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(Pisters 2011), which focuses on the schizoanalytic aspects of the neuroimage. Reprinted with permission of Edinburgh University Press.

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Shane Denson, Therese Grisham, and Julia Leyda, "Post-Continuity, the Irrational Camera, Thoughts on 3D" – This roundtable discussion was first published in the online journal *La Furia Umana* 14 (2012). Web. http://www.lafuriaumana.it/index.php/archives/41-lfu-14. [offline]



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ARTWORK



Cover image: Detail from "Post-Cinema: 24fps@44100Hz" by Karin + Shane Denson (acrylic, 24"x24", plus augmented reality overlay: digital video and generative text, using a Markov-chain algorithm trained on the chapters of the present book).

To view the augmented (AR) content, download the free Wikitude AR browser app for iOS or Android and search for "Post-Cinema." Point your phone or tablet at the image above and enjoy!

Also see the video trailer for this book by Shane Denson: *Post-Cinema*: 24fps@44100Hz Demo. Online at: https://vimeo.com/151691584.



Perspectives on Post-Cinema: An Introduction

BY SHANE DENSON AND JULIA LEYDA

If cinema and television, as the dominant media of the twentieth century, shaped and reflected the cultural sensibilities of the era, how do 21st-century media help to shape and reflect new forms of sensibility? Various attempts to identify the defining characteristics of these newer media (and hence their salient differences from older media) emphasize that they are essentially digital, interactive, ludic, miniaturized, mobile, social, processual, algorithmic, aggregative, environmental, or convergent, among other things. Recently, some theorists have begun to say, simply, that they are post-cinematic. This perspective, which in many ways guides the present collection, is not without its dangers; for example, the term "post-cinema" may seem reductive, too blunt to account for the long and variegated list of adjectives that characterize our current media landscape. And yet the term has a clear advantage in that it helps us to recognize this environment as a landscape, rather than merely a jumbled collection of new media formats, devices, and networks.

To say that 21st-century media are post-cinematic media does not, however, deny the heterogeneity of elements composing the landscape. Rather, post-cinema is a summative or synoptic notion of a special sort, one that allows for internal variety while focusing attention on the cumulative impact of the newer media. To employ the term post-cinema is, first of all, to describe this impact in terms of a broad historical transformation-emblematized by the shift from cinema to post-cinema. It is in this regard that we find another advantage of the term; for rather than positing a clean break with the past, the term post-cinema asks us more forcefully than the notion of "new media," for example, to think about the *relation* (rather than mere distinction) between older and newer media regimes. Post-cinema is not just after cinema, and it is not in every respect "new," at least not in the sense that new media is sometimes equated with digital media; instead, it is the collection of media, and the mediation of life forms, that "follows" the broadly cinematic regime of the twentieth century—where "following" can mean either to succeed something as an alternative or to "follow suit" as a development or a response in kind. Accordingly, post-cinema would mark not a caesura but a transformation that alternately abjures, emulates, prolongs, mourns, or pays homage to cinema. Thus, post-cinema asks us to think about new media not only in terms of novelty but in terms of an ongoing, uneven, and indeterminate historical transition. The postcinematic perspective challenges us to think about the affordances (and limitations) of the emerging media regime not simply in terms of radical and unprecedented change, but in terms of the ways that post-cinematic media are in conversation with and are engaged in actively re-shaping our inherited cultural forms, our established forms of subjectivity, and our embodied sensibilities.

These changes have only begun to be theorized, and emerging perspectives are just starting to enter into dialogue with one another. In this collection, we have gathered key voices in this budding conversation, including pivotal statements from some of the more prominent theorists of post-

cinema, along with essays that extend the work of theorizing a critical aesthetics and politics of film culture today. The <u>contributors</u> to this conversation—and we hope, above all, that this book contributes more to a conversation than to a worldview or yet another critical "turn"—are widely diverse in their theoretical and analytical orientations, outlooks, and commitments. To this extent, it is incorrect to speak, in the singular, of *the* post-cinematic perspective; rather, the authors assembled here represent a range of different and sometimes divergent perspectives on post-cinema. Indeed, not all of them would endorse the description of the term offered above; some of them might reject it outright. And yet all of them have found it useful, for one reason or another, to address the ongoing changes in our moving-image media and the lifeworlds they mediate in terms of this conversation about a shift from cinema to post-cinema.

In order, then, to best represent the variety within this burgeoning critical discourse on post-cinema, we have included both established and emerging scholars—people who not only have a variety of scholarly investments in the term, owing in part to their various academic generations and to the vicissitudes of disciplinary fashions and politics, but who also have very different experiences of the changes in question, owing more directly to the material facts of age, gender, and national and other backgrounds. For whatever post-cinema might be, it is surely not a transition that can be accounted for in identical terms for everyone, everywhere. We certainly do not wish to suggest any kind of grand narrative or teleological story about post-cinema as a determinate, unified, and global successor to cinema. But nor will the collected essays bear out any such story. Instead, this book's chapters engage collectively in a conversation not because their authors always agree with each other in their assessments or evaluations of post-cinema—or even about the best way to speak about it—but because they agree to make an effort to find the terms that would allow them to articulate their commonalities and their differences.

The essays take as their critical starting-points concepts such as David Bordwell's "intensified continuity" and Steven Shaviro's "post-cinematic affect" and "post-continuity"—concepts that are in many ways opposed to one another, but which help to stake out a common field upon which to position oneself. The chapters expand and build upon the ideas of these and a range of other thinkers, with the goal of coming to terms with an apparently new media ecology that requires us to search for a new critical vocabulary. These essays explore key questions in breaking this new ground, seeking and articulating both continuities and disjunctures between film's first and second centuries. Questions of aesthetics and form overlap with investigations of changing technological and industrial practices, contemporary formations of capital, and cultural concerns such as identity and social inequalities. The impact of digitization on taken-for-granted conventions is also in play: intermediality, new forms of distribution both licit and illicit, academic and critical reliance on genres and discrete media formats—all of these come under scrutiny as paradigms shift in the post-cinematic era.

Tapping into this exciting ongoing critical conversation, *Post-Cinema: Theorizing 21st-Century Film* explores the emergence of a new "structure of feeling" (Williams) or "episteme" (Foucault) in post-millennial film and other media, one that is evident in new formal strategies, radically changed conditions of viewing, and new ways in which films address their spectators. Contemporary films, from blockbusters to independents and the auteurist avant-garde, use digital cameras and editing technologies, incorporating the aesthetics of gaming, webcams, surveillance video, social media, and smartphones, to name a few. As a result of these developments and reconfigurations, the aesthetic boundaries between art-house film and blockbuster have become increasingly blurred as the mechanisms and perspectives of classical continuity are formally and materially challenged by a post-cinematic media regime. Changes in reception practices, too, necessitate new theories of spectatorship, commodification, and convergence, as the growing body of work on

digital media documents. Material access to and experiences of media vary widely around the world and among different groups within a given cultural context, in ways that influence development in relatively new areas of scholarship such as game studies and sound studies, for example. Moreover, the aesthetics of contemporary film do not merely simulate the environments created by digital technologies and media, but break more radically with the power geometries and cultural logics of twentieth-century cinema. In this way, they transmit the effects not only of digitization, but also of economic globalization and the ongoing financialization of human activities. In recent "accelerationist art" such as Neveldine and Taylor's film *Gamer*, Steven Shaviro argues, "intensifying the horrors of contemporary capitalism does not lead them to explode, but it does offer us a kind of satisfaction and relief, by telling us that we have finally hit bottom." ("Accelerationist Aesthetics") As daily life is utterly financialized and cultural production wholly subsumed by capital, human endeavor cannot be understood outside of "work" or entrepreneurship, whether this is work on the self or on the job market. The conversion or reduction to the digital of almost every iota of human existence would seem to reduce art and entertainment (film, games), economics (banking, credit), and communication (personal, commercial) to a single plane of intangibility, to the ether. However, theories of postcinema frequently resist or problematize this notion of vanishment and, on the contrary, strive to engage a materialist critique even when the object of analysis appears so insubstantial and elusive. Post-cinema is thus bound up in the neoliberal motor of perpetual capitalist expansion and subsumption; by unpacking the aesthetics of post-cinema, we also hope to foster new and developing analytical models that attend to the latest iterations of capital. In a parallel direction, and in a concerted effort to acknowledge and counter the frequent gender imbalance in scholarly discussions about film aesthetics and digital culture, the anthology also seeks to illuminate the ways in which post-cinema engages with established areas of inquiry in film studies, such as gender, race, class, and sexuality.

But if post-cinema concerns the emergence of a new "structure of feeling" or "episteme," new forms of affect or sensibility, then traditional scholarly forms and methods for investigating these issues are unlikely to provide adequate answers. Indeed, if the question of post-cinema is, as we suggested at the outset of these introductory remarks, a question of how 21st-century media help to shape and reflect new forms of sensibility, then any answer will necessarily involve engaging with a more speculative, broadly philosophical dimension of inquiry (see Denson, Shaviro, Pisters, Ivakhiv, and Hansen). For it will only be upon the basis of precisely these new forms of sensibility that we will be able to raise and answer the question of their transformative powers. The speculative thinking demanded by such a situation is intimately tied to the notion of post-cinema as an ongoing, non-teleologically determined transition, in the very midst of which we find ourselves. Of course, one general background for any discussion of post-cinema is the familiar debate over the supposed "end" of film or cinema in the wake of digitalization. But whereas many earlier estimations of this shift lamented or resisted the unfortunate passing of cinema, more recent theory has reversed or at least relaxed this backward-looking tendency and begun considering in a more prospective mode the emergence of a new, properly post-cinematic media regime.

The notion of post-cinema takes up the problematic prefix "post-," which debates over postmodernism and postmodernity taught us to treat not as a marker of definitive beginnings and ends, but as indicative of a more subtle shift or transformation in the realm of culturally dominant aesthetic and experiential forms. It is with this understanding in mind that we reject the idea of post-cinema as a clear-cut break with traditional media forms and instead emphasize a transitional movement taking place along an uncertain timeline, following an indeterminate trajectory, and characterized by juxtapositions and overlaps between the techniques, technologies, and aesthetic conventions of "old" and "new" movingimage media. The ambiguous temporality of the "post-," which intimates

a feeling both of being "after" something and of being "in the middle of" uncertain changes—hence speaking to the closure of a certain past as much as a radical opening of futurity—necessitates a speculative form of thinking attuned to experiences of contingency and limited knowledge. With respect to 21st-century media, theories of post-cinema inherit from postmodernism this speculative disposition, relating it to concrete media transformations while speculating more broadly about the effects they might have on us, our cognitive and aesthetic sensibilities, our agency, or our sense of history. Looking at objects ranging from blockbuster movies to music videos to artistic explorations of the audio-visual archive, and mounting interventions that range from critiques of post-cinema's politics and political economy to media-philosophical assessments of our new media ecology or media-theoretical reflections on environmental change—the contributions to this volume collectively articulate postcinema's media-technical, aesthetic, ecological, and philosophical vectors in a way that helps develop a grounded but emphatically speculative film and media theory for our times.

Grounded Speculation

In order, then, to ground the discussion a bit more, it is perhaps worth acknowledging that not only the contributors but the <u>editors</u> as well have varying backgrounds and experiences that inform our understandings of post-cinema. Our own formative experiences of movies inflect our own attitudes and concerns as scholars, and in the interest of thinking through these experiences, we will indulge in some reflections on our pasts and their effects on our present. Quite contrary to mere nostalgia, we maintain that a critical examination of personal memories can strengthen our own understanding and deepen our ongoing engagements with cinema and, or including, post-cinema.

Julia Leyda: Cinema Spaces of Memory and Transgression

I grew up in movie theaters in the 1970s and 80s. As a kid, I was lucky enough to live in a fairly large city where there were still single- or two-

screen first-run and repertory neighborhood theaters. These public spaces were in transition, soon to change to second-run "dollar" theaters, and now not one of them still exists. But it was easy to walk the few blocks from my house to the Gentilly Woods Mall with neighborhood kids (unaccompanied by adults!) to see movies usually aimed at the "family" audience: Herbie Goes to Monte Carlo (1977) and The Wiz (1978) in particular stand out. That cinema had an exit that opened right onto the alley behind the mall, so we quickly realized we could send one kid in and wait for them to open up and let the rest of us in. The reason we stopped sneaking in this way, and possibly the last time we ever went there, was one of the formative moments in the construction of my racial identity. Instead of our friend opening the door, an adult white man in a tie (an usher? a manager?) appeared and looked at us in disgust. We were frozen—this was a dicey situation. But then he said something to our African American friends like, "Get away from here, you dirty n s." And to me and my brother, both white, "What are you doing with them?" Instead of all of us feeling the same—busted and possibly in big trouble—he divided us into two discrete races. As a group, we had never (in my memory) discussed racial difference, and the humiliation of my friends filled me with shame. Of course, we turned and ran, but the space of the suburban shopping center cinema was altered for me forever.

As I got older, getting in free at the movies got easier. I started hanging out at the Pitt Cinema, this time a repertory with grown-up movies (it was immortalized in Walker Percy's novel *The Moviegoer*, a fact that didn't faze us at the time). A friend's brothers worked there and let us in for free whenever we wanted, with the grudging acquiescence of the owner, Lloyd, who found us tiresome but for the most part easy to ignore. Lloyd, like one of my friend's brothers, was gay and nobody made much of a fuss about it. Thus it was a regular weekend activity for me and my friend to go to work with them and watch whatever was playing, taking time out to wheedle free sodas and popcorn if we thought we could get away with it. We didn't work there, but I liked to imagine we did—such

was the allure of a more grown-up life: free admission, grumpy gay boss and co-workers, esoteric movies. Here were movies that weren't playing anywhere else: 2001: A Space Odyssey (1968), Beatles movie double- and triple-features, Harold and Maude (1971), and even gay-themed movies like La Cage aux Folles (1978). In my memory we were constantly on the verge of being kicked out, though probably this is distorted because we did in fact see dozens of movies there. The opening of 2001 we deemed preposterous and annoyed the grownup audience by giggling hysterically as the bone hurtled through the air in slow motion; Beatlemania infected us during A Hard Day's Night and we were reprimanded for screaming along with the manic teens in the movie. Getting in free, hanging out, and watching unlimited movies gave us the license to walk in and out of whatever was showing, a privilege unthinkable for most kids our age, and we beamed with the knowledge that we were so blessed.

So it seemed only natural that when I moved to New York for college, I regularly found myself riding the 1 train to hang out at the downtown cinema where my hometown friend at NYU worked: the 8th Street Playhouse. Another grouchy gay manager, more evenings spent lounging in the back rows or chatting with the candy girl, and even the weekend live shows accompanying the regular screenings of *The Rocky Horror Picture Show* (1975) soon became mundane. The Playhouse was the center of our social life; some of us worked there, the rest of us just hung out until their shifts ended, occasionally tearing tickets in a pinch. In the era before cell phones, it was easy to meet up there, go eat or drink for a couple of hours, and come back to feed friends or pick them up after work and then go out in earnest. In addition to watching *Nightmare on Elm Street 3: Dream Warriors* (1987) far too many times, I continued to develop my hanging out skills, all part of an economy of free admissions, pilfered sodas and popcorn, and the clandestine consumption of a variety of intoxicants.

By the 1990s, the role of the cinema in my life completely changed from a social space to an expense, another part of my life that had to be budgeted

and paid for. I was reduced to paying for tickets, attending the "dollar" movies as much as possible, and renting videos by the stack. Like most grad students, I couldn't afford cable, so the independent video stores were my mainstay, with their heady mix of classics, curated staff picks, and new releases. Now those local Seattle institutions—Broadway Video, Scarecrow Video—are also gone. Moving to Japan at the turn of the millennium further alienated me from cinema life, given that the regular ticket prices were more than twice the going rate in major first-run cinemas in New York. As a film studies scholar, I scavenged videos everywhere I could, scouring the local rental shops for English-language movies in the original, or, much harder to find, Japanese and other non-Anglophone movies with English subtitles. Satellite television was common there, and the hype surrounding HDTV just beginning as terrestrial broadcasts were scheduled to phase out. This was also when piracy became part of my repertoire, whether bootleg DVDs from Korea or shaky cam downloads from Napster—it felt almost justifiable given the enormous lag in release dates and general scarcity of older movies in any form.

Learning about transgression, whiteness, desire, and the business of movie exhibition and distribution, I realize now that not only were movies a major influence on my young life, but actual cinemas as well. How it came to pass that so much of my social life throughout my first two decades centered so closely on the spaces of particular cinemas, I never even wondered; nor did I immediately remark the fairly sudden disappearance of those spaces from my life. Yet my experiences rooted in the social spaces of these cinemas now seem inextricably bound to my preoccupations as a film and media studies scholar. It's true that a certain measure of nostalgia permeates my recollections, yet I don't feel threatened or befuddled by the rapid changes in film production, distribution, and exhibition over my lifetime thus far. Quite the contrary, I'm fairly optimistic that although kids today won't experience what I did, they'll instead find their own ways of coming to consciousness through moving-image media.

Shane Denson: Cinematic Memories of Post-Cinematic Transition Reading through Julia's reminiscences, I am infected with that sense of nostalgia that she acknowledges creeping into them. In the early 1980s, I also spent a great deal of time hanging out at a suburban mall in a largish American city, and much of that time was spent in or around the movie theater there, which had sprung up with the mall in 1978 or 1979. Those were good times, though in retrospect hardly unproblematic ones, and Julia's narrative of childhood innocence and its loss, and the role that the cinema played throughout it all, calls forth memories of my own early experiences. On second thought, however, my relation to the cinema was quite different, and the wistful associations evoked in me by Julia's story of the back-alley exit through which she and her friends would sneak into the theater are based not so much on my own memories, but on a borrowed set of images and narratives—tales, whether true or false, that I overheard and appropriated from my older brothers and their friends, for example, but memories borrowed above all from the cinema itself. The nostalgia I feel probably has more to do with the movies I saw back then and their depictions of suburban life movies like E.T. The Extra-Terrestrial (1982) or The Goonies (1985) than with anything I experienced myself, "in real life." In this respect, my nostalgia is a properly "cinematic" nostalgia, and I suspect that it is not altogether different from the feeling of longing for simpler times, for the romanticized "good old days," that befalls many of us at one time or another—and that may very well be at the root of the sense of loss that certain scholars feel when they reflect on the way that celluloid has given way to digital video and that movies have largely moved from the big screen to a plethora of little ones. The cinema, that is, has in many cases already exerted a revisionary force and worked upon our memories of what the cinema itself could be and what it meant to us. Notions of post-cinema are inevitably caught in these feedback loops, and any assessment of the historical and affective changes signaled by the term will have to take seriously these entanglements, which continue

to define us today.

My memories and associations, then, are "cinematic"—but in what sense? They have been shaped, as I mentioned, by movies like E.T. and The Goonies, but as far as I can recall I never saw these movies in a movie theater. In fact, when I come to think about it, I really didn't see an awful lot of movies at that six-screen cinema in the mall. I did see a few of the big blockbusters there: my parents took me to see *The Empire Strikes Back* (1980), for example, and I also saw Raiders of the Lost Ark (1981) on a big screen. But these movies, like *E.T.* and *The Goonies*, were really impressed upon my memory and made a part of who I was as a child through repeated viewings on cable TV. Indeed, my knowledge of "film" was shaped largely by HBO, Showtime, and the Movie Channel, all of which were delivering round-the-clock service to our home by 1981. It was thus on a bulky, late 1970s model Zenith wooden-cabinet console TV that many of my ideas of cinema were formed. On the same four-by-three color CRT screen which around the same time began displaying fast-paced music videos ("I want my MTV!") and the simple but fascinating computer graphics of an 8-bit videogame console ("Have you played Atari today?").

Which brings me back to the question of what, if I wasn't watching movies, I was doing hanging out at the movie theater all the time. Like many other kids my age, I was playing games like *Pac-Man* (1980), *Centipede* (1980), or *Galaga* (1981), or watching in awe as the more skillful older kids played them. To be sure, I loved going to the movies, but even when there was nothing showing that interested me and my friends, "going to the movies" could be a good excuse to sink a few quarters into these arcade machines. Later, the proximity of games and movies would change, both in my head and in the physical architecture of the mall, when a dedicated arcade space opened up across the way and only a few outdated machines remained in the cinema lobby. The cinema, if not "the cinema," was in decline, and it continued to recede ever farther from my view over the next few years, as I began frequenting an arcade located far away from the mall and renting VHS cassettes of horror movies that, at my age, I could still not gain admission to at the movie theater.

In the meantime, I had begun noticing that media formats generally were coming and going with what seemed like increasing speed. Within a year or two of purchasing my first 33 rpm album, I began seeing shiny little discs popping up next to the record stands. My brothers' 8-track tapes, which I had never really given much thought to before, slowly started growing, in my imagination and in my hands, into absurdly large objects. Overnight and irreversibly, my longtime friend from next door took on a freakish appearance in my eyes when I saw that his family's video recorder played odd-sized movies in something called "Betamax" format, and that they had hooked up an audio cassette player to their computer, itself hooked up to an old black-and-white television set. I didn't know if they were living in the past or in the future, but they certainly weren't living in the same time as me. Our own Atari 2600 started looking old when another friend got a ColecoVision for Christmas in 1982. But the great video game crash of 1983 would change all that soon enough, with the effect that hundreds of mediocre games suddenly became affordable to me on my weekly allowance. Thus, for the next few years, I spent all of my money on media that were essentially already relics. Throughout all of this, the cinema continued to occupy a relatively constant, if marginal or supplementary, relation to the rapidly changing media environment: cinema was the "content" of television and video, as Marshall McLuhan had pointed out several decades prior, and it was now also the nominal inspiration for such games as Atari's Raiders of the Lost Ark (1982) or the much-ridiculed "adaptation" of E.T. (1982).

But if this was essentially already a post-cinematic landscape—a claim that, to me, it seems plausible to make—it is worth thinking about the logic of supplementarity that structured that landscape. With Jacques Derrida, we can say that a supplement, in this case cinema, is never purely or unproblematically subordinated to the dominant term it is said to serve as an aid or appendage. And anyway: what, in this case, would that dominant term, or medium, be? Television? Video? Digital media? A case could be made for any of these, I suppose, but in terms of the rapid flux of

media as an overall environment at the time, no single medium impresses me as clearly dominant—and this, to me, is what marks this transitional era as truly post-cinematic. Not because the cinema was dead, but because it was precisely un-dead. As a supplement, cinema was both content and medium, medium and message, host and parasite. Clearly, I did not think of things in these terms at the time, but I was noticing *media* everywhere, which meant that the denaturalization (not demise) of the once dominant medium, cinema, was so far advanced that even a child could register it. The speed of change, the introduction of new formats, obsolescence as the order of the day—all of these announced media, with cinema as one among them. I like to think now that I recognized, implicitly, the depth of material-technological change and its imbrication with economic impulses when the games market crashed, that my rummaging through the bargain bins into which all games cartridges had been cast echoed, somehow, with the quarters I had sunk into the arcade machines a few years prior, and that by dint of those machines' proximity to film in the mall cinema, I was attuned to the sprawling network of relations among media in transition. I like to imagine, further, that I already had a vague feeling that the very ground of subjectivity, of perception, affect, and agency, was in the midst of shifting, as I noticed the depth of my (emotional and monetary) investments in technological formats that not only failed to work properly on occasion, but that regularly underwent systematic obsolescence and yet refused, in some ways, quite to die. Perhaps I am imagining all that. But I am not, I believe, imagining the relation of supplementarity by which post-cinema is irreducibly marked, and by which my experiences of it remain marked today: for as I have pointed out already, my earliest memories of post-cinema are themselves "cinematic" through and through.

Post-Cinematic Conversations

What these narratives demonstrate, if nothing else, is the multifaceted nature of what we are calling the post-cinematic landscape, and the multiple registers on which this new media regime has gradually transformed our

experience. The transitions we have been describing affected us in quite different ways, articulating very different spatial, temporal, social, and material parameters for our respective experiences and the memories we have of them. Readers with different backgrounds will no doubt be able to tell very different stories of post-cinema. Your own account may emphasize a vastly different set of perceptual, political, emotional, or media-technological changes. It is our hope that this book will open spaces in which to assess these individual and collective differences, that it will provide opportunities to think through the various facets of post-cinema as an unevenly distributed historical transition, and that it will foster a conversation that is rich in perspectives, interests, concerns, and commitments.

To this end, we have divided the book into seven parts, each centering around a different major facet of the conversation. First, laying some initial groundwork in Part 1, we seek to mark out some general "Parameters for Post-Cinema." This first section features some of the opening gambits in post-cinematic theory, articulating several of the basic sites where a shift from cinematic to post-cinematic forms might be located: in the image, in editing practices, or in the larger media environment. Several of these chapters were previously published in open-access, online form. Along with Part 7, the last section of roundtable discussions, this opening section frames the collection with contributions that may still be available elsewhere online, but that we felt were significant in the development of this area of film and media scholarship. Together, they provide a useful introduction to many of the themes that continue to inform discussions of post-cinema and that will echo throughout the chapters of this volume. If Part 1 introduces post-cinema through a discussion of the largely formal parameters of images, editing, and media interactions, Part 2 extends this focus to include an assessment of what post-cinema feels like. Tracing the conversations about post-cinema to some of its roots in phenomenology and affect theory, this section reprints pivotal texts by Vivian Sobchack and Steven Shaviro alongside new forays that envision a successor to

Shane Denson and Julia Leyda

Gilles Deleuze's "movement-image" and "time-image" of *Cinema 1* and *Cinema 2*, or that frame post-cinema in terms of our embodied and cognitive relations to contemporary media technologies. Collectively, the chapters of this section contribute to a broadly phenomenological and/ or post-phenomenological discussion of viewers' "Experiences Post-Cinema."

Part 3 delves into the "Techniques and Technologies of Post-Cinema." Although post-cinema can in part be defined temporally, it is primarily demarcated by the rapid and pervasive shift from analog to digital technics of cinema. The elimination of analog projectors (and with them the unionized jobs of projectionists) and the prevalence of sophisticated digital and computer-assisted effects were quickly followed by the (still ongoing) transition among many filmmakers to shooting digital movies. These changes in the technological apparatus—as expressed in digital animation techniques, "bullet time" spectacles, 3D formats, and new ways of articulating image/sound relations—demand attention from film and media theorists, who can trace their reverberations in other areas of film scholarship.

One area where they can be traced is in the realm of the political, which is the focus of Part 4: "Politics of Post-Cinema." Cultural institutions such as cinema must always be studied with an awareness of their wider contexts, including an exploration of the historical, social, and political moments from whence they originate. Whether interrogating the roles of race, gender, sexuality, or political economy, these chapters extend the parameters of post-cinema beyond aesthetics and phenomenology, and into the realms of politics, biopolitics, and ideology.

<u>Part 5</u> inquires into the place of post-cinema in the longue durée of moving-image history, and its chapters initiate a series of much-needed "<u>Archaeologies of Post-Cinema</u>." Far from constituting a radical break with earlier cinematic eras, post-cinema enjoys myriad continuities and

ongoing intertextualities with, for example, silent movies, pre-cinematic representational forms, gallery art practices, and even blockbuster event movies. Very much in the spirit of media archaeology (see Parikka; Huhtamo and Parikka), the chapters collected in this section complicate any linear history of post-cinema by unearthing links and resonances across historical periods, discourses, and technologies.

<u>Part 6</u> turns its attention to what can broadly be termed "<u>Ecologies of Post-Cinema</u>." These studies emphasize the material involvements of cinematic and post-cinematic media in environmental change; they look at post-cinematic representations of ecological disaster and extinction; they conceive contemporary media as themselves radically environmental; or they think about the changing environments and infrastructures of post-cinematic venues.

Finally, Part 7 closes the volume with a set of "Dialogues on Post-Cinema." While the digital turn in moving-image media constitutes one of this book's major media-technical subjects, the digital turn in academic scholarship constitutes an equally crucial media-technical factor in the book's form-and, indeed, in its sheer possibility as an open-access volume. This turn, which has been central to the emergence of the "digital humanities," enables scholars to conduct conversations via electronic media and to share them publicly via the Internet. Three of the roundtable discussions included in this section were initially published online, in La Furia Umana and In Media Res, while the final one was initiated specifically for this volume. Some of the ideas first explored in these conversations later developed into sustained works of scholarship, even if the open-access, online "immortality" we aspired to petered out into dead links. These less formal, less structured academic exchanges can open up a wider range of topics and tangents than a traditional single-authored essay, and their more conversational tone ensures that they are highly accessible. The collaborative nature of these exchanges also foregrounds the value of such all-too-rare group efforts, as different scholars' ideas

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fuel one another and inspire responses that push us farther than we could have gone alone. We are pleased to close out the volume with this section, which includes discussions that initially inspired our thinking about this book, that generated core ideas for several of its chapters, and that continue, several years later, to take the conversation in new directions.

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1.1 What is Digital Cinema?

BY LEV MANOVICH

Cinema, the Art of the Index [1]

Thus far, most discussions of cinema in the digital age have focused on the possibilities of interactive narrative. It is not hard to understand why: since the majority of viewers and critics equate cinema with storytelling, digital media is understood as something that will let cinema tell its stories in a new way. Yet as exciting as the ideas of a viewer participating in a story, choosing different paths through the narrative space, and interacting with characters may be, they only address one aspect of cinema which is neither unique nor, as many will argue, essential to it: narrative.

The challenge which digital media poses to cinema extends far beyond the issue of narrative. Digital media redefines the very identity of cinema. In a symposium that took place in Hollywood in the spring of 1996, one of the participants provocatively referred to movies as "flatties" and to human actors as "organics" and "soft fuzzies." [2] As these terms accurately suggest, what used to be cinema's defining characteristics have become just the default options, with many others available. When one can "enter" a virtual three-dimensional space, viewing flat images projected on the screen is hardly the only option. When, given enough time and money,

almost everything can be simulated in a computer, filming physical reality is just one possibility.

This "crisis" of cinema's identity also affects the terms and the categories used to theorize cinema's past. French film theorist Christian Metz wrote in the 1970s that "Most films shot today, good or bad, original or not, 'commercial' or not, have as a common characteristic that they tell a story; in this measure they all belong to one and the same genre, which is, rather, a sort of 'super-genre' ['sur-genre']" (402). In identifying fictional films as a "super-genre" of 20th-century cinema, Metz did not bother to mention another characteristic of this genre because at that time it was too obvious: fictional films are live-action films, i.e. they largely consist of unmodified photographic recordings of real events which took place in real physical space. Today, in the age of computer simulation and digital compositing, invoking this characteristic becomes crucial in defining the specificity of 20th-century cinema. From the perspective of a future historian of visual culture, the differences between classical Hollywood films, European art films, and avant-garde films (apart from abstract ones) may appear less significant than this common feature: that they relied on lens-based recordings of reality. This essay is concerned with the effect of the so-called digital revolution on cinema as defined by its "super-genre" of fictional live-action film.[3]

During cinema's history, a whole repertoire of techniques (lighting, art direction, the use of different film stocks and lenses, etc.) was developed to modify the basic record obtained by a film apparatus. And yet behind even the most stylized cinematic images we can discern the bluntness, the sterility, the banality of early 19th-century photographs. No matter how complex its stylistic innovations, the cinema has found its base in these deposits of reality, these samples obtained by a methodical and prosaic process. Cinema emerged out of the same impulse that engendered naturalism, court stenography, and wax museums. Cinema is the art of the index; it is an attempt to make art out of a footprint.

Even for Andrei Tarkovsky, film-painter par excellence, cinema's identity lay in its ability to record reality. Once, during a public discussion in Moscow in the 1970s, he was asked the question as to whether he was interested in making abstract films. He replied that there can be no such thing. Cinema's most basic gesture is to open the shutter and to start the film rolling, recording whatever happens to be in front of the lens. For Tarkovsky, an abstract cinema is thus impossible.

But what happens to cinema's indexical identity if it is now possible to generate photorealistic scenes entirely in a computer using 3-D computer animation; to modify individual frames or whole scenes with the help a digital paint program; to cut, bend, stretch and stitch digitized film images into something which has perfect photographic credibility, although it was never actually filmed?

This essay will address the meaning of these changes in the filmmaking process from the point of view of the larger cultural history of the moving image. Seen in this context, the manual construction of images in digital cinema represents a return to 19th-century pre-cinematic practices, when images were hand-painted and hand-animated. At the turn of the 20th century, cinema was to delegate these manual techniques to animation and define itself as a recording medium. As cinema enters the digital age, these techniques are again becoming commonplace in the filmmaking process. Consequently, cinema can no longer be clearly distinguished from animation. It is no longer an indexical media technology but, rather, a sub-genre of painting.

This argument will be developed—in three stages. I will first follow a historical trajectory from 19th-century techniques for creating moving images to 20th-century cinema and animation. Next I will arrive at a definition of digital cinema by abstracting the common features and interface metaphors of a variety of computer software and hardware that are currently replacing traditional film technology. Seen together,

these features and metaphors suggest a distinct logic of a digital moving image. This logic subordinates the photographic and the cinematic to the painterly and the graphic, destroying cinema's identity as a media art. Finally, I will examine different production contexts that already use digital moving images—Hollywood films, music videos, CD-ROM games and artworks—in order to see if and how this logic has begun to manifest itself.

A Brief Archaeology of Moving Pictures

As signified by its original names (kinetoscope, cinematograph, moving pictures), cinema was understood, from its birth, as the art of motion, the art that finally succeeded in creating a convincing illusion of dynamic reality. If we approach cinema in this way (rather than the art of audiovisual narrative, or the art of a projected image, or the art of collective spectatorship, etc.), we can see it superseding previous techniques for creating and displaying moving images.

These earlier techniques shared a number of common characteristics. First, they all relied on hand-painted or hand-drawn images. The magic lantern slides were painted at least until the 1850s; so were the images used in the Phenakistiscope, the Thaumatrope, the Zoetrope, the Praxinoscope, the Choreutoscope and numerous other 19th-century pre-cinematic devices. Even Muybridge's celebrated Zoopraxiscope lectures of the 1880s featured not actual photographs but colored drawings painted after the photographs (Musser 49-50).

Not only were the images created manually, they were also manually animated. In Robertson's Phantasmagoria, which premiered in 1799, magic lantern operators moved behind the screen in order to make projected images appear to advance and withdraw (Musser 25). More often, an exhibitor used only his hands, rather than his whole body, to put the images into motion. One animation technique involved using mechanical slides consisting of a number of layers. An exhibitor would

slide the layers to animate the image (Ceram 44-45). Another technique was to slowly move a long slide containing separate images in front of a magic lantern lens. 19th-century optical toys enjoyed in private homes also required manual action to create movement—twirling the strings of the Thaumatrope, rotating the Zoetrope's cylinder, turning the Viviscope's handle.

It was not until the last decade of the 19th century that the automatic generation of images and their automatic projection were finally combined. A mechanical eye was coupled with a mechanical heart; photography met the motor. As a result, cinema—a very particular regime of the visible—was born. Irregularity, non-uniformity, the accident and other traces of the human body, which previously inevitably accompanied moving image exhibitions, were replaced by the uniformity of machine vision. [4] A machine that, like a conveyer belt, was now spitting out images, all sharing the same appearance, all the same size, all moving at the same speed, like a line of marching soldiers.

Cinema also eliminated the discrete character of both space and movement in moving images. Before cinema, the moving element was visually separated from the static background as with a mechanical slide show or Reynaud's Praxinoscope Theater (1892) (Robinson 12). The movement itself was limited in range and affected only a clearly defined figure rather than the whole image. Thus, typical actions would include a bouncing ball, a raised hand or eyes, a butterfly moving back and forth over the heads of fascinated children—simple vectors charted across still fields.

Cinema's most immediate predecessors share something else. As the 19th-century obsession with movement intensified, devices that could animate more than just a few images became increasingly popular. All of them—the Zoetrope, the Phonoscope, the Tachyscope, the Kinetoscope—were based on loops, sequences of images featuring complete actions which

can be played repeatedly. The Thaumatrope (1825), in which a disk with two different images painted on each face was rapidly rotated by twirling a string attached to it, was in its essence a loop in its most minimal form: two elements replacing one another in succession. In the Zoetrope (1867) and its numerous variations, approximately a dozen images were arranged around the perimeter of a circle. [5] The Mutoscope, popular in America throughout the 1890s, increased the duration of the loop by placing a larger number of images radially on an axle (Ceram 140). Even Edison's Kinetoscope (1892-1896), the first modern cinematic machine to employ film, continued to arrange images in a loop (Musser 78). 50 feet of film translated to an approximately 20-second long presentation—a genre whose potential development was cut short when cinema adopted a much longer narrative form.

From Animation to Cinema

Once the cinema was stabilized as a technology, it cut all references to its origins in artifice. Everything which characterized moving pictures before the 20th century—the manual construction of images, loop actions, the discrete nature of space and movement—was delegated to cinema's bastard relative, its supplement, its shadow—animation. 20th-century animation became a depository for 19th-century moving-image techniques left behind by cinema.

The opposition between the styles of animation and cinema defined the culture of the moving image in the 20th century. Animation foregrounds its artificial character, openly admitting that its images are mere representations. Its visual language is more aligned to the graphic than to the photographic. It is discrete and self-consciously discontinuous: crudely rendered characters moving against a stationary and detailed background; sparsely and irregularly sampled motion (in contrast to the uniform sampling of motion by a film camera—recall Jean-Luc Godard's definition of cinema as "truth 24 frames per second"), and finally space constructed from separate image layers.

In contrast, cinema works hard to erase any traces of its own production process, including any indication that the images we see could have been constructed rather than recorded. It denies that the reality it shows often does not exist outside of the film image, the image which was arrived at by photographing an already impossible space, itself put together with the use of models, mirrors, and matte paintings, and which was then combined with other images through optical printing. It pretends to be a simple recording of an already existing reality—both to a viewer and to itself.[6] Cinema's public image stressed the aura of reality "captured" on film, thus implying that cinema was about photographing what existed before the camera, rather than "creating the 'never-was" of special effects.[7] Rear projection and blue-screen photography, matte paintings and glass shots, mirrors and miniatures, push development, optical effects and other techniques which allowed filmmakers to construct and alter the moving images, and thus could reveal that cinema was not really different from animation, were pushed to cinema's periphery by its practitioners, historians, and critics.[8] Today, with the shift to digital media, these marginalized techniques move to the center.

What is Digital Cinema?

A visible sign of this shift is the new role that computer-generated special effects have come to play in Hollywood industry in the last few years. Many recent blockbusters have been driven by special effects, feeding on their popularity. Hollywood has even created a new mini-genre of "The Making of" videos and books, which reveal how special effects are created.

I will use special effects from a few recent Hollywood films for illustrations of some of the possibilities of digital filmmaking. Until recently, Hollywood studios were the only ones who had the money to pay for digital tools and for the labor involved in producing digital effects. However, the shift to digital media affects not just Hollywood, but filmmaking as a whole. As traditional film technology is universally being replaced by digital

technology, the logic of the filmmaking process is being redefined. What I describe below are the new principles of digital filmmaking, which are equally valid for individual or collective film productions, regardless of whether they are using the most expensive professional hardware and software or amateur equivalents. Consider, then, the following principles of digital filmmaking:

- 1. Rather than filming physical reality it is now possible to generate film-like scenes directly in a computer with the help of 3-D computer animation. Therefore, live-action footage is displaced from its role as the only possible material from which the finished film is constructed.
- 2. Once live-action footage is digitized (or directly recorded in a digital format), it loses its privileged indexical relationship to profilmic reality. The computer does not distinguish between an image obtained through the photographic lens, an image created in a paint program, or an image synthesized in a 3-D graphics package, since they are made from the same material—pixels. And pixels, regardless of their origin, can be easily altered, substituted one for another, and so on. Live-action footage is reduced to just another graphic, no different from images that were created manually. [9]
- 3. If live-action footage was left intact in traditional filmmaking, now it functions as raw material for further compositing, animating, and morphing. As a result, while retaining visual realism unique to the photographic process, film obtains the plasticity that was previously only possible in painting or animation. To use the suggestive title of a popular morphing software, digital filmmakers work with "elastic reality." For example, the opening shot of *Forrest Gump* (Robert Zemeckis 1994; special effects by Industrial Light and Magic) tracks an unusually long and extremely intricate flight of a feather. To create the shot, the real feather was filmed against a blue background in different positions; this material was then animated

and composited against shots of a landscape.[10] The result: a new kind of realism, which can be described as "something that looks as if it is intended to look exactly as if it could have happened, although it really could not."

- 4. Previously, editing and special effects were strictly separate activities. An editor worked on ordering sequences of images together; any intervention within an image was handled by special-effects specialists. The computer collapses this distinction. The manipulation of individual images via a paint program or algorithmic image processing becomes as easy as arranging sequences of images in time. Both simply involve "cut and paste." As this basic computer command exemplifies, modification of digital images (or other digitized data) is not sensitive to distinctions of time and space or of differences of scale. Thus, re-ordering sequences of images in time, compositing them together in space, modifying parts of an individual image, and changing individual pixels become the same operation, conceptually and practically.
- 5. Given the preceding principles, we can define digital film in this way:

digital film = live action material + painting + image processing + compositing + 2-D computer animation + 3-D computer animation

Live-action material can be recorded either on film or video or directly in a digital format. [11] Painting, image processing, and computer animation refer to the processes of modifying already existent images as well as creating new ones. In fact, the very distinction between creation and modification, so clear in film-based media (shooting versus darkroom processes in photography, production versus post-production in cinema) no longer applies to digital cinema, since each image, regardless of its origin, goes through a number of programs before making it to the final film. [12]

Let us summarize the principles discussed thus far. Live action footage is now only raw material to be manipulated by hand: animated, combined with 3-D computer-generated scenes, and painted over. The final images are constructed manually from different elements, and all the elements are either created entirely from scratch or modified by hand.

We can finally answer the question "What is digital cinema?" Digital cinema is a particular case of animation that uses live-action footage as one of its many elements.

This can be re-read in view of the history of the moving image sketched earlier. Manual construction and animation of images gave birth to cinema and slipped into the margins, only to re-appear as the foundation of digital cinema. The history of the moving image thus comes full circle. Born from animation, cinema pushed animation to its boundary, only to become one particular case of animation in the end.

The relationship between "normal" filmmaking and special effects is similarly reversed. Special effects, which involved human intervention into machine-recorded footage and which were therefore delegated to cinema's periphery throughout its history, become the norm of digital filmmaking.

The same applies for the relationship between production and post-production. Cinema traditionally involved arranging physical reality to be filmed though the use of sets, models, art direction, cinematography, etc. Occasional manipulation of recorded film (for instance, through optical printing) was negligible compared to the extensive manipulation of reality in front of a camera. In digital filmmaking, shot footage is no longer the final point but just raw material to be manipulated in a computer where the real construction of a scene will take place. In short, the production becomes just the first stage of post-production.

The following examples illustrate this shift from re-arranging reality to re-arranging its images. From the analog era: for a scene in *Zabriskie Point* (1970), Michelangelo Antonioni, trying to achieve a particularly saturated color, ordered a field of grass to be painted. From the digital era: to create the launch sequence in *Apollo 13* (Ron Howard 1995; special effects by Digital Domain), the crew shot footage at the original location of the launch at Cape Canaveral. The artists at Digital Domain scanned the film and altered it on computer workstations, removing recent building construction, adding grass to the launch pad and painting the skies to make them more dramatic. This altered film was then mapped onto 3-D planes to create a virtual set that was animated to match a 180-degree dolly movement of a camera following a rising rocket (see Robertson 20).

The last example brings us to yet another conceptualization of digital cinema—as painting. In his book-length study of digital photography, William J.T. Mitchell focuses our attention on what he calls the inherent mutability of a digital image:

The essential characteristic of digital information is that it can be manipulated easily and very rapidly by computer. It is simply a matter of substituting new digits for old.... Computational tools for transforming, combining, altering, and analyzing images are as essential to the digital artist as brushes and pigments to a painter. (7)

As Mitchell points out, this inherent mutability erases the difference between a photograph and a painting. Since a film is a series of photographs, it is appropriate to extend Mitchell's argument to digital film. With an artist being able to easily manipulate digitized footage either as a whole or frame by frame, a film in a general sense becomes a series of paintings. [13]

Hand-painting digitized film frames, made possible by a computer, is probably the most dramatic example of the new status of cinema. No longer strictly locked in the photographic, it opens itself towards the painterly. It is also the most obvious example of the return of cinema to its 19th-century origins—in this case, to hand-crafted images of magic lantern slides, the Phenakistiscope, the Zoetrope.

We usually think of computerization as automation, but here the result is the reverse: what was previously automatically recorded by a camera now has to be painted one frame at a time. But not just a dozen images, as in the 19th century, but thousands and thousands. We can draw another parallel with the practice, common in the early days of silent cinema, of manually tinting film frames in different colors according to a scene's mood (see Robinson 165). Today, some of the most visually sophisticated digital effects are often achieved using the same simple method: painstakingly altering by hand thousands of frames. The frames are painted over either to create mattes (hand-drawn matte extraction) or to directly change the images, as in Forrest Gump, where President Kennedy was made to speak new sentences by altering the shape of his lips, one frame at a time.[14] In principle, given enough time and money, one can create what will be the ultimate digital film: 90 minutes, i.e. 129,600 frames, completely painted by hand from scratch, but indistinguishable in appearance from live photography.[15]

Multimedia as "Primitive" Digital Cinema

3-D animation, compositing, mapping, paint retouching: in commercial cinema, these radical new techniques are mostly used to solve technical problems while traditional cinematic language is preserved unchanged. Frames are hand-painted to remove wires that supported an actor during shooting; a flock of birds is added to a landscape; a city street is filled with crowds of simulated extras. Although most Hollywood releases now involve digitally manipulated scenes, the use of computers is always carefully hidden. [16]

Commercial narrative cinema still continues to hold on to the classical realist style where images function as unretouched photographic records of events that took place in front of the camera. [17] Cinema refuses to give up its unique cinema effect, an effect which, according to Metz's penetrating analysis made in the 1970s, depends upon narrative form, the reality effect, and cinema's architectural arrangement all working together.

Towards the end of his essay, Metz wonders whether in the future non-narrative films may become more numerous; if this happens, he suggests that cinema will no longer need to manufacture its reality effect. Electronic and digital media have already brought about this transformation. Beginning in the 1980s, new cinematic forms have emerged that are not linear narratives, that are exhibited on a television or a computer screen, rather than in a movie theater—and that simultaneously give up cinematic realism.

What are these forms? First of all, there is the music video. Probably not by accident, the genre of music video came into existence exactly at the time when electronic video effects devices were entering editing studios. Importantly, just as music videos often incorporate narratives within them, but are not linear narratives from start to finish, they rely on film (or video) images, but change them beyond the norms of traditional cinematic realism. The manipulation of images through hand-painting and image processing, hidden in Hollywood cinema, is brought into the open on a television screen. Similarly, the construction of an image from heterogeneous sources is not subordinated to the goal of photorealism but functions as an aesthetic strategy. The genre of music video has been a laboratory for exploring numerous new possibilities of manipulating photographic images made possible by computers—the numerous points which exist in the space between the 2-D and the 3-D, cinematography and painting, photographic realism and collage. In short, it is a living and constantly expanding textbook for digital cinema (see Shaviro, "Splitting the Atom" in this volume).

A detailed analysis of the evolution of music video imagery (or, more generally, broadcast graphics in the electronic age) deserves a separate treatment, and I will not try to take it up here. Instead, I will discuss another new cinematic non-narrative form, CD-ROM games, which, in contrast to music video, relied on the computer for storage and distribution from the very beginning. And, unlike music video designers who were consciously pushing traditional film or video images into something new, the designers of CD-ROMs arrived at a new visual language unintentionally while attempting to emulate traditional cinema.

In the late 1980s, Apple began to promote the concept of computer multimedia; and in 1991 it released QuickTime software to enable an ordinary personal computer to play movies. However, for the next few years the computer did not perform its new role very well. First, CD-ROMs could not hold anything close to the length of a standard theatrical film. Secondly, the computer would not smoothly play a movie larger than the size of a stamp. Finally, the movies had to be compressed, degrading their visual appearance. Only in the case of still images was the computer able to display photographic-type detail at full screen size.

Because of these particular hardware limitations, the designers of CD-ROMs had to invent a different kind of cinematic language in which a range of strategies, such as discrete motion, loops, and superimposition, previously used in 19th-century moving-image presentations, in 20th-century animation, and in the avant-garde tradition of graphic cinema, were applied to photographic or synthetic images. This language synthesized cinematic illusionism and the aesthetics of graphic collage, with its characteristic heterogeneity and discontinuity. The photographic and the graphic, divorced when cinema and animation went their separate ways, met again on a computer screen.

The graphic also met the cinematic. The designers of CD-ROMs were aware of the techniques of 20th-century cinematography and film editing,

but they had to adopt these techniques both to an interactive format and to hardware limitations. As a result, the techniques of modern cinema and of 19th-century moving images have merged in a new hybrid language.

We can trace the development of this language by analyzing a few wellknown CD-ROM titles. The bestselling game Myst (Broderbund, 1993) unfolds its narrative strictly through still images, a practice which takes us back to magic lantern shows (and to Chris Marker's La Jetée).[18] But in other ways *Myst* relies on the techniques of 20th-century cinema. For instance, the CD-ROM uses simulated camera turns to switch from one image to the next. It also employs the basic technique of film editing to subjectively speed up or slow down time. In the course of the game, the user moves around a fictional island by clicking on a mouse. Each click advances a virtual camera forward, revealing a new view of a 3-D environment. When the user begins to descend into the underground chambers, the spatial distance between the points of view of each two consecutive views decreases sharply. If earlier the user was able to cross a whole island with just a few clicks, now it takes a dozen clicks to get to the bottom of the stairs! In other words, just as in traditional cinema, Myst slows down time to create suspense and tension.

In *Myst*, miniature animations are sometimes embedded within the still images. In the next bestselling CD-ROM *7th Guest* (Virgin Games, 1993), the user is presented with video clips of live actors superimposed over static backgrounds created with 3-D computer graphics. The clips are looped, and the moving human figures clearly stand out against the backgrounds. Both of these features connect the visual language of *7th Guest* to 19th-century pre-cinematic devices and 20th-century cartoons rather than to cinematic verisimilitude. But like *Myst*, *7th Guest* also evokes distinctly modern cinematic codes. The environment where all action takes place (an interior of a house) is rendered using a wide-angle lens; to move from one view to the next, a camera follows a complex curve, as though mounted on a virtual dolly.

Next, consider the CD-ROM *Johnny Mnemonic* (Sony Imagesoft, 1995). Produced to complement the fiction film of the same title, marketed not as a "game" but as an "interactive movie," and featuring full-screen video throughout, it comes closer to cinematic realism than the previous CD-ROMs—yet it is still quite distinct from it. With all action shot against a green screen and then composited with graphic backgrounds, its visual style exists within a space between cinema and collage.

It would not be entirely inappropriate to read this short history of the digital moving image as a teleological development which replays the emergence of cinema a hundred years earlier. Indeed, as computers' speed keeps increasing, the CD-ROM designers have been able to go from a slide show format to the superimposition of small moving elements over static backgrounds and finally to full-frame moving images. This evolution repeats the 19th-century progression: from sequences of still images (magic lantern slide presentations) to moving characters over static backgrounds (for instance, in Reynaud's Praxinoscope Theater) to full motion (the Lumières' cinematograph). Moreover, the introduction of QuickTime in 1991 can be compared to the introduction of the Kinetoscope in 1892: both were used to present short loops, both featured the images approximately two by three inches in size, both called for private viewing rather than collective exhibition. Finally, the Lumières' first film screenings of 1895, which shocked their audiences with huge moving images, found their parallel in CD-ROM titles of 1995, where the moving image finally fills the entire computer screen. Thus, exactly a hundred years after cinema was officially "born," it was reinvented on a computer screen.

But this is only one reading. We no longer think of the history of cinema as a linear march towards only one possible language, or as a progression towards more and more accurate verisimilitude. Rather, we have come to see its history as a succession of distinct and equally expressive languages, each with its own aesthetic variables, each new language closing off some

of the possibilities of the previous one—a cultural logic not dissimilar to Kuhn's analysis of scientific paradigms. Similarly, instead of dismissing visual strategies of early multimedia titles as a result of technological limitations, we may want to think of them as an alternative to traditional cinematic illusionism, as a beginning of digital cinema's new language. For the computer/entertainment industry, these strategies represent only a temporary limitation, an annoying drawback that needs to be overcome. This is one important difference between the situation at the end of the nineteenth and the end of the twentieth centuries: if cinema was developing towards the still open horizon of many possibilities, the development of commercial multimedia, and of corresponding computer hardware (compression boards, storage formats such as Digital Video Disk), is driven by a clearly defined goal: the exact duplication of cinematic realism. So if a computer screen, more and more, emulates a cinema screen, this not an accident but a result of conscious planning.

The Loop and Spatial Montage

A number of artists, however, have approached these strategies not as limitations but as a source of new cinematic possibilities. As an example, I will discuss the use of the loop and of montage in Jean-Louis Boissier's *Flora petrinsularis* (1993) and in my own *Little Movies* (1994-).[19]

As already mentioned, all 19th-century pre-cinematic devices, up to Edison's Kinetoscope, were based on short loops. As "the seventh art" began to mature, it banished the loop to the low-art realms of the instructional film, the pornographic peep-show, and the animated cartoon. In contrast, narrative cinema has avoided repetitions; like modern Western fictional forms in general, it put forward a notion of human existence as a linear progression through numerous unique events.

Cinema's birth from a loop form was reenacted at least once during its history. In one of the sequences of the revolutionary Soviet montage film, *A Man with a Movie Camera* (1929), Dziga Vertov shows us a

cameraman standing in the back of a moving automobile. As he is being carried forward by an automobile, he cranks the handle of his camera. A loop, a repetition, created by the circular movement of the handle, gives birth to a progression of events—a very basic narrative which is also quintessentially modern: a camera moving through space recording whatever is in its way. In what seems to be a reference to cinema's primal scene, these shots are intercut with the shots of a moving train. Vertov even re-stages the terror which the Lumières' film supposedly provoked in its audience; he positions his camera right along the train track so the train runs over our point of view a number of times, crushing us again and again.

Early digital movies share the same limitations of storage as 19th-century pre-cinematic devices. This is probably why the loop playback function was built into the QuickTime interface, thus giving it the same weight as the VCR-style "play forward" function. So, in contrast to films and videotapes, QuickTime movies are supposed to be played forward, backward, or looped.

Can the loop be a new narrative form appropriate for the computer age? It is relevant to recall that the loop gave birth not only to cinema but also to computer programming. Programming involves altering the linear flow of data through control structures, such as "if/then" and "repeat/while"; the loop is the most elementary of these control structures. If we strip the computer from its usual interface and follow the execution of a typical computer program, the computer will reveal itself to be another version of Ford's factory, with a loop as its conveyer belt.

Flora petrinsularis realizes some of the possibilities contained in the loop form, suggesting a new temporal aesthetics for digital cinema. The CD-ROM, which is based on Rousseau's *Confessions*, opens with a white screen, containing a numbered list. Clicking on each item leads us to a screen containing two frames, positioned side by side. Both frames show

the same video loop but are slightly offset from each other in time. Thus, the images appearing in the left frame reappear in a moment on the right and vice versa, as though an invisible wave is running through the screen. This wave soon becomes materialized: when we click on one of the frames we are taken to a new screen showing a loop of a rhythmically vibrating water surface. As each mouse click reveals another loop, the viewer becomes an editor, but not in a traditional sense. Rather than constructing a singular narrative sequence and discarding material which is not used, here the viewer brings to the forefront, one by one, numerous layers of looped actions which seem to be taking place all at once, a multitude of separate but co-existing temporalities. The viewer is not cutting but re-shuffling. In a reversal of Vertov's sequence where a loop generated a narrative, the viewer's attempt to create a story in *Flora petrinsularis* leads to a loop.

The loop that structures *Flora petrinsularis* on a number of levels becomes a metaphor for human desire that can never achieve resolution. It can be also read as a comment on cinematic realism. What are the minimal conditions necessary to create the impression of reality? As Boissier demonstrates, in the case of a field of grass, a close-up of a plant or a stream, just a few looped frames become sufficient to produce the illusion of life and of linear time.

Stephen Neale describes how early film demonstrated its authenticity by representing moving nature: "What was lacking [in photographs] was the wind, the very index of real, natural movement. Hence the obsessive contemporary fascination, not just with movement, not just with scale, but also with waves and sea spray, with smoke and spray" (52). What for early cinema was its biggest pride and achievement—a faithful documentation of nature's movement—becomes for Boissier a subject of ironic and melancholic simulation. As the few frames are looped over and over, we see blades of grass shifting slightly back and forth, rhythmically responding to the blow of non-existent wind that is almost approximated by the noise of a computer reading data from a CD-ROM.

Something else is being simulated here as well, perhaps unintentionally. As you watch the CD-ROM, the computer periodically staggers, unable to maintain a consistent data rate. As a result, the images on the screen move in uneven bursts, slowing and speeding up with human-like irregularity. It is as though they are brought to life not by a digital machine but by a human operator, cranking the handle of the Zoetrope a century and a half ago.

Little Movies is my own project about the aesthetics of digital cinema, and a eulogy to its earliest form—QuickTime. Beginning with the well-known supposition that every new medium relies on the content of previous media, Little Movies features key moments in the history of cinema as its logical subject.

As the time passes, the medium becomes the message, that is, the "look" more than the content of any media technology of the past is what lingers on. Little Movies reads digital media of the 1990s from a hypothetical future, foregrounding its basic properties: the pixel, the computer screen, the scanlines. As described earlier, in the early 1890s the public patronized Kinetoscope parlors where peep-hole machines presented them with the latest marvel—tiny moving photographs arranged in short loops. And exactly a hundred years later, we are equally fascinated with tiny QuickTime movies—the precursor of digital cinema still to come. Drawing a parallel between these two historical moments, Little Movies are explicitly modeled after Kinetoscope films: they are also short loops. Like Boissier, I am also interested in exploring alternatives to cinematic montage, in my case replacing its traditional sequential mode with a spatial one. Ford's assembly line relied on the separation of the production process into a set of repetitive, sequential, and simple activities. The same principle made computer programming possible: a computer program breaks a task into a series of elemental operations to be executed one at a time. Cinema followed this principle as well: it replaced all other modes of narration with a sequential narrative, an assembly line of shots that

appear on the screen one at a time. A sequential narrative turned out to be particularly incompatible with a spatialized narrative, which played a prominent role in European visual culture for centuries. From Giotto's fresco cycle at Cappella degli Scrovegni in Padua to Courbet's *A Burial at Ornans*, artists presented a multitude of separate events (which were sometimes even separated by time) within a single composition. In contrast to cinema's narratives, here all the "shots" were accessible to a viewer at one.

Cinema has elaborated complex techniques of montage between different images replacing each other in time; but the possibility of what can be called "spatial montage" between simultaneously co-existing images was not explored. In *Little Movies* I begin to explore this direction in order to open up again the tradition of spatialized narrative suppressed by cinema. In one of the movies I develop the narrative through a number of short video clips, all much smaller in size than the computer screen. This allows me to place a number of clips on the screen at once. Sometimes all the clips are paused, and only one clip is playing; at other times two or three different clips play at once. As the narrative activates different parts of the screen, montage in time gives way to montage in space. Or rather, we can say that montage acquires a new spatial dimension. In addition to montage dimensions already explored by cinema (differences in images' content, composition, movement) we now have a new dimension: the position of the images in space in relation to each other. In addition, since images do not replace each other (as in cinema) but remain on the screen throughout the movie, each new image is juxtaposed not just with one image which preceded it, but with all the other images present on the screen.

The logic of replacement, characteristic of cinema, gives way to the logic of addition and co-existence. Time becomes spatialized, distributed over the surface of the screen. Nothing is forgotten, nothing is erased. Just as we use computers to accumulate endless texts, messages, notes, and data

(and just as a person, going through life, accumulates more and more memories, with the past slowly acquiring more weight than the future), "spatial montage" accumulates events and images as it progresses through its narrative. In contrast to cinema's screen, which primarily functioned as a record of perception, here the computer screen functions as a record of memory.

By making images different in size and by having them appear and disappear in different parts of the screen without any obvious order, I want to present the computer screen as a space of endless possibilities. Rather than being a surface that passively accepts projected images of reality recorded by a camera, the computer screen becomes an active generator of moving-image events. It already contains numerous images and numerous narrative paths; all that remains is to reveal some of them.

Conclusion: From Kino-Eye to Kino-Brush

In the 20th century, cinema has played two roles at once. As a media technology, cinema's role was to capture and to store visible reality. The difficulty of modifying images once they were recorded was exactly what gave cinema its value as a document, assuring its authenticity. The same rigidity of the film image has defined the limits of cinema as I defined it earlier, i.e. the super-genre of live action narrative. Although it includes within itself a variety of styles—the result of the efforts of many directors, designers, and cinematographers—these styles share a strong family resemblance. They are all children of the recording process that uses lenses, regular sampling of time, and photographic media. They are all children of a machine vision.

The mutability of digital data impairs the value of cinematic recordings as documents of reality. In retrospect, we can see that 20th-century cinema's regime of visual realism, the result of automatically recording visual reality, was only an exception, an isolated accident in the history of visual representation which has always involved, and now again involves, the

manual construction of images. Cinema becomes a particular branch of painting—painting in time. No longer a kino-eye, but a kino-brush.[20]

The privileged role played by the manual construction of images in digital cinema is one example of a larger trend: the return of pre-cinematic moving images techniques. Marginalized by the 20th-century institution of liveaction narrative cinema that relegated them to the realms of animation and special effects, these techniques reemerge as the foundation of digital filmmaking. What was supplemental to cinema becomes its norm; what was at its boundaries comes into the center. Digital media return to us the repressed of the cinema.

As the examples discussed in this essay suggest, the directions that were closed off at the turn of the century, when cinema came to dominate the modern moving-image culture, are now again beginning to be explored. Moving-image culture is being redefined once again; cinematic realism is being displaced from being its dominant mode to become only one option among many.

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Notes

This essay was first published in 1996, in the German online magazine *Telepolis*, and has been reprinted, in modified form, in two book publications (see works cited). The version reprinted here, however, has appeared only on Manovich's website.

[1] This is the third in a series of essays on digital cinema. See my "Cinema and Digital Media" and "To Lie and to Act: Potemkin's Villages, Cinema and Telepresence." This essay has greatly benefited

from the suggestions and criticisms of Natalie Bookchin, Peter Lunenfeld, Norman Klein, and Vivian Sobchack. I also would like to acknowledge the pioneering work of Erkki Huhtamo on the connections between early cinema and digital media which stimulated my own interest in this topic. See, for instance, his "Encapsulated Bodies in Motion."

- [2] The remarks were made by Scott Billups, a major figure in bringing Hollywood and Silicon Valley together by way of the American Film Institute's Apple Laboratory and Advanced Technologies Programs in the late 1980s and early 1990s (see Billups; also Perisi).
- [3] Cinema as defined by its "super-genre" of fictional live action film belongs to media arts, which, in contrast to traditional arts, rely on recordings of reality as their basis. Another term which is not as popular as "media arts" but is perhaps more precise is "recording arts." For the use of this term, see Monaco 7.
- [4] The birth of cinema in the 1890s is accompanied by an interesting transformation: while the body as the generator of moving pictures disappears, it simultaneously becomes their new subject. Indeed, one of the key themes of early films produced by Edison is a human body in motion: a man sneezing, the famous bodybuilder Sandow flexing his muscles, an athlete performing somersaults, a woman dancing. Films of boxing matches play a key role in the commercial development of the Kinetoscope. See Musser 72-79; Robinson 44-48.
- [5] This arrangement was previously used in magic lantern projections; it is described in the second edition of Althanasius Kircher's *Ars magna* (1671). See Musser 21-22.
- [6] The extent of this lie is made clear by the films of Andy Warhol from the first part of the 1960s—perhaps the only real attempt to create cinema without a language.
- [7] I have borrowed this definition of special effects from Samuelson.
- [8] The following examples illustrate this disavowal of special effects; other examples can be easily found. The first example is from popular discourse on cinema. A section entitled "Making the Movies" in Leish's

Cinema contains short stories from the history of the movie industry. The heroes of these stories are actors, directors, and producers; special effects artists are mentioned only once. The second example is from an academic source: the authors of the authoritative Aesthetics of Film state that "[t]he goal of our book is to summarize from a synthetic and didactic perspective the diverse theoretical attempts at examining these empirical notions [terms from the lexicon of film technicians], including ideas like frame vs. shot, terms from production crews' vocabularies, the notion of identification produced by critical vocabulary, etc." (Aumont et al. 7). The fact that the text never mentions special effects techniques reflects the general lack of any historical or theoretical interest in the topic by film scholars. Bordwell and Thompson's Film Art: An Introduction, which is used as a standard textbook in undergraduate film classes is a little better as it devotes three of its five hundred pages to special effects. Finally, a relevant piece of statistics: a library at the University of California, San Diego contains 4273 titles catalogued under the subject "motion pictures" and only 16 tiles under "special effects cinematography." For the few important works addressing the larger cultural significance of special effects by film theoreticians see Sobchack; Bukatman, Norman Klein is currently working on a history of special effects environments.

- [9] For a discussion of the subsumption of the photographic to the graphic, see Lunenfeld.
- [10] For a complete list of people at ILM who worked on this film, see the SIGGRAPH '94 Visual Proceedings (Petrovich et al. 19).
- [11] In this respect 1995 can be called the last year of digital media. At the 1995 National Association of Broadcasters convention Avid showed a working model of a digital video camera which records not on a video cassette but directly onto a hard drive. Once digital cameras become widely used, we will no longer have any reason to talk about digital media since the process of digitization will be eliminated.
- [12] Here is another, even more radical definition: digital film = f(x, y, t). This definition would be greeted with joy by the proponents of

abstract animation. Since the computer breaks down every frame into pixels, a complete film can be defined as a function which, given the horizontal, vertical, and time location of each pixel, returns its color. This is actually how a computer represents a film, a representation which has a surprising affinity with a certain well-known avant-garde vision of cinema! For a computer, a film is an abstract arrangement of colors changing in time, rather than something structured by "shots," "narrative," "actors," and so on.

[13] The full advantage of mapping time into 2-D space, already present in Edison's first cinema apparatus, is now realized: one can modify events in time by literally painting on a sequence of frames, treating them as a single image.

[14] See "Industrial Light & Magic alters history with MATADOR," promotional material by Parallax Software, SIGGRAPH '95 Conference, Los Angeles, August 1995.

[15] The reader who followed my analysis of the new possibilities of digital cinema may wonder why I have stressed the parallels between digital cinema and the pre-cinematic techniques of the 19th century but did not mention 20th-century avant-garde filmmaking. Did not the avant-garde filmmakers already explore many of these new possibilities? To take the notion of cinema as painting, Len Lye, one of the pioneers of abstract animation, was painting directly on film as early as 1935; he was followed by Norman McLaren and Stan Brakhage, the latter extensively covering shot footage with dots, scratches, splattered paint, smears, and lines in an attempt to turn his films into equivalents of Abstract Expressionist painting. More generally, one of the major impulses in all of avant-garde filmmaking, from Léger to Godard, was to combine the cinematic, the painterly, and the graphic—by using liveaction footage and animation within one film or even a single frame, by altering this footage in a variety of ways, or by juxtaposing printed texts and filmed images.

I explore the notion that the avant-garde anticipated digital aesthetics in my "Engineering Vision: from Constructivism to the Computer";

here I would like to bring up one point particularly relevant for this essay. When the avant-garde filmmakers collaged multiple images within a single frame, or painted and scratched film, or revolted against the indexical identity of cinema in other ways, they were working against "normal" filmmaking procedures and the intended uses of film technology. (Film stock was not designed to be painted on.) Thus they operated on the periphery of commercial cinema not only aesthetically but also technically.

One general effect of the digital revolution is that avant-garde aesthetic strategies became embedded in the commands and interface metaphors of computer software. In short, the avant-garde became materialized in a computer. Digital cinema technology is a case in point. The avantgarde strategy of collage reemerged as a "cut and paste" command, the most basic operation one can perform on digital data. The idea of painting on film became embedded in paint functions of film-editing software. The avant-garde move to combine animation, printed texts, and live-action footage is repeated in the convergence of animation, title generation, paint, compositing, and editing systems into single all-in-one packages. Finally, another move to combine a number of film images together within one frame (for instance, in Léger's 1924 Ballet Mécanique or in Vertov's 1929 A Man with a Movie Camera) also become legitimized by technology, since all editing software, including Photoshop, Premiere, After Effects, Flame, and Cineon, by default assumes that a digital image consists of a number of separate image layers. All in all, what used to be exceptions for traditional cinema became the normal, intended techniques of digital filmmaking, embedded in technology design itself. For the experiments in painting on film by Lye, McLaren, and Brakhage, see Russett and Starr 65-71; 117-128; also Sitney 230; 136-227.

[16] Reporting in the December 1995 issue of *Wired*, Paula Perisi writes: "A decade ago, only an intrepid few, led by George Lucas's Industrial Light and Magic, were doing high-quality digital work. Now computer imaging is considered an indispensable production tool for all

films, from the smallest drama to the largest visual extravaganza" (144). [17] Therefore, one way in which the fantastic is justified in contemporary Hollywood cinema is through the introduction of various non-human characters such as aliens, mutants, and robots. We never notice the pure arbitrariness of their colorful and mutating bodies, the beams of energy emulating from their eyes, the whirlpools of particles emulating from their wings, because they are made perceptually consistent with the set, i.e. they look like something which could have existed in a three-dimensional space and therefore could have been photographed.

[18] This 28-minute film, made in 1962, is composed of still frames narrativized in time, and concludes with a very short live action sequence. For documentation, see Marker.

[19] *Flora petrinsularis* is included in the compilation CD-ROM *Artintact 1. Little Movies* are available online at http://jupiter.ucsd.edu/~manovich/little-movies.

[20] It was Dziga Vertov who coined the term "kino-eye" in the 1920s to describe the cinematic apparatus's ability "to record and organize the individual characteristics of life's phenomena into a whole, an essence, a conclusion" (47). For Vertov, the presentation of film "facts," based as they were on materialist evidence, defined the very nature of the cinema.



1.2 Post-Continuity: An Introduction

BY STEVEN SHAVIRO

In my 2010 book *Post-Cinematic Affect*, I coined the term "post-continuity." I used this term to describe a style of filmmaking that has become quite common in action films of the past decade or so. In what I call the post-continuity style, "a preoccupation with immediate effects trumps any concern for broader continuity—whether on the immediate shot-by-shot level, or on that of the overall narrative" (123).

In recent action blockbusters by the likes of Michael Bay and Tony Scott, there no longer seems to be any concern for delineating the geography of action, by clearly anchoring it in time and space. Instead, gunfights, martial arts battles, and car chases are rendered through sequences involving shaky handheld cameras, extreme or even impossible camera angles, and much composited digital material—all stitched together with rapid cuts, frequently involving deliberately mismatched shots. The sequence becomes a jagged collage of fragments of explosions, crashes, physical lunges, and violently accelerated motions. There is no sense of spatiotemporal continuity; all that matters is delivering a continual series of shocks to the audience.

This new action-movie style has not been unnoticed by film critics and theorists. The first writer to come to grips with this new style, as far as

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I know, was Bruce Reid in the Seattle weekly newspaper *The Stranger*. More than a decade ago (2000), Reid wrote, with tongue not quite in cheek, of Bay's "indefensible" vision:

"I had to train everyone to see the world like I see the world," Bay states in the DVD commentary to *Armageddon*. That world is apparently one of disorienting edits, mindless whip pans, and rack focuses that leave the background in a blur to reveal the barrel of a gun. Colors are treated with equal exaggeration: Entire scenes are lit in deep blue or green with no discernible source for the reflection. It is an anarchic, irresponsible vision, despite all the macho, patriotic chest-thumping.

Reid went on to slyly suggest that, despite being a "crushingly untalented" hack, Bay nonetheless shared with avant-garde filmmakers like Stan Brakhage and Bruce Conner "the same headlong thrill of the moment, the same refusal to dawdle over or organize their material."

Much more recently (2008), David Bordwell has complained on his <u>blog</u> of the way that, in recent years,

Hollywood action scenes became "impressionistic," rendering a combat or pursuit as a blurred confusion. We got a flurry of cuts calibrated not in relation to each other or to the action, but instead suggesting a vast busyness. Here camerawork and editing didn't serve the specificity of the action but overwhelmed, even buried it. ("A Glance")

More recently still, in the summer of 2011, Matthias Stork gave a well-nigh definitive account of these changes in action editing in his two-part video essay "Chaos Cinema," which led to a storm of commentary on the Internet. (A third part of the video essay has since been added, in which Stork replies to many of his critics). Stork directly addresses the transformation from action sequences (like those of Sam Peckinpah,

John Woo, and John Frankenheimer) which offered the viewer a coherent sense of action in space and time, to the sequences in recent action films that no longer do this. Stork says:

Chaos cinema apes the illiteracy of the modern movie trailer. It consists of a barrage of high-voltage scenes. Every single frame runs on adrenaline. Every shot feels like the hysterical climax of a scene which an earlier movie might have spent several minutes building toward. Chaos cinema is a never-ending crescendo of flair and spectacle. It's a shotgun aesthetic, firing a wide swath of sensationalistic technique that tears the old classical filmmaking style to bits. Directors who work in this mode aren't interested in spatial clarity. It doesn't matter where you are, and it barely matters if you know what's happening onscreen. The new action films are fast, florid, volatile audiovisual war zones.

Stork's video essay is extremely interesting and useful. He really makes you *see* how action editing has changed over the course of the past decade or so. I have been showing it to my students in order to explain how editing styles have changed.

But I can't help feeling that Stork's focus is too narrow, and that his judgments—about the badness, or "illiteracy," of "chaos cinema" in comparison to the older action-editing styles of Peckinpah, Woo, et al.—are too simplistic and unequivocal. Stork deliberately adopts a provocative and polemical tone, in order to get his point across. But he only talks negatively about the new style; he points out what it fails to do, without giving enough credit for the positive things that it actually does. To my mind, it is inadequate simply to say that the new action films are merely vapid and sensationalistic. Ironically, Stork's dismissal of action films today sounds rather like the way in which, in years past, Hollywood fare in general was disparaged in comparison to self-conscious art films.

When I showed "Chaos Cinema" Part 1 to my Introduction to Film class

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earlier this semester, the students agreed that they could really see the stylistic differences that the video put on display. But many of them also said that, having grown up with "chaos cinema," they enjoyed it and weren't bothered by the failings of which Stork accused it. New forms and new technical devices imply new possibilities of expression; I am interested in trying to work out what these new possibilities might be. This will involve picking up on Bruce Reid's not-entirely-facetious suggestion of ties between the most crassly commercial recent filmmaking and the historical projects of the avant-garde.

In the third part of his "Chaos Cinema" video essay, responding to criticisms by Scott Nye, Stork grudgingly admits that Tony Scott's *Domino* (2005)—surely one of the most extravagant examples of post-continuity style—is not devoid of aesthetic value. But Stork complains that, because of its radical "abstraction," *Domino* doesn't work in a genre context—it isn't really an action film. I note, however, that Bruce Reid had already credited Michael Bay with pushing filmmaking "to the brink of abstraction," and yet making movies that mass audiences love. Stork complains that *Domino* is an avant-garde experiment; the avant-garde, he says, is "a hermetically sealed environment," with "different audiences, reception spheres and ambitions" than the commercial genre film. But I am rather inclined to agree with Reid; the mass vs. avant-garde distinction just doesn't hold any longer. After all, there isn't a technique used by Jean-Luc Godard that hasn't become a mainstay of television and Internet commercials.

One way that we can start to work out the potentialities of post-continuity styles is by looking at their genealogy. Stork notes, as I also do in my book, that what he calls "chaos cinema" is an offshoot, or an extreme development, of what David Bordwell calls *intensified continuity*. Bordwell demonstrates how, starting with the New Hollywood of the 1970s, commercial filmmaking in America and elsewhere has increasingly involved "more rapid editing . . . bipolar extremes of lens lengths . . . more close framings in dialogue scenes . . . [and] a free-ranging camera"

("Intensified Continuity" 16-21). But although this makes for quite a different style from that of classic Hollywood, Bordwell does not see it as a truly radical shift: "[f]ar from rejecting traditional continuity in the name of fragmentation and incoherence," he says, "the new style amounts to an *intensification* of established techniques" (16). It still tells stories in the classical manner—only more so, with a vengeance.

I think that Stork and I are both arguing that this is no longer the case with the 21st-century developments of action cinema. (And Bordwell himself might even agree with this, as witness the blog posting I quoted earlier ["A Glance"]). In my book, I suggested that intensified continuity has "jumped the shark," and turned into something else entirely (*Post-Cinematic Affect* 123). We might call this, in the old Hegelian-Marxist style, a dialectical reversal involving the transformation of quantity into quality. Or we might see it as an instance of Marshall McLuhan's observation that every new medium retrieves an earlier, supposedly "outdated" medium; and then, at its limit, reverses into its opposite. In the 21st century, the very expansion of the techniques of intensified continuity, especially in action films and action sequences, has led to a situation where continuity itself has been fractured, devalued, fragmented, and reduced to incoherence.

That is to say, the very techniques that were developed in order to "intensify" cinematic continuity, have ended up by undermining it. In using the word *continuity*, I am first of all referring to continuity editing as the basic orienting structure of Hollywood narrative cinema. But I am also pointing toward a larger sense of the word, in which it implies the homogeneity of space and time, and the coherent organization of narrative. It is continuity in this broader sense, as well as in the narrower one, which has broken down in "chaos cinema."

Michael Bay himself can be quoted on this point: "when you get hung up on continuity," he says, "you can't keep the pace and price down. Most people simply consume a movie and they are not even aware of these

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errors" (qtd. in Shaviro, *Post-Cinematic Affect* 119). It's noteworthy that Bay seems equally concerned with "pace" and "price," and that he sees his movies as objects which the audience will "simply consume." As far as Bay is concerned, the frequent continuity violations discovered in his films by hostile critics are not "errors" at all; they are just nitpicky details that only matter to those few of us who analyze films for a living. It's easy enough to ridicule this sort of attitude, of course; and I have done so as much as anybody. But beyond ridicule, the crucial point is that the classical values of continuity simply don't matter to certain contemporary filmmakers any more.

This is why I prefer my own term, *post-continuity*, to Stork's "chaos cinema." Film today is post-continuity, just as our culture in general is postmodern—or, even better, post-literate. Even if we've discovered today that "we have never been modern," this discovery is itself a product of modernity. And it's not that we don't read anymore, but rather that reading itself has been recontextualized, and subsumed within a broader multimedia/audiovisual environment. In the same way, it is not that continuity rules are always being violated or ignored; nor are the films made in their absence simply chaotic. Rather, we are in a "post-continuity" situation when continuity *has ceased to be important*—or at least has ceased to be as important as it used to be.

You can still find lots of moments in post-continuity films in which the continuity editing rules are being carefully followed, as well as moments in which they are thrown out the window. And it's also true that, as Stork notes, continuity cues that are not provided visually are instead provided subliminally on the soundtrack. (The role of sound in post-continuity cinema is something that I will need to address elsewhere). In any case, however, the crucial point for post-continuity films is that the violation of continuity rules isn't foregrounded, and isn't in itself significant. This is in sharp contrast to the ways that jump cuts, directional mismatches, and other violations of continuity rules were at the center of a film like

Godard's *Breathless* more than half a century ago. Today, neither the use of continuity rules nor their violation is at the center of the audience's experience any longer.

In other words, it is not that continuity rules—whether in their classical or "intensified" form—have been abandoned, nor even that they are concertedly violated. Rather, although these rules continue to function, more or less, they have lost their systematicity; and—even more—they have lost their centrality and importance. And this marks the limit of Bordwell's claim, in his "Intensified Continuity" essay, that even the flamboyant camera movements and ostentatious edits and special effects of the "intensified" style still serve the same ultimate goal as classical narration: putting the audience in the position of "comprehending the story" and "surrendering to the story's expressive undertow" (25).

Continuity structures, however, are not just about articulating narrative. Even more importantly, perhaps, they work to provide a certain sense of spatial orientation, and to regularize the flow of time. Where Bordwell sees the establishment of spatiotemporal relations as crucial to the articulation of narrative, I am inclined to think that the actual situation is the reverse. Even in classical narrative films, following the story is not important in itself. It is just another one of the ways in which we are led into the spatiotemporal matrix of the film; for it is through this matrix that we experience the film on multiple sensorial and affective levels.

I am making a rather large theoretical claim here, one that I will need to justify, and further develop, elsewhere. But I think it has major consequences for the ways in which we understand post-continuity.

In post-continuity films, unlike classical ones, continuity rules are used opportunistically and occasionally, rather than structurally and pervasively. Narrative is not abandoned, but it is articulated in a space and time that are no longer classical. For space and time themselves have become relativized or unhinged. In this sense, Bordwell is wrong to claim

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that "in representing space, time, and narrative relations (such as causal connections and parallels) today's films generally adhere to the principles of classical filmmaking" ("Intensified Continuity" 16).

Part of what's at stake here is the relation between style and significance. Of course, we know that it is impossible simply to link a particular technique, or stylistic device, with a fixed meaning. This is why Bordwell rejects the sort of theorization that I am pursuing here; it is also, I think, why Stork can only say of the "chaos cinema" style that it is poorly made. But against this, I'd like to cite <u>some remarks</u> by Adrian Martin. Martin begins by giving Bordwell his due:

In his droll 1989 book *Making Meaning*, the American scholar David Bordwell makes fun of a standard procedure in discussing film. Let us take shot/reverse shot cutting, proposes Bordwell. Critics like to say: if we see, as part of the same scene, one person alone in a shot, and then another person alone in another shot, it means that the film intends us to see them as emotionally far apart, separated, disconnected. But (Bordwell continues) it can also be taken to mean the exact opposite: the rhythm of the cutting, the similarity of the positioning of the figures in the frame—all that signals a union, a oneness, a deep connection between these two people! Bordwell repeats the same mock-demonstration with camera movement: if a panning or tracking shot takes us from one character, past an expanse of space, to another character, critics will unfailingly say either that this means they are secretly connected, or (on the contrary) that there is a gulf between them.

However, Martin suggests that there is more to it than Bordwell is able to properly recognize; and in this, he moves from Bordwell to Deleuze:

Maybe we are not asking the right question. It might be enough to answer Bordwell by pointing out that such meanings, of interconnectedness or disconnectedness, are not just the handy hallucination of the critic; and that each film, in creating its own dramatic context, will subtly or unsubtly instruct us on how to read the emotional and thematic significance of its stylistic devices. OK, argument settled—at least within the framework of an essentially classical, organic aesthetic. But there is another way to attack this matter, and it is more philosophical. Let us turn to Gilles Deleuze's meditation on the films of Kenji Mizoguchi in his *Cinema 1: The Movement-Image*:

this seems to us to be the essential element in what have been called the extravagant camera-movements in Mizoguchi: the sequence-shot ensures a sort of parallelism of vectors with different orientations and thus constitutes a connexion of heterogeneous fragments of space, thus giving a very special homogeneity to the space thus constituted. . . . It is not the line which unites into a whole, but the one which connects or links up the heterogeneous elements, while keeping them heterogeneous. . . . Lines of the universe have both a physics—which reaches its peak in the sequence-shot and the tracking-shot—and a metaphysics, constituted by Mizoguchi's themes. (194)

What a concept to boggle Bordwell's mind: the camera movement which is (to paraphrase Deleuze) a line which connects what is disconnected, while keeping it disconnected! Yet this is precisely the complexity of what we are given to see, as spectators, in a film by Mizoguchi or so many other filmmakers: this ambiguous or ambivalent interplay of what connects or disconnects, links or unlinks, the people and objects and elements of the world.

Without necessarily endorsing Deleuze's particular mode of analysis, I'd

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like to suggest that Martin gives us the way in which we can indeed assign some broader significance to the larger phenomenon of post-continuity: to see what it connects and what it disconnects. In classical continuity styles, space is a fixed and rigid container, which remains the same no matter what goes on in the narrative; and time flows linearly, and at a uniform rate, even when the film's chronology is scrambled by flashbacks. But in postcontinuity films, this is not necessarily the case. We enter into the spacetime of modern physics; or better, into the "space of flows," and the time of microintervals and speed-of-light transformations, that are characteristic of globalized, high-tech financial capital. Thus in Post-Cinematic Affect, reflecting on Neveldine and Taylor's Gamer, I tried to look at the ways that the post-continuity action style is expressive of, as well as being embedded within, the delirium of globalized financial capitalism, with its relentless processes of accumulation, its fragmentation of older forms of subjectivity, its multiplication of technologies for controlling perception and feeling on the most intimate level, and its play of both embodiment and disembodiment (93-130).

I think, however, that there is much more to be said about the *aesthetic sensibility* of post-continuity styles, and the ways that this sensibility is related to other social, psychological, and technological forces. Post-continuity stylistics are expressive both of technological changes (i.e. the rise of digital and Internet-based media) and of more general social, economic, and political conditions (i.e. globalized neoliberal capitalism, and the intensified financialization associated with it). Like any other stylistic norm, post-continuity involves films of the greatest diversity in terms of their interests, commitments, and aesthetic values. What unites, them, however, is not just a bunch of techniques and formal tics, but a kind of shared *episteme* (Michel Foucault) or *structure offeeling* (Raymond Williams). It is this larger structure that I would like to illuminate further: to work out how contemporary film styles are both expressive of, and productively contributory to, these new formations. By paying sustained attention to post-continuity styles, I am at least trying to work toward a *critical aesthetics* of contemporary culture.

I would like to conclude by suggesting that the notion of "post-continuity" may well have a broader cultural scope, rather than just being restricted to what Stork calls "the woozy camera and A.D.D. editing pattern of contemporary [action] releases" ("Chaos Cinema, Part 2"). Consider, for instance, the following:

- On his blog, the cinematographer John Bailey interviewed Stork and commented extensively on the ideas from his video essay. Bailey proposes that the real hallmark of "chaos cinema" is "spatial confusion," even when this is accomplished without "eruptive cutting." He therefore suggests that even films that "embrace the long take", and mimic the hypercontinuity of first-person computer games, may also partake of what I am calling post-continuity. Gus van Sant's *Gerry*, for instance, accomplishes "such a complete spatial dislocation that it slowly, inexorably becomes the heart of the film." Bailey's observations are quite congruent with work that I have been doing on how space time relations, as well as audiovisual relations, are radically changed by the new digital technologies (see my essay "Splitting the Atom," in this volume).
- Dogme95-influenced handheld cinematography also produces a post-continuity style. Excessive camera movements, reframings without functional justification, and rough, jumpy editing lead to a vertiginous sense of dislocation. Writing about Lars Von Trier's *Melancholia* on his Twitter feed, Adrian Martin (@ AdrianMartin25) complains: "I tend to dislike almost every stylistic decision made by Lars von Trier. Other things can be interesting, but the style! Where is the craft in this MELANCHOLIA thing? Some of the actors are great, but nobody is being directed, it's an amateur movie!!" Now, I value this film quite highly, as Martin evidently does not. But I think that his discomfort bears witness to something that is genuinely true of the film: its indifference to the traditional aesthetics of continuity, and the sorts of meanings

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- that are produced by such an aesthetic. My own argument is that this is altogether appropriate to a film that rejects modernity altogether, and envisions the end of the world. (I try to discuss the *positive* effects of Von Trier's post-continuity style in my essay "*Melancholia*, or the Romantic Anti-Sublime").
- I think that post-continuity is also at work in the minimalism and stasis of such recent low-budget horror films as the Paranormal Activity series. These films are evidently not dislocated, as they are shot, and take place, in single locations. In each film, the point of view is restricted to the rooms and grounds of one single-family home. But these films are entirely shot with home-video and home-computing equipment; and the machines that capture all the footage themselves appear within the diegesis. This means that everything comes either from jerky handheld video cameras, or else from the fixed locations of laptop cams and surveillance cams. As a result, the patterns of traditional continuity editing are completely missing: there are no shot-reverse shot patterns, and no cuts between establishing shots and close-ups. Instead, we get a point of view that is impersonal, mechanized, and effectively from nowhere. Nicholas Rombes argues that the Paranormal Activity films are in fact avant-garde works, due to their use of fixed or mechanically-controlled cameras. (For further discussion of this, see the Critical Roundtable on these films, featuring me, Rombes, and Julia Leyda, and moderated by Therese Grisham, in a recent issue of La Furia Umana [reprinted in this volume]).

Although I have yet to explore any of these more fully, it strikes me that the following might also be considered as instances of post-continuity:

- The casual, throwaway style of "mumblecore" slice-of-life films.
- The widespread integration of graphics, sound effects, and mixtures of footage emulating video games, that we find in a film like *Scott Pilgrim*.
- The promiscuous mixtures of different styles of footage that we

find in such films as Oliver Stone's *Natural Born Killers* and Brian De Palma's *Redacted*.

In all of these cases, the films do not altogether dispense with the concerns of classical continuity; but they move "beyond" it or apart from it, so that their energies and their investments point elsewhere. What is common to all these styles is that they are no longer centered upon classical continuity, or even the intensification of continuity identified by Bordwell. We need to develop new ways of thinking about the formal strategies, as well as the semantic contents, of all these varieties of post-continuity films.

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Notes

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1.3 DVDs, Video Games, and the Cinema of Interactions

BY RICHARD GRUSIN

1

On May 16, 2002, my son Sam and I attended one of the opening-day digital screenings of *Star Wars: Episode II—Attack of the Clones* at the Star Southfield Theatre, the only theater in the Detroit metropolitan area (and one of only two in Michigan) equipped to project the film in the digital format in which George Lucas wanted us to see it. In the intervening years most people have probably forgotten the hype that attended the film's release. The digital production, distribution, and screening of *Attack of the Clones* was heralded in the popular media as marking a watershed moment in the history of film, "a milestone of cinema technology" along the lines of *The Jazz Singer* (McKernan). Some industry executives claimed that because *Attack of the Clones* was produced entirely without the use of celluloid film it "heralded the future of Hollywood and the death of actual 'film' making" (Healey and Huffstutter).

Elsewhere I have discussed the significance of the digital production and screening of *Attack of the Clones* in relation to the early history of cinema ("Remediation"). Rather than considering the possibility of digital cinema as constituting a radical break or rupture with the cinema of the twentieth

century, we need to understand how the emerging forms and practices of digital media provide us with a perspective from which the entire history of cinema up to this point can be seen as an extension of "early cinema." Borrowing from the idea that electronic textuality marks what has been called the late age of print, I argue that digital cinema marks us as inhabiting the late age of early cinema (or perhaps phrased differently, the late age of celluloid film). In describing the current cinematic moment in this fashion, I do not mean to suggest that film will disappear, but that it will continue increasingly to be engaged with the social, technological, and aesthetic forms and practices of digital media. This engagement will be marked not (as many digital enthusiasts contend) by the emergence of a distinctively new digital medium (and the concomitant abandonment of the technologically outmoded medium of celluloid film), but rather by the emergence of multiply networked, distributed forms of cinematic production and exhibition. Indeed I am convinced that we already find ourselves with a digital cinema—not as a distinctively new medium but as a hybrid network of media forms and practices, what the title of my paper calls a "cinema of interactions."

My title alludes to Tom Gunning's paradigmatic conception of a "cinema of attractions," which rewrites one of the most powerful origin myths of early cinematic history—the received account of naive spectators who are thought to have mistaken the filmed image of a train for a real train and thus to have fled from the theater so that they would not be run over. Gunning reinterprets this narrative by suggesting that insofar as shock or surprise did attend upon the earliest exhibition of motion pictures, it was not because naive spectators mistook a filmed image for reality. Rather he argues that viewers of early cinema participated in an "aesthetic of astonishment," produced by the contradiction between their conscious understanding that they were watching a moving picture in a theater and their surprise or astonishment at perceiving an image that appeared to be—that affected them as if it were—real. Thus for Gunning the cinema of attractions produces an aesthetic of astonishment that results from the

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discontinuity between what spectators knew to be true and what they felt to be true. This aesthetic of astonishment involves a contradictory response to the ontological status of moving photographic images, a response which tries to incorporate two contradictory beliefs or states of mind—the knowledge that one is sitting in a public theater watching an exhibition of a new motion picture technology and the feeling that what one is seeing on screen looks real.

In characterizing our current historical moment as entailing a digital cinema of interactions, I want to suggest that at the onset of the twentyfirst century, as motion pictures are increasingly moving away from a photographic ontology of the real towards a post-photographic digital ontology, cinema is defined not as the photographic mediation of an unmediated world that exists prior to and independent of its being filmed but rather as the remediation of an already mediated world distributed among a network of other digital remediations. I introduce the concept of a cinema of interactions to challenge one of the most powerful myths of contemporary digital culture, paradigmatically articulated in William Gibson's novel Neuromancer—the myth, namely, that digital media create an alternative reality or "cyberspace," an immaterial simulacrum of the "real" world inhabited by our bodies. One of the most compelling cinematic remediations of this myth can be found in the first film of the Matrix trilogy, where the film's protagonist and its viewers soon discover that the cinematic world in which the film opens is not the "real" world, but the world of the matrix—a massively multi-user computer program experienced by humans, whose immobile bodies inhabit a world ruled by artificially intelligent machines that are using humans as batteries hooked up to generate power, enabling these machines to rule the world. In setting forth the fantasy of humans inhabiting an illusory world, a shared, consensual hallucination created by a computer program, *The Matrix* (and the myth of cyberspace it participates in) fails to come to terms with the most interesting implications of digital media for contemporary cinema. What is truly significant about our current moment of digital media is

not the Baudrillardian suggestion that reality doesn't exist, that the real is only a simulation, but something very different: the way in which we customarily act in ways that suggest that digital media, computer programs, or video games, *are* real. The digital cinema of interactions entails what I think of as an aesthetic of the animate, in which spectators or users feel or act as if the inanimate is animate, in which we simultaneously know that the mediated or the programmed are inanimate even while we behave as if they were animate.

This cinema of interactions (and its concomitant aesthetic) was very much at play in *The Matrix Reloaded*, the long-awaited second film of the Matrix trilogy, which was released on May 15, 2003, one day short of a full year after the release of *Episode II* of Star Wars. As we had with *Attack of the* Clones the previous year, my son Sam and I saw The Matrix Reloaded in the first week both of its theatrical release in May and of its IMAX release in June. Screened in metro Detroit only at the Henry Ford IMAX Theatre in Dearborn, Michigan, The Matrix Reloaded was the third feature film to be digitally re-mastered for IMAX (following Apollo 13 and Attack of the Clones). Due to improved re-mastering technology, however, it was the first to be done without cuts. Compared with the digital production and screening of Attack of the Clones, the IMAX screening of Matrix Reloaded received little media hype. Nor is it my intent in invoking the IMAX Reloaded to make hyperbolic claims about such digitally remastered projections as marking the future of Hollywood film (although Sam and I both agreed that the scenes in the underground world of Zion and the action sequences were much more impressive in IMAX than they were in 70mm). Rather I invoke the IMAX Reloaded because (along with its multiple remediations as a video game, an anime DVD, and in various forms on the Web) it is one element of the distributed cinematic artifact created by the Wachowskis and producer Joel Silver.

In this chapter, I focus on the idea of digital cinema at the present historical moment, to look at the questions of convergence and hybridity in our contemporary digital cinema of interactions. Industry and media discussions of digital cinema have tended to focus on the digital production and screening of conventional films like Attack of the Clones, or on the threat posed by DVDs to theatrical movie-going, while academic discussions of interactive cinema often indulge in the desire for a radically new cinema along the lines of hypertext fiction and other new media art. I want to depart from both of these portrayals of digital cinema, to suggest that by looking at the relation between cinema and new media, we can see that we already find ourselves in a digital cinema of interactions. My argument has both a techno-cultural and an aesthetic dimension. I will first take up the social and economic distribution of cinema across a number of different digital media; I will then discuss some examples of how this cinema of interactions has manifested itself aesthetically and formally in a couple of recent DVDs, concluding with a brief discussion of the social, economic, and aesthetic impications of Peter Greenaway's ambitious, hyper-mediated Tulse Luper project.

2

Over the past decade and more, film scholars have begun to find affinities between the viewing conditions or practices of contemporary film and media and those of early cinema, between what Miriam Hansen (among others) characterizes as "preclassical and contemporary modes of film consumption" (139). Such a characterization gets at some of what I am interested in elucidating in thinking about cinema at the current historical moment as a digital cinema of interactions. Like new digital media, cinema from its inception involved itself in refashioning or remediating earlier media. The construction of spectatorship relied upon such earlier technologies of representation as magic lantern shows or panoramas. In depicting realistic and/or exotic subjects, like war, travel, natural disasters, or phantom rides, early cinema remediated such documentary and monstrative media as photography and stereography. And as early cinema began to employ rudimentary narratives, it engaged in the remediation of plays, novels, and other familiar stories like the Passion.

The public presentation of early cinema, like the private and public presentation of new digital media, similarly remediated existing forms of entertainment. Hansen's reminder that early cinema remediated the format of early commercial entertainments like vaudeville and traveling shows can also serve to alert us to the fact that in contemporary culture early digital media similarly borrow from and insert themselves into such commercial entertainments as sporting events, theme parks, movies, and television.

Hansen avers that the principles that early cinema borrowed from these commercial entertainments "preserved a perceptual continuum between the space/time of the theater and the illusionist world on screen, as opposed to the classical segregation of screen and theater space with its regime of absence and presence and its discipline of silence, spellbound passivity, and perceptual isolation" (38-39). We can see an analogous perceptual continuum in today's digital cinema of interactions between the film screened in the theater and its multiple remediations in DVDs, video games, trailers, web sites, and so forth. Just as the viewing conditions of early cinema did not enforce the separation of screen and spectator that emerged in so-called classical cinema, so early digital cinema breaks down the separation of the film-screened-in-theater from its multiple remediations in videotape, DVD, or television rebroadcasting. In today's cinema of interactions the photographic ontology of classical cinema gives way to a digital ontology where the future, not the past, is the object of mediation—where the photographic basis of film and its remediation of the past gives way to the premediation of the future more characteristic of video games and other digital mediation and networking.[1] This logic of premediation imagines an interactive spectator in a domestic or other social space rather than an immobilized spectator in the darkened dream-space of apparatus or gaze theory. The divide between screen and audience in classical Hollywood cinema gives way to a continuum between the digital artifact and the viewer's/user's interaction. In the late age of early cinema we find ourselves at a historical moment when we

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can no longer consider the film screened in the theater as the complete experience of the film. The conception of film as a distinctive medium is now giving way both conceptually and in practice to film as a distributed form of mediation, which breaks with classical cinema in several respects. In some cases it remediates elements of early cinema; in others it breaks with both early cinema and classical cinema. In our current cinema of interactions the experience of the film in the theater is part of a more distributed aesthetic or cinematic experience. Our experience of almost any new film now inevitably includes the DVD (or often multiple editions of DVDs) complete with trailers, deleted scenes, story-boards, pop-up commentaries, hyperlinked mini-videos, director's and actor's commentaries, and so forth.

One of the most compelling examples of the way in which new digital media have participated in fundamental changes in mainstream contemporary cinema is the fact that the DVD release of a feature film is no longer seen as an afterthought, a second-order distribution phenomenon aimed at circulating the original film to a wider audience. Today the production, design, and distribution of DVD versions of feature films are part of the original contractual (and artistic) intention of these films. Consequently it is now customarily the case that the conceptualization of the DVD precedes the commencement of production of the film itself; indeed in some cases production of the DVD begins even before the production of the film (as was reported to be true of Spielberg's Minority Report). While such pre-production contractual considerations have for some time now been standard for other forms of post-release repurposing (e.g., international, videotape, and television rebroadcast rights or marketing and other commercial product tie-ins), I want to suggest that the remediation of theatrical releases in DVD and increasingly other digital formats marks a fundamental change in the aesthetic status of the cinematic artifact. This digital cinema of interactions is not a pure, new digital, interactive medium but a distributed form of cinema, which demands we rethink the cinema as object of study and analysis, to recognize that a film does

not end after its closing credits, but rather continues beyond the theater to the DVD, the video game, the soundtrack, the websites, and so forth. Such a change is not simply a change in the technological basis of cinema but rather a change that is distributed across practices of production, screening, exhibition, distribution, interaction, use, and spectatorship. Recent industry and academic hype for digital cinema has focused on a notion of medium specificity that was over-dependent on the technological base of the medium. While it is true that the distributed digital cinema of interactions manifests itself through new digital technologies, the "new medium" or perhaps the new social logic of the medium, is a kind of hybrid alliance of digital technology, social use, aesthetic practice, cultures of spectatorship, and economic exchange. The Matrix franchise is an important example of this new hybrid medium—with the IMAX Reloaded, the Animatrix DVD (and its related web versions), the Enter the Matrix video game for Xbox, Nintendo GameCube, PlayStation 2, and Windows PC, and a multi-player online game. All of these artifacts simultaneously distribute "The Matrix" across different media practices and attempt to acquire for the Matrix a cinema audience that extends across any number of different media times and places, an audience not limited to the attendance of a feature film at a public screening in a suburban multiplex.

In this sense, then, distributed cinema is like other distributed media, part of a logic of remediation in which media not only remediate each other but increasingly collaborate with other media technologies, practices, and formations. At our current historical moment there is almost no sense of a medium that exists in itself, but rather only media that exist in relation to or in collaboration with other media. One might ask, if a medium only exists insofar as it is distributed across other media technologies, practices, and social formations, then what exactly is "television" or the "Internet" or "film"? My answer would be that television or the Internet or film should be understood as networks or systems of technologies, practices, and social formations that are generally stable for the most

part, but that in the process of circulation and exchange tend to fluctuate or perhaps overlap at various nodes or crossings. In everyday usage we often tend to identify these media with their audiovisual manifestations on different screens (film, computer, or TV), but we know that at the current historical moment these screens are not technologically limited to the display of particular media, but can each be used to display any of these three media—TV or the Internet can be projected on cinema screens by digital projectors, we can watch movies or surf the Internet on a TV screen, computers let us watch TV and movies on our monitors with relative ease, and electronic games can be played on TV screens, computer monitors, handheld game systems, PDAs, and even mobile phones.

3

If we find ourselves today in a digital cinema of interactions in this sociotechnical sense that cinema only exists through its interactions with other (primarily) digital media, there is also an aesthetic sense in which we find ourselves faced with a cinema of interactions—the emergence of a visual style and narrative logic that bear more relationship to digital media like DVDs and video games than to that of photography, drama, or fiction. It is not difficult to see how a digital medium like the DVD has come to function as a central element of a distributed, interactive cinema—the way in which the formal features which are now commonplace in DVDs already function as a form of interactive cinema. For some time now films on DVD have been broken into chapters so that viewers can interact with the film in a non-linear fashion; indeed with the increased frequency of random buttons on recent models of DVD players, viewers even have the option of random-access cinema. The breaking of feature films into chapters is so customary that it comes as something of a surprise (albeit not entirely unexpected) when the DVD of David Lynch's Mulholland Drive is, like some of his earlier films, released without chapter breaks so that viewers will not be able to view the film in non-linear fashion. Not only is the film not broken into chapters, but the DVD is designed so that if at any point in the film you use the remote to try to return to the previous

chapter you are instead sent back to the beginning of the film; and if you try to skip to the next chapter you are sent past the end of the film to the final graphical trademarks for Digital Video Compression Center and Macrovision Quality Control. Indeed Lynch self-consciously produces the Mulholland Drive DVD with as little interactivity as possible. The only bonus features on the DVD besides the theatrical trailer are brief bios of selected cast and a double-sided single-sheet case insert with "David Lynch's 10 clues to unlocking this thriller"—testifying by their absence to the ubiquity of interactive features in contemporary DVDs. Directors' and actors' commentaries that play over the feature's soundtrack; videos on the making of the film or on historical or other background; alternate endings or deleted scenes—all of these are now DVD staples. In a more interactive vein are "Easter eggs" that viewers must "find" or earn by playing simple games designed into the DVD; storyboards of selected scenes that can be viewed with the soundtrack of the finished film; or hyperlinks that take the viewer to mini-videos related to a particular scene. I rehearse this partial list of DVD features not to celebrate the wonderfully enhanced content made possible by digital technology, but to think about the way in which these features can be understood as already constituting film as interactive.

If a director like Lynch calls attention to our digital cinema of interactions by purposefully stripping conventional interactive features from his DVDs, other directors release DVDs which push interactivity even further to insist upon the fact that the film is not confined to the form of its theatrical exhibition but is distributed across other media as well. In many cases these films were already experimental in their theatrical release. Take Christopher Nolan's *Memento*, for example, which gained notoriety by presenting its story of a man with no short-term memory on the lookout for his wife's murderer in short scenes arranged in reverse chronological order (a device employed more recently in Gaspar Noe's troubling film *Irréversible*). Nolan uses the interactive features of the DVD in a number of interesting ways. The clever interactive design

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scheme visually remediates institutionalized psychiatric tests, which the DVD user must figure out how to negotiate in order to view the film or to access its extra features. In the director's commentary, Nolan's voice is played backwards at certain ambiguous moments of the film (although I have been told that some of these also play forwards on repeated viewings, but do so in contradictory ways). Perhaps most interesting is the "hidden" feature that allows the film's scenes to be re-ordered chronologically. Viewing the film in this fashion provides a very different cinematic experience from the one audiences enjoyed in the theater and is certain to alter the sense of the film's meaning in quite significant ways.

Another unconventional film in which the interactivity of the DVD provides a fundamentally different cinematic experience from that of the theater is Mike Figgis's Timecode, a 97-minute film which was shot simultaneously by four digital video cameras in real time in one single cut. Figgis shot the film 15 times before he got a take he wanted to keep (the dialogue and action were improvised around certain basic elements of the storyline). To produce the film he divided the screen into four quadrants, each of which presented one of the four films from the final take. Although there are no visual cuts in the film, the sound editing serves to influence the viewer's focus of attention by alternately raising or lowering the volume in one of the four quadrants at particular moments of the film. On the DVD of the film the viewer can watch the film as Figgis released it theatrically. But there are other interactive options that can be used to create a very different cinematic experience. The DVD allows the viewer to listen to a single quadrant in its entirety or to edit the film's sound herself by moving at will from one quadrant to the next. Figgis also includes the full-length version of the first take; presumably future DVDs could be released to include the remaining thirteen. In a project like this it is even more difficult than with *Memento* to make a clear-cut distinction between the theatrical release and the interactive versions available on DVD. Furthermore, from its very conceptualization, a film like *Timecode* is already understood to be more than its theatrical release,

to be distributed not only across the four quadrants of the screen but across the seemingly infinite interactive versions available via the DVD. Indeed rather than seeing the DVD as a second order phenomenon in relation to the theatrical release, it would in some strong sense be more accurate to consider the theatrical release as the second-order phenomenon in its attempt to reproduce or remediate the interactivity of the DVD, with the viewer's shifting attention substituting for the digital shifting made possible by the same digital technology employed in the DVD.

Just as films like Memento and Timecode remediate the interactivity of DVDs and other digital media, so other films are engaged in a process of mutual remediation with video games. For some time now video games (both computer- and platform-based) have been remediating cinema in a variety of ways. Perhaps the least interesting aspect of this remediation involves the design and release of games based on successful films. More interesting are games like the Grand Theft Auto series, which has been marketed like a film, including cinema-style promotional billboards and the release of CD soundtracks for each game. Tom Clancy's Splinter Cell remediates film (and of course fiction) in a different way: the game includes "extras" like those on a DVD, including an "interview" that operates on the premise that the game's main character (a digitally animated fictional creation) is in fact an actor cast in the role of the main character. But for my purposes, perhaps the most interesting remediation of film by video games is the way in which the semiotics of video game screen space have become increasingly conventionalized in their incorporation of "cut scenes" or "cinematics," letter-boxed narrative segments introducing a game's various levels of play. It is now customary in almost every game (even animated games with no connection to previously released films) to employ a semiotic distinction between the full-screen visual space of the video game and the widescreen (letterboxed) visual space of the cinematics, where the space of play is the full-screen space of the TV monitor, but the space of spectatorship is the widescreen space of the letterboxed film. Just as letterboxing has begun to acquire a certain

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symbolic cachet on television, with sophisticated HBO shows like *The Sopranos* or *Six Feet Under* or network shows like *ER* or *The West Wing* being presented in letterboxed format, or letterboxed sequences being edited into commercials for luxury or high-tech commodities, so it is often used in video games to indicate the quality of a game's graphics (even though, in most cases, the cinematics are generated by a different digital technology than the game's graphics, often even by digital video or film).

4

Insofar as video games have been remediating film, the opposite is true as well.[2] This distributed aesthetic manifests itself in remediation of cinematic style in video games, as well as remediation of video-game logic, style, and content in cinema. The aesthetic of the animate and the game-like logic of premediation emerges to challenge or supplement the story-like, linear narrative, mimetic/realistic world of more traditional cinema. For at least two decades, film has been remediating video games in a variety of ways. Earlier films like Tron (1982), Joysticks (1983), and The Last Starfighter (1984) reflected society's concerns about the effects of video games on young people. More recent films have tried to capitalize on popular games by translating them into cinematic narratives, including among others Super Mario Brothers (1993), Street Fighter (1994), Mortal Kombat (1995), Final Fantasy (2001) Lara Croft Tomb Raider (2001), and Resident Evil (2002). Other films like The Matrix (1999), Crouching Tiger, Hidden Dragon (2000), XXX (2002), and the most recent Bond films have targeted game-playing spectators by employing game-like visual effects, camera angles, and action sequences. Most interesting for cinema studies scholars, however, is the way in which some more recent films like Groundhog Day (1993), Run, Lola, Run (1998), ExistenZ (1999), and Femme Fatale (2003) have begun to experiment with recursive, gamelike narrative logics instead of more conventional linear narratives.

Among relatively recent films that have remediated video games in their

visual style and/or recursive narrative structure, Tom Tykwer's Lola Rennt, or Run, Lola, Run stands out as one of the most telling examples of the cinema of interactions. Stylistically, the film is a pastiche of multiple media forms, including animation, video, film, still photography, slowmotion, and bird's-eye-view cinematography. The film's opening sequence introduces its characters with still photographs in a style that remediates the initial screens of a video game. The film's two epigraphs comment explicitly on the rule-based and recursive nature of games. The plot is set up at the beginning in an opening sequence not unlike the cinematics that lay out a game's challenge: Lola's boyfriend Manni has lost 100,000 Deutsche marks that he has received as the runner in a drug deal and which he has to turn over to his employer in 20 minutes; Lola's task, as the game's main character, is to try to help Manni raise this money by noon, or else he will be killed. The film presents three different attempts by Lola to get the money. As in a video game, each attempt begins exactly the same way, with Lola running through her flat, past her mother having the same conversation on the telephone and watching the same television show, then down the stairs in an animated sequence in which she must get past a growling dog, at which point she does something different each time and the game commences. In the first game Lola fails to get the money and is killed; in the second game she fails to get the money and Manni is killed; in the third game both she and Manni get the money and they win the game, with an extra 100,000 marks to boot. Each sequence follows a similar plot with similar scenes and characters; however, as in a game, different choices by Lola and Manni lead to different outcomes.

Although one might object that no matter how recursive a film like *Run*, *Lola*, *Run*, for example, might be, it cannot be truly interactive in the same way a game is—film viewers can't change the outcome like they can in video games. Although this is obviously true, it does not contradict the point that films like *Lola* remediate games, but rather refines it. For if we consider the social conditions of video game-playing, that is, if we think about the question of video-game spectatorship, we can see that the cinematic

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sequences in video games might reflect the fact that game-playing is often a social activity, with one or more people playing while others watch. The cinematic sequences of video games may be aimed equally at video-game spectators and video-game players—or at players as spectators. From this perspective Lola is perhaps as much about the phenomenon of videogame spectatorship as it is about playing video games. Indeed, in some sense movies like Lola are cinematic representations of the increasingly common and widespread experience of watching other people (friends or family) play video games, whether in the home or in public gatherings of PC and console game players. It is this audience of onlookers and fellow gamers that the cinematics are addressed to, and this form of digital spectatorship that such films remediate. This world is the world of games, not of classical cinema, in that games are always already premediated; the world of a game is mediated prior to anybody ever playing it. The cinema of interactions suggests that the world depicted in cinema is one in which human actions do not happen in linear, narrative fashion, but are recursive, that the cinematic world is a world like that of gaming in which one can reboot, start over, and have a different outcome.

The contingency that accompanies this interactivity is made explicit in the film in two brief scenes that separate the three "game" sequences. In each of these scenes Lola and Manni are smoking together in bed, having an intimate, seemingly post-coital conversation about choice and chance. The point of these conversations is to wonder whether, if one of them were to die, the other would find someone to replace him or her; the implication is that in some sense life is like a game in which people, like characters, play roles in one another's lives, but can be replaced by other characters as necessary. Tykwer says in the director's commentary that these scenes are meant to convey the intensity of Lola's and Manni's love, to help explain the lengths she goes to try to rescue him from his predicament. Yet these scenes also work to suggest that life operates according to something like the aesthetic of the animate in which people behave as if the ones they love are their "true" loves, even though they know that their relationship

is based upon chance and that it could have turned out, or still might turn out, very differently.

In Femme Fatale (2003), Brian De Palma presents a similar notion of the idea that human characters and their interactions are more like game-playing avatars than like psychologically realistic characters whose continuous sense of self-identity is set forth via the linear development of cinematic narrative. Femme Fatale, a film that was noticed mostly for the cinematic tour de force of its opening theft/seduction sequence, is more interesting as De Palma's commentary on our current cinema of interactions. Stylistically, this is reflected in the hypermediacy De Palma presents in the film, the sense that the world of the film is a world made up of multiple forms of mediation. For De Palma film is a medium that absorbs, appropriates, and remediates all others. Indeed Femme Fatale can be seen as making an argument for film as superior to other technologies of visual reproduction and representation—in part by demonstrating from its very first frames the ways in which cinema has remediated other imaging technologies, and the way in which at the current moment all of these technologies are inseparable from film itself. The film opens with the soundtrack from Double Indemnity and with its full screen being filled with the image of Double Indemnity being remediated on French television, complete with French subtitles. Throughout this opening sequence, the horizontal lines of scansion from the projection technology of television are made quite visible on the screen, establishing the contrast between film and TV both as media and as technical apparatuses. Soon the image of Laure, Femme Fatale's female lead, appears reflected on the TV screen as she watches the film in her hotel room. At exactly the crucial moment when a shot is fired in *Double Indemnity* the title of De Palma's film appears on the screen. From that moment, as the opening credits begin to list the leading actors in the film, the camera begins to pull back from the television set, further heightening the contrast between the two media in terms of their different aspect ratios, and the television itself becomes visible as an object in the same space inhabited by the woman

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reflected in the televisual remediation of the film. As the camera pulls back further, the television recedes into the background in relation to the cinematic image, perhaps suggesting a more medialogical point about the relative importance of the two media.

Still, insofar as De Palma may be staging an argument for the superiority of film to other media, he is not arguing for the purity of the cinematic medium, but rather insisting upon the interaction of film with multiple forms of mediation, including other films. Indeed the initial televisually mediated cinematic merging of Femme Fatale with Double Indemnity is doubled shortly thereafter with Régis Wargnier's Est-Ouest (1999), which is being premiered at Cannes on the day the film begins. As with the televised image of Double Indemnity, the projected and screened image of *East-West* takes over the entire screen at one point, substituting its opening credits for the screened image of Femme Fatale, seemingly starting the film all over again. Nor are television and film the only media that De Palma remediates. Laure, the main character, poses as a photographer at Cannes; another key character, Antonio Banderas, is a paparazzo. Veronica, the target of Laure's seduction/theft in the film's stunning opening sequence, is first presented in the film through the televised coverage of the Cannes steps sequence, which is revealed, as De Palma's camera pulls back, to be shown on one of a multiplicity of televisual monitors being watched by Cannes security in a room filled with other media like computers, printers, and other peripherals (indeed throughout the film De Palma is careful to call attention cinematically to several different models of Apple computers and monitors). The theft of Veronica's jewels is made possible by one of Laure's accomplices drilling through tunnels into the walls of the ladies' room; this tunneling is carried out by a televideated robotic drill whose telescopic interface with meter readings and lens speed are remediated by the first-person POV cinematic image. The way in which the tunnelling is filmed and the heist is carried out (through heating ducts and other post-industrial spaces) makes an explicit allusion to video-game logic and imagery. In addition, De Palma

employs split-screen imagery on multiple occasions, often with one or both halves of the screen shot through the camera of Banderas's paparazzo character. When one of these split screens follows this character into his apartment, De Palma very deliberately shows a flat-screen Apple Cinema Display monitor running OSX, with the digital photograph that he just took emerging within the imaging software displayed on the monitor, coming out of his printer, and being cropped. Intriguingly, Banderas appears as a kind of double of the filmmaker himself: his true passion, his life's work, is the total remediation through photomontage of the very Paris street scene he sees outside his window.

Femme Fatale not only participates in the cinema of interactions through its distribution of cinema among many other forms of mediation, but like Lola it also follows a game-like narrative logic. Unlike Tykwer, however, De Palma seeks to explain away the film's recursive structure as a dream; still, it is not accidental that the film moves like a video game. At various moments, both leading into the dream and during the dream, the film seems to shift to another level, as in a video game. Furthermore, as in a game, the main character changes identities throughout the film, giving a sense of having different avatars through which she negotiates the world of the film. And while, unlike Lola, the recursive elements of the film are explained as Laura's dream, the dream functions less according to a psychological or psychoanalytical textual logic, which provides insight into the character's identity or frame of mind, than it does according to a logic in which the various paths or choices for a character's life have already been premediated. Furthermore, while film sequences that turn out to be dreams are by no means unheard of in the history of film, in a more conventional narrative film the idea that the future would be foreseen almost exactly in a dream, and that the dream could lead to some small decisions or changes that would make everything turn out very differently for the main character, would be seen as unrealistic, as violating the conventional laws of verisimilitude to which realistic cinematic narratives are meant to ascribe. But in a cinema of interactions

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in which the world of the film is understood to be like an already mediated game environment, in which only certain roles and choices and paths are available to the key characters in the film, such a dream seems not just plausible but expected—the rules or conditions of the game.

5

Of major film directors, Peter Greenaway, in his hyper-ambitious Tulse Luper project, most explicitly and wholeheartedly addresses the question of the future of cinematic aesthetics in an age of premediation. The first film of a projected trilogy, The Tulse Luper Suitcases: The Moab Story, premiered at Cannes in May 2003. Although it premiered as an autonomous cinematic artifact, Greenaway also considers the three parts of the trilogy as "one very long film" divided into three sections for pragmatic reasons. In interviews supporting the film's premiere, Greenaway articulates his vision of what I have been calling a digital cinema of interactions, detailing how the Tulse Luper films participate in a complex, multimedia project (Greenaway). He imagines this project, first, as distributed across three different films—the trilogy format already in practice by Star Wars, The Lord of the Rings, and The Matrix. But as he suggests in one of his interviews, the multi-part structure is also a further formalization or conventionalization of the phenomenon of sequels that has become more widespread in the past few decades, but which has also been part of the cinematic phenomena of repetition and sequence from film's inception. In addition to this basic sense in which the film as aesthetic object extends beyond the experience of viewing it in the theater, Greenaway imagines that the film will be remediated in DVDs and websites, in books and on television, and "in lots of different versions and perspectives." Motivated by the fact that the film audience has been distributed across many other digital media, Greenaway is aiming not just "at cinema audiences but all the new audiences that are cropping up as we all know in all different guises all over the world," after what he describes as "essentially the digital revolution" (Greenaway "Interview").

Not only does Greenaway imagine the Tulse Luper project to be distributed across any number of different new media forms and practices, but he also conceives of a cinema of interactions as demanding new aesthetic and narrative logics. He says in one of his Cannes interviews:

Anybody who immediately sees the film might feel that to describe it even as a piece of cinema might be a little strange. It's not a window on the wall, cut and paste movie. It's many many multi-layered, it's fragmented into all sorts of moving frames which are superimposed over one another. We also very very deliberately use calligraphy and text on the screen, so all those advertising techniques which you're aware of in commercials and video clips—trying to use all the different many many tropes out there that are very very apparent to anybody who looks at any moving image material whatever in the year 2003. ("Interview")

In the *Tulse Luper* films, the cinematic narrative is interrupted by non-linear elements such as links (remediated as suitcases) which will allow viewers to interact with the film through one of 92 DVDs that will be released, one for each of the 92 suitcases that appear in the films. Other elements of this hybrid cinematic project will be presented on the Internet, including the daily release of contemporary remediations of the *1001 Tales of Arabian Nights*, one of which is planned to be released each day. So not only do the films interact with DVDs and websites, but the viewer interacts with the film/DVD/Internet hybrid as well. These 92 supplementary DVDs and the accompanying websites would be used to provide additional elements of the *Tulse Luper* story, not unlike the way in which the Wachowskis have done by distributing *The Matrix* not only across three films but also across the DVDs, *The Animatrix* and its soundtrack, the *Enter The Matrix* game, and on the Internet.

Regardless of the way in which Greenaway's hyper-ambitious project finally materializes (it's hard to imagine, for example, the development and commercial release of 92 DVDs, and from evidence available on

the web, his momentum seems already to have stalled), his Tulse Luper project articulates three key elements of our current digital cinema of interactions. First, he imagines the Tulse Luper project as a distributed artifact, the most basic sense in which the film as aesthetic object extends beyond the experience of viewing it in the theater. Next, he imagines the aesthetic artifact as interactive, interrupted by non-linear elements or links (remediated as suitcases), which will allow viewers of the film to interact with the film through DVDs or on the Internet. Finally he imagines that these different media formats will interact with one another as they remediate the form and content of one another across different media formats. Among the most pressing challenges posed by this new digital cinema of interactions, as Greenaway himself recognizes, is how to assemble and motivate an interactive network of creative people, producers, consumers, and audiences. The new cinema of interactions involves not the creation of a distinctly new medium but the remediation of a number of older, existing media—the redeployment not only of human agents but also of non-human agents like media technologies, forms, and practices, and social, economic, and commercial networks. And although Greenaway does not specify this challenge himself, the emergence of projects like Tulse Luper Suitcases also challenges critics and historians of film and new media to make new alliances and find new ways to make sense of this kind of digital or cinematic Gesamtkunstwerk, to create new forms of knowledge suitable to the changing conditions of moving image technologies brought about by the changes in media technologies, forms, and practices that have accompanied what has come to be called the digital revolution.

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Notes

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[1] For a fuller discussion of the concept of premediation, see Grusin "Premediation."

[2] Matteo Bittanti offers a fourfold taxonomy of the ways in which what he calls "technoludic" films have remediated video games. This taxonomy consists of films that have commented on the social implications of video games like *Tron*, *Joysticks*, *Nightmares*, *Cloak and Dagger*, and *The Last Starfighter*; films that display video games in one or more scenes for the purpose of quotation or allusion like *Soylent Green*, *Brother from Another Planet*, *D.A.R.Y.L.*, *Clockers*, *Titus*, and *Center of the World*.



2.1 The Scene of the Screen: Envisioning Photographic, Cinematic, and Electronic "Presence"

BY VIVIAN SOBCHACK

The essence of technology is nothing technological.
—Martin Heidegger

What happens when our *expressive* technologies also become *perceptive* technologies—expressing and extending us in ways we never thought possible, radically transforming not merely our comprehension of the world but also our apprehension of ourselves? Elaine Scarry writes that "we make things so that they will in turn remake us, revising the interior of embodied consciousness" (97). Certainly, those particularly expressive technologies that are entailed in the practices of writing and the fine arts do, indeed, "remake" us as we use them—but how much more powerful a revision of our embodied consciousness occurs with the inauguration of perceptive technologies such as the telescope and the microscope or the

X-ray? Changing not only our expression of the world and ourselves, these perceptive technologies also changed our sense of ourselves in radical ways that have now become naturalized and transparent. More recently (although no longer that recently), we have been radically "remade" by the perceptive (as well as expressive) technologies of photography, cinema, and the electronic media of television and computer—these all the more transformative of "the interior of embodied consciousness" (and its exterior actions too) because they are technologies that are culturally *pervasive*. They belong not merely to scientists or doctors or an educated elite but to all of us—and all of the time.

Indeed, it almost goes without saying that during the past century photographic, cinematic, and electronic technologies of representation have had enormous impact on our means and modalities of expression and signification. Less obvious, perhaps, is the enormous impact these technologies have had on the historically particular significance or "sense" we have and make of those temporal and spatial coordinates that radically in-form and orient our social, personal, and bodily existence. At this time in the United States, whether or not we go to the movies; watch television or music videos; own camcorders, videotapes, or digital video disc recorder/players; allow our children to engage video and computer games; write our academic papers on personal computers; do our banking and shopping online—we are all part of a moving-image culture, and we live cinematic and electronic lives. Indeed, it is not an exaggeration to claim that none of us can escape daily encounters—both direct and indirect—with the objective phenomena of photographic, cinematic, televisual, and computer technologies and the networks of communication and texts they produce. It is also not an extravagance to suggest that, in the most profound, socially pervasive, and yet personal way, these objective encounters transform us as embodied subjects. That is, relatively novel as materialities of human communication, photographic, cinematic, and electronic media have not only historically symbolized but also historically constituted a radical alteration of the forms of our

culture's previous temporal and spatial consciousness and of our bodily sense of existential "presence" to the world, to ourselves, and to others.

This different sense of subjectively perceived and embodied presence, both signified and supported by first photographic and then cinematic and electronic media, emerges within and co-constitutes objective and material practices of representation and social existence. Thus, while certainly cooperative in creating the moving-image culture or lifeworld we now inhabit, cinematic and electronic technologies are quite different not only from photographic technologies but also from each other in their concrete materiality and particular existential significance. Each technology not only differently *mediates* our figurations of bodily existence but also constitutes them. That is, each offers our lived bodies radically different ways of "being-in-the-world." Each implicates us in different structures of material investment, and—because each has a particular affinity with different cultural functions, forms, and contents—each stimulates us through differing modes of presentation and representation to different aesthetic responses and ethical responsibilities. As our aesthetic forms and representations of "reality" become externally realized and then unsettled first by photography, then cinema, and now electronic media, our values and evaluative criteria of what counts in our lives are also unsettled and transformed. In sum, just as the photograph did in the nineteenth and early twentieth centuries, so in the late twentieth and early twenty-first, cinematic and electronic screens differently solicit and shape our presence to the world, our representation in it, and our sensibilities and responsibilities about it. Each differently and objectively alters our subjectivity while each invites our complicity in formulating space, time, and bodily investment as significant personal and social experience.

These preliminary remarks are grounded in the belief that historical changes in our sense of time, space, and existential, embodied presence cannot be considered less than a consequence of correspondent changes in our technologies. However, they also must be considered something

more—for, as Martin Heidegger reminds us in the epigraph that begins this essay, "The essence of technology is nothing technological" (317). That is, technology never comes to its particular material specificity and function in a neutral context to neutral effect. Rather, it is historically informed not only by its materiality but also by its political, economic, and social context, and thus it both co-constitutes and expresses not merely technological value but always also cultural values. Correlatively, technology is never merely used, never simply instrumental. It is always also incorporated and lived by the human beings who create and engage it within a structure of meanings and metaphors in which subject-object relations are not only cooperative and co-constitutive but are also dynamic and reversible.

It is no accident, for example, that in our now dominantly electronic (and only secondarily cinematic) culture, many people describe and understand their minds and bodies in terms of computer systems and programs (even as they still describe and understand their lives in terms of movies). Nor is it trivial that computer systems and programs are often described and understood in terms of human minds and bodies (for example, as intelligent or susceptible to viral infection) and that these new computer-generated "beings" have become the explicit cybernetic heroes of our most popular moving-image fictions (for example, Robocop, Paul Verhoeven, 1987; or Terminator 2: Judgment Day, James Cameron, 1991). As Elena del Río suggests, "[T]echnology springs from the very human condition of embodiment and . . . the human imaginary is of necessity a technologically drawn and grounded structure" (97). Thus, even in the few examples above we can see how a qualitatively new techno-logic begins to alter our perceptual orientation in and toward the world, ourselves, and others. Furthermore, as this new techno-logic becomes culturally pervasive and normative, it can come to inform and affect profoundly the socio-logic, psycho-logic, axio-logic, and even the bio-logic by which we daily live our lives.

Most powerful of all, in this regard, are those perceptual technologies that serve also as technologies of representation—namely, photography, cinema, television, and, most recently, computers. These technologies extend not only our senses but also our capacity to see and make sense of ourselves. Certainly, a technological artifact that extends our physical capacities like the automobile (whose technological function is neither perception nor representation but transportation) has profoundly changed the temporal and spatial shape and meaning of our lifeworld and our own bodily and symbolic sense of ourselves.[1] However, such perceptual and representational technologies as photography, motion pictures, television, video, and computers in-form us twice over: first through the specific material conditions by which they latently engage and extend our senses at the transparent and lived bodily level of what philosopher of technology Don Ihde calls our "microperception," and then again through their manifest representational function by which they engage our senses consciously and textually at the hermeneutic level of what he calls our "macroperception" (29).[2] Most theorists and critics of cinematic and electronic media have been drawn to the latter—that is. to macroperceptual descriptions and interpretations of the hermeneuticcultural contexts that inform and shape both the materiality and social contexts of these technologies and their textual representations. Nonetheless, we would not be able to reflect on and analyze either technologies or texts without, at some point, having engaged them immediately—that is, through our perceptive sensorium, through the immanent mediation and materiality of our own bodies. Thus, as Ihde reminds us, although "there is no microperception (sensory-bodily) without its location within a field of macroperception," it is equally true that there is "no macroperception without its microperceptual foci." Indeed, all macroperceptual descriptions and interpretations "find their fulfillment only within the range of microperceptual possibility" (Ihde 29; emphasis added). It is important to emphasize, however, that because perception is constituted and organized as a bodily and sensory gestalt that is always already meaningful, a microperceptual focus is not reducible to a focus on physiology. That is, insofar as our senses are not only sensible but also "make sense," the perceiving and sensible body is always also a *lived body*—immersed in, making, and responding to social as well as somatic meaning.

In what follows, then, I want to emphasize certain microperceptual aspects of our engagement with the perceptual technologies of photographic, cinematic, and electronic representation that have been often overlooked. I also want to suggest some of the ways the respective *material* conditions of these media and their reception and use inform and transform our microperceptual experience—particularly our temporal and spatial sense of ourselves and our cultural contexts of meaning. We look at and carry around photographs or sit in a movie theater, before a television set, or in front of a computer not only as conscious beings engaged in the activity of perception and expression but also as carnal beings. Our vision is neither abstracted from our bodies nor from our other modes of perceptual access to the world. Nor does what we see merely touch the surface of our eyes. Seeing images mediated and made visible by technological vision thus enables us not only to see technological images but also to see technologically. As Ihde emphasizes, "the concreteness of [technological] 'hardware' in the broadest sense connects with the equal concreteness of our bodily existence"; thus "the term 'existential' in context refers to perceptual and bodily experience, to a kind of 'phenomenological materiality" (21). Insofar as the photographic, the cinematic, and the electronic have each been objectively constituted as a new and discrete techno-logic, each also has been subjectively incorporated, enabling a new and discrete perceptual mode of existential and embodied presence. In sum, as they have mediated and represented our engagement with the world, with others, and with ourselves, photographic, cinematic, and electronic technologies have transformed us so that we presently see, sense, and make sense of ourselves as quite other than we were before each of them existed.

The correlation and materiality of both human subjects and their objective artifacts not only suggests some commensurability and possibilities of confusion, exchange, and reversibility between them but also suggests that any phenomenological analysis of the existential relation between human lived-body subjects and their technologies of perception and representation must be semiological and historical even at the microperceptual level. Description must attend both to the particular objective materiality and modalities through which subjective meanings are signified and to the subjective cultural and historical situations in which both objective materiality and meaning come to cohere in the praxis of everyday life. Like human vision, the materiality and modalities of photographic, cinematic, and electronic perception and representation are not abstractions. They are concretely situated and finite, particularly conventional and institutionalized. They also inform and share in the spatiotemporal structures and history of a wide range of interrelated cultural phenomena. Thus, in its attention to the broadly defined "material conditions" and "relations" of production (specifically, the conditions for and production of both technological perception and its existential meaning), existential phenomenology is compatible with certain aspects of new historicism or Marxist analysis.

In this context we might turn to Fredric Jameson's seminal discussion of three crucial and expansive historical "moments" marked by "a technological revolution within capital itself" and the related "cultural logics" that correspondingly emerge and become dominant in each of them to radically inform three revolutions in aesthetic sensibility and its representation (77). Situating these three critical moments in the 1840s, 1890s, and 1940s, Jameson correlates the major technological changes that revolutionized the structure of capital—changing market capitalism to monopoly capitalism to multinational capitalism—with the changes wrought by the "cultural logics" identified as, respectively, realism, modernism, and postmodernism, three radically different axiological forms and norms of aesthetic representation and ethical investment.

Extrapolating from Jameson, we can also locate within this historical and logical framework three correspondent technological modes and institutions of visual (and aural) representation: respectively, the photographic, the cinematic, and the electronic. Each, I would argue, has been critically complicit not only in a specific *technological revolution* within capital but also in a specific *perceptual revolution* within the culture and the subject. That is, each has been significantly co-constitutive of the particular temporal and spatial structures and phenomeno-logic that inform each of the dominant cultural logics Jameson identifies as realism, modernism, and postmodernism.

In this regard, writing about the technologically inflected and pervasive perceptual revolution in the lived experience of time and space that took place in Europe and the United States during the period between 1880 and 1918, phenomenological historian Stephen Kern demonstrates that although some major cultural changes occurred relatively independent of technology, others were "directly inspired by new technology" or emerged more subtly from the new technological "metaphors and analogies" that indirectly altered the structures of perceptual life and thought (6-7). What is suggested here is that the technologically discrete nature and phenomenological impact of new technologies or "materialities" of representation co-constitute a complex cultural gestalt—one implicated in and informing each historically specific "technological revolution in capital" and transformation of cultural logic. Thus, the technological "nature" of the photographic, the cinematic, and the electronic is graspable always and only in a qualified manner—that is, less as a technological essence than as a cultural theme.

Althoughmymostnovelcontributionshereare, Ihope, to our understanding of the technologies of cinematic and electronic representation (those two materialities that constitute our current moving-image culture), something must first be said of that culture's grounding in the context and phenomenology of the *photographic* (which has provoked a good

deal of phenomenological description).[3] The photographic mode of perception and representation is privileged in the period of market capitalism located by Jameson as beginning in the 1840s. This was a "moment" emergent from and driven by the technological innovations of steam-powered mechanization, which both enabled unprecedented industrial expansion and informed the new cultural logic of realism. Not only did industrial expansion give rise to other modes and forms of expansion, but this expansion was itself historically unique because of its unprecedented visibility. As Jean-Louis Comolli points out: "The second half of the nineteenth century lives in a sort of frenzy of the visible. . . . [This is] the effect of the social multiplication of images. . . . [It is] the effect also, however, of something of a geographical extension of the field of the visible and the representable: by journies, explorations, colonisations, the whole world becomes visible at the same time that it becomes appropriatable" (122-23). Thus, although the cultural logic of realism has been seen as represented primarily by literature (most specifically, the bourgeois novel), it is, perhaps, even more intimately bound to the mechanically achieved, empirical, and representational "evidence" of the world constituted—and expanded—by photography.

Until very recently the photographic has been popularly and phenomenologically perceived as existing in a state of testimonial verisimilitude—the photograph's film emulsions analogically marked with (and objectively "capturing") material traces of the world's concrete and "real" existence. [4] Unlike the technologies that preceded it, photography produced images of the world with an exactitude previously rivaled only by the human eye. Thus, as Comolli suggests, with the advent of photography the human eye loses its "immemorial privilege"; it is devalued in relation to "the mechanical eye of the photographic machine" that "now sees in its place" (123). This replacement of human with mechanical vision had its compensations, however—among them, the material control, containment, and objective possession of time and experience. [5] Abstracting visual experience from an ephemeral temporal flow, the

photographic both chemically and metaphorically "fixes" its ostensible subject quite literally as an *object* for vision. It concretely reproduces the visible in a material process that—like the most convincing of scientific experiments—produces the seemingly same results with each iteration, empirically giving weight to and proving in its iterability the relationship between the visible and the real. Furthermore, this material process results in a *material form* that can be objectively possessed, circulated, and saved, that can accrue an increasing rate of interest over time and become more valuable in a variety of ways. Photography is thus not only a radically new form of representation that breaks significantly with earlier forms, but it also radically changes our epistemological, social, and economic relationships to both representation and each other. As Jonathan Crary tells us: "Photography is an element of a new and homogenous terrain of consumption and circulation in which an observer becomes lodged. To understand the 'photographic effect' in the nineteenth century, one must see it as a crucial component of the new cultural economy of value and exchange, not as part of a continuous history of visual representation" (13). Indeed, identifying the nineteenth-century photograph as a fetish object, Comolli links it with gold and aptly calls it "the money of the 'real" the photograph's materiality assuring the possibility of its "convenient circulation and appropriation" (142).

In a phenomenological description of subjective human vision, Merleau-Ponty tells us that "to see is to have at a distance" ("Eye" 166). This subjective activity of visual possession—of having but at a distance—is objectified by the materiality of photography that makes possible both a visible—and closer—possession. That is, the having at a distance that is subjective vision is literalized in an object that not only replicates and fixes the visual structure of having at a distance but also allows it to be brought nearer. With a photograph, what you see is what you get. [6] Indeed, this structure of objectification and empirical possession is doubled, even tripled. Not only does the photograph materially "capture" and possess traces of the "real world," not only can the photograph

itself be materially possessed as a real object, but the photograph's culturally defined semiotic status as a mechanical reproduction (rather than a linguistic representation) also enables an unprecedented, literal, material, and perhaps uniquely complacent form—and ethics—of, first, *self-possession* and then, at a later date when the technology is portable and cheap, of *self-proliferation*. Filled with a currency of the real that—through objectification and mortality—outlasts both its present value and its human subjects to accrue increasing interest, family albums serve as "memory banks." [7] In sum, the photograph's existence as an object and a possession with fixed yet increasing value materializes and authenticates experience, others, and oneself as empirically real.

In regard to the materiality of the photograph's authenticating power, it is instructive to recall one of a number of particularly relevant ironies in Blade Runner (Ridley Scott, 1982), a science fiction film made within an electronic culture already hermeneutically suspicious not only of photographic realism but also of any realisms at all. [8] Given this cultural context, it is hardly surprising that the film's primary narrative focus is on the ambiguous ontological status of a "more human than human" group of genetically manufactured "replicants"—an ambiguity that also casts epistemological doubt on how one knows one is human. At a certain moment Rachel, the film's heroine and latest replicant prototype, disavows the revelation of her own manufactured status by pointing to a series of keepsake photographs that give "proof" to the existence of her mother, to her own existence as a little girl, and thus to her subjective memory of a real past. Told that both her memory and its material extroversion actually "belong to someone else," she not only becomes distraught but also ontologically re-signed as someone who possesses no real life, no real history—although she still remembers what she remembers, and the photographs still sit on her piano. Indeed, the photographs are suddenly foregrounded in their objective materiality (for the human spectator, as well as for the narrative's replicant) as utterly suspect. That is, when interrogated, they simultaneously both reveal and lose that great material

and circulatory value they commonly hold for *all* of us as the "money of the 'real," as our means of self-possession.

The structures of objectification, material possession, self-possession, and self- proliferation that constitute the photograph as both a real trace of personal experience and a concrete extroversion of experience that can "belong to someone else" give specific form to its temporal existence. In capturing aspects of life itself in a real object that can be possessed, copied, circulated, and saved as the "currency" of experience, the appropriable materiality and static form of photography accomplish a palpable intervention in what was popularly perceived in the mid-nineteenth century to be time's linear, orderly, and teleological flow from past to present to future. The photograph freezes and preserves the homogeneous and irreversible *momentum* of this temporal stream into the abstracted, atomized, and essentialized time of a moment. But at a cost. A moment cannot be inhabited. It cannot entertain in the abstraction of its visible space, its single and static *point* of view, the presence of a lived and living body—so it does not really invite the spectator into the scene so much as it invites contemplation of the scene. In its conquest of temporality and its conversion of time's dynamism into a static and essential moment, the photograph constructs a space one can hold and look at, but in its conversion to an object to behold that space becomes paradoxically thin, insubstantial, and opaque. It keeps the lived body out even as it may imaginatively catalyze—in the parallel but dynamically temporalized space of memory or desire—an animated drama.

The cinema presents us with quite a different perceptual technology and mode of representation. Through its objectively visible spatialization of a frozen point of view into dynamic and intentional trajectories of *self-displacing vision* and through its subjectively experienced temporalization of an essential moment into *lived momentum*, the cinematic radically reconstitutes the photographic. This radical difference between the transcendental, posited moment of the photograph and the existential

momentum of the cinema, between the scene to be contemplated and the scene as it is lived, is foregrounded most dramatically in Chris Marker's remarkable short film, La Jetée (1962).[9] A cinematic study of desire, memory, and time, La Jetée is presented completely through the use of still photographs—except for one extraordinarily brief but utterly compelling sequence late in the film. Lying in bed and looking toward the camera in yet another photograph, the woman—who has through time and memory been the object of the hero's desire and whom we have only come to know in frozen and re-membered moments that mark her loss as much as her presence—suddenly blinks. Yet this is a peculiar sense of "suddenly"—one that speaks more to surprise at an unexpected and radical shift in the ontological status of the image and our relation to it than to a more superficial narrative or formal surprise. Indeed, just prior to the brief momentum and intentional revelation of the woman actively blinking, we have watched an increasingly rapid cinematic succession of stilled and dissolving photographic images of her supine in bed that increasingly approach motion but *never achieve* it. The editorial succession thus may prepare us narratologically or formally for motion, but, however rapid, this succession alone does not animate the woman or give her substantial presence as more than her image. Thus, even as we are seemingly prepared, and even though the photographic move to cinematic movement is extremely subtle, we are nonetheless surprised and deem the movement startling and "sudden." And this is because everything radically changes, and we and the image are reoriented in relation to each other. The space between the camera's (and the spectator's) gaze and the woman becomes suddenly habitable, informed with the real possibility of bodily movement and engagement, informed with lived temporality rather than eternal timelessness. The image becomes "fleshed out," and the woman turns from a posed odalisque into someone who is not merely an immortalized lost object of desire but also-and more so-a mortal and desiring subject. In sum, what in the film has been previously a mounting accumulation of nostalgic moments achieves substantial and present presence in its

sudden and brief accession to momentum and the consequent potential for effective action.

As did André Bazin, we might think of photography as primarily a form of mummification (although, unlike Bazin, I will argue that cinema is not) (9-10). Although it testifies to and preserves a sense of the world's and experience's once-real presence, it does not preserve their present. The photographic neither functions—like the cinematic—as a "cominginto-being" (a presence always presently constituting itself), nor—like the electronic—as "being-in-itself" (an absolute presence in the present). Rather, it functions to fix a "being-that-has been" (a presence in a present that is always past). Thus, and paradoxically, as it materializes, objectifies, and preserves in its acts of possession, the photographic has something to do with loss, with pastness, and with death, its meanings and value intimately bound within the structure and aesthetic and ethical investments of nostalgia.

Although dependent on the photographic, the cinematic has something more to do with life and with the accumulation of experience—not its loss. Cinematic technology animates the photographic and reconstitutes its materiality, visibility, and perceptual verisimilitude in a difference not of degree but of kind. The *moving picture* is a visible representation not of activity finished or past but of activity coming into being and being. Furthermore, and even more significant, the moving picture not only visibly represents moving objects but also—and simultaneously presents the very movement of vision itself.[10] The novel materiality and techno-logic of the cinema emerges in the 1890s, the second of Jameson's transformative "moments" of "technological revolution within capital itself." During this moment other novel technologies, particularly the internal combustion engine and electric power, literally reenergized market capitalism into the highly controlled yet much more expansive structure of monopoly capitalism. Correlatively, Jameson sees the emergence of the new cultural logic of modernism—a logic that restructures and

eventually comes to dominate the logic of realism insofar as it represents more adequately the new perceptual experience of an age marked by the strange autonomy and energetic fluidity of, among other mechanical phenomena, the motion picture. Although photographically verisimilar, the motion picture fragments, reorders, and synthesizes time and space as animation in a completely new "cinematic" mode that finds no necessity in the objective teleo-logic of realism. Thus, although modernism has found its most-remarked-on expression in the painting, photography, and sculpture of the Futurists (who attempted to represent motion and speed in static forms) and the Cubists (who privileged and represented multiple perspectives and temporal simultaneity in static forms), as well as in the novels of James Joyce (who articulated the simultaneity of objective and subjective time and the manner in which consciousness "streams"), it is in the cinema that modernism found its fullest representation. [11]

Philosopher Arthur Danto tells us, "With the movies, we do not just see that they move, we see them moving: and this is because the pictures themselves move" (17). While still objectifying the subjectivity of the visual into the visible, the cinematic qualitatively transforms the photographic through a materiality that not only claims the world and others as objects for vision (whether moving or static) but also signifies its own materialized agency, intentionality, and subjectivity. Neither abstract nor static, the cinematic brings the existential activity of vision into visibility in what is phenomenologically experienced as an intentional stream of moving images—its continuous and autonomous visual production and meaningful organization of these images testifying not only to the objective world but also, and more radically, to an anonymous, mobile, embodied, and ethically invested *subject* of worldly space. In this regard it is important to note that the automatic movement of the film through the camera and projector is overwritten and transformed by the autonomous movement of what is phenomenologically perceived as a visual intentionality that visibly chooses the subjects and objects of its attention, takes an attitude toward them, and accumulates them into a meaningful aesthetically and ethically articulated experience. [12] Thus this novel and visible cinematic subject (however physically anonymous) is perceived at the microperceptual level as able to inscribe visual and bodily changes of situation, to dream, hallucinate, imagine, remember, and value its habitation and experience of the world. And, as is the case with human beings, this cinematic subject's potential motility and experience exist as both open-ended and inextricably bound by the existential finitude and material limits of its particular vision and historical and cultural coherence—that is, its narrative.

Here, again, La Jetée is exemplary. Despite the fact that the film is made up of what strikes us as a series of discrete and still photographs rather than the "live" and animated action of human actors, even as it foregrounds the transcendental status and atemporal nonbecoming of the photograph, La Jetée nonetheless phenomenologically projects as a temporal flow and an existential becoming. That is, as a whole the film organizes, synthesizes, and enunciates the discrete photographic images into animated and intentional coherence and, indeed, makes this temporal synthesis and animation its explicit narrative theme. What La Jetée allegorizes in its explicit narrative, however, is the transformation of the moment to momentum that constitutes the ontology of the cinematic and the latent background of every film.

Although the technology of the cinematic is grounded, in part, in the technology of the photographic, we need to again remember that "the essence of technology is nothing technological." The fact that the technology of the cinematic *necessarily* depends on the discrete and still photographic frame moving intermittently (rather than continuously) through the shutters of both camera and projector does not *sufficiently* account for the materiality of the cinematic as we experience it. Unlike the photograph, a film is semiotically engaged in experience not merely as its mechanical objectification—or material reproduction—that is, as merely an object for vision. Rather, the moving picture, however mechanical and

photographic its origin, is semiotically experienced as also subjective and intentional, as presenting representation of the objective world. Thus, perceived as the subject of its own vision, as well as an object for our vision, a moving picture is not precisely a thing that (like a photograph) can be easily controlled, contained, or materially possessed—at least, not until the relatively recent advent of electronic culture. Certainly before videotape and DVDs the spectator could share in and thereby, to a degree, interpretively alter a film's presentation and representation of embodied and enworlded experience, but the spectator could not control or contain its autonomous and ephemeral flow and rhythm or materially possess its animated experience. Now, of course, with the help of consumer electronics the spectator can both alter the film's temporality and materially possess its inanimate "body." However, this new ability to control the autonomy and flow of the film's experience through fastforwarding, replaying, and pausing[13] and the ability to possess the film's "body" so as to animate it at will and at home are not functions of the material and technological ontology of the cinematic; rather, they are functions of the material and technological ontology of the electronic, which has come to increasingly dominate, appropriate, and transform the cinematic and our phenomenological experience of its perceptual and representational modalities.

In its pre-electronic state and original materiality, however, the cinema mechanically projected and made visible *for the very first time* not just the objective world but the very structure and process of subjective, embodied vision—hitherto only directly available to human beings as an invisible and private structure that each of us experiences as "our own." That is, the novel materiality and techno-logic of the cinema gives us concrete and empirical insight and makes objectively visible the reversible, dialectical, and social nature of our own subjective vision. Writing of human vision and our understanding that others also see as we do, Merleau-Ponty tells us: "As soon as we see other seers . . . henceforth, through other eyes we are for ourselves fully visible. . . . For the first time, the seeing that I am

is for me really visible; for the first time I appear to myself completely turned inside out under my own eyes" (143-44). Prior to the cinema this visual reflexivity in which we see ourselves seeing through other eyes was accomplished only indirectly: that is, we understood the vision of others as structured similarly to our own only through looking at—not through—the intentional light in their eyes and the investments of their objective behavior. The cinema, however, uniquely materialized this visual reflexivity and philosophical turning *directly*—that is, in an objectively visible but subjectively structured vision we not only looked *at* but also looked *through*. In sum, the cinema provided—quite literally—*objective insight* into the subjective structure of vision and thus into oneself and others as always both viewing subjects and visible objects.

Again, the paradoxical status of the more-human-than-human replicants in *Blade Runner* is instructive. Speaking to the biotechnologist who genetically manufactured his eyes with an ironic literality that not only resonates in the narrative but also describes the audience of the film, replicant Roy Batty says, "If you could only see what I've seen with your eyes." The perceptive and expressive materiality of the cinematic through which we engage this ironic articulation of the desire for a supposedly "impossible" form of intersubjectivity is the very materiality through which this desire is objectively and visibly fulfilled. [14] Thus, rather than merely replacing human vision with mechanical vision, the cinema functions mechanically to bring to visibility the reversible structure of human vision: this structure emerges in the lived body as systemically both a subject and an object, as both visual (seeing) and visible (seen), and as simultaneously productive of both an activity of seeing (a "viewing view") and an image of the seen (a "viewed view").

Indeed, through its motor and organizational agency (achieved by the spatial immediacy of the mobile camera inhabiting a world and the reflective and temporalizing editorial re-membering of that primary spatial experience), the cinema inscribes and provokes a sense of

existential presence that is at once subjectively introverted and objectively extroverted; centered synoptically and synthetically yet also decentered and split, mobile and self-displacing. Thus, the cinematic does not evoke the same sense of self-possession generated by the photographic. Indeed, the cinematic subject is sensed as never completely self-possessed, for it is always partially and visibly given over to the vision of others at the same time that it visually appropriates only part of what it sees and also cannot entirely see itself. Furthermore, the very mobility of its vision structures the cinematic subject (both film and spectator) as always in the act of displacing itself in time, space, and the world; thus, despite its existence as materially embodied and synoptically centered (on the screen or as the spectator's lived body), it is always eluding its own (as well as our) containment.

The cinema's visible inscription of the dual, reversible, and animated visual structure of embodied and mobile vision radically transforms the temporal and spatial structure of the photograph. Consonant with what Jameson calls the "high-modernist thematics of time and temporality," the cinematic thickens the photographic with "the elegiac mysteries of durée and of memory" (64). Although its visible structure of unfolding does not challenge the dominant realist perception of *objective* time as an irreversible and forwardly directed stream (even flashbacks are contained by the film's vision in a forwardly directed momentum of experience), the intentional temporal and spatial fluidity of the cinema expresses and makes visible as well—and for the first time—the nonlinear and multidirectional movements of *subjectivity* as it imagines, remembers, projects forward. In this way the cinematic makes time visibly heterogeneous. That is, we visibly perceive time as structured differently in its subjective and objective modes, and we understand that these two structures exist *simultaneously* in a demonstrable state of discontinuity as they are, nonetheless, actively and constantly *synthesized as coherent* in a specific lived-body experience (that is, a particular, concrete, and spatialized history and a particularly temporalized narrative).

Cinema's animated presentation of representation constitutes its "presence" as always presently engaged in the experiential process of coming into being and signifying. Thus the significant value of the streaming forward that informs the cinematic with its specific form of temporality (and differentiates it from the atemporality of the photographic) is intimately bound to a structure not of possession, loss, pastness, and nostalgia but of accumulation, ephemerality, presentness, and anticipation—to a presence in the present informed by its connection to a collective past and an expansive future. Visually (and aurally) presenting the subjective temporality of memory, desire, and mood through the editorial expansion and contraction of experience, as well as through flashbacks, flash-forwards, freeze-framing, pixilation, reverse motion, slow motion, and fast motion, the cinema's visible (and audible) activity of retention and protension constructs a subjective temporality other than—yet simultaneous with the irreversible direction and forward momentum of objective time. This temporal simultaneity not only "thickens" the cinematic present but also extends cinematic presence spatially—both expanding the space in every image between the here, where the enabling and embodied cinematic eye is situated, and the there, where its gaze locates itself in its objects, and embracing a multiplicity of situations in such visual/visible cinematic articulations as double exposure, superimposition, montage, and parallel editing.

The cinematic also radically transforms the spatial phenomeno-logic of the photographic. Simultaneously presentational and representational, viewing subject and visible object, present presence informed by past and future, continuous becoming that synthesizes temporal heterogeneity as the coherence of embodied experience, the cinematic thickens the thin abstracted space of the photograph into a concrete and habitable *world*. We might remember here the sudden animated blinking of a woman's eyes in *La Jetée* and how this visible motion transformed the photographic into the cinematic, the flat surface of a possessed picture into the lived space and active possibility of a lover's bedroom. In its capacity for movement

the cinema's material agency (embodied as the camera) thus constitutes visual/visible space as always also motor and tactile space—a space that is deep and textural, that can be materially inhabited, that provides not merely an abstract ground for the visual/visible but also its particular situation. Thus, although it is a favored term in film theory, there is no such abstraction as *point of view* in the cinema. Rather, there are concrete situations of viewing—specific, mobile, and invested engagements of embodied, enworlded, and situated subjects/objects whose visual/ visible activity prospects and articulates a shifting field of vision from a world whose horizons always exceed it. Furthermore, informed by cinematic temporality, the space of the cinematic is also experienced as heterogeneous-both discontiguous and contiguous, lived and remembered from within and without. Cinematic presence is thus multiply located—simultaneously displacing itself in the there of past and future situations yet orienting these displacements from the here where the body is at present. As the multiplicity and discontinuity of time are synthesized and centered and cohere as the experience of a specific lived body, so are multiple and discontiguous spaces synopsized and located in the spatial and material *synthesis* of a particular body. That is, articulated as separate shots and scenes, discontiguous spaces and discontinuous times are synthetically gathered together in a coherence that is the cinematic lived body: the camera its perceptive organ, the projector its expressive organ, the screen its discrete and material center of meaningful experience. In sum, the cinematic exists as an objective and visible performance of the perceptive and expressive structure of subjective lived-body experience. Not so the electronic, whose materiality and various forms engage its spectators and "users" in a phenomenological structure of sensual and psychological experience that, in comparison with the cinematic, seems so diffused as to belong to *no-body*. Emerging culturally in the 1940s in television (a technology that seemed a domestically benign conjunction and extension of radio and cinema) and in supercomputers (a more arcane technology driven by a less benign military-industrial complex), the electronic can be seen as the third "technological revolution within capital itself." Both television and computers radically transformed not only capital but also the culture, insofar as both in-formed what was, according to Jameson, an unprecedented and "prodigious expansion of capital into hitherto uncommodified areas," including "a new and historically original penetration and colonization of Nature and the Unconscious" (78). Subsequently, the electronic has increasingly come to dominate not only the photographic and cinematic but also our lives; indeed, as Brooks Landon writes, it has "saturated all forms of experience and become an inescapable environment, a 'technosphere'" (27). Beginning in the 1940s, this expansive and totalizing incorporation of what was perceived to be natural by what seemed a totally mediated culture, and the electronically specular production, proliferation, and commodification of the unconscious (globally transmitted as visible and marketable desire) restructures monopoly capitalism as multinational capitalism. Correlatively, Jameson (famously) identifies postmodernism as a new cultural logic that begins to dominate modernism and to alter our sense of existential (and, I would add, cinematic) presence.

A function of technological (and televisual) pervasion and (World-Wide-Web) dispersion, this new electronic sense of presence is intimately bound up in a centerless, network-like structure of the *present*, of instant stimulation and impatient desire, rather than in photographic nostalgia for the past or cinematic anticipation of a future. Digital electronic technology atomizes and abstractly schematizes the analogic quality of the photographic and cinematic into discrete pixels and bits of information that are then transmitted serially, each bit discontinuous, discontiguous, and absolute—each bit "being-in-itself" even as it is part of a system.

[15] Television, videocassettes and digital discs, VCR and DVD recorder/players, electronic games, personal computers with Internet access, and pocket electronics of all kinds form an encompassing perceptual and representational system whose various forms "interface" to constitute an alternative and absolute electronic world of immaterialized—if materially consequential—experience. And this electronic world incorporates the

spectator/user uniquely in a spatially decentered, weakly temporalized and quasi-disembodied (or diffusely embodied) state.

Once again we can turn to Blade Runner to provide illustration of how the electronic is neither photographic nor cinematic. Tracking Leon, one of the rebellious replicants, the human protagonist, Deckard, searches the replicant's empty room plus bath and discovers a photograph that seems to reveal nothing but the empty room itself. Using a science fictional device that resembles a television and DVD player, Deckard directs (by voice) its electronic eye to zoom in, close up, isolate, and enlarge to impossible detail various portions of the photograph in which he finally discovers a vital clue to the renegade replicant's whereabouts. On the one hand, it might seem that Deckard functions here like a photographer, working in his darkroom to make, through optical discovery, past experience significantly visible. (Indeed, this sequence recalls the photographic blowups of an ambiguously "revealed" murder in Michelangelo Antonioni's 1966 cinematic classic, Blow-Up.) On the other hand, Deckard can be likened to a film director, using the electronic eye to prospect and probe photographic space and thus to animate through diacritical action an eventually "discovered" narrative. Deckard's electronic eye, however, is neither photographic nor cinematic. Although it constitutes a series of moving images from the static singularity of Leon's photograph and reveals to Deckard the stuff of which narrative can be made, it does so serially and in static, discrete bits. The moving images that we see do not move themselves, and they reveal no animated and intentional vision to us or to Deckard. Transmitted to the television screen, the moving images no longer quite retain the concrete, material, and objective "thingness" of the photograph, but they also do not achieve the subjective animation of the intentional and prospective vision objectively projected by the cinema. In sum, they exist less as Leon's experience than as Deckard's information.

Indeed, the electronic is phenomenologically experienced not as a discrete, intentional, body-centered mediation and projection in space

but rather as a simultaneous, dispersed, and insubstantial transmission across a network or web that is constituted spatially more as a materially flimsy latticework of nodal points than as the stable ground of embodied experience. Electronic representation and presence thus asserts neither an objective and material possession of the world and self (as does the photographic) nor a centered and subjective spatiotemporal engagement with the materiality of the world and others accumulated and projected as materially embodied and intentional experience (as does the cinematic). Digital and schematic, abstracted from materially reproducing the empirical objectivity of nature that informs the photographic and from presenting a representation of embodied subjectivity and the unconscious that informs the cinematic, the electronic constructs a metaworld where aesthetic value and ethical investment tend to be located in representationin-itself. That is, the electronic semiotically—and significantly constitutes a system of simulation, a system that constitutes copies that seem lacking an original ground. And, when there is a thinned or absent connection phenomenologically perceived between signification and its original or "real" referent, when, as Guy Debord tells us, "everything that was lived directly has moved away into a representation," referentiality becomes not only intertextual but also metaphysical. Living in such a formally schematized and intertextual metaworld unprecedented in its degree of remove from the materiality of the real world has a significant tendency to liberate the engaged spectator/user from the pull of what might be termed moral and physical gravity—and, at least in the euphoria of the moment, the weight of its real-world consequences. (Indeed, not only do the wanton use of credit cards and electronic shopping seem mundane and pervasive evidence of this, but so, too, does the less pervasive and overly optimistic exuberance of easily "discharging" one's civic responsibility by sending and circulating electronic petitions to save, for example, the National Endowment for the Arts.)[16]

The immateriality and gravitational release of the electronic also digitizes "the elegiac mysteries of *durée* and of memory" and of human situation.

Narrative, history, and a centered (and central) investment in the human lived body and its mortality become atomized and dispersed across a system that constitutes temporality not as a coherent flow of mordantly conscious experience but as the eruption of ephemeral desire and the transmission of random, unevaluated, and endless information. (Here we might think, in the first instance, of online merchandising catalogs and the rise of Internet auctions; and, in the second instance, of one's generally disappointing experience of searching the Internet for things more meaningful than cheap airline tickets.)[17] Unlike photographic or cinematic temporality, the primary value of electronic temporality is the discrete temporal bit of *instant present*—that (thanks to television, videotape, digital disc, and computer memory and software) can be selected, combined, and instantly replayed and rerun by the spectator/ user to such a degree that the previously irreversible direction and stream of objective time seems not only overcome but also recast as the creation of a recursive temporal network.[18] That is, on the one hand, the temporal cohesion of history and narrative gives way to the temporal discretion of chronicle and episode, to music videos once narratologically shocking in their discontinuities and discontiguities, and to the kinds of narratives that find both causality and the realizations of intentional agency multiple, random, or comic.[19] On the other hand, however, temporality is also dispersed and finds resolution not in the intelligibility of narrative coherence or in the stream of interior consciousness that used to temporally "co-here" as one's subjective identity but rather in a literal network of instants and instances that literally "call" it into being. It is thus not surprising that today what seems, for many, to hold identity together is coherence of another kind: the ongoing *affirmation* of constant cell phone calls, electronic pages, "palm pilot" messaging—these standing less as significant communication than as the exterior, objective proof of one's existence, of one's "being-in-the-world."

The once dominant cultural logic of modernism and its cinematic techno-logic phenomenologically informed and transformed an earlier

moment's primarily objective and linear sense of temporality with the material realization of time as heterogeneous. That is, it re-cognized and representationally realized that objective and subjective time were lived simultaneously but structured quite differently. By means of a perverse turn, the now dominant cultural logic of postmodernism (and, perhaps, post-postmodernism) and its electronic techno-logic phenomenologically informs—and transforms—modernist and cinematic temporality with a sense of subjective and objective time as once again homogeneous. However, this is a radical transformation rather than a return to an older phenomeno-logic in which the sense of objective time as constitutively streaming forward in a linear progression that marked past, present, and future was dominant, and subjective time was subordinated to this movement and thus transparently sensed as homogenous with it. The modernist period marked by the technological shifts of which cinema was primary split our sense of time in two and made visible—and sensible—the difference between the linearity of objective time and the nonlinearity of subjective time and thus constituted our sense of these as heterogeneous. What is novel—and radical—about temporality as it has been transformed by electronic culture is that while our sense of subjective time has retained its modernist nonlinear structure, our sense of objective time has been reconstituted from its previous constancy as streaming forward in a linear progression into a nonlinear and discontinuous structure that is, to a great degree, now homologous with the nonlinear and discontinuous structure of subjective time. Thus, objective time is no longer at odds with the nonlinear and discontinuous structure of subjective time, and most of the clear distinctions that marked them as separate modalities of temporality have faded. Temporality is now constituted and lived paradoxically as a homogeneous experience of discontinuity. The distinctive subjective nature of high modernist (and cinematic) "durée" is also extroverted into the objective temporality of "read-only" and "random-access" computer and cultural—memory, and the regulative strictures and linear teleology of objective time now seem to turn back in on themselves recursively in a nonlinear structure of equivalence and reversibility. (Where the railroads

once ran to "on time," we need only look to the airlines and our general disbelief in the "reality" of their schedules—and, then, of course, there's TiVo.) This temporal transformation is a radical one—and it shifts our sensibilities from *Remembrance of Things Past*, a modernist, elegiac, and grave re-membering of experience, to the postmodernist, comic, and flighty recursivity of a *Back to the Future*.[20]

Again the genre of science fiction film is illuminating.[21] The Back to the Future films are certainly apposite, and Alex Cox's postmodern, parodic, and deadpan Repo Man (1984) manifests even more clearly the phenomenologically experienced homogeneity of postmodern heterogeneity. The film is a picaresque, loose, strung-out, episodic, and irresolute tale about an affectless and dissolute young man involved with car repossessions, aliens from outer space, Los Angeles punks, government agents, and others, but it is also constructed as a complexly bound and chaotic system of coincidences.[22] At the local and human level of narrative coherence, individual scenes are connected not through narrative causality or psychological motivations but through literally material signifiers. A dangling dashboard ornament, for example, provides the acausal and material motivation between two of the film's otherwise disparate episodes. However, at a transcendently global level the film resolves its acausal and chaotic structure by a narrative recursivity that links what seem random characters and events together in the complex relationship and order of what one spaced-out character describes as both the "cosmic unconsciousness" and a "lattice of coincidence." [23] Emplotment and identity in Repo Man become diffused across a vast relational "lattice of coincidence"—a "network," a "worldwide web" constituted by nodular and transient encounters and events. It is thus no accident that the car culture of Los Angeles figures prominently in Repo Man-not only fragmenting individual experience at the local level into separate segments and discrete and chaotic bits lived only, and incoherently, through the windows of an automobile but also enabling such experience's transcendent coherence in that literal but global "lattice of coincidence," the "network" and "web" of the Los Angeles freeway system, which reconnects experience as intelligible at another and less grounded and human order of magnitude.

The postmodern and electronic instant, in its break from the modernist and cinematic temporal structures of retention and protension, constitutes a form of absolute presence (one abstracted from the objective and subjective discontinuity that gives meaning to the temporal system past/ present/future). Correlatively, this transformation of temporality changes the nature and qualities of the space it occupies. As subjective time becomes experienced as unprecedentedly extroverted and is homogenized with a transformed sense of objective time as less irrefutably linear than directionally mutable, space becomes correlatively experienced as abstract, ungrounded, and flat—a site (or screen) for play and display rather than an invested situation in which action counts rather than computes. Such a superficial space can no longer precisely hold the interest of the spectator/user but has to constantly stimulate it. Its flatness—a function of its lack of temporal thickness and bodily investment—has to attract spectator interest at the surface. To achieve this, electronic space constructs objective and superficial equivalents to depth, texture, and invested bodily movement. Saturation of color and hyperbolic attention to detail replace depth and texture at the surface of the image, and constant action and the simultaneous and busy multiplicity of screens and images replace the gravity that grounds and orients the movement of the lived body with a purely spectacular, kinetically exciting, often dizzying sense of bodily freedom (and freedom from the body). Thus, along with this transformation of aesthetic characteristics and sensibility emerges a significant transformation of ethical investments. Whether negative or positive in effect, the dominant cultural techno-logic of the electronic and its attendant sense of electronic "freedom" have a tendency to diffuse and/ or disembody the lived body's material and moral gravity.[24]

What I am suggesting is that, ungrounded and nonhierarchical as it is,

electronic presence has neither a point of view nor a visual situation, such as we experience, respectively, with the photograph and the cinema. Rather, electronic presence randomly disperses its being across a network, its kinetic gestures describing and lighting on the surface of the screen rather than inscribing it with bodily dimension (a function of centered and intentional projection). Images on television screens and computer terminals seem neither projected nor deep. Phenomenologically they seem, rather, somehow "just there" as we (inter)face them. This twodimensional, binary superficiality of electronic space at once disorients and liberates the activity of consciousness from the gravitational pull and orientation of its hitherto embodied and grounded existence in a material world. All surface, electronic space cannot be inhabited by any body that is not also an electronic body. Such space both denies and prosthetically transforms the spectator's physical human body so that subjectivity and affect free-float or free-fall or free-flow across a horizontal/vertical grid or, as is the case with all our electronic pocket communication devices, disappear into thin air. Subjectivity is at once decentered, dispersed, and completely extroverted—again erasing the modernist (and cinematic) dialectic between inside and outside and its synthesis of discontinuous time and discontiguous space in the coherence of conscious and embodied experience. As Jameson explains this novel state of being:

[T]he liberation . . . from the older *anomie* of the centered subject may also mean, not merely a liberation from anxiety, but a liberation from every other kind of feeling as well, since there is no longer a self present to do the feeling. This is not to say that the cultural products of the postmodern era are utterly devoid of feeling, but rather that such feelings—which it might be better and more accurate to call "intensities"—are now free-floating and impersonal, and tend to be dominated by a peculiar kind of euphoria. (64)

Co-constituted and brought to visibility by the cultural and techno-logic of the electronic, this kind of euphoric presence is not merely novel and

peculiar. At the risk of sounding reactionary I would suggest that it also can be dangerous—and this not merely because its abstraction tends to cause car accidents. At a much deeper level its lack of specific and explicit interest and grounded investment in the human body and enworlded action, its free-floating leveling of value, and its saturation with the present instant could well cost us all a future.

In "The Body as Foundation of the Screen" Elena del Río points out that a phenomenological and existential description of technologically produced images must insist "on the structuring role of the body in the production and reception of images, but more importantly, on the reconfiguration of the body itself—one that extends limits beyond the objective frames of visibility and presence" (95). In the context of discussing the singular films of Atom Egoyan, who explores human relationships as they are lived negatively and positively within multiple—and primarily electronic modes of technologically mediated perception and expression, del Río describes the reconfiguration of the lived-body subject in a similar yet much more positive way than does Jameson. Pointing to our experience of the multiplicity of screens and the simultaneity of heterogeneous spaces in electronically mediated image culture, she writes: "Such coexistence of images has the effect of dispersing the punctual and self-possessed body into a multiplicity of bodies inhabiting different temporal and spatial sites. Thus, rather than sustaining the illusion of a narcissistic ego-logical identity, the electronic screen is able to provide a symbolic paradigm of impermanence and insubstantiality" (109). Nonetheless, she also notes that the more positive aspects of this electronic dispersal and reconfiguration of the lived-body subject are hardly normative—and indeed contradict the dominant logic of recent cybernetic environments that, however futilely, attempt "to shun and erase the body as if its existential and organic weight could simply be wished away" (97). Thus, Egoyan's "use of the electronic screen" as a new mode of humanization capable of articulating and representing substance and value is "radical" and "does not contradict the effects normatively produced by electronic media." And, it is worth noting,

this electronic reconfiguration of the lived-body subject occurs through the *cinematic*—Egoyan's films incorporating the electronic (rather than the other way round) so that his cinema constitutes, as del Río describes it, "a self-conscious representational process that is absent in the majority of mainstream uses of electronic technologies" (112).

Phenomenological analysis does not end with the "thick" description and thematization of the phenomenon under investigation. It aims also for an interpretation of the phenomenon that discloses, however partially, the lived meaning, significance, and nonneutral value it has for those who engage it. In terms of contemporary moving-image culture, however much they both engage and contest each other and however much they borrow on each other's figures and metaphors, the material differences between cinematic and electronic representation emerge as significant differences in their historically lived meaning and value. Cinema is an objective technology of perception and expression that comes and becomes—before us in a structure that implicates both a sensible body and a sensual and sense-making subject. In its visual address and movement it allows us to see objectively for the first time what was once a visible impossibility: that we are at once both intentional subjects and material objects in the world, both the seer and the seen. Thus, it shows us and affirms the embodied being of consciousness as it materially and intentionally engages the substantial world. It also affirms and shows us that, sharing materiality and the world through vision and action, we are intersubjective beings.

Now, historically, it is the techno-logic of the electronic—and not the residual logic of the cinematic—that dominates the form and in-forms the content of our cultural representations. And, unlike cinematic representation, electronic representation by its very structure phenomenologically diffuses the fleshly presence of the human body and the dimensions of that body's material world. However significant and positive its values in some regards, however much its very inventions and

use emerge from lived-body subjects, the electronic tends to marginalize or trivialize the human body. Indeed, at this historical moment in our particular society and culture, we can see all around us that the lived body is in crisis. Its struggle to assert its gravity, its differential existence, status, and situation, its vulnerability and mortality, its vital and social investment in a concrete lifeworld inhabited by others, is now marked in hysterical and hyperbolic responses to the disembodying effects of electronic representation. On the one hand, contemporary moving images show us the human body (its mortal "meat") relentlessly and fatally interrogated, "riddled with holes" and "blown away," unable to maintain material integrity or moral gravity. If the Terminator doesn't finish it off, then electronic smart bombs will. On the other hand, the current popular obsession with physical fitness and cosmetic surgery manifests the wish to reconfigure the human body into something more invulnerable—a "hard body"; a lean, mean, and immortal "machine"; a cyborg that can physically interface with the electronic network and maintain a significant—if altered—material presence in the current digitized lifeworld of the subject. Thus, it is no historical accident that, earlier in our electronic existence, bodybuilder Arnold Schwarzenegger played the invulnerable, hard-body cyborg Terminator, whereas, much more recently and more in tune with the lived body's dematerialization, the slightly built Keanu Reeves flexibly dispersed and diffused what little meat he had across The Matrix (Andy and Larry Wachowski, 1999), The Matrix Reloaded (Andy and Larry Wachowski, 2003), and The Matrix Revolutions (Andy and Larry Wachowski, 2003).

Within the context of this material and technological crisis of the flesh, one can only hope that the hysteria and hyperbole surrounding it are strategic responses—and that through this crisis the lived body has, in fact, managed to reclaim our attention sufficiently so as to forcefully argue for its existence and against its simulation or erasure. For, within the dominant cultural and techno-logic of the electronic there are those out there who prefer the simulated body and a virtual world. Indeed, they

have forgotten that "technology springs from the very human condition of embodiment" and actually believe the body (contemptuously called "meat" or "wetware") is best lived only as an image or as information. Indeed, they suggest that the only possibility for negotiating one's presence in our electronic lifeworld is to reconfigure the body through disembodiment, to digitize and download our consciousness into the neural nets and memory and onto the screens of a solely electronic existence. [25] Such an insubstantial electronic presence can ignore AIDS, homelessness, hunger, torture, the bloody consequences of war, and all the other ills the flesh is heir to outside the image and the datascape. It can ignore the lived body that not only once imagined its technologic but gave it substantial grounding, gravity, and value. It can ignore its own history. Indeed, devaluing the physically lived body and the concrete materiality of the world, the dominant cultural and techno-logic informing our contemporary electronic "presence" suggests that—if we do not take great care—we are all in danger of soon becoming merely ghosts in the machine.

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Notes

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- [1] Reference here is not only to the way in which automotive transportation has extended the capacity for movement of our physical bodies and thus our lived sense of distance and space, the rhythms of our temporality, and the hard currency that creates and expresses our cultural values relative to such things as class and style but also to the way in which it has changed the very sense we have of our bodies. The vernacular expression of regret for "being without wheels" speaks ontologically to our very real incorporation of the automobile, as well as to its incorporation of us.
- [2] Ihde distinguishes two forms of perception: "What is usually taken as sensory perception (what is immediate and focused bodily in actual seeing, hearing, etc.), I shall call *microperception*. But there is also what might be called a cultural, or hermeneutic, perception, which I shall call *macroperception*. Both belong equally to the lifeworld. And both dimensions of perception are closely linked and intertwined" (29: emphasis added).
- [3] Seminal phenomenological works in this regard are Bazin; Sontag; and Barthes.
- [4] Contemporary erosion of faith in the photographic as evidence of the real in popular consciousness has been the result of the development of the seamless electronic manipulation of the photographic image—a possible manipulation that now transparently informs our reception and inflects and transforms the photograph's "realism." Although air-brushing

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and other forms of image manipulation have been practiced for a long while, they have generally left a discernible trace on the image; such is not the case with digital computer alterations of the photographic image. For an overview of this issue see Grundberg; for lengthier and more rigorous explication and discussion of the radical shift from the photographic to the digital, see both Mitchell and Lunenfeld.

[5] Most media theorists point out that photographic (and cinematic) optics are structured according to a norm of perception based on Renaissance theories of perspective; such perspective represented the visible as originating in, organized, and mastered by an individual and centered subject. This form of painterly representation is naturalized by the optics of photography and the cinema. Comolli, in "Machines of the Visible," says, "The mechanical eye, the photographic lens, . . . functions . . . as a guarantor of the identity of the visible with the normality of vision . . . with the norm of visual perception" (123-24).

[6] Jean-Luc Godard plays with this notion of photography as an objectified and literalized possession of vision's "having at a distance" in major sequences of his witty *Les Carabiniers* (1963). In the film two conscripts—dumb and dumber—come back from a war "rich" with material loot in their possession: suitcases full of picture postcards they perceive as quite literally capturing the national monuments and treasures they now (re)present.

[7] It must be noted that the expression *memory bank* is connected to electronic (not photographic) culture. It nonetheless serves us as a way of reading backward that recognizes a literal as well as metaphorical economy of representation and suggests that any attempts to understand the photographic in its "originality" are pervasively informed by contemporary electronic consciousness.

[8] Suspension of belief in "realism" is not the same as disbelief in the real. It is, however, a rejection of the transparency of such belief in "realism" and a recognition that our access to the real is always mediated and epistemologically partial.

[9] For readers unfamiliar with the film, *La Jetée* is a narrative articulated

in a recursive structure. A survivor of World War III has a recurrent memory of a woman's face and a scene at Orly airport, where, as a child, he has seen a man killed. Because of his vivid memory scientists in his postapocalyptic culture—now living underground with minimal power and without hope—attempt experiments to send him back into his vivid past so that he can, perhaps, eventually time-travel to the future to get help for his present. After many experiments, the man is able to live briefly in his past images and actually meet and start a sporadic relationship with the woman he remembers, as well as to briefly visit the future. Aware, however, that he has no future in his own present, with the assistance of those in the future the protagonist chooses to return to his past and the woman he now loves. But this final return to the scene of his original childhood memory at Orly airport ultimately reveals, first, that what he watched as a child was himself as an adult being pursued by people from his own present, and, second, that his original memory was, in fact, the vision of his own adult death.

[10] For extended phenomenological description and interpretation of the various movements of cinematic vision see my "The Active Eye: A Phenomenology of Cinematic Vision."

[11] Here it is worth noting that James Joyce, in 1909, was "instrumental in introducing the first motion picture theater in Dublin" (Kern 76-77).

[12] This overriding and transformation of automatic movement by autonomous movement can be understood as a phenomenon that is not merely brought about as mere technological "illusion" if we consider that our relation to our own lived bodies is precisely similar: that is, our automatic physiological operations are constantly overwritten and transformed by our autonomous and intentional actions unless these operations are foregrounded because, in a particular instance, they trouble us and we specifically attend to them.

[13] With the electronic and the advent of the VCR and DVD player, a pause is indeed a pause. However, in the cinema, an image can appear "frozen" on the screen only if it is replicated many times over so that it can *continue moving* through the projector; unlike the still photograph,

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the film always has to actively work at "arresting" its gaze. For further elaboration, see my "The Active Eye."

[14] This statement encapsulates the major argument and supporting demonstration of my *The Address of the Eye: A Phenomenology of Film Experience*.

[15] Although all moving images follow each other serially, each photographic and cinematic image (or frame) is developed or projected analogically rather than digitally. That is, the image is developed or projected as a whole and its elements are differentiated by gradation rather than by the on/off discretion of absolute numerical values.

[16] I am speaking here of a *dominant* cultural and techno-logic. Obviously, electronic communication (including such things as petition circulation) can and does entail more significant degrees of moral gravity with correlatively significant material consequences. This, however, tends to be the case in circumstances and for people in cultures in which electronic and postmodern logic is *not* a dominant and in which embodied being is truly at referential stake and cannot be forgotten or so easily "liberated."
[17] Although it may undermine my argument here, I do admit that there

[18] Michael Heim's *Electric Language: A Philosophical Study of Word Processing* is apposite here. He writes:

may not be anything more meaningful than cheap airline tickets.

Though it may have identical content, the film viewed through personal videocassette technology is not really the same film projected on the . . . silver screen. There is a profound change in the experience, . . . in the sense of what is being seen, when the projected images are no longer bigger than life and are manipulable through fast-forward, freeze-frame, and every kind of fingertip control. Such viewing is no longer an occasion to which you must adjust your attention. With it, cinema culture comes to be on tap, manipulable at will. The videocassette provides a different psychic framework for the film." (118)

[19] See, e.g., *Sliding Doors* (Peter Howitt, 1998), in which a character lives out two dramatically different existential possibilities; *Run Lola Run* (Tom Tykwer, 1998), in which a character literally runs through several iterations

of a situation where—following chaos theory—small changes in initial conditions have major existential consequences; *Memento* (Christopher Nolan, 2000), in which time seems to move linearly backwards toward the inauguration of a past event but is actually full of gaps and overlaps and also moves ambiguously forward in relation to another of the film's narrative foci; and *Mulholland Drive* (David Lynch, 2001), in which there seems only local temporal cohesion and subjectivities and agency free-floats among the characters.

[20] The *Back to the Future* films—a trilogy—were all directed by Robert Zemeckis: *Back to the Future* (1985), *Back to the Future Part II* (1989), and *Back to the Future Part III* (1990).

[21] Of all narrative film genres, science fiction has been most concerned with poetically mapping those transformations of spatiality, temporality, and subjectivity informed and/or constituted by new technologies. As well, SF cinema, in its particular materiality, has made these new poetic maps concretely visible. For elaboration see my *Screening Space: The American Science Fiction Film* (223-305).

[22] My references to chaos in terms of complex systems are both specific and purposeful and derive from new circumscriptions of the complex relations between chaos and order in what were formerly seen as random and coincidental phenomena. For the most readable elaboration see Gleick; for an application to cultural issues related to contemporary representations of chaos see also my own "A Theory of Everything: Meditations on Total Chaos."

[23] This character, Miller, is both the film's most far-sighted "seer" and the narrative's most spaced-out "loony." He is prone to articulating disjointed yet strangely logical systems of relation in which connections between UFOs and South America explain where all the people on Earth have come from and where they are going. He demonstrates his notions of the "cosmic unconsciousness" and the "lattice of coincidence" by pointing out how "you'll be thinking of a plate of shrimp and suddenly someone will say 'plate' or 'shrimp' or 'plate of shrimp."

[24] Since this essay was originally published, I have been confronted by

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arguments about this assertion, particularly in relation to virtual reality and various attempts to mobilize the human sensorium in electronic space. The argument is that electronic space "reembodies" rather than "disembodies" us. Although, to some extent, this is true, the dominant cultural logic of the electronic tends to elide or devalue the bodies that we are in physical space—not only as they suffer their flesh and mortality but also as they ground such fantasies of reembodiment.

[25] Since this essay was first written, it is interesting to note that the rhetoric of *downloading* one's consciousness into the computer has become further dispersed and "transcendentalized." Now, the rhetoric speaks of *uploading* one's consciousness onto the World Wide Web.



2.2 Post-Cinematic Affect

BY STEVEN SHAVIRO

In [Post-Cinematic Affect], I look at four recent media productions three films and a music video—that reflect, in particularly radical and cogent ways, upon the world we live in today. Olivier Assayas's Boarding Gate (starring Asia Argento) and Richard Kelly's Southland Tales (with Justin Timberlake, Dwayne Johnson, Seann William Scott, and Sarah Michelle Gellar) were both released in 2007. Nick Hooker's music video for Grace Jones's song "Corporate Cannibal" was released (as was the song itself) in 2008. Mark Neveldine and Brian Taylor's film Gamer was released in 2009. These works are quite different from one another, in form as well as content. "Corporate Cannibal" is a digital production that has little in common with traditional film. Boarding Gate, on the other hand, is not a digital work; it is thoroughly cinematic, in terms both of technology, and of narrative development and character presentation. Southland Tales lies somewhat in between the other two. It is grounded in the formal techniques of television, video, and digital media, rather than those of film; but its grand ambitions are very much those of a bigscreen movie. Gamer, for its part, is a digital film made in emulation of computer games. Nonetheless, despite their evident differences, all four of these works express, and exemplify, the "structure of feeling" that I would

like to call (for want of a better phrase) post-cinematic affect.

Why "post-cinematic"? Film gave way to television as a "cultural dominant" a long time ago, in the mid-twentieth century; and television in turn has given way in recent years to computer- and network-based, and digitally generated, "new media." Film itself has not disappeared, of course; but filmmaking has been transformed, over the past two decades, from an analog process to a heavily digitized one. It is not my aim here to offer any sort of precise periodization, nor to rehash the arguments about postmodernity and new media forms that have been going on for more than a quarter-century. Regardless of the details, I think it's safe to say that these changes have been massive enough, and have gone on for long enough, that we are now witnessing the emergence of a different media regime, and indeed of a different mode of production, than those which dominated the 20th century. Digital technologies, together with neoliberal economic relations, have given birth to radically new ways of manufacturing and articulating lived experience. I would like to use the four works I have mentioned in order to get a better sense of these changes: to look at developments that are so new and unfamiliar that we scarcely have the vocabulary to describe them, and yet that have become so common, and so ubiquitous, that we tend not even to notice them any longer. My larger aim is to develop an account of what it feels like to live in the early 21st century.

I am therefore concerned, in what follows, with effects more than causes, and with evocations rather than explanations. That is to say, I am not looking at Foucauldian genealogies so much as at something like what Raymond Williams called "structures of feeling" (though I am not using this term quite in the manner that Williams intended). I am interested in the ways that recent film and video works are *expressive*: that is to say, in the ways that they give voice (or better, give sounds and images) to a kind of ambient, free-floating sensibility that permeates our society today, although it cannot be attributed to any subject in particular. By the term

expressive, I mean both symptomatic and productive. These works are symptomatic, in that they provide indices of complex social processes, which they transduce, condense, and rearticulate in the form of what can be called, after Deleuze and Guattari, "blocs of affect." [1] But they are also productive, in the sense that they do not represent social processes, so much as they participate actively in these processes, and help to constitute them. Films and music videos, like other media works, are machines for generating affect, and for capitalizing upon, or extracting value from, this affect. As such, they are not ideological superstructures, as an older sort of Marxist criticism would have it. Rather, they lie at the very heart of social production, circulation, and distribution. They generate subjectivity, and they play a crucial role in the valorization of capital. Just as the old Hollywood continuity editing system was an integral part of the Fordist mode of production, so the editing methods and formal devices of digital video and film belong directly to the computing-and-informationtechnology infrastructure of contemporary neoliberal finance. There's a kind of fractal patterning in the way that social technologies, or processes of production and accumulation, repeat or "iterate" themselves on different scales, and at different levels of abstraction.[2]

What does it mean to describe such processes in terms of affect? Here I follow Brian Massumi (23-45) in differentiating between *affect* and *emotion*. For Massumi, affect is primary, non-conscious, asubjective or presubjective, asignifying, unqualified, and intensive; while emotion is derivative, conscious, qualified, and meaningful, a "content" that can be attributed to an already-constituted subject. Emotion is affect captured by a subject, or tamed and reduced to the extent that it becomes commensurate with that subject. Subjects are overwhelmed and traversed by affect, but they *have* or *possess* their own emotions. Today, in the regime of neoliberal capitalism, we see ourselves as subjects precisely to the extent that we are autonomous economic units. As Foucault puts it, neoliberalism defines a new mutation of "*Homo oeconomicus* as entrepreneur of himself, being for himself his own capital, being for himself his own producer, being for

himself the source of [his] earnings" (*Biopolitics* 226). For such a subject, emotions are resources to invest, in the hope of gaining as large a return as possible. What we know today as "affective labor" is not really affective at all, as it involves rather the sale of labor-power in the form of predefined and pre-packaged emotions.[3]

However, emotion as such is never closed or complete. It also still testifies to the affect out of which it is formed, and that it has captured, reduced, and repressed. Behind every emotion, there is always a certain surplus of affect that "escapes confinement" and "remains unactualized, inseparable from but unassimilable to any *particular*, functionally anchored perspective" (Massumi 35). Privatized emotion can never entirely separate itself from the affect from which it is derived. Emotion is representable and representative; but it also points beyond itself to an affect that works transpersonally and transversally, that is at once *singular* and *common* (Hardt and Negri 128-29), and that is irreducible to any sort of representation. Our existence is always bound up with affective and aesthetic flows that elude cognitive definition or capture.[4]

On the basis of his distinction between affect and emotion, Massumi rejects Fredric Jameson's famous claim about the "waning of affect" in postmodern culture (Jameson 10-12). For Massumi, it is precisely subjective emotion that has waned, but not affect. "If anything, our condition is characterized by a surfeit of [affect] . . . If some have the impression that affect has waned, it is because it is unqualified. As such, it is not ownable or recognizable and is thus resistant to critique" (Massumi 27-28). "The disappearance of the individual subject" with which Jameson is concerned (16) leads precisely to a magnification of affect, whose flows swamp us, and continually carry us away from ourselves, beyond ourselves. For Massumi, it is precisely by means of such affective flows that the subject is opened to, and thereby constituted through, broader social, political, and economic processes. [5]

Indeed, and despite their explicit disagreement, there is actually a close affinity between Massumi's discussion of transpersonal affect which always escapes subjective representation, and Jameson's account of how "the world space of multinational capital" is "unrepresentable," or irreducible to "existential experience" (Jameson 53-54). Intensive affective flows and intensive financial flows alike invest and constitute subjectivity, while at the same time eluding any sort of subjective grasp. This is not a loose analogy, but rather a case of parallelism, in Spinoza's sense of the term. Affect and labor are two attributes of the same Spinozian substance; they are both powers or potentials of the human body, expressions of its "vitality," "sense of aliveness," and "changeability" (Massumi 36). But just as affect is captured, reduced, and "qualified" in the form of emotion, so labor (or unqualified human energy and creativity) is captured, reduced, commodified, and put to work in the form of "labor power." In both cases, something intensive and intrinsically unmeasurable—what Deleuze calls difference in itself (Difference 28-69)—is given identity and measure. The distinction between affect and emotion, like the distinction between labor and labor power, is really a radical incommensurability: an excess or a surplus. Affect and creative labor alike are rooted in what Gayatri Spivak describes as "the irreducible possibility that the subject be more than adequate—super-adequate—to itself" (73).

This super-adequacy is the reason why neither the metamorphoses of capital nor the metamorphoses of affect can be grasped intuitively, or represented. But Jameson is quick to point out that, although the "global world system" is "unrepresentable," this does not mean that it is "unknowable" (Jameson 53). And he calls for "an aesthetic of cognitive mapping" (54) that would precisely seek to "know" this system in a non-representational and non-phenomenological way. This proposal, again, is closer than has generally been recognized to the cartographic project that Massumi inherits from Deleuze and Guattari, and that I would like to call, for my own purposes, and following Jonathan Flatley (2008), an aesthetic of affective mapping. [6] For Jameson and Deleuze and Guattari

alike, maps are not static representations, but tools for negotiating, and intervening in, social space. A map does not just replicate the shape of a territory; rather, it actively *inflects* and *works over* that territory.[7] Films and music videos, like the ones I discuss here, are best regarded as affective maps, which do not just passively trace or represent, but actively construct and perform, the social relations, flows, and feelings that they are ostensibly "about."

In [Post-Cinematic Affect], I map the flows of affect in four dimensions, in conjunction with four "diagrams" of the contemporary social field.[8] All four of these diagrams are more or less relevant to all four of the works that I am discussing; but for heuristic purposes, I will link each work preferentially to a single diagram. The first diagram is that of Deleuze's "control society," a formation that displaces Foucault's Panoptical or disciplinary society (Deleuze, Negotiations 177-82). The control society is characterized by perpetual modulations, dispersed and "flexible" modes of authority, ubiquitous networks, and the relentless branding and marketing of even the most "inner" aspects of subjective experience. Such processes of control and modulation are especially at work in the "Corporate Cannibal" video. The second diagram marks out the delirious financial flows, often in the form of derivatives and other arcane instruments, that drive the globalized economy (LiPuma and Lee). These flows are at once impalpable and immediate. They are invisible abstractions, existing only as calculations in the worldwide digital network, and detached from any actual productive activity. And yet they are brutally material in their "efficacy," or in their impact upon our lives as the current financial crisis makes all too evident. Financial flows are the motor of subjectivity, most crucially, in *Boarding Gate*. The third diagram is that of our contemporary digital and post-cinematic "media ecology" (Fuller), in which all activity is under surveillance from video cameras and microphones, and in return video screens and speakers, moving images and synthesized sounds, are dispersed pretty much everywhere. In this environment, where all phenomena pass through a stage of being processed in the form of digital code, we cannot meaningfully distinguish between "reality" and its multiple simulations; they are all woven together in one and the same fabric. *Southland Tales* is particularly concerned with the dislocations that result from this new media ecology. Finally, the fourth diagram is that of what McKenzie Wark calls "gamespace," in which computer gaming "has colonized its rivals within the cultural realm, from the spectacle of cinema to the simulations of television" (7). *Gamer* posits a social space in which the ubiquity of gaming has become nearly absolute.

In three of the four works I am discussing, I focus upon the figure of the media star or celebrity. Grace Jones has always been a performance artist as much as a singer. Her music is only one facet of her self-constructed image or persona. "Corporate Cannibal" gives this persona a new twist. *Boarding Gate* is a star vehicle for Asia Argento. Its concerns are close to those of Assayas's earlier films, and especially *Demonlover* (2002); but these concerns are filtered, and rearticulated, through Argento's visceral, self-consciously performative onscreen presence. *Southland Tales* has sprawling, multiple plotlines and an ensemble cast; but nearly all its actors, including Justin Timberlake, are pop culture figures who actively play against their familiar personas. Kelly thereby creates a sort of affective (as well as cognitive) dissonance, a sense of hallucinatory displacement that largely drives the film.

Jones, Argento, and Timberlake are all perturbing presences, exemplary figures of post-cinematic celebrity. They circulate endlessly among multiple media platforms (film, television talk shows and reality shows, music videos and musical recordings and performances, charity events, advertisements and sponsorships, web- and print-based gossip columns, etc.), so that they seem to be everywhere and nowhere at once. Their ambivalent performances are at once affectively charged and ironically distant. They enact complex emotional dramas, and yet display a basic indifference and impassivity. I feel involved in every aspect of their lives,

and yet I know that they are not involved in mine. Familiar as they are, they are always too far away for me to reach. Even the *Schadenfreude* I feel at the spectacle of, say, Britney's breakdown or Madonna's divorce backhandedly testifies to these stars' inaccessibility. I am enthralled by their all-too-human failures, miseries, and vulnerabilities, precisely because they are fundamentally inhuman and invulnerable. They fascinate me, precisely because it is utterly impossible that they should ever acknowledge, much less reciprocate, my fascination.

In short, post-cinematic pop stars allure me. The philosopher Graham Harman describes allure as "a special and intermittent experience in which the intimate bond between a thing's unity and its plurality of notes somehow partly disintegrates" (143). For Harman, the basic ontological condition is that objects always withdraw from us, and from one another. We are never able to grasp them more than partially. They always hold their being in reserve, a mystery that we cannot hope to plumb. An object is always more than the particular qualities, or "plurality of notes," that it displays to me. This situation is universal; but most of the time I do not worry about it. I use a knife to cut a grapefruit, without wondering about the inner recesses of knife-being or grapefruit-being. And usually I interact with other people in the same superficial way. Now, in general this is a good thing. If I were to obsess over the inner being of each person I encountered, ordinary sociability would become impossible. It is only in rare cases—for instance when I intensely love, or intensely hate, someone—that I make the (ever-unsuccessful) attempt to explore their mysterious depths, to find a real being that goes beyond the particular qualities that they display to me. *Intimacy* is what we call the situation in which people try to probe each other's hidden depths.[9]

What Harman calls *allure* is the way in which an object does not just display certain particular qualities to me, but also insinuates the presence of a hidden, deeper level of existence. The alluring object explicitly *calls attention* to the fact that it is something more than, and other than, the

bundle of qualities that it presents to me. I experience allure whenever I am intimate with someone, or when I am obsessed with someone or something. But allure is not just my own projection. For any object that I encounter really is deeper than, and other than, what I am able to grasp of it. And the object becomes alluring, precisely to the extent that it forces me to acknowledge this hidden depth, instead of ignoring it. Indeed, allure may well be strongest when I experience it *vicariously*: in relation to an object, person, or thing that I do not actually know, or otherwise care about. Vicarious allure is the ground of aesthetics: a mode of involvement that is, at the same time, heightened and yet (as Kant puts it) "disinterested." The inner, surplus existence of the alluring object is something that I cannot reach—but that I also cannot forget about or ignore, as I do in my everyday, utilitarian interactions with objects and other people. The alluring object insistently displays the fact that it is separate from, and more than, its qualities—which means that it exceeds everything that I feel of it, and know about it. This is why what Kant calls a judgment of beauty is non-conceptual and non-cognitive. The alluring object draws me beyond anything that I am actually able to experience. And yet this "beyond" is not in any sense otherworldly or transcendent; it is situated in the here and now, in the very flows and encounters of everyday existence.

Pop culture figures are vicariously alluring, and this is why they are so affectively charged. They can only be grasped through a series of paradoxes. When a pop star or celebrity allures me, this means that he or she is someone to whom I respond in the mode of intimacy, even though I am not, and cannot ever be, actually intimate with him or her. What I become obsessively aware of, therefore, is the figure's distance from me, and the way that it baffles all my efforts to enter into any sort of relation with it. Such a figure is forever unattainable. Pop stars are slippery, exhibiting singular qualities while, at the same time, withdrawing to a distance beyond these qualities, and thus escaping any final definition. This makes them ideal commodities: they always offer us more than they

deliver, enticing us with a "promise of happiness" that is never fulfilled, and therefore never exhausted or disappointed. In terms of a project of affective and cognitive mapping, pop stars work as anchoring points, as particularly dense nodes of intensity and interaction. They are figures upon which, or within which, many powerful feelings converge; they *conduct* multiplicities of affective flows. At the same time, they are always more than the sum of all the forces that they attract and bring into focus; their allure points us elsewhere, and makes them seem strangely absent from themselves. Pop culture figures are *icons*, which means that they exhibit, or at least aspire to, an idealized stillness, solidity, and perfection of form. Yet at the same time, they are fluid and mobile, always displacing themselves. And this contrast between stillness and motion is a generative principle not just for celebrities themselves, but also for the media flows, financial flows, and modulations of control through which they are displayed, and that permeate the entire social field.

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Notes

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[1] Strictly speaking, Deleuze and Guattari say that the work of art "is a bloc of sensations, that is to say, a compound of percepts and affects" (*What is Philosophy?* 164).

[2] I am implicitly drawing upon Jonathan Beller's account of what he calls "the cinematic mode of production," or the way that cinema and its successor media "are deterritorialized factories in which spectators work, that is, in which we perform value productive labor" (1). The cinema machine extracts surplus labor-power from us, in the form of our attention; and the circulation and consumption of commodities is effected largely through the circulation and consumption of moving images, provided by film and its successor media. Beller gives a highly concrete account of how media forms and culture industries are central to the productive regime, or economic "base," of globalized capitalism today. However, I think that he underestimates the differences between cinematic and post-cinematic media: it is these differences that drive my own discussion here.

[3] My terminology here is somewhat different from that of Michael Hardt and Antonio Negri, who have done the most to develop the concept of affective labor. For Hardt and Negri, "unlike emotions, which are mental phenomena, affects refer equally to body and to mind, In fact, affects, such as joy and sadness, reveal the present state of life in the entire organism" (108). This seems wrong to me, precisely because there is no such thing as "mental phenomena" that do not refer equally to the body. The division between affect and emotion must rather be sought elsewhere. This is why I prefer Massumi's definition of emotion as the capture, and reductionto-commensurability, of affect. It is this reduction that, among other things, allows for the sale and purchase of emotions as commodities. In a certain sense, emotion is to affect as, in Marxist theory, labor-power is to labor. For labor itself is an unqualifiable capacity, while labor-power is a quantifiable commodity that is possessed, and that can be sold, by the worker. Hardt and Negri's own definition of affective labor in fact itself makes sense precisely in the register of what I am calling labor-power

and objectified emotions: "Affective labor, then, is labor that produces or manipulates affects such as a feeling of ease, well-being, satisfaction, excitement, or passion. One can recognize affective labor, for example, in the work of legal assistants, flight attendants, and fast food workers (service with a smile)" (108).

[4] In the first half of the 20th century, Fascism and Nazism in particular are noteworthy for their mobilization of cinematic affect; though arguably Soviet communism and liberal capitalism also mobilized such affect in their own ways. Much has been written in the last half-century about the Nazis's use of cinema, Goebbels's manipulation of the media, and the affective structure of films like Leni Riefenstahl's *Triumph of the Will*. But already in the 1930s, Georges Batailles pointed to the centrality of affective politics in his analysis of "The Psychological Structure of Fascism" (137-60). And Walter Benjamin explicitly linked this fascist mobilization of affect to its use of the cinematic apparatus in his essay on "The Work of Art in the Age of Its Technological Reproducibility" (251-83), especially when he diagnoses fascism's "aestheticizing of politics" (270). Part of my aim here is to work out how the post-cinematic manipulation of and modulation of affect, as we are experiencing it today, differs from the mass mobilization of cinematic affect in the early and middle 20th century.

[5] Affect theory, or "non-representational theory" (Thrift), is usually placed in sharp opposition to Marxist theory, by advocates of both approaches. I am arguing, instead, that we need to draw them together. This is precisely what Deleuze and Guattari attempted to do in *Anti-Oedipus*. The attempt was not entirely successful, but it seems prescient in the light of subsequent "neoliberal" developments in both affective and political economies.

To put this in a slightly different way, I am largely sympathetic to Bruno Latour's insistence that networked social processes cannot be explained in terms of global categories like "capital," or "the social"—because these categories themselves are what most urgently need to be explained. As Whitehead says, the business of philosophy "is to explain the emergence of the more abstract things from the more concrete things," rather than the

reverse (Whitehead 20). The only way to explain categories like "capital" and "the social" is precisely by working through the network, and mapping the many ways in which these categories function, the processes through which they get constructed, and the encounters in the course of which they transform, and are in turn transformed by, the other forces that they come into contact with. But explaining how categories like "capital" and "society" are constructed (and in many cases, auto-constructed) is not the same thing as denying the very validity of these categories—as Latour and his disciples, in their more uncautious moments, are sometimes wont to do.

[6] Jameson explains the difference between knowledge and representation by referring to Althusser's notorious distinction between "science" and "ideology" (Jameson 53). But however unfortunate his terminology, Althusser is really just restating Spinoza's distinction between different types of knowledge. Spinoza's first, inadequate kind of knowledge corresponds to Althusser's ideology, and to the whole problematic of representation; while his third kind of knowledge, of things according to their immanent causes, *sub specie aeternitatis*, corresponds to Althusser's science. The same Spinozian distinction is the basis for Deleuze and Guattari's contrast between "cartography and decalcomania," or mapping and tracing, where the latter remains at the level of representation, while the former is directly "in contact with the real" (*A Thousand Plateaus* 12-14).

For a close look at practices of affective mapping, and their differences from Jameson's "cognitive mapping," see Giuliana Bruno.

[7] As Eleanor Kaufman, commenting on Deleuze and Guattari, puts it: "The map is not a contained model, or tracing, of something larger, but it is at all points constantly inflecting that larger thing, so that the map is not clearly distinguishable from the thing mapped" (5).

[8] I am using "diagram" here in the sense outlined by Foucault and by Deleuze. Foucault defines a diagram as "a generalizable model of functioning; a way of defining power relations in terms of the everyday life of men . . . [The Panopticon] is the diagram of a mechanism of power

reduced to its ideal form; its functioning, abstracted from any obstacle, resistance, or friction, must be represented as a pure architectural and optical system; it is in fact a figure of political technology that may and must be detached from any specific use" (Foucault, *Discipline* 205). Deleuze cites this definition, and further elaborates it, in his book on Foucault and elsewhere (Deleuze, *Foucault*).

[9] Three additional things need to be noted here. In the first place, Harman's discussion does not privilege human subjectivity in any way. His descriptions of how objects exceed one another's grasp in any encounter applies as much "when a gale hammers a seaside cliff" or "when stellar stellar rays penetrate a newspaper" as it does when human subjects approach an object (Harman 83). When I use a knife to cut a grapefruit, the knife and the grapefruit also encounter one another at a distance, unable to access one another's innermost being. In the second place, I do not have any privileged access into the depths of my own being. My perception of, and interaction with, myself is just as partial and limited as my perception of, and interaction with, any other entity. And finally—although in this respect I am going against Harman, who argues for the renewal of something like a metaphysics of occult substances the withdrawal of objects from one another need not imply that any of the objects thus withdrawn actually possess some deep inner essence. The argument is that all entities have more to them than the particular qualities they show to other entities; it says nothing about the status or organization of this more.



2.3 Flash-Forward: The Future is Now

BY PATRICIA PISTERS

1. The Death of the Image is Behind Us

Starting with the observation that "a certain idea of fate and a certain idea of the image are tied up in the apocalyptic discourse of today's cultural climate," Jacques Rancière investigates the possibilities of "imageness," or the future of the image that can be an alternative to the often-heard complaint in contemporary culture that there is nothing but images, and that therefore images are devoid of content or meaning (1). This discourse is particularly strong in discussions on the fate of cinema in the digital age, where it is commonly argued that the cinematographic image has died either because image culture has become saturated with interactive images, as Peter Greenaway argues on countless occasions, or because the digital has undermined the ontological photographic power of the image but that film has a virtual afterlife as either information or art (Rodowick 143). Looking for the artistic power of the image, Rancière offers in his own way an alternative to these claims of the "death of the image." According to him, the end of the image is long behind us. It was announced in the modernist artistic discourses that took place between Symbolism and Constructivism between the 1880s and 1920s. Rancière argues that the modernist search for a pure image is now replaced by a kind of impure image regime typical for contemporary media culture.

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Rancière's position is free from any technological determinism when he argues that there is no "mediatic" or "mediumistic" catastrophe (such as the loss of chemical imprinting at the arrival of the digital) that marks the end of the image (18). The qualities of an image do not depend on the fact that they are seen on a canvas, a cinema screen, a television set or a computer window. For Rancière there is a certain imageness (that can even be evoked by words) that continues to influence our perception and understanding. Rancière defines cinematic images in particular as a manifestation of "operations that couple and uncouple the visible and its signification or speech and its effects, which create and frustrate expectations" (4-5). Images on the one hand refer to reality, not necessarily as a faithful copy, but as to what they suffice to stand for. And then there is also the interplay of operations between the visible and invisible, sayable and unsayable, an alteration of resemblance and dissemblance which is the way by which art constructs images that have affective and interrupting power. Rancière argues that (filmic) images in our museums and galleries today can be classified in three major (dialectically interrelated) categories according to the dominant type of operations: the naked image, the ostensive image, and the metaphorical image.

Naked images are those images that do not constitute art, but which testify to reality and trace history; they are images that primarily witness and testify. Ostensive images are images that also refer to reality but in a much more obtuse way, in the name of art, with dissemblances (such as the framing of the image within an exhibition context, or within an aesthetic style) that perform an operation on reality. The final category of images, the metaphorical ones, follow a logic that makes it "impossible to delimit a specific sphere of presence isolating artistic operations and products from forms of circulation of social and commercial imagery and from operations interpreting this imagery" (24). These are images that employ various strategies (play, irony, metamorphosis, remixing) to critically or wittily interrupt and join the media flow. Taken together,

these image-types constitute the operational power of the image in contemporary culture, while the last category especially seems to indicate the dominant impurity of the new image regime. It is the last category that is relevant for discussing the future of the image as a third type of image in a Deleuzian sense. In the larger project from which this paper is derived I explain more fully why this third type of images should be called the neuro-image. [1] Put in a very concise way, this new formulation draws on an explicit reference to Deleuze's suggestion that "the brain is the screen" and his call for looking at the biology of the brain for assessing the audiovisual image. Here, I simply want to emphasize that the starting point of the neuro-image is a change in cinema, where we slowly but surely have moved from following characters' actions (movement-image), to seeing the world filtered through their eyes (time-image), to experiencing directly their mental landscapes (neuro-image). But this is in fact a flashforward of what will come later in this paper.

First, I should like to address a problem that seems to be hidden in Rancière's categorization of the images in respect to the future of the cinematographic image. While he refers to the new image regime of contemporary culture, his filmic examples almost always refer to modern cinema of the sixties, or, to put it in Deleuzian terms, to "time-images" that diverge from more classical cinema or "movement-images" in that characters no longer seem goal-oriented but more adrift (or even lost) in time and space. And when Rancière in Les Écarts du cinéma speaks of more contemporary cinema, such as the films of Pedro Costa, these films also follow the irrational and crystalline logic of the time-image (Rancière 137-53). But one can wonder if the heart of cinema today still resides in modern time-images. Of course, time-images exist in contemporary cinema. But is the impurity that Rancière describes as typical for the new image regime really a form of the time-image? Or have we moved to a third type of cinema, beyond the movement-image and time-image? A comparison of two "apocalyptic images," one from the sixties and one from contemporary media culture, help to investigate this question further.

2. Flashback: The Time-Image Grounded in the Past

First, a flashback to Alain Resnais's Hiroshima Mon Amour (1959): not only a classic modern time-image in a Deleuzian sense, but also a film that investigates the (limits of the) power of the image. The famous phrases "I have seen everything in Hiroshima" and "You have seen nothing in Hiroshima" indicate the struggle between the visible and its significations that Rancière theorizes. Considered according to his categories of naked, ostensive, and metaphorical images, we can see that on one level the film is a naked image that traces the catastrophic event of the atomic bomb attack on Hiroshima in 1945. In the first instance, Resnais was asked to make a documentary about this apocalyptic event. And some of the images, such as those shot in the Hiroshima Memorial Museum, are "naked" in that witnessing sense. However, Hiroshima Mon Amour is not a purely, nakedly documenting image. As Resnais recounts in an interview on the DVD edition of the film, he quickly found out he was not capable of making a documentary on this traumatic moment in history. Not finding any solution to transform the disaster into images that would add something to the existing Japanese documentaries and newsreels, he asked Marguerite Duras to write a script. During their long conversations, the filmmaker and writer were wondering about the strange fact that while they were talking about Hiroshima, life took its usual course while new bombs were flown over the world. This is how they arrived at the idea of focusing on a small-scale personal event, a love story involving a Japanese man and a French woman, with the catastrophe constantly in the background.

And so we see how Resnais and Duras render the naked image obtuse, witnessing, but also transforming the image poetically by colliding together words (Hiroshima – Amour), bodies (the famous opening sequence of the ash-embracing bodies), seeing and not-seeing ("You have seen nothing in Hiroshima"), places (Nevers in France, Hiroshima in Japan) and times (the past and the present that start to collapse into each other). I will return to these temporal dimensions of Resnais's film,

but at this point it is important to see how this temporal confusion as one of the "dissemblance" techniques is typical of the artistic ostensive image. However, as far as Rancière's last image category is concerned, the metaphoric image, it is more difficult to see where Resnais's film intervenes ambiguously in the flow of media images. Even though the images of agonizing/loving bodies in "ashembrace" at the beginning of the film are in themselves images that allow metaphoric (or allegorical) readings, they are not part of the playfully critical artistic and commercial images Rancière ranks under this category (the term metaphoric is perhaps not the most well-chosen in that sense). Therefore, it is fair to say *Hiroshima* Mon Amour moves between naked and ostensive images, but cannot be categorized under Rancière's last category of impure metaphoric images so typical for today's audio-visual culture. Is the time-image (exemplified by Resnais' film) then the best way to understand the futurity of the image? I do not mean to imply that Rancière and Deleuze make a similar argument about the image. Rancière is more concerned with a politicalaesthetical dialectics between the visible and the sayable, the visible and the invisible. Deleuze addresses the ontological problem of the complex temporal dimensions of cinema, the virtual and the actual (which is not the same as a play between the visible and the invisible). Nevertheless, in the following I will propose to develop a temporal ontology for the futurity of the image that might produce an encounter between and beyond Rancière and Deleuze.

Hiroshima Mon Amour is a time-image in the Deleuzian sense. As is well known, in all his work Alain Resnais is preoccupied with time. Practically all his films present a battle with the ravages of time, with echoes of the past that keep on resonating in the present. Hiroshima Mon Amour audiovisually translates the Bergsonian thesis that the past coexists with the present. The love story the French woman has with the Japanese man in 1950s Hiroshima causes her to relive her first love affair, with a German soldier during the Second World War. The Japanese man becomes the German lover from the past. She is in Nevers in France. Hiroshima Mon

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Amour is a crystal of time, which gives us the key to the time-image in general (Deleuze 69). As Deleuze argues, "what the crystal reveals or makes visible is the hidden ground of time, that is, its differentiation into two flows, that of presents which pass and of pasts which are preserved" (98). Hiroshima Mon Amour translates the untranslatability of the apocalypse and the unimaginabilities of the traumas of the (collective and individual) past into ostensive images that are fundamentally Bergsonian in their conception of non-chronological time, the pre-existence of a past in general, the coexistence of all layers of the past and the existence of its most contracted degree: the present (Deleuze 82). In order to understand these temporal dimensions of the time-image (and its relation to the future), it is useful to make a connection between Deleuze's Cinema 1: The Movement Image and Cinema 2: The Time Image on the one hand, and his philosophy of time as developed in Difference and Repetition on the other.

3. Temporal Dimensions in the Passive Syntheses of Time

In chapter 2 of *Difference and Repetition*, Deleuze develops the idea of the passive syntheses of time. As in the cinema books, here too Bergson is the main reference point, although the beginning of Deleuze's reflections is Hume's thesis that "repetition changes nothing in the object repeated, but does change something in the mind which contemplates it" (Deleuze 70). Repetition has no "in itself," but it does change something in the mind of the observer of repetitions: on the basis of what we perceive repeatedly in the living present, we recall, anticipate, or adapt our expectations in a synthesis of time, which Deleuze calls in Bergsonian terms "duration." This synthesis is a passive synthesis, since "it is not carried out by the mind, but occurs in the mind" (71). The active (conscious) synthesis of understanding and recollection are based upon these passive syntheses that occur on an unconscious level. Deleuze distinguishes different types of passive syntheses of time that have to be seen in relation to one another and in combination with active (conscious) syntheses. The conception of the syntheses of time is incredibly sophisticated and complicated, which James Williams recently has demonstrated brilliantly (Williams). Here I will only be able to refer to the basic elements of Deleuze's conception of time because it offers the possibility of conceiving the "future-image."

The first synthesis Deleuze distinguishes in *Difference and Repetition* is that of habit, the true foundation of time, occupied by the living present. But this passing present is grounded by a second synthesis of memory: "Habit is the originary synthesis of time, which constitutes the life of the passing present. Memory is the fundamental synthesis of time which constitutes the being of the past (that which causes the present to pass)" (80). Moving to the cinema books, it is possible to argue that the first synthesis of time, habitual contraction, finds its aesthetic expression as movement-images, the sensory-motor manifestations of the cinematographic brain-screen. The second synthesis of time corresponds to the dominant form of time in the time-image, where the past becomes more important and shows itself more directly as the ground of time. The first and second syntheses of time have to be seen as "temporal keynotes" of sorts that are different in the movement-image (having its base predominantly in the present) and the time-image (grounded in the past). The second synthesis can enfold moments of the first synthesis, so the temporal keynotes are permeable systems. Each synthesis has its own composition of past, present, and future.

The present that is based in the first synthesis of time is a contracted synthesis, a particular stretch in the present, as with the lovers embracing in *Hiroshima Mon Amour*: "It's crazy how soft your skin is," the woman tells the man in the first scene after the long opening sequence when we finally see the lovers in a hotel room. This scene is a stretch in the living present where the lovers are in the actual moment of their love affair. By way of contrast, the present as a dimension of the past (grounded in the second synthesis of time) is the most contracted degree of all of the past, which is the more dominant temporal dimension in *Hiroshima Mon Amour*. The Japanese man in the present becomes the culmination

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point of all layers of the past: he becomes the German lover of the past, he becomes (the events that happened in) Hiroshima. The present is now a dimension of the past as its crystallizing point.

But the past also has its own temporal manifestations: as a dimension of the present (in the first synthesis) the past is always related to the present as a clear reference point from which it differs. For example, the flashback in the most famous impossible love story of the movementimage, *Casablanca*, constitutes the shared memory of Rick and Ilsa: the recollection of their love affair in Paris that explains the drama of the situation in the present of Casablanca.



Figure 1 – HIROSHIMA MON AMOUR (Alain Resnais, 1959)

But in the second synthesis of time, the past exists as sheets of all of the past that start to float and move, such as the collective and individual pasts that get mixed up in *Hiroshima Mon Amour*. Or the mosaic of memory snippets in other Resnais films, such as *Muriel*, or the Time of Return (1963), where memories of the Algerian War of Independence and personal memories of the characters connect in fragmentary and ambiguous ways.

And then there is the problem of the future. If we look from the dimensions of the first and second syntheses, the future is anticipated either from a point in the present, or from the past. Usually, in the first synthesis of time, the future as a dimension of the present is an expectation that departs from the present, an anticipation that in movement-images motivates goal-oriented behavior, such as the pursuit of happiness in melodrama or the various goals of an action hero. It can also be argued that the future in the movement-image starts after the film ends, such as the "happily ever after" moment of the wrapping up of classical Hollywood narratives. The future is that which comes after the present of the film has ended; an end that in the movement-image we usually anticipate through genre conventions that frame our expectations.

4. The Future as Dimension of the Past

In the time-image, on the other hand, the future becomes a dimension of the past. Here it becomes less an anticipation of an action, but the expectation of a repetition of an event whose outcome is based on the past. Each layer of a coexisting past implies its own possible future. Deleuze mentions Resnais's *Je t'aime*, *Je t'aime* (1968) as one of the few films that show how we inhabit time. As the poster for the film announces: "The past is present and future in Alain Resnais's new time machine." In other words, the present and future are dimensions of the second synthesis of time. *Je t'aime*, *Je t'aime* is the strange science fiction story of a man who has tried to commit suicide after the death of his girlfriend. He survives, collapses into a catatonic depression, and is recruited as a guinea pig for

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a scientific experiment. He is brought to a remote research center where scientists tell him that their subject of research is time. They have built a machine that looks like a giant brain. The idea is that the scientists will use the machine to send him back in time exactly one year (to 5 September 1966 at 4:00 p.m.) for the duration of one minute. Before he enters the brain-machine the man is heavily sedated with drugs that, as the scientists explain, make him "completely passive though still capable of receiving memories." As if they had read *Difference and Repetition*, the scientists seem to have created a machine for literally travelling into the second passive synthesis of time.

The inside of this machine is soft and lobe-like. The man lies down, sinking into the velvet folds of the brain-machine, and waits for the memories to come to him. The scene to which he returns is at the seaside during a holiday with his girlfriend in the south of France. He is snorkeling and gets out of the water. His girlfriend, sunbathing on the rocks near the water, asks him, "Was it good?" This scene is repeated several times, but always with slight differences and subtle variations, both in the order of the shots within the sequence, its variable beginnings and ends, and the slightly different camera angles and shot lengths. One can say that it is as if his brain is looking through a kaleidoscope to see all the possible combinations of the mosaic snippets of memory, possibly looking for a new outcome, a new future. Another important scene of the past that is repeated with variations is set in a hotel room in Glasgow where the man and his girlfriend are on holiday. This is the moment where she will die because of a leaking gas heater. Was it an accident or not? Did she kill herself or did he (accidentally) kill her? The memory is not clear and changes slightly each time. The first time, we see the memory of this hotel room scene and the flame of the heater is burning. His memory is transformed by the man's feelings of guilt, and at the last return, we see that the flame is extinguished. His future changes accordingly: when this memory (albeit possibly a false memory) arrives, he returns from his wanderings in the layers of the past to the present, collapses, and finally will die. So the future in this film is a dimension of the past.

Hiroshima Mon Amour also represents the future as related to the past. At several points, the film suggests that the traumas of war and other disasters will be repeated in the future, which is based on the idea that we have seen nothing, that we will forget, and everything will start all over: "2,000 dead bodies, 80,000 wounded, within nine seconds. The numbers are official. It will happen again," the woman says in voice-over over images of the rebuilt city of Hiroshima. Also in the love story, the future is a function of memory and forgetting, as the man says, "In a few years when I have forgotten you, I will remember you as the symbol of love's forgetfulness. I will think of you as the horror of forgetting." The woman, too, when she recalls her first love, trembles at the fact that the intensity of such shattering love can be forgotten, and a new love can occur again.

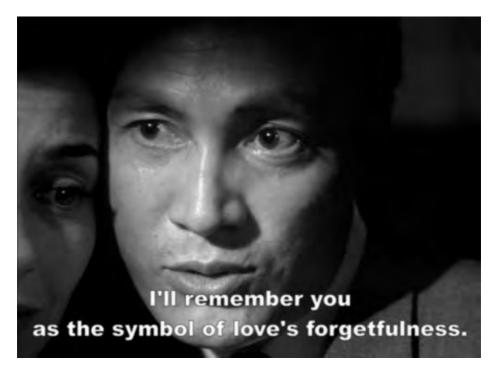


Figure 2 – HIROSHIMA MON AMOUR (Alain Resnais, 1959)

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It is important to note that in *Hiroshima Mon Amour* everything happens a second time. Historically, the unimaginable disaster had been repeated already three days later, in Nagasaki. The French woman's impossible love affair from the Second World War is repeated in another passionate love affair in post-war Japan. Even film history returns as the film recalls, both thematically and stylistically, other impossible love affairs of the cinema, in allusions to *Casablanca* as mentioned above, as well as Hitchcock's *Vertigo*. Not only do the Hitchcock and Resnais films share the theme of a love affair haunted by the past, but some of the scenes in *Hiroshima Mon Amour* are composed in a strikingly similar way to *Vertigo*. On all levels, we can see in *Hiroshima Mon Amour* a variation of the idea of the future that is based in the past: I will forget you. We will forget (love, war). And it (love, war) will happen again. Repetition and difference, the future as grounded in the past: this is the cyclic temporality of *Hiroshima Mon Amour*.

5. The Future as Eternal Return

In Difference and Repetition Deleuze also postulates another idea of the future, the future as such as the third synthesis of time: "The third repetition, this time by excess, [is] the repetition of the future as eternal return" (90). In this third synthesis, the foundation of habit in the present and the ground of the past are "superseded by a groundlessness, a universal ungrounding which turns upon itself and causes only the yetto-come to return" (91). In this third synthesis the present and the past are dimensions of the future. The third synthesis cuts, assembles, and (re-)orders from the past and the present, to select the eternal return of difference. The third synthesis is the time of (endless) serial variations and remixes of pasts and presents. My argument is that contemporary cinema can be understood as a third type of image, which I propose to call the "neuro-image," a mode of cinema predominantly based in the third synthesis of time, which has a particular relation to the future. Only the third synthesis can include the first and second syntheses of time. This, as I hope to show, can explain some of the neuro-image's impurity and manifestations in contemporary modes of filmmaking. But let me first return to Deleuze's discussion of the third synthesis of time.

For the development of the third synthesis of time in Difference and Repetition, Deleuze no longer refers to Bergson; Nietzsche has now become the main reference point. In *The Time-Image* Bergson also seems to disappear at a certain point to make way for Nietzsche's appearance, though in the cinema books Nietzsche is not explicitly connected to the question of time (not to the third synthesis of time, in any case). In the chapter on Orson Welles and the powers of the false (chapter 6 of *The Time-Image*), Nietzsche is an important reference to understanding the manipulating but also creative powers of the false.[2] However, this is discussed as a consequence of the direct appearance of time, which is until that moment in The Time-Image mainly elaborated in terms of the pure past (all of the past) of the second synthesis of time. At the end of the discussion of Welles's cinema, the powers of the false are connected to the creative powers of the artist and the production of the new (though not explicitly to the eternal return and the future). The series of time (characteristic of the third synthesis) are also mentioned in The Time-Image, especially in the chapter on bodies, brains, and thoughts (chapter 8). Here the bodies in the cinema of Antonioni and Godard relate to time as series. In the book's conclusion Deleuze explains this temporal image as "a burst of series": the time-image here "does not appear in an order of coexistences or simultaneities, but in a becoming as potentialization, a series of powers." (275).

But after all the insistence on the Bergsonian temporal dimensions of the movement-image, the time-image, and Deleuze's extended commentaries on Bergson, this form of time as series remains rather underdeveloped on a theoretical level in *The Time-Image*. Referring to *Difference and Repetition*, we can deduce that the powers of the false and the series of time that can be identified in some time-images might perhaps belong to the third synthesis of time. We have seen that Alain Resnais's films,

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Hiroshima Mon Amour in particular, are firmly rooted in the second synthesis of time, even when they speak of the future. Is it perhaps possible to find glimpses of the third synthesis of time in Resnais's films, where the images speak *from* the future? As Deleuze suggests at the end of "The Brain is the Screen," cinema is only at the beginning of its exploration of audio-visual relations, which are relations of time (372). This suggests the possibilities for new dimensions of time in the image and perhaps clearer openings to the third synthesis of time.

In My American Uncle (1980), Resnais mixes fiction with scientific findings about the brain. Here the genre is less "science fiction," where scientists invent strange experiments to reveal truths about the nature of time and memory as in Je t'aime, Je t'aime, but more a "docufiction" where French neurobiologist Henri Laborit discusses (in voice-over and in direct address from behind his desk) findings about the workings of the human brain that are by and large consistent with contemporary cognitive neurosciences. Laborit discusses the brain from an evolutionary perspective from which it is possible to distinguish three layers in the brain (a primitive, reptile kernel, which is the brain for survival; a second affective and memory brain; and a third brain, the outer layer or neocortex that enables associations, imagination, and conscious thoughts). Throughout the film, Laborit explains how these three layers together, in dynamic exchange with one another and constantly influenced by others and by our environment, can explain human behavior. These scientific intermezzos are seamlessly connected to the stories of three different characters, who tell and enact their stories and whose lives intersect at certain moments. These fictional stories translate the scientific discourse of the neurobiologist quite literally, sometimes too literally for a contemporary audience. Nevertheless, My American Uncle also gives a moving insight into what ultimately motivates the filmmaker, the philosopher, and the scientist: the drive to understand more profoundly why we do what we do, and to find ways to improve not only individual destinies but also the fate of humanity.

The last images of My American Uncle present a particularly political coda to the expositions and dramatizations that went before. This scene follows directly after we have heard Laborit in voice-over declaring in a future conditional tense that as long as we do not understand how our brain works, and understand that until now it has always been used to dominate the other, there is little chance that anything will change. What follows are images of a camera traveling through a ruined city landscape, and because the words that preceded these images still resonate throughout the sequence, we comprehend that this devastated landscape might be understood as an image from the future: the eternal return of the series of war and disaster. The images are in fact of the aftermath of urban riots in the Bronx in the 1970s. But the images also immediately remind us of the desolate bombarded cityscapes of Sarajevo in Bosnia and Grozny in Chechnya, and other still future urban war zones at the time of filming, and Boulogne, a French city that suffered heavily during the Second World War, and the setting of his film Muriel (1963). So the past, the present, and the future are now dimensions of the future. Then at the end of the final sequence of My American Uncle, the camera suddenly detects a ray of hope and holds at the only colorful image in the deserted streets: on one of the somber walls is a mural of a forest by American artist Alan Sonfist—a sort of city screen as a hopeful sign of a possible future, a new beginning. While the camera zooms in, the forest turns into pure green, fragments and colors that are not yet connected to concrete images; everything is still open to possible futures. As such, these last images of the film, as a sign of death and re-beginnings, belong perhaps to the third synthesis of time, the future, the image related to the inevitability of death and repetitions of death, but also the possibility of the creation of the new.

6. Database Logic of the Neuro-Image

So Resnais's cinema, although mainly based in the second synthesis of time (with its particular future), also seems to be open to the third synthesis of time that speaks from the future as such. Moreover, not coincidentally,

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Figure 3 – MY AMERICAN UNCLE (Alain Resnais, 1980)

as I will try to show, his films also express a "digital logic" avant la lettre, which prefigures some of cinema's translation of the challenges of the future of the image. The necessity of cinema's internal positioning towards the digital is suggested in an important remark made by Deleuze in *The Time-Image*: "The life or the afterlife of cinema depends on its internal struggle with informatics" (270). It may seem like a stretch to think of Resnais as a Web 2.0 filmmaker. But there is a kind of very contemporary "database logic" in Resnais's work. Database logic is defined by Lev Manovich in *The Language of New Media* as a typical characteristic of digital culture (212-81). Contemporary culture is driven by databases, from which, time and again, new selections are made, new narratives

constructed, in endless series. As Manovich explains, this does not mean that the database is only of our time: the encyclopedia and even Dutch still-life paintings of the seventeenth century follow a kind of database logic. It is just that with the seemingly endless storage and retrieval possibilities of digital technology, the database has become a dominant cultural form in the 21st century. Specifically, it allows for the creation of endless series of new combinations, orderings, and remixes of its basic source materials, which on a temporal scale matches the characteristics of the third synthesis of time, the future as eternal return.

The database logic in Resnais is often developed from within the second synthesis of time: in Hiroshima Mon Amour, Last Year in Marienbad, Muriel, and Je t'aime, Je t'aime, for instance, the past presents itself in different variations. But there are also some moments where the future as the third synthesis of time appears in a glimpse as the ungrounded ground from which it is spoken, such as in the last images of My American Uncle discussed above. Or, for example, in a scene in The War is Over (1966), in which the main character imagines in a sort of "database flashforward" the unknown girl who helped him escape from the police on the Spanish border (he only heard her voice on the phone): a montage of flashforwards with female faces gives various possible options of what the girl would look like. These kinds of database-options of various futures return at other moments in the film as well. My American Uncle is also database-like, when at the beginning of the film several objects are shown without any clear meaning or connection between them. Later in the film, some of these objects will be suggested in relation to different stories and characters, and obtain (symbolic) meaning, only to return in a mosaic of many different objects and persons at the end of the film. Here Resnais's film-screen really resembles a typical web page that offers multiple entrances that each lead to other possible future stories.

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Figure 4 - MY AMERICAN UNCLE (Alain Resnais, 1980)

Taking this database logic one step further, I suggest that the third synthesis of time that appears in the *Time-Image* (in a more or less disguised form) is the dominant sign of time under which cinema's images in the digital age operate much more explicitly, and which allows for the conceptualization of a third image type, the neuro-image. The serial and remixing logic of the database has today become the dominant logic, corresponding to the temporal logic of the third synthesis under which the neuro-image is constructed. Of course there are still movement-images that operate under the logic of the rational cut, continuity editing and the integration of sequences into a whole (Deleuze 277), and are based in the first passive synthesis of time. And obviously time-images also find new directors whose work is grounded in the second synthesis of time reigned by the incommensurable or irrational cut of the coexisting layers of the pure

past (277). But, arguably, the heart of cinema has now moved into a database logic connected to the third synthesis of time. It is an impure image regime, because it repeats and remixes all previous image regimes with their specific temporal orders (the movement-image and the time-image), but it ungrounds all these regimes due to the dominance of the third synthesis and the speculative nature of the future as such.

7. Flashforward: The Neuro-Image from the Future

Some examples of popular contemporary neuro-images where we have moved quite literally into the character's brain world include *Source Code* (Jones 2011), whose tagline punningly calls it "an action flick with brains," and *Inception* (Nolan 2010), where a team of dream invaders tries to implant (or incept) one little thought in someone's mind that might change the future. *Avatar* (Cameron 2009) is another case in point of "brain power" in cinema, where the avatars are operated by brain activity. And of course there is the world of the precogs appearing on the tactile screens in *Minority Report* (Spielberg 2002) that predict future crimes. Typically in these films, people are hooked up to a kind of brain-scanning machine. Yet even when this is not so literally emphasized, contemporary cinema has become a mental cinema that differs in major ways from previously dominant modes of filming. [3]

Focusing only on the temporal dimensions of these images, for the purposes of this argument, it becomes evident that the future plays an important role that can be expressed on many different levels. In *Minority Report*, crime prevention is based on crimes that are about to happen, predicted by savants with the power of predicting the future; in this way, the future is literally part of the narrative. The main character in *Source Code* acts with increasing knowledge of the future, every time he relives a variation of the past in a kind of eternal return. If we think of *Inception*, the whole story is actually told from a point of view in the future. At the beginning of the film, the main characters meet when they are very old. At the end of the narrative, we return to this point, indicating that actually everything

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was told from this future moment of old age and even the moment of their death. Here, again, the future structures the narration. In a different way, *Avatar* is told from the point of view of the future of the planet, the story being situated after the collapse of the earth. These are all examples from contemporary Hollywood, which is by and large still characterized by the movement-image (so we also still have typical characteristics of the temporal dimensions of the first synthesis of time, such as the sensorimotor orientation and genre expectations). But alongside this continuation of convention, a different temporal order of repetition and difference, eternal return and serialization, with the higher degree of complexity typical of the digital age has definitively made its way to the cinema screen.

The American television series FlashForward is another interesting contemporary example of a neuro-image (with movement-image tendencies) that is told from the point of view of the future. FlashForward is based on the science fiction novel of the same name by Robert Sawyer (1999) in which the main character is a scientist who works at CERN, where the Large Hadron Collider particle accelerator is performing a run to search for the Higgs boson, with the side effect of a global blackout during which all people on earth experience a flashforward of twenty-two years. The television series adds other characters and changes the leap forward in time to six months, but the basic premise remains the same: everybody in the world is confronted with an image from the future. The show questions the idea of what it is to live and act based on a vision of the future. Since the future as such is always speculative (we simply cannot know for sure what will happen in the future, so it is not a matter of determinism even though destiny becomes an important problem), some fear their visions will come true, others fear they will not; but all have to act in respect to their flashforward. As in Hiroshima Mon Amour, in FlashForward there is a collision between collective and individual fate, but the television series presents us with a more mosaic-like story typical of the neuroimage's database narrative (presenting the countless possible variations of the future). Quite literally we see here how the idea of the future has now

come to inform our image culture. We can also see this perspective of our present and past from an idea of a vision of the future more broadly in contemporary culture: 9/11 and the War on Terror marked the moment of preventive war, tests to measure the telomeres in DNA can predict the age of a person's death, and the ecological future of the planet is more uncertain than ever. Clearly, there is much more to be said about the ways in which the neuro-image resonates with larger developments in contemporary culture.

At this point I will just make a few more comparative observations between the future in FlashForward, or, more generally, the future from the third synthesis of time in the neuro-image, and the future in *Hiroshima* Mon Amour, or the future based in the second synthesis of time. In both Hiroshima Mon Amour and FlashForward the catastrophe is in fact caused by a scientific invention: the atomic bomb and the Large Hadron Collider, respectively. However, in Hiroshima Mon Amour, as we have seen, future disasters are imagined from the perspective of this past event: it has happened; it will happen again. FlashFoward actually deals with speculations predicated on a future disaster: we do not know if the Large Hadron Collider will create the effect as described. Most scientists assure us that it will absolutely not provide anything like a blackout, let alone a leap in consciousness into the future. Nevertheless, the series clearly posits the whole narrative as a dimension of the future. On a more individual scale, Hiroshima Mon Amour deals with the horror of an intense and seemingly unforgettable love affair that will be forgotten. In FlashForward the horror (or surprise) is situated in the future. Some characters see themselves in the future in another love affair, for example, something unimaginable in the present. In all cases, the future influences the present in *FlashForward*, just as the past influences the present in *Hiroshima Mon Amour*.

Now, one may object that *Hiroshima Mon Amour* and *FlashForward* are absolutely incomparable. And of course this is true in certain respects. *Hiroshima Mon Amour* is an absolute masterpiece of modern art cinema, a

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pure time-image in the Deleuzian sense, and an ostensive image (with naked references) in Rancière's terms. As I have argued, Hiroshima Mon Amour does not exactly fit Rancière's classification and arguments for modern cinema as playfully critical, and impure in the sense that commercial and artistic images are mixed. I have tried to show that Rancière's very useful classification does not match very well with the cinematographic examples upon which he himself draws, which are all time-images based in the second synthesis of time. The future of the image, as defined by Rancière, seeks to move beyond the time-image into a new and impure regime of imageness where the commercial and the artistic are increasingly mixed. The neuro-image I propose here, in following Deleuze's suggestions in "The Brain is the Screen" to explore cinema's temporal dimensions (372) as part of the contemporary Hollywood machine, is just such an impure image. But the neuro-image can also present itself in a more artistic way, which remains perhaps closer to the time-image, but which is rather found in the museum, gallery, or on the Internet.

After Hiroshima Mon Amour (Kolbowski 2008) is a digital film presented as a museum installation that can also be viewed online. This film is an example of a critical and artistic remixing of, and operation on, the image that comes closer to Rancière's third category of future-images. But, just like the key films in contemporary Hollywood described above, this film is a neuro-image in its temporal dimensions. Kolbowski's film repeats Hiroshima Mon Amour from the point of view of different future disasters (in this case the War in Iraq and the Katrina disaster in New Orleans); the allegorical love affair of the French woman and Japanese man is serialized and played by ten different actors of various ethnicities, races, and genders. The famous opening scene of the "ashembrace" is slowed down, made to stutter, and filtered with colors; various scenes of the original film are recreated in black and white; contemporary material downloaded from the Internet is added, and the score and sound design of the original film are remixed. In this way the audio-visual relations become relations of time: while the texts address the past by recalling the exact dialogues of *Hiroshima Mon Amour* ("You have seen nothing in Hiroshima"), the images speak from repetitions in the future (images of soldiers' video diaries made during the Iraq War) of a multiplication of the wars and love affairs in an eternal return.



Figure 5 – AFTER HIROSHIMA (Silvia Kolbowski, 2005-2008). Courtesy of the artist.

With the concept of the neuro-image, which can appropriate both artistic characteristics of the time-image and classical Hollywood characteristics of the movement-image, but which remixes, reorders and serializes these images in new ways, we can see how we have entered an image-type of the third synthesis of time, which speaks from the future, but which itself also indicates that the future is now.

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Notes

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- [1] A fuller argument on the neuro-image is developed in Pisters (2012).
- [2] "Time has always put the notion of truth in crisis, . . . It is a power of the false which replaces and supersedes the form of the true, because it poses the simultaneity of incompossible presents, or the co-existence of not-necessarily true pasts" (130-31).
- [3] Obviously the neuro-image did not just happen overnight. In the conclusion of *The Neuro-Image* I situate the emergence and consolidation of this new mode of cinema between 11/9 (the fall of the Berlin Wall in 1989) and 9/11 (the fall of the twin towers in 2001). I also discuss precursor films such as the films of Alain Resnais, and Pontecorvo's *The Battle of Algiers*. The main difference with these precursor images is that the opening of brain spaces was confined to either the avant-garde or the genres of science fiction or horror. Contemporary popular cinema has moved the image more pervasively inside the skull.



2.4 Towards a Non-Time Image: Notes on Deleuze in the Digital Era

BY SERGI SÁNCHEZ [1]

1. Squint your eyes and you'll spot the very instant when, according to Gilles Deleuze, the movement-image gives way to the time-image: the suicide of Edmund (Edmund Moeschke) in Germany Year Zero (Germania Anno Zero, Roberto Rossellini, 1947). Edmund, a twelve-year-old boy in the ruins of postwar Berlin, has just poisoned his sick father, following the advice (as he understands it) of his former schoolteacher, a Nazi and possibly a pedophile, who counsels the boy that the weak should perish so that the strong can flourish. All that Edmund can do now is stare at a reality that has become overwhelming for him, a reality he is no longer able to understand: the war has forever changed human values, and people face an uncertain future. Humankind has just regained the freedom it has fought so hard for, but it still doesn't know what to do with it. Germany Year Zero represents the cinema of the seer: the seer can only see, he cannot *not* see; the seer who sees can no longer act. The seeing are like sleepwalkers, like ghosts. That's how Rossellini's Edmund goes with the flow of what he can't change anymore, like a

shipwreck adrift. Edmund is not a character for us to identify with, but a black hole of centripetal forces. The crack of the Holocaust, the war that revealed to us the shame of being human, permanently separates people from things and probably also words from things and concepts from their meaning.

Rossellini's year zero is also a year zero for images: the year when the cinema depicts a teenager committing suicide is the year when the innocence of the movement-image seems insufficient to understand a world ripped apart. Its steaming guts remain on the floor, but this image—"conceived of as being but one element in a natural arrangement with other images within a logic of the set [ensemble] analogous to that of the finalized coordination of our perceptions and actions" (Rancière 107)—is not enough anymore. Jacques Rancière calls into question the relationship established by Deleuze between his taxonomy of the film image and the unfolding of History. Deleuze warns us that he is not writing a history of cinema but a classification of signs, and Rancière shows that Deleuze, like Bresson, aims to draw a map of the things of the world, some kind of natural philosophy where "the image need not be constituted at all" because, following Henri Bergson, "[i]t exists in itself. It is not a mental representation but matter-light in movement. . . . Matter is the eye, the image is light, light is consciousness" (Rancière 109).

We know that one of the most controversial points of the Deleuzian theory lies in how he separates the two ages of cinema, in relation to the historical caesura of the Second World War. Rancière refutes that division through common sense: if the two kinds of images belong to two different stages of its evolution, how, for instance, could they equally be exemplified by Bresson's films (112)? Actually, then, we are not talking of two kinds of images, but of an image with two different voices or, according to Rancière's metaphor, of the passage from one shore to the other of the same images (113). The sudden and emphatic

connection between the time-image and the postwar period may seem to contradict Deleuze's assertion that he doesn't want to write a history of images, but in fact it does not. Deleuze is definitely indebted to André Bazin, the first theorist to admit Neorealism looks into the inside of human beings when forcing them to look to the outside. But Deleuze takes the Bazinian idea beyond realism and into the field of thought—if we once had nice, organic representations, then due to the crisis of faith in human actions, all we have now is a cliché we tirelessly come back to in order not to forget how worn out it is. That is why Rancière thinks of the movement-image as a philosophy of nature—much closer to Bazin's theory about realism—and of the time-image as a philosophy of spirit (113). "The thought and spirit that cinema needs (and that we, too, need)," writes Paola Marrati, "are immanent powers of life which hold the hope and pose the challenge of creating new links between humans and this world" (Marrati 63-64). It might seem puzzling that Deleuze finds some features of the time-image, emerging from the ruins of movement, in filmmakers like Vincente Minnelli or Joseph L. Mankiewicz, who are so familiar with the cause-and-effect manners of Hollywood's classical cinema. But the French philosopher circles around many different centers and enjoys intersecting zones and past areas to which time endlessly refers in its constant course.

2. Another suicide, also of a child, marks the reincarnation of the time-image in contemporary cinema. Significantly, that suicide is conceived by Steven Spielberg, accused by Godard of turning the Holocaust into a Hollywood tale in *Schindler's List* (1993) and openly criticized in the French director's *In Praise of Love* (*Éloge de l'amour*, 2001). Godard summoned Spielberg to a face-off in the framework of the Locarno Film Festival; the American director refused, but his *A.I.: Artificial Intelligence* (2001) could be the answer of a seer-filmmaker. Two and a half months before the Twin

Towers attack, Spielberg's premiere flooded Manhattan: feet dangling over an aquatic abyss, David (Haley Joel Osment), a robot with the capacity for unlimited love, discovers that he is nothing but a circuit of cables programmed for affection. His silent wandering through a ruined city is not so different from Edmund's in *Germany Year Zero*: the only difference—a big difference—between them is that David, raised in the infinite innocence of Carlo Collodi's *Pinocchio*, cannot die. Sunk into a huge womb, into the quiet waters of femininity, David is rescued by the sunlight that his protector Gigolo Joe (Jude Law) emanates. He falls again into the ocean of neglected childhood, and the rusty Ferris wheel of Coney Island traps him before the sublimate image of his adoptive mother: an icon of the Virgin.[2]

Critics like Jonathan Rosenbaum and J. Hoberman insisted after the premiere that A.I.: Artificial Intelligence was the product of the union of two seemingly opposite sensitivities: Stanley Kubrick's, who promoted the project, and Steven Spielberg's, an inspired replicant.[3] We must agree with Deleuze that "for Kubrick, the world itself is a brain" (Cinema 2 205), and "the identity of world and brain, the automaton, does not form a whole, but rather a limit, a membrane which puts an outside and an inside in contact, makes them present to each other, confronts them or makes them clash" (206). That membrane is what Deleuze calls "memory"—not in the sense of the ability to remember, but of making "sheets of past and layers of reality correspond, the first emanating from an inside which is always already there, the second arriving from an outside always to come, the two gnawing at the present which is now only their encounter" (207).[4] David is Deleuze's automaton, literally—he is the consciousness of an extinguished world, the only container of the universe's memory of the aliens who visit the Earth two thousand years after the end of everything.[5] He is the only hope for a human race that explored the vast space-time continuum and was unable to recreate the life flow for longer than twenty-four hours. What if David was the materialization of the hopes that Kubrick placed in Spielberg, defender of the movement-image, to perpetuate the time-image into an indefinite future with no expiry date? When talking of Resnais and Kubrick, Deleuze emphasizes the idea of a cerebral cinema which it would be mistaken to identify with an intellectual cinema (Cinema 2 204-15). Although the latter—an "intellectual" cinema in its classical form (which Deleuze associates with Eisenstein)—is not devoid of emotion or feeling, it has much more to do with the movement-image, which depends on the reactions caused by sensorimotor situations in the external world. David, on the other hand, is a repository for the pure, Bergsonian memory, one characterized by eternal life. The beautiful coda where Spielberg's aliens grant David his wish and let him spend one more day with his revived mother doesn't play into Spielberg's presumed sentimental vein, but rather opens the door to a reversible time, to a possible resurrection that Spielberg rather mysteriously entertains. So happiness goes through death and reincarnation, and the joining of the spirits of movementimage (Spielberg) and time-image (Kubrick) makes possible the renaissance of time as an emotional vector of contemporary cinema.

It doesn't seem odd that Spielberg himself was reborn from his creative ashes following A.I. Nor does it seem fantastic to suggest that the heroes played by Tom Cruise in two of Spielberg's later films help us to understand what happens to David, that memory-world that can't survive in a drowned world. Analyzing Cruise's character not in Spielberg's films but in Brian de Palma's Mission: Impossible (1996), and comparing it to the shining Douglas Fairbanks of the silent era, Núria Bou and Xavier Pérez write that the unconscious, happy jumping without a safety net, and the endless chases have been replaced by a bottomless void that turns the new male hero into a puppet that doesn't even know its demiurge (104)—an opinion we find ratified in Minority Report (Steven Spielberg, 2000). Here, Cruise plays Chief John Anderton, head of the "Pre-Crime" special

law enforcement division, which anticipates and thwarts crime with the help of three "Pre-Cogs," specially gifted beings who are able to see the future. When we see Anderton editing the future memories of the seers on a virtual multiscreen console in order to avert a murder, when we see him heading towards entrapment by that same net of images which will bring him guilt and doom him to a perilous steeplechase, we are reminded of Rossellini's Edmund and of A.I.'s David sinking into the amniotic fluid, forever on the verge of oblivion. Likewise, Cruise in the role of single father Ray Ferrier running away from a relentless alien invasion in War of the Worlds (Steven Spielberg, 2005) signifies for us the memory-world developing through an era of void, a void that is able to neutralize time unless our hero struggles to reconquer it. To some extent, 21st-century cinema has gone through a transit space while trying to report on this reconquest: it studied the perseverance of the time-image, it watched the gestures of its body free-falling before surviving and transforming into something else. And it did so to confirm the emergence of that "something else" to which it naturally tends, materializing partly thanks to electronic and digital media images, made of pixels or non-time particles (or particles of eternal time, unable to die, like Spielberg's David).

3. We should consider once more what an image is. That is what Godard has been wondering ever since those "three thousand hours of cinema" that drove him to take up film criticism and filmmaking. [6] The more he wonders about it, the less he finds a calming conclusion: over the last years, his aesthetic project, disillusioned but lively, has been tinged with a certain amount of longing. That longing used to find relief in his enthusiasm for quoting and his active involvement in a cinema of resonances, but now it has turned into full consciousness of loss. That's why, in the master class depicted in his *Notre musique* (2004)—where Godard plays himself delivering a lecture at the European Literary Encounters in Sarajevo (on the same topic as a

lecture he really gave there in 2002)—he confronts two symmetrical images of Rosalind Russell and Cary Grant speaking on the telephone in *His Girl Friday* (Howard Hawks, 1940), and says: "As you see, it's the same image repeated twice. That's because the director is not able to see the difference between a man and a woman." This, he tells his audience (or us), is a common mistake in cinema, and things only get worse when images refer to historical events, "because that's when we see that the truth has two faces." It is therefore mandatory to deal with differences.

Referring to the dichotomy Israelis/Palestinians, Godard concludes that "Israelis came to fiction and Palestinians came to documentaries." The imaginary belongs to the realm of certitude and the real belongs to the realm of uncertainty. Godard's famous nostalgia for Howard Hawks's movement-image becomes a nihilistic, political reflection on the shot-reverse shot relation of a dreaming nation (which has the power) and a sleepless nation (which is oppressed). At the beginning of his master class, he asks: "Where do you think this picture was taken?" "Stalingrad," "Beirut," "Warsaw," "Hiroshima" are the answers. He says: "Richmond, Virginia, 1865. American Civil War." Godard shows that Deleuze was right when he believed that repetition is a condition of History itself, that it's not possible to talk of History without repetition. So Godard goes back to the ruins of Sarajevo in Notre musique, because he now feels morally compelled to become Rossellini's Edmund, to feel his helplessness at a later stage. In Allemagne 90 Neuf Zéro (1991), Lemmy Caution, a character from Godard's Alphaville (1965), gets out of his grave to walk around through some other ruins, those of reunified Germany after the fall of the Berlin Wall. Caution was another of Godard's alter egos, a ghost, walking on the pavement of a city that had been a huge cemetery. Godard has been drawing the map of that cemetery for many years. At the time of Je vous salue Marie (1983), Godard defined cinema as a depository of suffering (Bergala Godard par

Godard 2, 608). One of the image's duties is not to bear witness to the present anymore, but to let the past come back in multiple ways, like the waves we create when we throw a stone into the water: they are alike but different, too, and they are all destined to lap the earth and make it change with every each wave. There is no dialectics of time, for the present's relationship with the past is not linear: the present includes past, absorbs it, lets it leak to create a sediment. The past is not like the cream in the coffee, but like the sugar dissolved in the liquid to become a part of its nature (in Bergson's famous image). We could say then that Godard in *Histoire(s) du cinéma* (1988-98) is like David in *A.I.*: anchored to his experience as a spectator, he reenacted cinema's history as a 'memory-world' disintegrating and overlapping itself.

4. When, in France Tour Détour Deux Enfants (1977), Godard asks a little girl if night is space or time, and she answers "both" without hesitating, an image is taking shape off-camera, where space and time melt and superimpose to give birth to a darkness. It's the darkness of truth, the truth of the image that thinks of itself, that struggles to make its way through the abyss of existence. Godard goes on asking: "When you look at yourself in the mirror, does your image exist? Do you exist only as yourself or, quite the opposite, do you have more than one existence? When your mother thinks of you and has an image of you, don't you exist although she cannot see you?" The girl hesitates: she is a slave to the senses and doesn't allow herself to accept that her image can exist regardless of her presence. "You, reflected in the mirror - is it an image of you or is it your image?" Godard asks her. "Your image on television, is it less real than you, doesn't it exist as much as you?" During the interview, in a stolen moment, the girl's uncertainty reveals itself in an image of her hair over her face, the electronic freezing of a truth that doesn't lie in the inquisitive offscreen words of Godard or in Cécile's childish hesitations. It's a secret that remains inside the transparent walls of the image.

So that image embodies a certain kind of hope—the hope of the image and of what we can expect from it. Walter Benjamin's "Theses on the Philosophy of History" considers the significance of the image as a promise of presence; that is, as a kind of prediction that ontologically carries an unresolved past, the only temporality that may open a crack in the present from which the future may emerge. It is the same image that Godard sets in motion in his *Histoire(s) du cinéma*, turning his arduous endeavor into a manifesto that is less pessimistic than its gloomy gravity makes it seem. The pregnant image embraces its own finitude as well as its own celebration, so when Benjamin talks of the "end of History," we must not take it literally. It's not about the end of occurrence, it's about thinking History as if we were thinking its boundary. It's a good lesson following all those apocalyptic warnings that have foretold cinema's death for years: realizing that, when we think cinema's history from an ahistorical view, we think it from an awareness of the boundary - a boundary that we quite possibly don't know, of course. So there is no sense looking for a cause or a guilty party for the death of cinema as we know it, as Benjamin would say, especially because such a death is inherent to the intelligibility of cinema to begin with. And, in the second place, because the end is not an event in any positivistic sense:

The end of history is not immediately present in history, that is, it's not available [disponible] in each one of the present moments of history or in any of them. This non-presence of the end within history can be conceived of in this first way: the end of history transcends history itself; the end cancels history, abolishing its specific temporality. Knowledge of the transcendent end of history is therefore apocalyptic: it offers itself in a glimpse, by virtue of which

the end is ecstatically present in the present as its image. (Oyarzún 26, emphasis in original, my translation).

Thinking the cinema is thinking its death, and thinking its death is thinking of it as a mutable, Heraclitean entity. That's why the advent of digitization does not mean the end of cinematographic occurrence: the digital image is like a seed, a fertilized ovule waiting to become a zygote and a living being, just as the time-image was inscribed within the movement-image.

5. "In the dot, space becomes a metaphor through time and time becomes a metaphor through space" (Engell 483, my translation). Here Lorenz Engell insightfully reads the television image as the utmost expression of Deleuze's time-image. Engell says that the TV screen's image is not defined by a square—that is, by a grid of spatial coordinates but by the intervals and the reproduction of the minimal units of meaning that make them up—that is, by its temporality.[7] The phonemes of the television image are the dot-images that constitute the screen's lines and columns, but also the intervals between them. Those dot-images, both absent and present, are never visible at the same time, but they manifest themselves in a temporal sequence. To our perception, the image consists of those intervals between the dot-images, which, according to Engell, are time in addition to space.[8] Because the pixel or point is the metaphor of what cannot be stretched out nor represented, that is, because the point is the representation of non-representation, the electronic image is not determined by the presence of the pixel-image, but by its lack of dimension. When the point becomes visible, it has lost what gives it its sense: if it exists, if we can see it, if it's microscopically measurable, it's not just a point anymore. The television image is doomed to the time and space of an intersection, that of an image which comes and one which is already leaving. It is an image that is permanently in transit, so it is also a double image: in it we can see how the actual and the virtual coexist, to the point that it's almost impossible to distinguish them. Engell explains beautifully and precisely how the television image takes shape according to these parameters: on the screen, the image we perceive is never present, but it's there where it splits up as two images, outlined by the cathode ray, one *in* the other and *over* the other: an image cannot be perceived as actual if it needs to be completed by its virtual image. Simultaneity of past and present is inherent to the ontology of the television image, so it would not be mistaken to think that "television is nothing but time turned into image" (485, my translation). [9]

6. It's hard to believe that the visionary intuition of Deleuze's words in the conclusion to *The Time-Image* didn't extend to an aesthetic assessment of the TV image. Deleuze considered that his two volumes about cinema dealt with the subject of an art threatened by a will to change, and by a new format that was going to modify forever not just its ontological dimension, but the way we think of it:

The electronic image, that is, the tele and video image, the numerical image coming into being, either had to transform cinema or to replace it, to mark its death. . . . The new images no longer have any outside (out-of-field), any more than they internalized in a whole; rather, they have a right side and a reverse, reversible and non-superimposable, like a power to turn back on themselves. They are the object of a perpetual reorganization, in which a new image can arise from any point whatever of the preceding image. The organization of space here loses its privileged directions, and first of all the privilege of the vertical which the position of the screen still displays, in favor of an omnidirectional space which constantly varies its angles and co-ordinates, to exchange the vertical and the horizontal. And the screen itself, even if it keeps a vertical position by

convention, no longer seems to refer to the human posture, like a window or a painting, but rather constitutes a table of information, an opaque surface on which are inscribed 'data,' information replacing nature, and the brain-city, the third eye, replacing the eyes of nature. (Cinema 2 265)

Historically, the postwar period marks the moment when both the time-image appeared and TV became established as a mass medium. As we have seen, the TV image perfectly meets the requirements of the time-image: cinema depends on montage, staging, framing, and sound (four of its main ingredients) for time to emerge as a pure optical and sound sensation; on the other hand, time is in television's DNA, time belongs to it in an ontological sense. Why, if Deleuze realizes the secrets of the electronic image, does he reject television? Just because he blames it for failing to take advantage of its aesthetic specificity, for becoming a thoroughly commercialized communication machine, only able to send back superfluous shapes and contents. Television lacks what Deleuze calls the "supplement" or aesthetic function, which lost ground to "a social function, a function of control and power, the dominance of the medium shot, which denies any exploration of perception, in the name of the professional eye" (Negotiations 72). Thus did television replace its natural aesthetic function with a social-technical one.

7. Lorenz Engell comes to the conclusion that the electronic image, established as a distillation of time's essence, prepares us for an image beyond the image. Not by chance, the Godard of the midseventies, the one who left militant cinema behind after the post-1968 disenchantment and a serious motorcycle crash that kept him away from the world for almost three years, was the first to notice the new expressive abilities of the electronic image. In his work for television he devotes himself to a different sort of militancy: the act of wondering about the image's nature, about that "beyond" that

runs away and brings up the rear but remains unaffected as a time cell that surrenders to his study. It's a hopeful recommencement that evolves not only according to the rules of the interplay of opposites but also to the firm intention of conducting an experiment which, in the medium of celluloid, Godard considered to be exhausted. His avant-garde TV projects sought to reach a mass audience ("It's sending 25 postcards per second to millions of people" [Bergala 385, my translation]), a dream he shared with Rossellini's didactic television. It's surprising to see how naïve Godard is when he overrates the media effects of Rossellini's TV experiments, especially since he was aware of the disastrous audience response to films like Socrates (1971) or Cartesius (1974). However, the most important thing is what Godard discovers in these video experiments: the ontological basis of an electronic image that enlarges the Deleuzian concept of the time-image, and that will result in the birth of a nontime image, which is linked to the development of digital media. We have already encountered the notion of a double image; all of these video-period films suggest or show this duplicity (as in the nationalcultural as well as medial polarities in Ici et Ailleurs [1974]), or else duality plays an important role (the collaborative duos and two-part structures of Six fois deux/Sur et sous la communication [1976] or the structural, conceptual, and gendered symmetries of France/ tour/détour/deux/enfants [1978]), or the number two signifies a new beginning (as in Numéro deux [1975], which Godard calls a "remake" of À bout de souffle, his first film). All of them illustrate a dialectics, a system of opposites that is always wondering about what comes after a shot and before another one, lastly asking itself about what there is between two shots. Assuming that this interval establishes duplicity, Godard brings closer the possibility of defining a new image that is already beyond the time-image: in editing, it is impossible to draw a sharp line between images because one of them splits up into another before reorganizing as a third one. Godard uses text as an image, a layer that lodges itself into another one, or

forces one image to penetrate another, or disintegrates into it in slow motion. Millions of image-dots spread in millions of image-dots: amateur editing equipment is enough for the miracle to occur, and for the image to prefer intensities to trajectories, random dissolution to a time-scheduled trip. A "third image" emanates from the meeting of the first two, sparkling or solarized or superimposed: from the communion or collision between dot and interval, new images will be born, those of the monumental *Histoire(s) du cinéma*. What if that "third image" was born from the crash between the suicides in *Germany Year Zero* and *A.I.*?

8. Both versions of The Ring, Hideo Nakata's from 1998 and Gore Verbinski's from 2002, revolve around the topic of a videotape that causes the death of anyone who watches the film it contains. This occurs seven days after watching it, unless the ill-fated spectator makes a copy for someone else to watch. Salvation comes from accepting the viral dimension of electronic images, and understanding that those bewitching images propagate death as they are reproduced. According to Nicholas Rombes, The Ring raises a question which is essential to understanding the state of affairs of cinema in the digital era: "does the mass reproduction of the same images threaten to exterminate diversity, in the same way that the mass reproduction of a single virus might threaten to exterminate the diversity of life on earth?" (4). The videotape's images look like those of an avant-garde film. They are disturbing because it's as if they lacked an "original." They are a virus that replicates from nothingness, for there is no genesis. So they call reality into question: there is no reality from whence to be reproduced. "Reality is today's special effect" (Rombes 5).

What is the place of the human in this context? If Deleuze were alive, he would undoubtedly raise this question, since his two volumes

about cinema try to answer it on page after page. What would the relationship be between humankind and those images that lack an "original"? If reality is a special effect, where is human consciousness? What models do people count on to form identities? These are questions that also run through the present chapter like subterranean waters that a spelunker tries to chart. An image-spelunker who wishes to stop the image, to press the pause button and analyze the dissimilarities between the time-image and the non-time image which is far from being the denial of image. In the first case, the time-image, the freezing of the image shows to us its imperfections, almost highlighting the deformity of men, who need to believe in the world because they know that it is there, though shattered. In the second case, the non-time image, the digital freeze-frame emulates the sharpness of still photography, the pristine texture of a photo stuck to the window, a landscape so realistic that it seems unreal. We know the time-image embraces time even though it doesn't trust it, holding desperately onto something that hurts it, but makes it exist. We know, by contrast, that the non-time image rejects age, hates erosions, turns away from time to be the epitome of an untouched perfection, which it relates to the intensity of an instant that lasts forever—or won't last for an instant. It is the pause of the VHS image and it is the pause of the DVD image. From the interval between the two pauses comes a new age of the image which tries to create a space for the human that despises reality's duration, or rather, that defies reality itself.

Television represents the time-image in its purest form. Its morphologic structure itself—the dots and the interval between—favors the mingling of the real and the virtual. Deleuze notices this feature in the conclusion to *The Time-Image*, but, like film and TV critic Serge Daney, he also blames television for not taking advantage of its aesthetic possibilities, which are drowned by its social function. Only the video can grow the seed planted by the TV image and search

for a "beyond the image" that leaves behind the idea of time. The expressive possibilities of electronic images develop as a precedent for a digital image that will show itself to be immortal and eternal, timeless. As we have said, one of the more outstanding features of the digital image is its indifference to the effects of time: its volatile nature, the indifference to its erosions, the immateriality of its ontological condition. The digital image tends to reinterpret the depth of field, to underline the frame's autarchy, to reinterpret what Noël Burch called the "Primitive Mode of Representation" (186-201) according to the criteria of a medium able to fulfill our gaze with its experience of length alone (witness the mesmerizing effect of the static shot in Abbas Kiarostami's Five Dedicated to Ozu [2003], so similar to the Lumières' actualités). This attention to primitive cinema also turns into a great interest in restoring past images, as if the real meaning of the digital was to save celluloid from the unavoidable deterioration of its chemical nature. Just the way some silent films will always seem perennially new, allergic too to the effects of time.

There is, however, a non-time image that longs for its ancestors, for the movement-image that Deleuze defines as an action-reaction chain. It is the three-dimensional non-time image, which, from the denial of time, wants to create a thorough copy of reality. It is the most publicized form of non-time image, the popular digital cinema that fills the multiplex cinemas, wishing to expand like a "big bang" and turn its show into an immersive experience, a new version of the primitive "cinema of attractions." It is a non-time image that can hardly coexist with its contradictions, thrown towards the mercurial flexibility of its nature but finding its boundaries in the real representation of what is impossible, as if claiming a narrative logic which is not its own. It is the digital image that tries its best to contribute to the movement-image's survival in contemporary blockbusters, without realizing that is blowing it up, attracting attention to its own excesses.

From an ontological perspective, the non-time image is total interiority. Its bi-dimensionality opens the possibility that everything happens inside the shot: ghosts appear, emotions assume color, different levels of a singular reality are shown together, focused, in the foreground. Faces are flattened, distances are removed, landscapes are painted, and light is overexposed. This reinterpretation of reality has nothing to do with the mimesis that digital effects, obsessed with being more real than reality, used to look for. Image reveals its skin, is proud of its own texture, from the dirtiness of DV to the sharp perfection of HD. The poor DV quality—which David Lynch compared to that of early celluloid times, when neither the frame nor the emulsion contained so much information—creates a new relationship between image and spectator: I agree with Rombes when he says that there has been a resurgence of humanism in return for the morphological characteristics of the digital image. Something like a poetics of mistakes or unfinished things tries to compensate the unifying action of that no-image time, as if we needed the human factor to become visible, as if we wanted it to show itself only through failure and inaccuracy.[10] That new humanism doesn't only lie in the impossible post-realism of Dogma 95 (a false return to reality that shows what a deceit digital realism is), but also in the evolution of home movies, in the possibility of making a filmed autobiography where the self is in front and behind the camera at the same time. as well as in the manifestation of death in the present progressive, where the non-time image let us immortalize a verb tense. What is human comes back to stay: as an antidote but also as a force that pierces a wall to escape in endless directions. Humanity becomes rhizome, taking on a new molecular dimension.[11] What is human turns into hypertext, into split screen, into mosaic and multiplicity. It is the spectator in a state of dissolution, leaving behind its individual condition and becoming a stream of consciousness, a Body without Organs where is difficult to distinguish the breaking point between gaze and screen. It is the spectator plunged into that "becoming-

woman" that specifies the feminine dimension—as lunar, liquid, and hard to grasp—of that non-time image which (let's take two meaningful examples from the same filmmaker) plants *Mulholland Drive* and harvests *Inland Empire*. It is the spectator-author, demiurge of a little world that he shares with the whole universe, a universe made of time endlessly replicating until it loses itself in a limbo made of background noise and supportive or aggressive comments.

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Notes

- [1] Chapter translated by Isabel Margelí.
- [2] Unintentionally, as it were, Godard seems to agree with his scorned Spielberg when, in *Notre musique* (2004), he tells the story of Saint Bernadette of Lourdes, a young peasant who saw the Virgin eighteen times. When the local nuns and priests showed her canonical pictures of the Virgin created by Raphael or Murillo, Bernadette could not find any resemblance. But when she saw a Byzantine icon, the Virgin of Cambrai, Bernadette identified her at last. Godard says: "Without movement or depth, without the affected side: the sacred," as if he was referring to the maternal Virgin in *A.I.*

[3] Rosenbaum writes:

If A.I. Artificial Intelligence—a film whose split personality is apparent even in its two-part title—is as much a Kubrick movie as a Spielberg one, this is in large part because it defamiliarizes Spielberg, makes him strange. Yet it also defamiliarizes Kubrick, with equally ambiguous results—making his unfamiliarity familiar.

Hoberman asks: "Does the artifice belong to Spielberg and the intelligence to Kubrick?" (17).

- [4] For more on this Deleuzian conception and its relation to film and post-cinema, see also Patricia Pisters's contribution to this volume.
- [5] The aliens are imaged in strict accordance with the typical Spielberg iconography. Strictly speaking, these aliens are nothing but the result of

the evolution of the "supermechas," David's cyborg race.

[6] "Three Thousand Hours of Cinema" is the title of one of Godard's most famous articles, resembling something of a diary written in response to Truffaut's diary of the shooting of *Fahrenheit 451*.

[7] We must remember the transformation process of the image in an analog television:

The first set of 312 ½ odd number lines in the 625 lines, called the first field or the *odd field*, are first scanned sequentially. Halfway through the 313th line, the spot is returned to the top of the screen and the remaining 312 ½ even number lines, called the second field or the *even field* are then traced interleaved between the lines of the first set. This is done by operating the vertical field scan at 50 Hz so that the two successive interlaced scans, each at a 25 Hz rate, make up the complete picture frame. This keeps the line scanning speed down, as only 312 ½ lines are scanned in 1/50 second. The 625 lines of the full picture are scanned in 1/25 second. (Dhake 24)

[8] According to Engell, the most important theory of television, conceived by Marshall McLuhan in *Understanding Media*, is based on a misunderstanding, a wrong hypothesis: McLuhan's theory starts from a premise that considers the intervals between dots only in spatial terms. [9] "The difference between cinema and television lies in the fact that cinema is image and space, whereas there's no space in television, there's no image, there's only lines, electronic lines. The essential notion in

[10] After the Dogme manifesto, Harmony Korine published the "Mistakist Manifesto" with only three rules: "1. no plots. Only images. Stories are fine. 2. all edits effects in camera only. 3. 600 cameras/a wall of images/the Phil Spector of cine" (Roman viii).

television is time" (Fargier, Cassagnac, and Van der Stegen 10).

[11] Further:

A rhizome may be broken, shattered at a given spot, but it will start up again on one of its old lines, or on new lines. You can

never get rid of ants because they form an animal rhizome that can rebound time and again after most of it has been destroyed. Every rhizome contains lines of segmentarity according to which it is stratified, territorialized, organized, signified, attributed, etc., as well as lines of deterritorialization down which it constantly flees. There is a rupture in the rhizome whenever segmentary lines explode into a line of flight, but the line of flight is part of the rhizome. (Deleuze and Guattari 9)



2.5 Crazy Cameras, Discorrelated Images, and the Post-Perceptual Mediation of Post-Cinematic Affect

BY SHANE DENSON

With the shift to a digital and more broadly post-cinematic media environment, moving images have undergone what I term their "discorrelation" from human embodied subjectivities and (phenomenological, narrative, and visual) perspectives. Clearly, we still look at—and we still perceive—images that in many ways resemble those of a properly cinematic age; yet many of these images are mediated in ways that subtly (or imperceptibly) undermine the distance of perspective, i.e. the spatial or quasi-spatial distance and relation between phenomenological subjects and the objects of their perception. At the center of these transformations are a set of strangely volatile mediators: post-cinema's screens and cameras, above all, which serve not as mere "intermediaries" that would relay images neutrally between relatively fixed subjects and objects but which act instead as transformative, transductive "mediators" of the subject-object relation itself.[1] In other words, digital and post-cinematic media technologies do not just produce a new type

Shane Denson

of image; they establish entirely new configurations and parameters of perception and agency, placing spectators in an unprecedented relation to images and the infrastructure of their mediation.

The transformation at stake here pertains to a level of being that is therefore *logically prior* to perception, as it concerns the establishment of a new material basis upon which images are produced and made available to perception.[2] Accordingly, a phenomenological and postphenomenological analysis of post-cinematic images and their mediating cameras points to a break with human perceptibility as such and to the rise of a fundamentally post-perceptual media regime. In an age of computational image production and networked distribution channels, media "contents" and our "perspectives" on them are rendered ancillary to algorithmic functions and become enmeshed in an expanded, indiscriminately articulated plenum of images that exceed capture in the form of photographic or perceptual "objects." [3] That is, post-cinematic images are thoroughly *processual* in nature, from their digital inception and delivery to their real-time processing in computational playback apparatuses; furthermore, and more importantly, this basic processuality explodes the image's ontological status as a discrete packaged unit, and it insinuates itself—as I will argue in the following pages—into our own microtemporal processing of perceptual information, thereby unsettling the relative fixity of the perceiving human subject. Post-cinema's cameras thus mediate a radically nonhuman ontology of the image, where these images' discorrelation from human perceptibility signals an expansion of the field of material affect: beyond the visual or even the perceptual, the images of post-cinematic media operate and impinge upon us at what might be called a "metabolic" level.

In the following, I will discuss post-cinema's *crazy cameras*, its *discorrelated images*, and a fundamentally *post-perceptual mediation* as interlinked parts or facets of the medial ontology of post-cinematic affect. I will connect my observations to some of the empirical and

phenomenological developments surrounding contemporary image production and reception, but my primary interest lies in a more basic determination of affect and its mediation today. Following Bergson, affect pertains to a domain of material and "spiritual" existence constituted precisely in a gap between empirically determinate actions and reactions (or, with some modification, between the production and reception of images); affect subsists, furthermore, below the threshold of conscious experience and the intentionalities of phenomenological subjects (including the producers and viewers of media images).[4] It is my contention that the infrastructure of life in our properly postcinematic era has been subject to radical transformations at this level of "molecular" or pre-personal affect, and following Steven Shaviro I suggest that something of the nature and the stakes of these transformations can be glimpsed in our contemporary moving-image media.[5] Ultimately, these media ask us to re-think the material and experiential forms and functions of the camera, the image, and the mediation of life itself.

I

My argument revolves around what I am calling the "crazy cameras" of post-cinematic media, following comments by Therese Grisham in our roundtable discussion in *La Furia Umana*. [6] Seeking to account for the changed "function of cameras . . . in the post-cinematic episteme," Grisham notes that whereas "in classical and post-classical cinema, the camera is subjective, objective, or functions to align us with a subjectivity which may lie outside the film," there would seem to be "something altogether different" in recent movies.

For instance, it is established that in [District 9], a digital camera has shot footage broadcast as news reportage. A similar camera "appears" intermittently in the film as a "character." In the scenes in which it appears, it is patently impossible in the diegesis for anyone to be there to shoot the footage. Yet, we see that camera by means of blood splattered on it, or we become aware of watching

the action through a hand-held camera that intrudes suddenly without any rationale either diegetically or aesthetically. Similarly, but differently as well, in *Melancholia*, we suddenly begin to view the action through a "crazy" hand-held camera, at once something other than just an intrusive exercise in belated Dogme 95 aesthetics and more than any character's POV. . . .

What is it, precisely, that makes these cameras "crazy," or opaque to rational thought? My answer, in short, is that post-cinematic cameras—by which I mean a range of imaging apparatuses, both physical and virtual—seem not to know their place with respect to the separation of diegetic and non-diegetic planes of reality; these cameras therefore fail to situate viewers in a consistently and coherently designated spectating-position. More generally, they deviate from the perceptual norms established by human embodiment—the baseline physics engine, if you will, at the root of classical continuity principles, which in order to integrate or suture psychical subjectivities into diegetic/narrative constructs had to respect above all the spatial parameters of embodied orientation and locomotion (even if they did so in an abstract, normalizing form distinct from the real diversity of concrete body instantiations). Breaking with these norms results in what I call the discorrelation of post-cinematic images from human perception.

With the idea of discorrelation, I aim to describe an event that first announces itself negatively, as a phenomenological disconnect between viewing subjects and the object-images they view. In her now-classic book, *The Address of the Eye*, Vivian Sobchack theorized a correlation—or structural homology—between spectators' embodied perceptual capacities and those of film's own apparatic "body," which engages viewers in a dialogical exploration of perceptual exchange; cinematic expression or communication, accordingly, was seen to be predicated on an analogical basis according to which the subject-and object-positions of film and viewer are essentially reversible and dialectically transposable. But, according to Sobchack, this basic

perceptual correlation is endangered by new—or "postcinematic"—media (as she already referred to them in 1992), which disrupt the commutative interchanges of perspective upon which filmic experience depends for its meaningfulness.[7] With the tools Sobchack borrows from philosopher of technology Don Ihde, we can make a first approach to the "crazy" quality of post-cinematic cameras and the discorrelation of their images.



Figure 1 – CGI-generated lens flares underscore (but exceed) diegetic realities in GREEN LANTERN (Martin Campbell, 2011).

Take the example of the digitally simulated lens flare, featured ostentatiously in recent superhero films like *Green Lantern* or the *Ghost Rider* sequel directed by Neveldine and Taylor, who brag that their extensive use of it breaks all the rules of "what you can and can't do" in 3D (see Figures 1 and 2).[8] Beyond the stylistically questionable matter of this excess, a phenomenological analysis reveals significant paradoxes at the heart of the CGI lens flare. On the one hand, the lens flare encourages what Ihde calls an "embodiment relation" to the virtual camera: by simulating the material interplay of a lens and a light source, the lens



Figure 2 – Directors Mark Neveldine and Brian Taylor use CGI lens-flares to push the limits of 3D in GHOST RIDER: SPIRIT OF VENGEANCE (2011).

flare emphasizes the plastic reality of "pro-filmic" CGI objects; the virtual camera, which enables our view of these objects, is to this extent itself grafted onto the subjective pole of the intentional relation, "embodied" or "incorporated" in a sort of phenomenological symbiosis that channels perception towards the objects of our visual attention. [9] On the other hand, however, the lens flare draws attention to itself and highlights the images' artificiality by emulating (and indeed foregrounding the emulation of) the material presence of a (non-diegetic) camera. To this extent, the camera is rendered quasi-objective, and it instantiates what Ihde calls a "hermeneutic relation": we look *at* the camera rather than just *through* it, and we interpret it *as a sign or token of* verisimilitude or "realisticness." [10] The paradox here, which consists in the realism-constituting *and* realism-problematizing undecidability of the virtual camera's relation to the diegesis—where the "reality" of this realism is conceived as thoroughly mediated, the product of a simulated physical

camera rather than defined as the hallmark of embodied perceptual immediacy—points to a more basic problem: namely, to a transformation of mediation itself in the post-cinematic era. That is, the undecidable place of the mediating apparatus, the camera's apparently simultaneous occupation of both subjective and objective positions within the noetic relation that it enables between viewers and the film, is symptomatic of a more general destabilization of phenomenological subject- and objectpositions in relation to the expanded affective realm of post-cinematic mediation. Computational, ergodic, and processual in nature, media in this mode operate on a level that is categorically beyond the purview of perception, perspective, or intentionality.[11] Phenomenological analysis can therefore provide only a negative determination "from the outside": it can help us to identify moments of dysfunction or disconnection, but it can offer no positive characterization of the "molecular" changes occasioning them. Thus, for example, CGI and digital cameras do not just sever the ties of indexicality that characterized analog cinematography (an empirical or epistemological-phenomenological claim); they also render images themselves fundamentally processual—at once inextricably bound up in computational processes and simultaneously initiating a volatile feedback loop between these and the spectator. Such post-cinematic images, which fail to "settle" or coalesce into a fixed and distant position, thus displace the film-as-object-of-perception and uproot the spectator-as-perceivingsubject—in effect, enveloping both in an epistemologically indeterminate but materially quite real and concrete field of affective relation. Mediation, I suggest, can no longer be situated neatly between the poles of subject and object, as it swells with processual affectivity to engulf both.

Compare, in this connection, film critic Jim Emerson's statement in response to the debates over so-called "chaos cinema" [12]:

It seems to me that these movies are attempting a kind of shortcut to the viewer's autonomic nervous system, providing direct stimulus to generate excitement rather than simulate any comprehensible

experience. In that sense, they're more like drugs that (ostensibly) trigger the release of adrenaline or dopamine while bypassing the middleman, that part of the brain that interprets real or imagined situations and *then* generates appropriate emotional/physiological responses to them. The reason they don't work for many of us is because, in reality, they give us nothing to respond *to*—just a blur of incomprehensible images and sounds, without spatial context or allowing for emotional investment.

Now, I want to distance myself from what appears to be a blanket dismissal of such stimulation, but I quote Emerson's statement here because I think it correctly and neatly identifies the link between a direct affective appeal and the essentially post-phenomenological dissolution of perceptual objects and bypassing of perception itself. If we take it seriously, though, this link marks the crux of a transformation in the ontology of media, the point of passage from cinematic to post-cinematic media. Whereas the former operate on the "molar" scale of perceptual intentionality, the latter operate on the "molecular" scale of sub-perceptual and pre-personal embodiment, potentially transforming the material basis of subjectivity in a way that cannot be accounted for in traditional phenomenological terms.[13] But how do we account for this transformative power of postcinematic media, short of simply reducing it (as it would seem Emerson does) to a narrowly positivistic conception of physiological impact? In order to answer this question, it will be helpful to turn to Maurizio Lazzarato's reflections on the affective dimension of video and to Mark Hansen's expansions of these ideas with respect to computational and what he calls "atmospheric" media.

II

According to Lazzarato, the video camera captures time itself, the splitting of time at every instant, hence opening the gap between perception and action where affect (in Bergson's metaphysics) resides. [14] Because it no longer merely traces objects mechanically and fixes them as discrete

photographic entities, but instead generates its images directly out of the flux of sub-perceptual matter, which it processes on the fly in the space of a microtemporal duration, the video camera marks a revolutionary transformation in the technical organization of time. The video camera, writes Lazzarato, "modulates the flows of electromagnetic waves. Video images are contractions and dilations, 'vibrations and tremors' of light, rather than 'tracings,' reproductions of reality. The video camera's take is a crystallization of time-matter" (111). The mediating technology itself becomes an active locus of molecular change: a Bergsonian body qua "center of indetermination," a gap of affectivity between passive receptivity and its passage into action. The camera thus imitates the process by which our own pre-personal bodies synthesize the passage from molecular to molar, replicating the very process by which signal patterns are selected from the flux and made to coalesce into determinate images that can be incorporated into an emergent subjectivity.

This dilation of affect, which characterizes not only video but also computational processes like the rendering of digital images (which is always done on the fly), marks the basic condition of the post-cinematic camera; this, then, is the positive underside of that which presents itself externally as a negative, discorrelating incommensurability with respect to molar perception. As Mark Hansen argues in "Ubiquitous Sensation," the microtemporal scale at which computational media operate enables them to modulate the temporal and affective flows of life and to affect us directly at the level of our pre-personal embodiment. The categorically invisible operation of computation

impacts sensory experience *unconsciously, imperceptibly—in short, at a level beneath the threshold of attention and awareness.* It impacts sensory experience, that is, by impacting the sensing brain microtemporally, at the level of the autonomous subprocesses or microconsciousnesses that . . . compose the infrastructure of seamless and integrated macroconscious [or molar] experience (70)

In this respect, properly post-cinematic cameras, which include video and digital imaging devices of all sorts, have a direct line to our innermost processes of becoming-in-time, and they are therefore capable of informing the political life of the collective by flowing into the "general intellect" at the heart of immaterial or affective labor. According to Lazzarato, "[b]y retaining and accumulating duration, machines to crystallize time may help to develop or to neutralize the 'force to feel' and the 'force to act'; they may contribute to our 'becoming active' or to our being held in passivity" (96). This political dimension, in short, is contingent upon the post-cinematic camera's ability to dilate and transform the pre-individual space of molecular affect.

The Paranormal Activity series makes many of these claims more palpable through its experimentation with various modes and dimensions of postperceptual, affective mediation. [15] After using hand-held video cameras in the series' first installment and closed-circuit home-surveillance cameras in Paranormal Activity 2, and following a flashback by way of old VHS tapes in part 3, Paranormal Activity 4 intensifies its predecessors' estrangement of the camera from cinematic and ultimately human perceptual norms by implementing computational imaging processes for its strategic manipulations of spectatorial affect (see Figures 3-6, above). In particular, Paranormal Activity 4 uses laptop- and smartphone-based video chat and the Xbox's Kinect motion control system to mediate between diegetic and spectatorial shocks and to regulate the corporeal rhythms and intensities of suspenseful contraction and release that define the temporal/affective quality of the movie. Especially the Kinect technology, itself a crazy binocular camera that emits a matrix of infrared dots to map bodies and spaces and integrate them algorithmically into computational/ ergodic game spaces, marks the discorrelation of computational from human perception: the dot matrix, which is featured extensively in the film, is invisible to the human eye; the effect of rendering the matrix visible is only made possible through a video camera's night vision mode part of the post-perceptual sensibility of the (digital) video camera that



Figure 3 – Hand-held cameras mediate between diegetic and extra-diegetic spaces in PARANORMAL ACTIVITY (Oren Peli, 2007/2009).



Figure 4 – Closed-circuit home surveillance cameras capture the action in PARANORMAL ACTIVITY 2 (Tod Williams, 2009).



Figure 5 – PARANORMAL ACTIVITY 3 (Henry Joost and Ariel Schulman, 2011) presents itself in the form of VHS found footage.



Figure 6 – The Xbox Kinect exemplifies the nonhuman agency of post-cinematic cameras in PARANORMAL ACTIVITY 4 (Henry Joost and Ariel Schulman, 2012).

distinguishes it from the cinema camera. The movie (and the *Paranormal* Activity series more generally) thus provides a perfect illustration for the affective impact and bypassing of cognitive (and narrative) interest through video and computational imaging devices. In an interview, codirector Henry Joost says the use of the Kinect—fittingly enough inspired by a YouTube video demonstrating the effect—was a logical choice for the series: "I think it's very Paranormal Activity because it's like, there's this stuff going on in the house that you can't see." [16] Indeed, the effect highlights all the computational and video-sensory activity going on around us all the time, completely discorrelated from human perception, but very much involved in the temporal and affective vicissitudes of our daily lives through the many cameras and screens surrounding us and involved in every aspect of the progressively indistinct realms of our work and play. Ultimately, Paranormal Activity 4 points toward the uncanny qualities of contemporary media, which following Mark Hansen have ceased to be contained in discrete apparatic packages and have become diffusely "atmospheric."[17]

This goes in particular for the post-cinematic camera, which has shed the perceptually commensurate "body" that ensured cinematic communication on Sobchack's model and which, beyond video, is no longer even required to have a material lens. This does not, of course, mean that the camera has become somehow immaterial, but today the conception of the camera should perhaps be expanded: consider how all processes of digital image rendering, whether in digital film production or simply in computer-based playback, are involved in the same on-the-fly molecular processes through which the video camera can be seen to trace the affective synthesis of images from flux. Unhinged from traditional conceptions and instantiations, post-cinematic cameras are defined precisely by the confusion or indistinction of recording, rendering, and screening devices. In this respect, the "smart TV" becomes an exemplary post-cinematic camera (an uncannily flat domestic *Kammer* or "room" composed of smooth, computational space): it executes microtemporal processes ranging from compression/

decompression, artifact generation and suppression, resolution upscaling, aspect-ratio transformation, motion-smoothing image interpolation, and on-the-fly 2D to 3D conversion. Marking a further expansion of the video camera's artificial affect-gap, the smart TV and the computational processes of image modulation that it performs bring the perceptual and actional capacities of cinema—its receptive camera and projective screening apparatuses—back together in a post-cinematic counterpart to the early Cinématographe, equipped now with an affective density that uncannily parallels our own.

Especially in 100Hz/200Hz motion-smoothing processes, where the television inserts completely new, computationally generated images between the frames of the source signal, the smart TV demonstrates its post-cinematic quality as an imaging device radically discorrelated from human perception and perceptual technologies (including the analog camera, the lens of which is correlated with that of the human eye); the interpolation of computational processes disrupts the circuit of perception formerly mediated through the camera—a fact which announces itself to the viewer first and foremost on an affective level, in the form of the socalled "soap-opera effect": the images seem paradoxically too real, too close, too plastic; they have an uncanny quality about them, something not quite right—though it is exceedingly difficult to pin down this quality and express it in words. Such pictures have been described as "ridiculously 'sharp," "like an old Dr. Who episode where the action on screen is smoother than the background, creating a jarring disparity when watching movies with lots of movement," or where "you essentially see the 'moving' objects on a different plane than the background, as if they were cut outs moving on a painted background" (Biggs). There's something pornographic about the images movies filmed in 35mm suddenly look like a video-based telenovela or low-budget reality show. Surfaces stand out, and to this extent we might appeal to the vocabulary of Ihde's "hermeneutic relation": the medium begins to obtrude on the objective side of the noetic arrow, as an object or quasi-object of perceptual intentionality. But in fact, the situation is more

extreme, as this is just the affective side of a perceptual (or cognitive) non-relation to the technological infrastructure, which renders images on the fly, sub-perceptually "enriching" the images by multiplying them twofold, fourfold, or even more. This is a significant case, I think, because it displays a more general truth about the post-cinematic era: it is widely accepted that cameras are everywhere today, and even that this ubiquity is an important marker of our historical and technological situation today but we usually think about surveillance cameras and the proliferation of cameras in hand-held devices like smartphones. We do not usually think of our screens as cameras, but that is precisely what smart TVs and computational display devices of all sorts in fact are: each screening of a (digital or digitized) "film" becomes in fact a re-filming of it, as the smart TV generates millions of original images, more than the original film itself—images unanticipated by the filmmaker and not contained in the source material. To "render" the film computationally is in fact to offer an original rendition of it, never before performed, and hence to re-produce the film through a decidedly post-cinematic camera.

This production of unanticipated and unanticipatable images renders such devices strangely vibrant, uncanny—very much in the sense exploited by *Paranormal Activity*. The dilation of affect, which introduces a temporal gap of hesitation or delay between perception (or recording) and action (or playback), amounts to a modeling or enactment of the indetermination of bodily affect through which time is generated, and by which (in Bergson's system) life is defined. A negative view sees only the severing of the images' indexical relations to world, hence turning all digital image production and screening into animation, not categorically different from the virtual lens flares discussed earlier. [18] But in the end, the ubiquity of "animation" that is introduced through digital rendering processes should perhaps be taken more literally, as the artificial creation of (something like) life, which is itself equivalent—following Lazzarato following Bergson—with the gap of affectivity, or the production of duration through the delay of causal-mechanical stimulus-response circuits; the interruption of photographic

indexicality through digital processing is thus the introduction of duration = affect = life. Discorrelated images, in this respect, are autonomous, quasi-living images in Bergson's sense, having transcended and gained a degree of autonomy from the mechanicity that previously (in cinema's photochemical processes) kept them subservient to human perception. Like the unmotivated cameras of *District 9* and *Melancholia*, or the uncanny environmental ones of *Paranormal Activity*, post-cinematic cameras generally have become "something altogether different," as Therese Grisham put it: apparently crazy, because discorrelated from the molar perspectives of phenomenal subjects and objects, cameras now mediate post-perceptual flows and confront us everywhere with their own affective indeterminacy.

Ш

Another way to put this is to say that post-cinematic cameras and images are metabolic processes or agencies, and their insertion into the environment alters the interactive pathways that define our own material, biological, and ecological forms of being, largely bypassing our cognitive processing to impinge upon us at the level of our own metabolic processing of duration. Metabolism is a process that is neither in my subjective control nor even confined to my body (as object) but which articulates organism and environment together from the perspective of a pre-individuated agency. Metabolism is affect without feeling or emotion—affect as the transformative power of "passion" that, as Brian Massumi reminds us, Spinoza identifies as that unknown power of embodiment that is neither wholly active nor wholly passive. [19] Metabolic processes are the zero degree of transformative agency, at once intimately familiar and terrifyingly alien, conjoining inside/outside, me/not-me, life/death, old/novel, as the basic power of transitionality—marking not only biological processes but also global changes that encompass life and its environment.[20] Mark Hansen usefully defines "medium" as "environment for life" in order to foreground the infrastructural role of media in relation to the material powers of perception, action, and thought[21]; accordingly, metabolism is as much a process of media transformation as it is a process of bodily

change. As Elena del Río has described it, the shift from a cinematic to a post-cinematic environment is a metabolic process through and through:

Like an expired body that blends with the dirt to form new molecules and living organisms, the body of cinema continues to blend with other image/sound technologies in processes of composition/decomposition that breed images with new speeds and new distributions of intensities.

To the extent that metabolism is, as I have claimed, inherently affective (or "passionate," in a Massumian-Spinozan vein), post-cinematic affect has to be thought apart from feeling, certainly apart from subjective emotion. What I have been trying to do is to situate us in a position from which we might grasp the post-cinematic image itself not as an objective entity or process but as a metabolic agency, one which is caught up in and defines the larger media-ecological process of transformation that (dis)articulates subjects and objects, spectators and images, life and its environment in the transition to the post-cinematic. This metabolic image, I suggest, is the quintessential image of change, and it speaks to a perspective that is the immersed, undifferentiated (non-)perspective of metabolism itself—a material affect that is distributed across bodies and environments as the very medium of transitionality.

As I have outlined it here, this perspective builds upon a view of video and above all computation as technologies of microtemporal processing and modulation. But emphasizing this level of material-technological functioning, which subtends any identifiable "content" of mediation, points to the inadequacy of many of the more narrowly "technical" determinations of the transition to a post-cinematic regime. Thus, many discussions concentrate on whether editing styles today are overly chaotic or whether they embody a merely intensified form of continuity. But as Steven Shaviro points out in his discussion of what he calls "post-continuity," compliance or non-compliance with the rules of classical continuity is often simply beside the point in post-cinema. [22] The central

spectacle of Michael Bay's *Transformers* series—a series that is clearly full of hectic, non-continuity editing patterns—demonstrates this essentially secondary role of formal editing (see Figure 7, below). The transformations themselves embody a certain outstripping of human perceptual faculties, discorrelations that are staged in continuous takes, without the need for explicit violations of continuity. These transformations offer concise examples of a "hyperinformatic" cinema: they overload our capacities, giving us too much visual information, presented too fast for us to take in and process cognitively-information that is itself generated and embodied in informatic technologies operating at speeds well beyond our subjective grasp. Hence, the transformation's visualization does not simply produce images that give objective form to boys' and men's childhood fantasies and playtime imaginations; instead, it is precisely their failure to coalesce into coherent objects that defines these images as metabolic "spectacles beyond perspective"—i.e. as ostentatious displays that categorically deny us the distance from which we might regard them as perceptual objects. It is the processual flow and speed of algorithmic processing that is put on display here, and indeed put into effect as the images are played back on our computational devices.



Figure 7 – The central spectacles of TRANSFORMERS (Michael Bay, 2007) are "hyperinformatic" images that outstrip human perception.

But so long as we underestimate the meaning of the images' animation, so long as we reduce it to a merely technical effect of CGI's severing of photographic indexicality, we fail to grasp the significance of postcinematic affect as a more global event, an environmental shift or "climate change" precipitated by the condensation and flow of affect in our increasingly lively machines. Through the discorrelating effect that post-cinematic cameras have on intentional relations, we as subjects are effectively consumed by/with affect and transformed along with the would-be objects of algorithmic images; in a manner of speaking, these images do nothing less than devour and metabolize us. We are bound up in and transformed by the processual experience of digital mediation, which unlike the ideal closure of classical cinema is proximal and open to (rather than separate from) our computational lifeworld. In other words, there is no clear encapsulation of the movie experience as distinct from the digital infrastructures of our daily lives.[23] There is contiguity, involvement—always an inescapable involvement that marks the "participatory culture" of the convergence era as far less benign than some critics might hope.[24] Buy the game, buy the toys, download the app, stream it on Netflix, watch at home, at work, on the train: at stake is a literal capitalization of our attention, and the hyperinformatic dissolution of perspective is central to this undertaking. Affecting us on a molecular, sub-perceptual level of micro-temporal embodiment but imbricating us in an expansive, diffuse network of nebulous agencies and transactions, the post-cinematic dispositif operates by metabolizing subject-object relations, transforming and re-creating them by setting us and our affective machines in novel relations to one another and to the larger emergent flows of bits, bodies, and other material units of exchange.

IV

In a very different vein, Shane Carruth's recent film, *Upstream Color*, gestures towards the atmospheric and environmental aspects of post-cinematic metabolism, encompassing the sub- and supra-personal

dynamics, the micro- and macro-levels and confusions of within and without, in an audiovisual and narrative construct that displaces centered human perception in both directions at once. Upstream Color is about agencies that infiltrate the body, but that remain ecologically distributed throughout a network of hosts and environmental transport mechanisms: a river, plants, pigs, people, power lines, music, and money—all of these carry and are in turn carried by the parasitic maggots at the center of a story ostensibly about a couple, ruined professionally, financially, and perhaps psychologically, as they find their way to one another and ultimately to a greater sense of connection with the world. I say that it is "ostensibly" about this, but it is certainly about much more than this. I hesitate, however, to offer an "interpretation" per se, as narrative and signifying functions seem secondary to the experience the film propagates, both diegetically and medially, of indissoluble and multidirectional interlinkage—an experience, in short, of metabolism as the sub-perceptual nexus of growth and decay. (I wish to say that the film offers us an experience of metabolism itself, not a metaphor for metabolism.[25])



Figure 8 – Unexplained CGI images challenge us to scan the frame for information in UPSTREAM COLOR (Shane Carruth, 2013).

The basic affective tone (or Grundton) of the film is alternately dark and hopeful, but it is not really about the characters' (or even our) hopes or fears at all, it would seem. It feels more accurate to say that the film is simply about the material flows it traces, which are marked as decidedly post-cinematic early in the movie. Without any sort of contextual situation, we are presented with a sequence of digitally composited images, complete with hexagonal lens flares and some sort of unfinished-looking CGI creature (see Figure 8). These are then shown to belong to a diegetic screen, that of the female protagonist Kris, who advances and reverses the images in a step-wise manner, clicking through the frames as she searches for a shadow or a gaffer's foot that apparently went unnoticed by the effects team (Figure 9). If you've seen the film, you'll know that this brief scene—if indeed these images can be said to constitute a "scene"—is quite marginal in many respects. We'll never learn about the project that Kris is working on here, and she'll be fired from her job anyway when a man feeds her the parasite, sets her in a hypnotic state for some indefinite number of days, and cleans out all her assets. Yet the scene remains significant in situating the film in this context of computational labor and image production, where the human perspective that Kris brings (and that we bring) to these images is not central and focused, not the focusing vision that defines coherence in classical cinema, but a dispersed, "scanning" form of regard. The images compel us to interrogate them likewise, in this manner of scanning, as we are unable to identify anything of significance in the brief time given to us. In any case, Kris's vision is not a masterful or even directed gaze but more of a stop-gap designed to mop up around the post-cinematic vision machine; in her job, Kris herself embodies mere biopower in the service of algorithmic functions.

Her infection with the parasite will extract her from this assemblage, to a certain extent, but only by effecting a further splitting and dispersal of agency. Indeed, both Kris and the male protagonist Jeff, whom she is drawn to by some unknown force, and who has apparently undergone the same ordeal as she has, will more or less cease being individuals as their



Figure 9 – Female protagonist Kris (Amy Seimetz, UPSTREAM COLOR) shares our perspective with regard to the post-cinematic vision machine.

relationship develops. Their childhood memories merge, and it is unclear whose past belongs to whom. Moreover, this erasure of individual identity, the overt emergence of what Deleuze calls "dividuality," is mediated through free-floating dialogues that attach themselves to various locales and various times, impossibly bridging spatial and temporal distances that no embodied speaker could span. [26] So what sometimes resembles a Terrence Malick-style voiceover is in fact something quite different, as it is occasionally anchored in an image of a character speaking in one place, but that speaking character can disappear and reappear at a distant location within the space of a single ongoing dialogue, itself apparently presented in real time. We are in the realm of the virtual rather than the actual, it would appear, and the flow of images and sounds effectively involves the viewer in the dispersal of agency described in the diegesis. [27]

And it is the music, above all, that ties everything together. Semidiegetic in nature, the musical counterpart of a free indirect discourse, perhaps, the film's synthetic music weaves back and forth between the status of background music and source music; the Sampler, as the unnamed character is called in the film's credits, synthesizes natural and

technological sounds (running water, a drain pipe, the hum of a power line) into electronic music, effecting a sort of metabolic recombination of environmental materials. He sells his music on CD, but he also uses his sound compositions to attract the parasite's human hosts to a field where he extracts and transplants the worms from the people and into pigs. Playing simulated "rain" sounds on an amped-up PA system, the sampled sounds bypass the hosts' subjectivities, working on them subperceptually and impinging upon their bodies via the parasites, which compel their hosts' actions. And the music works on us as well by splitting our attentions between organic source and technical modulation, between reality and simulation, and between diegesis and medium. It thus continues, in a different register, the arc begun with the CGI images that Kris and we scan together for information, gesturing nebulously towards the conditions of life in the age of post-cinematic mediation. Driving both the narrative and the larger experience of the film in essential ways, the Sampler's music neatly sums or summons, gathers together the environmental and medial, sub- and supra-personal levels of metabolic action for characters and spectators alike. Underscoring and linking images of cellular decomposition, the computerized labor of image production, of worms making their way through human and nonhuman bodies, bodies succumbing to decay, individual selves giving way to various forms of control and dividuality, and microscopic processes of interspecies transfer, the Sampler's music marks the time of the environment and its interconnections. Together, sound and image mediate an experience of the expanded realm of affect which swallows up, discorrelates, and metabolizes subjective perception and perspective in the space of the post-cinematic ecosphere.

V

Ultimately, what *Upstream Color* points to is the way that biological, technological, phenomenological, and economic realities are all imbricated with one another today in a total media environment—that of post-cinema, which is unified and propagated not by cognitive

but by decidedly post-perceptual means. Cameras are irrational, neither subjective nor objective but radically ambiguous and volatile. Images are discorrelated, incommensurate with human subjectivities and perspectives. Media generally are post-perceptual, transductively mediating new forms of life by modulating the metabolic processes through which organisms such as ourselves are structurally coupled with our (biotic, technical, material, and symbolic) ecospheres. By insinuating themselves into the molecular flows of affect, prior to the possibility of perception and action, post-cinema's metabolic images have a direct impact on "the way we tick"—i.e. on the materially embodied production and modulation of time and temporal experience. In other words, these images radically articulate the conditions of life itself in the contemporary technosphere: not only do they "express" these conditions and our experiences of them, but they are in part responsible for enabling our experience in the first place; by articulating together the organic (the material substrate out of which human subjectivities are formed) and the technical (computational processes in particular) at a categorically prepersonal and non-cognitive level of microtemporal becoming, metabolic images are involved in generating the conditions for molar experience in the post-cinematic world. Finally, these techno-organic processes point us beyond our individual experiences, towards the larger ecologies and imbalances of the Anthropocene.[28] Ultimately, we might speculate, what post-cinema demands of us by means of its discorrelated images is that we learn to take responsibility for our own affective discorrelations that we develop an ethical and radically post-individual sensibility for the networked dividualities through which computational, endocrinological, socio-political, meteorological, subatomic, and economic agencies are all enmeshed with one another in the metabolic processing and mediation of life today.

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Notes

[1] The distinction between "intermediaries" and "mediators," as I employ it here, derives from Bruno Latour, who writes in *We Have Never Been Modern*:

An intermediary—although recognized as necessary—simply transports, transfers, transmits energy from one of the poles of the Constitution [i.e. the system by which modernity separates all entities into either cultural or natural, subject or object, obscuring the role of hybrid quasi-objects]. It is void in itself and can only be less faithful or more or less opaque. A mediator, however, is an original event and creates what it translates as well as the entities between which it plays the mediating role. (78)

Mediators thus instantiate "transductive" relations in Gilbert Simondon's sense of the term, viz. relations in which the related terms do not precede or exist outside of those relations:

Following the same path as the dialectic, transduction conserves and integrates the opposed aspects. Unlike the dialectic, transduction does not presuppose the existence of a previous time period to act as a framework in which the genesis unfolds, time itself being the solution and dimension of the discovered

systematic: time comes from the preindividual just like the other dimensions that determine individuation. ("The Genesis of the Individual" 315)

Adrian Mackenzie's *Transductions: Bodies and Machines at Speed* provides a useful introduction to, and an interesting exploration of, Simondon's concept.

[2] More generally, what is at stake here is a transformation at the level of what I have elsewhere termed the "anthropotechnical interface": "a realm of diffuse materiality . . ., the relational substrate which underlies the socially, psychically, and otherwise subjectively or discursively organized relations that humans maintain with technologies" (*Postnaturalism* 26). The anthropotechnical interface is

a material pivot in a realm of historical change that both exceeds and grounds our perceptual, conceptual, and linguistic faculties to register change or write history. Accordingly, embodiment—conceived as distinct from and ontologically prior to the discourses and social subjectivities founded upon it—is historically variable, and it varies in response to technological change; the affective body itself is decomposed and reconstituted when inserted into novel technological circumstances. Seen thus, embodiment (and, a fortiori, subjectivity) is not separable from these circumstances but is born (and re-born) from out of them; technological and human embodiment are co-constitutive, for the former redefines the shape of the latter as it opens new means of contact with the world as environment, while, on the other hand, the technological environment is meaningless or ineffectual without a body thus "environed" and affected. We are approaching here a theory of transitionality as the monstrous (re) birth of the anthropotechnical body in its movement between a given material environment and another. (Postnaturalism 182-183)

[3] Framed by an engagement with philosopher Bernard Stiegler's

discussion of cinema as a neo-Husserlian "temporal object," Mark B. N. Hansen makes an important argument about the contemporary breakdown of "objectal" forms of mediation in his "Living (with) Technical Time." According to Hansen, the move from objectal to more thoroughly processual forms of media and art gives rise to a changed experience of time itself-and ultimately to an experience of time divorced (or "discorrelated," as I put it) from the temporal scale of human perception. [4] Henri Bergson defines affect as "that part or aspect of the inside of our bodies which mix with the image of external bodies" (Matter and Memory 60); pertaining to the Bergsonian image of the body as a "center of indetermination," affect thus describes an intermixture of inside and outside, and an intensity experienced in a state of "suspension," outside of linear time and the empirical determinateness of forward-oriented action. It thus corresponds to a major emphasis in film theory conducted in the wake of the so-called affective turn—namely, a focus on privileged but fleeting moments, when narrative continuity breaks down and the images on the screen resonate materially, unthinkingly, or pre-reflectively with the viewer's autoaffective sensations. Such moments are, of course, central to Deleuze's conception of the "time-image" (cf. Cinema 2), which marks a break with the phenomenology of the "movement-image" of the pre-WWII era (cf. Cinema 1). My argument about post-cinema's discorrelated images tries to envision a further transformation on this affective terrain of human-technological interaction.

[5] I speak of a "properly" post-cinematic era in recognition of the fact that the entire second half of the twentieth century, following the rise of television and the decline of classical film style, might with some justification be claimed already to have been post-cinematic. Nevertheless, it seems reasonable to identify a period of transition that has only recently given way to a more fully or genuinely post-cinematic era. In his *Post-Cinematic Affect*, Steven Shaviro gestures in a similar direction: recognizing the media-technical and other changes taking place since the mid-twentieth century, Shaviro refuses a "precise periodization" (1) but maintains that "these changes have been massive enough, and have

gone on for long enough, that we are now witnessing the emergence of a different media regime, and indeed of a different mode of production, than those which dominated the twentieth century. Digital technologies, together with neoliberal economic relations, have given birth to radically new ways of manufacturing and articulating lived experience" (2).

[6] "Post-Cinematic Affect: Post-Continuity, The Irrational Camera, Thoughts on 3D" was the second roundtable discussion (with Therese Grisham, Julia Leyda, and myself) on the topic in *La Furia Umana*, following one devoted to "The Post-Cinematic in *Paranormal Activity* and *Paranormal Activity* 2" (with Therese Grisham, Julia Leyda, Nicholas Rombes, and Steven Shaviro). Both discussions are reprinted in this volume.

[7] Sobchack's reference to "postcinematic" media occurs in the concluding pages of *The Address of the Eye*, where she writes:

Postcinematic, incorporating cinema into its own techno-logic, our electronic culture has disenfranchised the human body and constructed a new sense of existential "presence." Television, video tape recorders/players, videogames, and personal computers all form an encompassing electronic system whose various forms "interface" to constitute an alternative and virtual world that uniquely *incorporates* the spectator/user in a spatially decentered, weakly temporalized, and quasi-disembodied state. (300)

These ideas, which Sobchack had previously articulated at greater length at the "Materialität der Kommunikation" conference in Dubrovnik in 1987, appeared in a number of versions throughout the years: first in German, as "The Scene of the Screen: Beitrag zu einer Phänomenologie der 'Gegenwärtigkeit' im Film und in den elektronischen Medien" (1988); then in English, in the journal *Post-Script*, as "Toward a Phenomenology of Cinematic and Electronic Presence: The Scene of the Screen" (1990); then in a revised version included in Sobchack's *Carnal Thoughts* (2004); which, finally, is reprinted in the present volume.

[8] Responding to an interviewer's suggestion that Ghost Rider: Spirit of Vengeance "looks a lot more conventionally edited than your usual hyperkinetic style," Mark Neveldine states that "there's a lot of places in the movie where, if we have a trademark style, I think you'll see it. Certainly the action is really fast-paced, we move the camera a lot, we broke every rule that supposedly was written about 3D and what you can and can't do." The interviewer follows up later in the same discussion: "One of the supposed rules of 3D is that a shot has to be held a certain length in order to be perceived in 3D. Is that one of the rules you guys broke in Ghost Rider, and/or would break in a 3D Crank sequel?" Neveldine replies: "Yeah, we didn't find any of the so-called rules of 3D were actually real rules. Through a process of testing and trying out different things and finding workarounds, we pretty much found we could shoot exactly the kind of thing we like to shoot, and it works great for 3D. We haven't had any complaints of people getting headaches from 3D, or puking. We expect to get that on Crank 3, but not because of the 3D." Brian Taylor adds, proudly: "Yeah, but we have more lens flares in our movie than most 2D movies have, so we're happy with it." Many reviewers were less enthusiastic, however, complaining about the overuse of lens flares, as generally gratuitous and sometimes nonsensical, and as the only thing that occasionally floats in 3D space in front of a basically flat surface picture. Generally, this use of lens flares fits with what I am theorizing as the irrationality of the post-cinematic camera: Neveldine and Taylor's lens flares are positively insistent on the materiality of the camera, while being used to foreground the supposedly gritty (because "against the rules") potential of 3D as 3D; in other words, the technical infrastructure of 3D is foregrounded rather than rendered invisible or natural, all the more so as the lens flares occupy a different plane than the rest of the images.

[9] Ihde symbolizes embodiment relations thus: (I—technology) \rightarrow world. The arrow indicates what Husserl designated the basic noetic relation, whereby a perceiving subject takes up an intentional relation towards some object or aspect of the world. In an embodiment relation, the subject and the mediating technology are bracketed together on the left hand side

of the arrow to indicate their cooperation in establishing the relation. The mediating technology becomes more or less transparent in the intentional act. Classical examples include Heidegger's famous hammer from *Being and Time* and Merleau-Ponty's only slightly less famous blind-man's cane from *Phenomenology of Perception*. Ihde discusses embodiment relations in detail in *Technology and the Lifeworld* (72-80).

[10] In contrast to the embodiment relation, Ihde symbolizes the hermeneutic relation thus: $I \rightarrow$ (technology—world). Here the mediating technology loses its transparency and becomes an object of interpretation, though still not the ultimate terminus of noetic intentionality, which aims *through* the mediating apparatus towards an object in the world. Thus, whereas an optical telescope tends to instantiate an embodiment relation as it disappears from view, a radio telescope instantiates a hermeneutic relation as a technology that has to be actively interrogated in order to learn about the heavens. Ihde explores hermeneutic relations at length in *Technology and the Lifeworld* (80-97). On the notion of "realisticness," as opposed to "realism," see Alexander Galloway, "Social Realism."

[11] I adopt the term "ergodic" from Espen Aarseth, who uses it to describe the interactive spaces of digital games and electronic literature; combining the Greek *ergon* (work) and *hodos* (path), the concept of ergodicity describes digital games, in contrast to other textual forms, as a type of discourse "whose signs emerge as a path produced by a non-trivial element of work" (32). Thus, a game's narrative "script" is not pre-existent, not just "there" for us to read like a novel, but it is instead generated at the moment of interaction, on the fly and in response to a user's input. Here, I wish to expand the notion of ergodicity to conceptualize the basic processuality of post-cinematic images, including such apparently non-interactive ones as CGI lens flares. Overt interactivity, in other words, might be seen as only one possible expression of an underlying instability at the root of post-cinematic images.

[12] On chaos cinema, see Matthias Stork's <u>video essay</u> by the same title. [13] The distinction between "molar" and "molecular" levels derives from Deleuze and Guattari. As with many of the concepts at work in

Deleuze and Guattari's collaborations, Brian Massumi's *A User's Guide to Capitalism and Schizophrenia* is helpful in understanding the molar/molecular distinction. Massumi writes:

It is crucial for understanding Deleuze and Guattari . . . to remember that the distinction between molecular and molar has nothing whatsoever to do with scale. Molecular and molar do not correspond to "small" and "large," "part" and "whole," "organ" and "organism," "individual" and "society." There are molarities of every magnitude (the smallest being the nucleus of the atom). The distinction is not one of scale, but of mode of composition: it is qualitative, not quantitative. In a molecular population (mass) there are only local connections between discrete particles. In the case of molar populations (superindividual or person) locally connected discrete particles have become correlated at a distance. Our granules of muck [in an example introduced earlier] were an oozing molecular mass, but as their local connections rigidified into rock, they became stabilized and homogenized, increasing the organizational consistency of different regions in the deposit (correlation). Molarity implies the creation or prior existence of a well-defined boundary enabling the population of particles to be grasped as a whole. We skipped something: the muck as such. A supple individual lies between the molecular and the molar, in time and in mode of composition. Its particles are correlated, but not rigidly so. It has boundaries, but fluctuating ones. It is the threshold leading from one state to another. (User's Guide 54-55)

Similarly, if there is really a moment of media-ontological transformation associated with the transition to a post-cinematic media regime, it would have to be located in a "meso-level" of human-nonhuman interactions located between an a-centered molecular flux and the situated centeredness of (new and old forms of) phenomenological subjectivity.

[14] Lazzarato mounts his argument in a book titled Videofilosofia:

La percezione del tempo nel postfordismo, translated into German as Videophilosophie: Zeitwahrnehmung im Postfordismus, but as yet untranslated into English. An exception is the first chapter, "Machines to Crystallize Time: Bergson," which appeared in the pages of *Theory, Culture & Society*, and from which I quote here.

[15] For a fuller reading of the series, see <u>Julia Leyda's chapter</u> in this collection, as well as the <u>La Furia Umana</u> roundtable on "The Post-Cinematic in *Paranormal Activity* and *Paranormal Activity* 2," reprinted in this volume.

[16] See Kevin P. Sullivan's discussion with directors Henry Joost and Ariel Schulman:

The Xbox Kinect and its invisible field of tracking dots surprised Joost and Schulman, but provided an opportunity for a new kind of scare. "[The Xbox Kinect scares] started because we were looking around and thinking about how many cameras there are around your house. My laptop has a camera built in. His does. The Kinect is actually two cameras," Joost said. "We were thinking maybe some of the filming will be done with the Kinect, and then we started researching what it's capable of and found this video on YouTube where someone was like, 'Do you actually know how this thing works and how it projects this grid of dots on the room that's completely invisible to the naked eye, but if you have the right camera, you can see it?' We were just like, 'Oh my God, this has to be in the movie. That's so crazy looking." In a weird way, the new technology fits nicely into the tradition of the series. "I think it's very Paranormal Activity because it's like, there's this stuff going on in the house that you can't see," Joost said. "Now we have a little bit of a window into what those things look like." Schulman agreed. "The ghost dimension."

[17] Ubiquitous computing, according to Hansen, "marks the endpoint of a certain trajectory in the dialectic of technics and sensation"—a trajectory that encompasses the transitions from film to video to digital

technologies. This most recent stage of media-technical development

abandon[s] an object-centered model of media in favor of an environmental one. No longer a delimited temporal object that we engage with focally through an interface such as a screen, media become an environment that we experience simply by being and acting in space and time—which is to say, without in most cases explicitly being aware of it, without taking it as the intentional object or target of our time consciousness. To anticipate a bit here, we can say that ubicomp signals a fundamental modification in our interface with technics: no longer object centered, resolutely personal, individually framed, and of the order of conscious perception, the technical mediation of sensation in ubicomp environments is atmospheric, impersonal, collectively accessible, and microtemporal in its sensory address. ("Ubiquitous Sensation" 73)

[18] There is, indeed, still much to be said in favor of the view that digital imaging processes fundamentally flatten the distinction between liveaction cinema and animated film. For an early statement of this view, see Lev Manovich's "What is Digital Cinema?," reprinted in this volume.

[19] Massumi defines affect as "a suspension of action-reaction circuits and linear temporality in a sink of what might be called 'passion,' to distinguish it both from passivity and activity" (28). See also my discussion in *Postnaturalism*, particularly 186-93.

[20] In Chapter 5 of *Postnaturalism*, I draw on Dutch phenomenological psychologist J. H. van den Berg's quirky "metabletic" treatment of the Industrial Revolution (in his *The Two Principal Laws of Thermodynamics*) in order to theorize metabolism as the ground and model of human-technological coevolution:

Just as an animal devours dead or living organic matter and, through processes outside its control, integrates it into a body that grows, maintains itself, reproduces, and dies within shifting ecological parameters, so too does the anthropotechnical

body mutate non-deterministically by absorbing into itself environmental materials of the most diverse sorts, synthesizing them into new structures and functional pathways that, viewed from above, constitute nodes in an evolving network of relations between apparatic innovations, cellular and organic changes, and other internal and external exigencies. As a metabolic process, anthropotechnical evolution is an a-centric and non-hierarchical process of transformation that is not only indifferent to consciousness but cannot be said to favor the organic or the natural either. It is spatially liminal and temporally transitional, always outside and in-between the molar 'situations' of human experience and empirical nature. (259)

[21] See Hansen's "Media Theory," where he explains that

Such a conceptualization [i.e. medium as environment for life] draws explicitly on the implications of recent work in biological autopoiesis (which, among other salient claims, demonstrates that embodied life necessarily involves a "structural coupling" of an organism and an environment), but it does so, importantly, in a way that opens the door to technics, that in effect contaminates the logic of the living with the distinct and always concrete operation of technics. From this perspective, the medium is, from the very onset, a concept that is irrevocably implicated in life, in the epiphylogenesis of the human, and in the history to which it gives rise qua history of concrete effects. Thus, long before the appearance of the term "medium" in the English language, and also long before the appearance of its root, the Latin term medium (meaning middle, center, midst, intermediate course, thus something implying mediation or an intermediary), the medium existed as an operation fundamentally bound up with the living, but also with the technical. The medium, we might say, is implicated in the living as essentially technical, in what I elsewhere call "technical life"; it is the operation of mediation—and perhaps

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also the support for the always concrete mediation—between a living being and the environment. In this sense, the medium perhaps names the very transduction between the organism and the environment that constitutes life as essentially technical; thus it is nothing less than a medium for the exteriorization of the living, and correlatively, for the selective actualization of the environment, for the creation of what Francisco Varela calls a "surplus of significance," a demarcation of a world, of an existential domain, from the unmarked environment as such. (299-300)

[22] See Shaviro's "Post-Continuity," <u>reprinted in this volume</u>, where he differentiates and positions his views in relation to those of David Bordwell and Matthias Stork.

[23] I have discussed this lack of closure in the roundtable discussion "Post-Cinematic Affect: Post-Continuity, the Irrational Camera, Thoughts on 3D," reprinted in this volume.

[24] In his book *Convergence Culture*, Henry Jenkins explores the intersections of popular-cultural phenomena of transmedia storytelling with an apparently democratizing impulse towards participation and creativity on the side of contemporary media consumers. Felix Brinker's chapter in this volume offers an alternative, somewhat more pessimistic view of these developments.

[25] With reference to J. H. van den Berg's notion of "metabletics," Bernd Jager makes an important distinction between "metabolism" and "metaphor" as two types of transformation. Metaphor, today as in the ancient Greek *metapherein*, refers to reversible passages that connect two realms and preserve similitude; on the other hand, metabolism, from *metaballein*, refers to abrupt and radical changes which efface, digest, or absorb all traces of an earlier state (van den Berg 4-9). Metabolic changes do not occur on a human scale, are not commensurate with human perception or discourse, and are therefore not subject to social or cultural construction (or deconstruction, for that matter); in contrast

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to metaphorical changes, which leave intact a humanly accessible context within which such changes may be cognized and recognized, metabolic processes are properly sub-conceptual, sub-phenomenal, and literally material. It is my contention that *Upstream Color*'s metabolic images are not just *about* metabolic processes but that they literally *enact* such material processes; and though the experience of watching Carruth's film is so utterly different from watching, say, a Michael Bay film, it is on the basis of this sub-conceptual affective impact, which bypasses cognitive processing or "metaphor," that I would claim both as properly post-cinematic.

[26] In his "Postscript on the Societies of Control," Deleuze describes the shift from Foucault's "disciplinary societies" of the eighteenth and nineteenth centuries to the new "societies of control" in terms of a reorganization of agency under the respective political-economic systems:

The factory [of the disciplinary society] constituted individuals as a single body to the double advantage of the boss who surveyed each element within the mass and the unions who mobilized a mass resistance; but the corporation [in societies of control] constantly presents the brashest rivalry as a healthy form of emulation, an excellent motivational force that opposes individuals against one another and runs through each, dividing each within. (4-5)

Thus, in societies of control: "We no longer find ourselves dealing with the mass/individual pair. Individuals have become 'dividuals', and masses, samples, data, markets, or 'banks'" (5). Kris and Jeff are exemplary figures of the control society: I have already pointed out that Kris's original career (in an anonymous neoliberal media corporation) positions her as "biopower in the service of algorithmic functions," but even after her transformation she continues to work in digital image production, printing large-format posters and signage for corporate customers. Jeff, on the other hand, originally worked in the world of high finance, and it is unclear whether embezzlement was part of his job or

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the reason why he lost it. Quite possibly, Jeff committed his crimes under the hypnotic influence of the mysterious "Thief" (as he is called in the film's credits), who infected both him and Kris with the parasite, and who caused Kris to sign over all her assets to him. In any case, Jeff takes responsibility for his actions, much as a neoliberal society expects us all to take responsibility for (or accept as "natural") events that are beyond our control or comprehension: for example, we are not to assign blame to banks or corporations for finance crises, as the causal mechanisms are (by design) far too complicated for most of us to understand. And even after his fall (or crisis) Jeff continues to work, off the books, in the more shadowy regions of finance capital. Both Kris's and Jeff's occupational activities are therefore inextricably, and exemplarily, bound up in the postcinematic universes of data that control our lives. And their plights, their transformations, are closely related to our own situations as inhabitants of neoliberal societies. We never learn why, to what end, the Thief went to such lengths to scam his victims out of their savings. As spectators, we are positioned as uncomprehending, unable to comprehend a plot of such complexity, involving such distributed and apparently non-coordinated agencies, similar to the way credit default swaps are just too complicated for most of us to understand and thus didn't raise enough red flags early on before the financial crisis.

[27] For Deleuze, following Bergson, "the virtual is fully real"—and thus not to be confused with the notion of virtuality according to which "virtual reality" is distinguished from "real life"; the virtual, which concerns the realm of potentialities (as well as the generative experience of duration and memory), is, according to Deleuze in *Difference and Repetition*, "real without being actual, ideal without being abstract, and symbolic without being fictional" (208).

[28] See Selmin Kara, "Anthropocenema: Cinema in the Age of Mass Extinctions," and Adrian Ivakhiv, "The Art of Morphogenesis: Cinema in and Beyond the Capitalocene," both of which are included in the present volume.



2.6 The Error-Image: On the Technics of Memory

BY DAVID RAMBO

1. Time's Error

Welcome to the world of images—or, just as well, the image of the world. Such is Henri Bergson's term for the thing in itself and for all its relations. Thus in his book *Matter and Memory*, he calls the universe the "aggregate of images." To move entails a seamless transition of which any intermediary and end points represent mathematical abstractions of space mapped onto real material duration. Gilles Deleuze, in his writing on cinema, follows Bergson in calling these movement-images (Cinema 1 11). Film designates for its images the screen as a center within the world (10). A film consists of arbitrarily abstracted "immobile" or "instantaneous images" that represent time subordinated to movement. Deleuze argues that cinema portrays these images in their concrete duration. But in order to do so, it must designate for its images the screen as a center within the "whole" or world which is open to the enduring flux of relations. By the same token, the spectator's body is a "living image" that serves as its own center according to which it "frames" the innumerable external images by parsing and reflecting them upon itself as, for example, a perceptionimage (62-63). Simply conceived, the body is a self-oriented system of reactions contingent upon the images it frames. Thus, while the cinematic aesthetic foregrounds the various movement-images through its own act

of framing, viewers in turn reflect these images within their own frame of access.

Movement-images presented in film accord with the viewer's sensorimotor schema that guides the framing of images and consequent bodily reactions. Thus, these images show time passing in subordination to movement. Obversely, what Deleuze terms the time-image depicts the work of time *as such* by breaking with or stunting the sensorimotor schema by way of irrational cuts, false continuity, absent movement, or the co-presence of variable pasts. In order to represent time in a "direct," pure state to which "aberrant movements" relate, the image "[frees] itself from sensory-motor links" (Deleuze, Cinema 2 41, 23). In a scene from David Lynch's Blue Velvet (1986), the yellow man, having been shot in the head, nevertheless remains standing (see Figure 1). Besides his barely noticeable swaying, the scene is a still shot of time unhinged from movement and into which the protagonist stumbles. As an interstice, the time-image provides a simultaneous before and after separate from the adjacent cinematic images, unique to and contained within only that interstice: a center adrift in its own indeterminate time (39).



Figure 1 – From David Lynch's BLUE VELVET, an interstitial time-image cut out of normal continuity.

Deleuze delineates an abundance of time-images, each with their own principled temporality. For example, in an "irrational cut," the interstice does not determine any commensurability, "there are only relinkages subject to the cut, instead of cuts subject to the linkage" (213-14). This abruptly diverts the spectator's anticipation of the future and rather catalyzes thought into its own autonomous stitching of contiguity. On either side of the interstice there may be sensorimotor embodiment in the viewer, but the transition from one to the next lacks a connection appropriate to anticipated movements. Christopher Nolan's Memento (2000) clearly exemplifies the irrational cut. Leonard, the protagonist whose post-trauma short-term memory loss limits his consciously accessible retention to the past eight minutes, seeks his wife's killer with the help of notes and tattoos (see Figure 2, below). Each scene lasts eight minutes and ends with Leonard suddenly realizing he has forgotten that which took place in the scene's opening. Nolan orders these sequences into a reverse narrative such that each scene's end links up to the beginning of the previous scene. Another narrative interspersed throughout the film's primary series of temporal steps shows a phone interview with Leonard who recounts a job he had prior to his injury. Thus, in addition to interstices organized according to reverse chronology, we also have a broader interstice that divides a past from the main sequence, both trapped in its own time as well as present in each and every eight-minute movement-image: the work of time borne by light, framed by screen.

Yet Deleuze does not consider that in order to be understood as time "out of joint" from movement, the time-image must be framed and reimaged by the viewer who is bound by the body's indirect representation of time. That is, the time-image must be abstracted, reconstructed, reimaged by the viewer who continues to be bound to the body's indirect representation of time. Deleuze admits as much when he calls for an "analytic of the image" by which to read these various signs, but he leaves unexplored the process wherein the living image reflects a separate frame (*Cinema 2* 245). The time-image therefore remains a cinematographic



Figure 2 – Christopher Nolan, MEMENTO. This shot from a black-and-white flashback foregrounds the imbrication of recording apparatuses (film, photography, tattoo, and neurological) and their control over time's disjoining and concomitant bodily-technical articulation.

image framed by cinema's technics of selection, and for it to be taken up by the spectator would introduce a distinct regime of relinkages subject first to the interstice but also to the brain's own technics of calculation and retention grounded in the material substrate of its memory. *Memento*'s interstices convey in one way how the time-image relies on the spectator to instantiate its temporal embodiment. As the film's reverse chronology unfolds, the spectator reticulates within memory a continuity conforming to normative sensorimotor schemata. However, our question lies not in how the time-image operates as an aesthetic, but in the image that results when we try to make sense of the time-image while simultaneously experiencing the passing actuality of time as we do so. This is the errorimage: a movement of thought whose anticipatory protention lacks any subsequent retention and therefore cycles forward unresolved, left to the throes of memory's unconscious expanse.

As my terminology suggests, a brief look into Husserlian phenomenology provides a stepping stone towards a theory of the error-image. Consciousness

persists through time by straddling the present's divide: a retention of the past prolonged coincides with a protention that anticipates that which is yet to come. Bernard Stiegler, to whom we will return later, notes that in the flux of experience protentions compound with perception and cycle back as more or less accurately realized retentions, a process which "brings about the selection of new protentions" (Technics and Time 2 231). This is an economy of possibility carried by memory's tests of consistency. However, a time-image radically denies the realization of such an anticipatory schema. I suggest that in an attempt to make sense of this image, the spectator's retention-protention schema becomes entangled in a sort of technical jam in which conscious temporality is severed from external stimuli and thought unsuccessfully seeks a proper ground for bodily response. The time-image onscreen breaks the recursive link between protention and retention, setting off the error-image which implodes into a spiral or explodes into an unstable flux. Only retentional finitude saves us from this unceasing calculation: time urges memory's actualization into the future, we register some affect and forget the problem posed by error, suppressing it into the unconscious.

The error-image can play out as a panic attack which forces a lapse of consciousness by over-inflating it with anticipatory calculation. Or retentional finitude can dislodge the circuit of memory in a number of ways. Let us first work through an example that directly exhibits the incipient components of error where the time-image merely instigates them.

Consider "Celery Man," a digital short starring Paul Rudd taken from *The Tim and Eric Awesome Show, Great Job*. Paul is running a computer program which shows several costumed versions of himself dancing to synthesized music. Upon trying a new beta version, the erratic overload occurs (1:41). In the final sequence of the flux, all the windows exhibit the same looping few frames of Paul's costumed personas. With "Celery Man" we have a representation of the experiential error-image (see Figure 3).

The Error-Image





Figure 3: Two frames from the final programmatic breakdown in "Celery Man."

This manifestation of error on the screen's GUI should not be termed digital, but visual. A properly digital image—to extend Bergson's cosmology of images now-demarcates the computation of transistor relays: a looped section of code and machinic voltages which crash during runtime, for example. We can hear the error-image, too, in the frantic repetition of a splice of sound. Such audial effects have become prevalent in contemporary music, functioning as a single beat bridge between a song's melodies. Guitarists of the so-called "math rock" genre, known for complicated time signatures and abrupt changes in melody, often stomp on a delay pedal for this digitally inscribed tonality of the in-between-note. Even more indicative of error is the way the sound effect feeds back by repeating its own additional notes, thus precipitating an interstice with increased volume and decreased delay between the notes. By momentarily jamming one's expected temporal flow, the musical error-image affects the listener with the suspense of solutionless calculation. A retention dislocated from its expected protention primes the listener for an imminent pleasure realized by the song's subsequent transcendence of error: a novel mode of discordant musicality invested in temporal, rather than merely tonal, dissonance.

Beyondits theoretical importance as an intervention into Gilles Deleuze's Bergsonist theory of cinema and Bernard Stiegler's technological phenomenology, the error-image also serves to focalize recent developments in time-based media. Of interest to us here is how the error-image's embodied reframing of the intra-cinematic time-image resonates with post-cinema's expansion of medial interventions into the constitution of perception. Though a reinvestment in the spectator's body gives rise to the error-image in response to a time-image, our investigation into technics and memory will open this attention to embodiment from a human perspective to a more inclusive, generalized scope. In this way, a theorization of error's plurality of images in both media-philosophical and aesthetic contexts can contribute to what Shane Denson has characterized as the "discorrelation" of images'

production from the human's phenomenological standards.[1] In the same way that the error-image foregrounds the time-image's latent rupture from any direct human perspective, so too do post-cinematic techniques realize and intensify the cinema's capacity for radically altering the foundation of worldly experience.

2. Towards a Spiritless Memory

In addition to the temporal blockage that characterizes this initial look, the error-image implicates a wider framework of memory. Beneath the error, a latent weave of memory traces fills the time-image's interstice and holds aloft the movement of thought as its substrate, the already-there horizon for the not yet: the virtual.

Temporalization

First, some terms. Conscious temporality refers to the perception of time, which expands physical time's passing present into an experienced now. Sensation refers to a perturbation of physiological senses that takes place beneath the threshold of conscious perceptual awareness. Body and mind, unconsciousness and consciousness, exist as dynamic, processual relations within the material universe and physical real time. Experience of them remains confined to temporality.

Given the temporal difference between physical processes, bodily sensibility, and perceptual temporality, conscious presence must therefore be composed of already passed material interactions. Registering a past requires a retention, which refers to a form maintained through time. Any recording, whether a technical trace like writing or a physiological mark like a scar or a neural pathway, is a retention. Memory's content furnishes our conscious temporality by informing us, via its own immanent and present retention, of the past as the present passes. Martin Hägglund explains the consequences of temporalization in terms of retention and protention:

these functions testify to the constitutive deferral and delay of différance. The delay is marked by the retentional awareness of being too late (in relation to what is no longer), while the deferral is marked by the protentional awareness of being too early (in relation to what is not yet) . . . I can appear to myself only by holding onto myself through retention and anticipating myself through protention. [2] (Hägglund 70)

Due to the necessities of its very existence, consciousness must have at least some immediate constitutive association with memory. The retention-protention schema substantiates a basic ground for conscious experience as an extra-present flux, but it alone does not definitively place memory's cosmological entirety at the base of all conscious phenomena.

Neuroscience of Recollection

Example one. In his book Proust Was a Neuroscientist, Jonah Lehrer recounts working in Nobel Prize-winning scientist Eric Kandel's lab at NYU. In his popularized account of Drs. Kandel and Kausik Si's experiments with rats conditioned to fear a specific sound, Lehrer explains how blocking the proteins necessary to make new memories inhibited "the process of remembering a memory" (Lehrer 84-85). Not only did the rats lack fearful sensations, they also lost the "original memory trace," which became evident after the protein blocker left the rats' bodies. A class of proteins called prions, which are both resistant to decay over time and malleable without genetic material, enable memories to persist until enacted in recollection. A memory trace for recollection exists in its recall during the process of sensation, and its subsequent retention after recall memorizes the latest sensation in lieu of the previous. This process, called "reconsolidation," follows Derrida's logic of the trace, which affords a retention with material persistence by its being open to destructive differentiation. Indeed, according to the Hebbian theory of learning, the entire nervous system

develops by adjusting activated synaptic weights, or the release of neurotransmitters, in proportion to their previous weights (Churchland 157-159). Sensibility thus sharpens its receptivity to the environment in a coincidence of reading and writing sensed bodily perturbations.

One more example. Neuropsychologist V. S. Ramachandran of the University of California, San Diego, complements these discoveries of memory in his work on neurological disorders. In the Capgras delusion, a patient cannot recognize an acquaintance's face because a head trauma or brain lesion has severed the neural connection between the fusiform gyrus, which processes visual information from words to faces, and the limbic system, a region responsible for emotion (Hirstein and Ramachandran). Sensation of a seemingly single sense perception thus requires an affective tonality retained by memory and imbued onto perception as a concomitant recollection. Yet the patient still recognizes voices, suggesting that the auditory centers of the brain have their own neural pathways to the limbic system. Bergson also accounts for these phenomena precisely. He determines that unconscious association precedes recognition, and that any conscious awareness of association results from thought's dissociation of the components present within recognition (Bergson 165). By the same token, "the alleged destruction of memories by an injury to the brain is but a break in the continuous progress by which they actualize themselves" (126).

Virtual Without Spirit

This minor sampling of contemporary neuroscience suggests that physiological memory combines a deconstructive trace structure with Bergson's paradigm of memory: experience is produced as memory reads its retentions by re-writing them. We can now express the differences between memory, perception, and consciousness in terms of the actual and the virtual. "Pure memory consists" in a "virtual state" of all its latent potential (Bergson 239-40). Sensation drives an image through memory "in a progression from the past to the present . . .

through a series of different *planes of consciousness*" that imbue it with the past, making it a recollection in a conscious "actual" state. This cerebral movement accords with Bergson's cone, wherein horizontal planes represent various associative pathways of memory traces. The most expanded plane corresponds to the nonconscious, absolutely unresolved totality of bodily retentions, while the cone's point is the most contracted state representative of "sensori-motor mechanisms" in action at a duration subliminal to perception, thus keeping it at the level of bodily affect (162).

Bergsonian memory entertains two instances of the actual and the virtual. One equates memory's retentional apparatus of the past maintained in the passing present to the virtual, the reading of that virtual to actualization, and the resultant conscious sensation to the actual. Another has the actual perception-image prehended by the body collide with the virtual memory-image selected for association, thus providing experience with a recollection-image indissociably composed of both actual and virtual elements. The cone represents the unconscious potential for memory's actualization into consciousness, not the possibilities for a variety of conscious states. Each plane, including the contracted point of present consciousness, contains the entirety of the past because the untraced retentions rest latent as memory-images, their exclusion from consciousness not an erasure from the real, but a necessary measure of contraction's finitude. As it passes, embodied sensation and conscious perception subsist on all of memory, whose virtual state in relation to consciousness takes the form of pre-incipient potential for actualizing contamination.

The cone, of course, is but a heuristic that Bergson employs in tandem with his didactic divison between pure perception, or durationless matter, and pure memory, or absolutely unactualized spirit. At the cone's point lies the plane of pure perception. Its most expanded plane partakes in, but still does not equal, pure memory. Bergson refers to

pure memory as "the domain of the spirit," while also securing the selections constitutive of human freedom to an image of matter, the memory-image, or rather the collection of such in a body (240). That he retains this immaterial term despite merging matter and spirit is a consequence of the ontological principle of duration. As real qualitative movement, duration must both repeat the entirety of the past, which is the ground for sensible qualities, and enact the thickness of the present in all its multifold contractions of that repeated past (202, 246-47). Without dualism, Bergson's cosmology would devolve into either static pure perception or unactualized, immaterial spirit of pure memory. Duration, we could say, is the *and* between *Matter and Memory*.

Contrary to Bergson's insistence on a dualism of material perception and immaterial spirit, the virtual must denote dormant potential in real, material relations. "Spiritual" does not refer to any transcendental property, only a residual image that enables some array of actions in response to perception. Memory is spiritual only because it adds to stimuli as the body perceives them, saturating perception with the past retained by memory. This actualizing recollection which conditions memory by prompting its "reconsolidation" is the mechanism of the virtual's survival through time, the multiplication of a living image's sheets of past (Lehrer 85). Memory's inability to revitalize past retentions without inextricably altering them shuts down what Deleuze calls "spiritual repetition," which is the repetition of the past for itself (Deleuze, Difference and Repetition 84). For the Deleuzean syntheses of time, the past in its unalterable coexistence repeats as a metaphysical requirement for time. But in order to convey this coexistence in terms of human memory, Deleuze turns to the very same example of reminiscence that Lehrer uses in his entirely material explanation of extratemporal memories awaiting recall: the involuntary memory of Combray that overcomes Proust upon tasting the madeleine.

3. Error as Interstice *Interstice of Co-Presence*

Sensation collides with memory in a vortex of subjective indeterminacy; it is inescapable. No consciously lived present exists without memory's constitutive temporality. No sensation comes to actual perception without memory's virtual past. Another sort of time-image corresponds to this actual-virtual bifurcation, Deleuze's "crystal-image," which is an actual image "crystalliz[ing] with its own virtual image" (Deleuze, Cinema 2 68). Between the real and its mirror, we watch time pass as the real's actual becomes virtual, and that virtual becomes actual in the mirror. In its actualization, the subjective becomes objective: a fleeting self bequeathed by memory in present circumstances more or less protracted. Actual and virtual are indiscernible because memory and sensation coalesce prior to perception, but they remain incompossible "because it is a perpetual self-distinguishing, a distinction in the process of being produced" (81-82). With the crystal Deleuze seeks to further enmesh Bergsonian philosophy into cinema, here showing our interiority to time by conveying time's two-sidedness consisting of passing presents and retained pasts. Unlike the interstice of false continuity, the actual-virtual interstice layers within "the mutual image" sheets of past, which chronological time refuses to make co-present by the nature of the sheets' own temporal creation and retention. At stake is the confrontation of the conscious "inside" with its underlying unconscious "outside" (207). Narratives with split personalities like David Fincher's Fight Club and Darren Aronofsky's Black Swan often make use of the crystal, the former with two different actors rapidly switching in and out of an image, and the latter with mirrors. Likewise, the presence of a ghost beyond the present of its death exhibits time's work insofar as the past grounds the present. Two scenes from Michelangelo Antonioni's The Passenger (1975), a film about one man's theft of a dead man's identity, will explore how this "mutual image" layers sheets of past, which chronological time cannot make properly co-present.

The spectator first witnesses David Robertson dead, face down. He is a set of clothes and the back of a head with brown hair. This shot is the first in which we see David Locke, played by Jack Nicholson, in the same space as Robertson. The flashback to their relationship is yet to come, and neither have we much sense of Locke's own character. For the setting offers the only significant evidence of the film up to this point: wide open and featureless desert waiting to be furnished, what Deleuze would call an "any-space-whatever." Antonioni thus presents Jack Nicholson's process of becoming-actor in that he begins psychically stripped down, seeking an object that will reflect Locke's constitutive image. This moment comes when Locke discovers Robertson dead, for Locke pauses, staring, aware of the death but stationed in a temporal limbo hinged on his decision to accept or to deny this death. His identity-theft does both.

We come to know Robertson only later, once Locke has assumed his persona. Thus to learn of Robertson's identity is only to construct Locke's. While their voices resound scratchily from a tape recorder to compose a distinct sound-image at first, David and David enter the camera's visual shot through a window to a past present with the back of their heads facing the spectator (see Figures 4-6). Antonioni invites us to confuse these nearly identical heads of hair and to see them coalesce with the formless sand. While listening to the tape replaying that past, David Locke dons Robertson's clothes in the present, which marks the first step in his self-identification as David Robertson. Through the window's past present, we have no sure way of knowing which body breathes and speaks beneath the khaki pants and blue shirt or the brown pants and red plaid shirt. Locke's voice we recognize as Jack Nicholson's, but in this layered temporality that combines Locke-becoming-Robertson in one moment with Locke and Robertson in another, one out of frame and the other within, there can be no certainty that Locke's voice has not already been disembodied—or more precisely, re-embodied—in the depiction of a supposedly past moment.



Figure 4



Figure 5



Figures 4-6 – Antonioni's smooth direction in THE PASSENGER slips the linear progression of the camera's gaze into a pocket of time out of joint.

From Sheets to Stitching: Recapitulation of the Error-Image

Only by witnessing the conversation between Robertson and Locke after Robertson's death do we understand what Locke sees as he pauses to watch Robertson's dead body. He is passively seeing, while he actively creates the same entanglement the audience experiences through that window. No longer merely an irresolvable protention, the error-image within the spectator's mind is one that opens thought to its material substrate and stitches contiguity among so many sheets of past according to the temporal dimensions provoked by the interstice. More forceful than the looped flux of aberrant movement is the error induced in the attempt to overcome the necessary impossibility for human memory's (actualizing) inside and (virtual) outside to confront each other on equal terms. This is the error-image of the panic attack, its capacity to affect increasing with its duration as a recursive loop wherein the analog human faints or the digital machine, its allocated memory overburdened with repeating procedures, stalls and crashes. Such an error-image results, in this case,

from a nascent version of the sort of techniques that characterize postcinema: due to the classically cinematic smooth direction of the shot, the fluid juxtaposition of two different times actually reflects back on the camera's, and the tape recorder's, production of both the spectator's and the character's irrationally conjoined perceptions. The mediately forced inversion of actuality into its phenomenologically excluded virtual constitution speaks to the comparative madness of post-cinema's "crazy cameras" (Denson). Inasmuch as the time-image, framed by Antonioni's camera work, launches the spectator's mind into error, it detaches the camera from its conventional diegetic procedures as a conduit for human perception and instead presents directly the perceptual efficacy of its technicity. In other words, an error-image has the potential to transfer attention from the object of cinematic presentation to the mediating processes of that presentation. The confrontation with a bit of time in its pure state can only result in the viewer's confrontation with the materiality of time as a complex of temporalizations that mediate, not the object of perception, but the very event of perception.

Whereas the time-image conceptually signals a sort of cognitive dissonance wherein both actual and virtual are coalesced for perception, the virtuality of the error-image refers to the unactualized, latent memory that passed through thought as ambiguous, amorphously formed recollection-images. The time-image opens up thought to memory, from which it came, by unhinging time from movement; the error-image, as I am theorizing it here, explores an alternative middle ground in the movement of thought itself that seeks its virtual ground anterior to time's subordination to material relation, with an end to undo conscious temporality's technical and chronological conversion of, and therefore concealing of, "time in its pure state." Likewise, a post-cinematic aesthetic tends to interrogate the multiply mediated creation of humanly perceivable sense by foregrounding the technics that escape phenomenological awareness. Instead of audiovisual representation, we witness a concatenation of data-based mediations. Just so, the error-

image highlights the impossibility for human perception to come to terms with what it constitutively excludes—even though that which is excluded comes to play a primary role in the provision of sensible material for human perception.

Let us consider another example. Onomatomania refers to the frustrating inability to recall a word whose signification is known to fulfill an intended linguistic meaning. As the experienced obstruction of memory's actualization in which sense cannot make the transition into language but only anticipate an intended recollection-image as the linguistic end, this is an error-image proper to human consciousness. The onomatomaniac cannot complete contraction's recall, instead ceaselessly and unsuccessfully filling a conscious space with a vacuum. Like a pristinely polished neon sign devoid of electricity: we know it is there, but we cannot excite it with the electrical vibrations necessary to see it. But what does it mean to border on the recall of pure memory as such? Or in Deleuze's appropriation of Bergson's terminology: what does it mean to actualize the virtual without dispossessing it of its virtuality? An affirmation of such a radical destabilization of conscious temporality would problematically equate the first passive synthesis of time that subordinates time to movement through habitual repetition to the second passive synthesis, which is the coexistence of pasts.[3] Rather, an errorimage necessitates the first synthesis's feeling around in the unfamiliar expanses belonging to its temporal sibling. A blind groping for the sensed word shapes obtuse gestures that accord more or less to the retention that awaits, forming in the process a temporal-haptic space for the nontemporalized infinite excess of Time. In its manic fancy, the actualizing retention casts aside misfit language like the failed pile of letters in a game of hangman. Whether the onomatomaniac acquiesces to virtual memory's indomitability by settling for an alternate word, or manages the proper pathways of recall, it is the pressure of futurity that drives the actual until its termination of the error through its transference as protention into retained memory.

The uniqueness of a theory of the error-image lies in the fact that it grafts onto the time-image its own flux of interpretation. With "dream" or "metaphor," cinema tries to "integrate thought into the image"—"to bring the unconscious . . . to consciousness" (Deleuze, *Cinema 2* 160-1). This is all thought of the movement-image, whereas the time-image would collapse the cut between thought and action in lieu of a depiction of the time that enables thought to inform the action-image. But what of bringing consciousness to the unconscious? To the viewer, the time-image remains a sign representative of both actual recollection and virtual sheets of past. Only the error-image, in its attempt to fill the objective depiction of an absent ground for time, brings "the thinker" to the "presence to infinity of another thinker in the thinker" (168). Its aesthetic—in both senses of artistry and of sensibility—commandeers the standard perceptual ordering of experience and confronts it with the subperceptual constituents of that ordering.

4. Technics of Memory

How, then, are memory traces made? More precisely, how are they made, in the case of the error-image, to harbor that which ought to remain outside of their sensible range? How do they relate, collaborating in overlapping milieux and technical assemblages? Our discussion of human memory's reconsolidation by recollection alluded to this problem, and here it extends into Bernard Stiegler's incorporation of technics in Martin Heidegger's existential analytic and Edmund Husserl's phenomenology of time consciousness. According to the first volume of Stiegler's Technics and Time, technics are "organized inorganic matter," from language and writing techniques to tools and global networks (49). He proposes that, as "artificial memory supports" providing access to the already-there, technics marked the inception of a co-evolution with the human: one part exterior to the body called epiphylogenesis, the other the phylogenesis of the prefrontal cortex (159). Therein lies the human's technical ontology: the foundation for a retention that awaits, the technique of anticipation, or protentional consciousness qua retentional facticity.

In Volume 2, Stiegler takes up Husserl's phenomenology of timeconsciousness and of the historical continuation of an intersubjective knowledge of idealities such as those constituted in mathematical research. Following Husserl, conscious perception in the present is termed primary retention (or memory), recollected memory is secondary retention (or memory proper), and technical retention exterior to human biology is tertiary memory (embodied in written records, audiovisual media, etc.). In his analysis of repeatedly listening to a recorded melody, Husserl determines that secondary memory conditions primary memory's selection of what it retains for a short duration in the immediately passing present. Husserl misses, as Stiegler points out, how his recognition of recollection's determination of conscious perception relies on the technical recording of the melody. This third stratum of exterior mnemotechnics is Stiegler's addendum, and it brings technical supports to the center of intellectual labor. By contrast, Husserl relegates the "art and method" of symbolic notation and recording techniques to the role of "surrogative operational concepts" (Husserl 126). From the initial formulation of the phenomenological method in his Logical Investigations to the final manuscripts known as The Crisis of European Sciences and Transcendental Phenomenology, Husserl consistently links scientific knowledge, or knowledge of idealities, to concrete situations of purely human experience. By Husserl's accounting, technical methods occlude this genesis of sense, such that the original intention of an ideality must be frequently reactivated by bracketing the extraneous "art and method" of technical surrogates and returning to its phenomenological genesis. Stiegler, however, argues for the reactivation of an ideality "sealed within" tertiary memory, and that "recovery is impossible, meaning that secondary memory penetrates into primary—except when tertiary memory is present" (Technics and Time 2, 229-30). He thus inverts the order of knowledge's genesis by rooting the sense of intellectual labor in the techno-logical establishment of exact repetition. Tertiary memory dissolves the distinction between primary and secondary memories by sustaining an identical perception

for conscious retrospection. Ultimately, Stiegler concludes that temporal objects such as film and audio recordings graft their flux directly onto the flux of consciousness, which entails an even more exact access to idealities than does writing (241).

Technics of Memory and Memory as World

According to Stiegler's argument, the prefrontal cortex is the culmination of an interiorization of exterior technics and vice versa: self-reflective conscious experience is itself technically conditioned. Problematically, however, Stiegler's belief that technical recording's increasing exactitude circumvents secondary memory's contamination of the Living Present would mean that primary consciousness as it passes in the present precedes its apperception, ergo its creation, in secondary retention. Secondary retention's "criteria for selection," as he phrases it, can become ultimately synchronized with those of the "programme industry's" hyper-industrialized tertiary retentions, so that individual experience is increasingly crafted by and through the mass media.[4] Certainly, the who is a what, meaning that both human subjectivity and its objects are technical artifacts, but the technics of recording differs greatly between human memory and those of inorganic objects. To supplant consciousness's actualization of virtual memory with that of tertiary retention requires the complete effacement of any human retention whatsoever by denying its specific, constitutive materiality. On the contrary, secondary memory takes in a tertiary retention as any other sensation-image and subjects it to its retained past of memory-images in order to compose perception in primary retention. By the same token, a technical object's own technics affords its expansion of retentions and their persistence through time, subjecting incoming action-images to its own technological framing.

Human memory as genetic and neurophysiological inscriptions is incorporated in a differentiated genus of technics known as the *who*, or the human individual, whose historical engagement with exterior technical objects is only possible due to a common, undergirding technicity. Stiegler's

crucial insight is to have designated this technicity in the co-originary coup of who and what. But an anthropological and prosthetic conceit in his tripartite stratification of memories limits our conceptualization of technics. Despite radically expanding the scope of the Heideggerian thesis of being-in-the-world as a necessary condition for human being's spatiality and temporality, Stiegler maintains both an overly cognitive bias in his critique as well as an entirely too distinct separation in human civilization between the technical system's developmental tendency and the "bio-anthropo-logical" evolutionary tendency (*Technics and Time* 2, 7).[5] He comes extremely close to a more balanced realization of his deconstruction of the who/what binary, for instance, in this following passage from the third volume of *Technics and Time*:

being-in-the-world is a being-in-the-"mondo-historiality" of the memory of the world, *ein in-der-Weltgeschichtlichkeit-sein*, a being-the-world in which the world is the memory of objects and objects of memory, beyond the "complex tools" and "references": a fabric of tertiary retentions that are the condition of primary and secondary retentions, as *Being and Time* indicates: they are possible, the existential analytic tells us, only through the facticity of an already-there. (161)

We see here one of Stiegler's seminal critiques of phenomenology: that Heidegger ought to have included all manner of exterior, technical retentions or memory supports in his existential category of "world-historiality," but which were on the contrary deemed "inauthentic" to *Dasein*'s being-in-the-world and therefore conducive to occluding rather than unveiling phenomena. Stiegler, however, unnecessarily continues to exclude those memorial associations with exterior non-technical objects or what we could simply call natural processes, which have their own regime of memory in the Bergsonist sense.

Instead, I locate the body of the *who* within, not a tertiary memory that is simply a *what*, but a transcendental field composed of, and in which

subsist, appendages of memory only some of which are differentiated according to the work of technics. We may think of the world itself as an organizing field of memory contracting through technics and nontechnical, sedimented physicochemical processes. Memory as world is made necessary by time, and is thus synonymous with Derrida's "arche-writing," or what Hägglund refers to as the "ultra-transcendental" logic of temporalization (Hägglund 50-75). Time necessitates a present that is both already there and delayed in its becoming present, while its contents in space are in a continual flux of extra-present differentiation. The "aggregate of images" in Bergson becomes now the movement of pure memory through the durational present: a non-spiritualist virtual that brings the past to bear on the present as potential forces.

Return to Error

With its explorative relation to memory, the theory of the error-image provides an avenue to address, first, the issue of "re-commencing the flux" stored by tertiary memory, and second, that of contributing to its progress. Opposed to the error-image of onomatomania is the failed attempt to pick up the intended conclusion of a half-written sentence after losing a train of thought. In this instance consciousness has the sensation of a clearly defined recollection-image of having been involved in the (interrupted) process of smoothly writing out a formed sense and forming thought of words. Whereas an error fails to drive sense into language, this lost train is the senseless awareness of forgetting, like an intaglio submerged in a pool of ink. Nothing remains trapped between virtual and actual memories as in the error-image, which would be like the inking in of an intaglio partially sanded flat. Unlike error's technical jam, the barrier of forgetting invites tertiary memory (as embodied in technical inscriptions) to serve as a perception-image that could prompt a memory-image coincidental with that lost flux to "return" to consciousness: a reminder in the remainder. One must not forget that, due to reconsolidation, human memory's actualization of consciousness is an erasing renewal of retentions and thus immune to the reactivation of the same. The experienced relation between a temporal object's flux and the flux of experience constitutes an interstice, a crystal-image between mind and screen, or mind and page. Therefore any addition to tertiary retention derives as much from the virtual past as from the actual perception. Text displayed by a computer monitor exhibits the same actual-virtual combination: the font's symbolic regime collaborates with the writer's technical manipulation of those symbols. Between a reader and a writer, the experience of those traces as recollection-images differs, and to the screen the retentions maintain their own distinct movementimages of matter. These sorts of conjunctional operations illustrate the functional differentiation of memory appendages as technical interlocutors equally participating in a field of memory assemblages.

Duncan Jones's film Source Code (2011) combines human and computer into an error-image indicative of a collaborative dwelling. In the technical sense, to dwell refers to the "slight pause in the motion of a part of a machine," which we get in the film as the restart of the eponymous program's eight-minute simulation of a bombed commuter train (OED). For Captain Colter Stevens (played by Jake Gyllenhaal), dwelling takes on Heidegger's sense of the word as a lingering by which "perception becomes definition" (Heidegger 61). "Source Code," the film's titular virtual reality program, provides the same initial scenario taken from the memory of one of the bomb victims on the train and modifies its in vitro ecology as Stevens reacts, these acts afforded by his compiled understanding over each successive attempt to identify the responsible culprit before a second bomb goes off in the real world. Program and human serve each other as exterior memory supports, always within the same cohesive past contracting in the present. Stevens also relies on further medial dwelling, for less than half of his body remains after what ought to have been a fatal helicopter crash in Afghanistan. With the "Source Code" program, a fragment of time itself has been condensed into image-form and stored as data for indefinite reproduction. Interestingly, this long form instance of the error-image

collapses the diegetic/non-diegetic split, a distinction often undercut by post-cinema's reflexive incorporation of the technical conditions of its own production. When we see Stevens's self-representation in a spherical room-cum-helicopter-cockpit, this is clearly a diegetic representation for the audience as well. But when we look on the wall of hardware and monitoring devices that afford the military team access to Stevens's computationally supported brain states, the diegesis collides with its own non-diegetic foundation in post-production special effects (see Figure 7, below). Here, the erring movement of thought takes on more than the stitching together of dissociated temporalities. It must come to grips with the gratuitous visuality made possible by the absence of the camera. If cinema's most experientially intense problem for consciousness is pure time or duration, then post-cinema's might very well be the other, non-temporal end of Bergson's heuristic concepts from *Matter and Memory*: pure perception.



Figure 7 – The audience bears witness to the technical complex of post-production and monitoring that drives the concurrence of Colter Stevens's programmatic "Source Code" experiences with the SOURCE CODE film itself.



Figure 8 – The heavily mediated, disembodied life of Stevens runs out of time in parallel with his, and the audience's, last eight-minute clip from the "Source Code" program.

Ultimately, with the second bomb threat thwarted, Stevens returns to "Source Code," which indicates that the error-image depicted by the film may not be the dwelling in tandem for a protention to link the simulation back into the real world where the terrorist continues to plant bombs. In the final run, the error-image precipitates a still time-image of the simulation at the moment Captain Stevens's real body dies. Unlike the deaths he undergoes in the program, which reloop Stevens back into "Source Code," the viewer watches this "real" death as a frozen frame of the coded reality, which is slowly revealed with increasing depth as the perspective floats backwards (see Figure 8, above). This directly invokes Bergson's pure perception, or the totality of matter-images stricken from duration. It is ambiguous whether this sequence ought to be taken as its own time-image, removed as it is from the sensorimotor continuity of action flowing from perception, or as a perception-image without movement. In this single-frame shot, the cinematic image stalls, it defaults

on its temporal promise of depicting real continuous movement, and delivers instead a post-cinematic fantasy of digital data made visual and given an artificial duration without concrete correspondence to physical events.

The visual presentation of a final image in death brings to bear the futural weight of mnemotechnically collaborative time onto the source code program's mechanical dwelling. Of course, this is a Hollywood blockbuster, so instead of a final image in death, Source Code ends with a cosmogony by means of memory and a kiss. The "sourced" world takes on the infinite expanses of pure memory's virtuality, redeems the Captain of his biological death by standing in as, to borrow Quintin Meillassoux's phrase, a "creative death" wherein the inside explodes onto an outside that implodes to fill it up with an active response, and thus trips the standard post-dwelling swipe of "Source Code's" memory by instantiating its own (Meillassoux 103-107). This signals the immanent virtualization of a distinct lobe of memory-world via its detachment from what used to transcend it and thereby contain it. Source Code ends with a mnemogony that conveys not two sheets of past in an interstice of co-presence, but an absence of interstice—for what cut could subordinate the relinkages of two entire cones within disparate Times?

When we began, the error-image erupted in response to a cinematographic time-image, while here we follow an error to its completion beyond the technocultural regime of cinema and receive yet another image of time. It is a chronophilic choreography that the error-image conducts: its anticipatory seeking cycles forward in search of its future ground, but it only uncovers vaster tracts of past. In this example, that past embraces the artificiality of digital post-production on both sides of the screen: the diegetic mnemogony and the non-diegetic gratuity of cameraless perception. And on either side, digital mnemotechnics and the human dwell in a field of reciprocal interiorization. Only by maintaining human memory's propensity to err—that is, recollection's actual-virtual

emergence of conscious thought—can tertiary memory expand towards some potential, beyond the merely possible. An aesthetic representation of the error-image conveys the heightened sensibility of this impasse of indeterminacy dually rooted in memory's destructive differentiation and consciousness's retentional finitude. Thought's protentions never match up with their correspondent retentions, but themselves become retentions in a cycle that diverges towards a limit, whether that be a border of the sensible or retentional finitude's demarcation of failure. Error is a techno-logic of *différance*, or a renewal that replaces, a prelude to creativity.

5. Conclusion

For many readers, this essay will have brought to mind Mark Hansen's invigorating study of human affectivity and embodiment in relationship to digital art in New Philosophy for New Media. Although a "digital image" in a strictly Bergsonian cosmology would refer to the actual computational processes of a digital machine, Hansen polemically refers to the human-computer interface as a "digital image" in order to make his point about the primary role of the human's bodily affection in any interface with the digital. His "thesis (that the digital image demarcates an embodied processing of information)" can be misinterpreted as a denial of the essential rapport between the human "body-brain achievement" and the human's originary technicity (Hansen, New Philosophy 12). I would characterize this reading as a misinterpretation, however, in part due to a retroactive fidelity inspired by his later work, which comes down much more clearly on the side of a theory of human-technical coupling that affords the unique specificity of the human's embodiment and in equal measure that of the extensive variety of technics.[6]

Nevertheless, my attention to memory does offer an alternative intervention into Deleuze's Bergsonist film theory and Stiegler's technological phenomenology. Hansen goes too far when he contends that the human's experience of a digital image is framed by the body's

capacity for auto-affection "independently of all preexistent technical frames"-regardless of however arbitrary that image may be when correlated to the matrices of numbers that exist in the CPU and randomaccess memory (266). For example, Robert Lazzarini's skulls (2001) provokes in the viewer an unsuccessful haptic reorientation in order to face modeled skulls digitally made anamorphic, which Hansen concludes is a result of the digital's being "a radically inhuman realm" (205). As we have noted, research on Capgras syndrome reveals that the recognition of human faces results from a personal history of memory concentrated in the fusiform gyrus. When confronted with Lazzarini's artwork, our memory recognizes the anamorphic skull for what it purports to be, but when it fails to fit properly with our ecologically normative criteria of a skull—i.e. the retentions conditioned through myriad perceptions and recollections—our conscious sensations of sight and affective bodily spacing help to guide our perception in an attempt to incorporate the anamorphic skull into our memory of a stereotypical human skull. Is this not a spatially based error-image in human consciousness instigated by an object's misalignment with memory's protention? Affection functions in tandem with the erring anticipation, the perceptual senses, and most crucially the technically framed image of Lazzarini's skull itself. If the experience of these anamorphic skulls testifies to the "inhuman realm" of the digital, as Hansen contends, then the adjective "inhuman" must not be understood as anti-human or incommensurable with the human. but instead as an indication of the essential mutability of the human. That is to say, Lazzarini's skulls highlight the inhuman technics of memory essential to the being of the so-called human.

By invoking Bergson's cone of pure memory against Stiegler's preoccupation with the Living Present as the equalizing measure of technicity, and by invoking Stiegler's technological phenomenology in an embodied response to Deleuze's semiology of the cinematographic image, we can consider memory as a recollection that preserves itself through simultaneous self-erasure and rewriting. At stake are both the habituation of certain

regimes of technical repetition as well as the ontological condition for novelty. Rather than utilize this concept either to define the human as its media, or mutually exclude the two on account of some intuited humanist vitalism, the human body's coextensive technics and physiology can be investigated as intrinsic to connectivity with technical objects as well as to their mutual differentiation. Thinking through the human's experience as a conglomerate of technical apparatuses both interior and exterior to the body proper, yet grounded in memory, highlights the human's unique contribution to technoculture.

The error-image contributes to a materialist philosophy insofar as its aesthetic may be applied to diverse technical situations, enabling us to think their commensurability through the category of memory as world. There appears to be a principle of learning or adaptation inherent to the error-image's escape from the already-there, and this is where it departs from both Stiegler's account of technics and an experiential framing of a time-image. What else is Source Code but a chronicle of repeatedly failing to complete the same video game level? Or to return to one of our first examples, the feedback in a musician's delay pedal depicts so many coexistent past presents in its repetition of previously repeated notes in addition to the tones added by the original delay effect. In order to proceed, memory must mute the error-image's burden of the past at the behest of the contraction of the present—that is, mute the error-image's burden of the past's virtuality and selectively reconstitute it through technics of actualization. A creative instantiation of the future necessitates an act of forgetting as the kernel of difference or change nevertheless made possible by the past's repetition. Retentional finitude takes ontological precedence over a technical programming of material facticity. For to take the consequences of Stiegler's argument beyond a technologically inflected orthodox phenomenology, as we have done here, does not solely disrupt a dichotomy between human and tool based on differing temporalities. It thins the boundary specifying technical or programmatic repetition from other material repetitions more broadly.

Although the error-image, as either an existing process or the object of aesthetic presentation, frames cosmologically constitutive categories of existence, its production requires a certain technological grasp of the data and processes involved in human sensorimotor schemata. One of the most encompassing features of post-cinema that highlights this technical control over the human by way of the insensible is the intrinsic involvement of capital.[7] That post-cinematic techniques are so affectively impactful and demand technological rigor means that such movies often feature prominently in major economic organizations of production and distribution. Quick reference to the budget, box office gross, and number of sequels to films like Michael Bay's Transformers and Oren Peli's Paranormal Activity gives credence to this intuition. As the camera's mediating work becomes less a function of the camera-asconduit and more of a post-production operation that surfaces opaquely on the screen itself, the primary mediation at work in post-cinema and bound up with the production of error-images is about as transparent as mediations come: the globally reticulated valorization of surplus-labor. We can register its effects, and we can reflect on the subordinate mediation of human life by commodification, but value in motion occurs in the interstices of these innumerable exchanges and transformations. Postcinema might then be considered as a heightened stimulation reacting to precisely this juggernaut's insensible ubiquity, and the error-image its techno-aesthetic ramification.

If a cinematographic image of pure time emerged alongside the any-space-whatever in the aftermath of World War II, then perhaps the error-image, as both an embodied response to that time-image and now an autonomous aesthetic of its own, only becomes apparent with the advent of capital's hyper-industrialization of human experience. At a superficial level, an error's recursive logic that ends in implosion mirrors the expansion of capital's real accumulation that periodically collapses in a crisis of value's failure to continue moving and aggrandizing. On a

more fundamental level, the frequently anxious, panic-stricken techno-affective tonality of the error-image taps into the contemporary saturation of life-time with work-time, commodification, and a financial ordering of the very conditions of possible experience. The camera's subsumption under post-cinematic techniques parallels the powerful transformation that such inhuman systems effect on the human's worldly experience. On one hand, theorizing the error-image highlights a number of aesthetic properties associated with post-cinema—the disunity of multiple perspectives by way of integrating perception's many technical mediations chief among them. On the other hand, we should expect that post-cinema as both a cultural production and a theoretical enterprise will present and recognize error-images in greater number and diversity. Post-cinema distills an aggregate of imperceptible technical processes, and the error-image attempts a response to this seemingly indeterminable mediation of human worldhood—within or out of the theater.

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Notes

[1] See Shane Denson's contribution to this volume, "<u>Crazy Cameras</u>, <u>Discorrelated Images</u>, and the Post-Perceptual Mediation of Post-

David Rambo

Cinematic Affect."

- [2] Despite the extensive overlap with the Derridean concept of time, I take issue with the notion that "each now is succeeded by another now in its very event" (Hägglund 72). For this derivation still invites an infinite regress of the Aristotelean negation of negation, whereas Bergson's duration elides any problems of the quasi-instantaneous by allocating the "now" to a position of factical abstraction. On the negation of negation, see Derrida. On the Bergsonian solution to this problem, see Massumi.
- [3] For more on Deleuze's elaboration of the syntheses of time, and on their relevance for theorizing post-cinema, see Patricia Pisters's contribution to this volume.
- [4] For more on this thesis, see Stiegler's *Symbolic Misery* series, published in translation by Polity. Also, for the origination of this argument in Stiegler's critique of the history of philosophy's "technical blindspot," see the Introduction, Ch.3 "The Industrialization of Memory," and the end of Ch.4 "Temporal Object and Retentional Finitude" in *Technics and Time, 2: Disorientation*, or the useful and more lucid summary of these arguments in Ch.1 "Cinematic Time" in *Technics and Time, 3: Cinematic Time and the Question of Malaise*. On the necessary, "a-transcendental" conditioning of the Kantian schematism by technical recording, for which Stiegler takes to task Adorno and Horkheimer's thesis on the culture industries, see Ch.2 "Cinematic Consciousness" and Ch.3 "*I* and *We*: The American Politics of Adoption," also in *Technics and Time, 3*.
- [5] A similar argument is made in Chapter 5 of Shane Denson's *Postnaturalism*, especially 319-32.
- [6] In addition to numerous articles, some of which attend to Bernard Stiegler's limiting treatment of tertiary retentions in terms of Husserl's "image consciousness" or the strictly human experience of its Living Present, Hansen's books *Bodies in Code: Interfaces with Digital Media* and *Feed-Forward: On the Future of Twenty-First-Century Media* provide excellent resources for further exploring the application of phenomenology and, most recently, Alfred North Whitehead's process

metaphysics, to human-technology interactions.

[7] For a Marxist intervention into media theory that addresses the insensible's dominant role in the sensible, see Brown.



3.1 Cinema Designed: Visual Effects Software and the Emergence of the Engineered Spectacle

BY LEON GUREVITCH

In 1984, after five years of funding both software and hardware development, Lucas Arts decided to find a buyer for Pixar Inc. In the process Lucas Arts approached a number of interested parties. During a protracted period of negotiations Siemens, Phillips Electronics, General Motors, and others all showed interest in a potential purchase of Pixar. In the end no corporate buyers were found and a private buyer (Steve Jobs) bought the company under the illusion that it would function as a hardware (rather than a software) company. However, the fate of these negotiations is less revealing than the type and nature of the companies that entered negotiations in the first place. Despite the fact that Pixar was ultimately to become a dominant animation company, the industrial nature of the companies interested in a takeover points to a so far understudied area of contemporary graphics production in movie culture. Despite the fact that suitors emerged from what at first appears to be a diverse range of industries, the principle underpinning their interest

was that of computer-aided design (CAD). For the automotive, medical, and electronics industries alike, Pixar's value as a computer graphics company stemmed from its capacity to align its visualization capacities with emergent technological, scientific, and industrial requirements.

In his work on what he terms technoscience's visualism—"a term which can accommodate both sciences and engineering, and both imaging and design practices" (Ihde 454)—Don Ihde describes the means by which our contemporary visual culture has moved "from Da Vinci to CAD and beyond" (as the title of Ihde's article puts it). Contemporary softwarebased visualization programs, he argues, embody a technological and economic imperative to visualize objects empirically—an imperative that emerged during the Renaissance and which "pretty much sets the style for early modern science onward" (458). Ihde is not the only observer to note similar such developments. In his work on "The Mapping of Space," Lev Manovich develops these themes (via theorists of Cartesian perspective William Ivins and Erwin Panofsky) with a specific focus on the effect of the computer and the consequences of automation. The automation of perspective, Manovich notes, completed a process initiated during the Renaissance, allowing for the simulation of dynamic, mathematically calculated, perspectival spaces. For Manovich, as for Ihde, the emergence of empirical visualization of objects and spaces has brought our computationally visualized culture in the 21st century in line with that of our scientific and engineering culture.

With this work in mind I shall, in this chapter, examine the implications of the shift toward computer-automated design in post-celluloid cinema. Specifically, I am concerned with the way in which visual effects cinema has witnessed the transition to a new form of cinema in which the tools and practices of computer-automated design are now a central feature of both Hollywood movie productions and their narratives. As we shall see, CAD is not only a now-constant feature of the VFX process, but it is also increasingly a central pivot of the myriad narratives around which

these VFX movies are constructed. From the Transformers franchise to Pixar films, from the Iron Man movies to The Avengers franchise, computer-aided and computer-automated design literally features as a central function of films that not only display but are also very much about technologies that could only be designed with the help of advanced computational processes. This shift has given rise to, and is characterized by, what I call "cinema designed." However, as is often the way with these kinds of transitions, its origins can be traced back decades, and should not be characterized as a sudden and revolutionary change (though the implications of the CAD-based movie are significant for the study of cinema). An analysis of CAD and the history of its development reveal a telling and recurrent set of interconnections between the conception of automated, computational design and a tendency amongst systems designers and software users to aim for the cinematic. Whilst many of the engineers of the first CAD forms appealed to the cinematic possibilities of their technology, contemporary software companies and visual effects (VFX) industry animators now use CAD-based systems in the fabrication of the assets that make up contemporary cinematic form. In both situations the question of whether CAD has influenced cinema or cinema has influenced CAD is somewhat moot. What is more important is tracing the emergence of this relationship in order to understand what it reveals about contemporary and future understandings of cinema. The rise of CAD programs and their centrality in cinematic production elevates the position of "design" as a practical reality, an ideological construct, and a rhetorical principle of contemporary VFX cinema. In this chapter I will consider the history of the emergence of computeraided design as a technology in its own right and as a functional corollary of cinema. Most importantly, I will argue that the move to center stage of CAD-based cinema has led to the emergence of design as a structuring principle of contemporary cinema. In this move, we have witnessed a two-way colonization in which CAD has influenced the development of visual effects-based cinema but cinema (and especially notions of "the cinematic") has equally influenced the development of CAD.

Before proceeding, however, we must consider the specific nature of CAD-based imaging and the meaning of its use, especially in relation to the notion of computer-generated imaging. At its most basic level CAD is, as the name suggests, a process of design that is aided by the computer. Initially in the development of these programs the advantage of the computer was that values set on one elevation (surface plane represented from a specific angle) of a two-dimensional representation could be automatically recalculated immediately by the computer for another, different elevation. Better still, if a designer created the input for all surfaces of an object the computer could automatically calculate the appearance of the object in 3D (both in isometric view and in perspective). CAD, then, laid down the foundations for what has since been called by animation and cinema theorists the "virtual camera" (see especially Jones).

There are many more nuances regarding the nature of CAD, but for the purposes of this chapter the most important point to note is that CAD introduced a means of visualizing virtual spaces and objects according to consistently applied calculations, and that this approach formed the basis upon which computer graphics more widely emerged. Today, CAD still underpins many aspects of VFX cinema: the wireframe graphics that form the underlying basis of many objects, or the simulated skeletal forms that function as a character's "rigging" are generally governed by the same CAD-based approaches that shaped the emergence of vector-based computer graphics in the 1950s. There are, of course, many parts of a VFX-based image that are not determined, simulated, or designed according to the principle of the "computer-aided" calculation, but the overall structure of special effects production still rests on the automated computational process.

Early Computer Graphics and the Spectacle of Engineering

In 1957, a collection of corporate engineers gathered together a working group at General Motors Research Lab (known as GMR) and, in partnership with IBM, agreed to construct a commercially viable computer-based

car design platform. IBM and GMR were not the only group working toward this goal, however. Famously, in the early 1960s Ivan Edward Sutherland created the "Sketchpad" computer program and submitted his PhD thesis (*Sketchpad: A Man-Machine Graphical Communication System*) at MIT. As Alan Blackwell and Kerry Rodden have pointed out, Sutherland's Sketchpad software had limited distribution and was only functional as an executable program at MIT itself. The impact of his research and the program that resulted from it, then, was in the idea that it engendered of the potential for computer-aided design, rather than in the spread of CAD itself. Fascinatingly, Blackwell and Rodden point out that these ideas were spread in two ways: through a widely cited conference publication and a movie of the program in use. Ironically, though fittingly for this chapter, the concept of CAD received one of its first public outings in the form of a celluloid record of the interface in action.

The reason that this was both ironic and fitting is that by the 1950s, whilst the cinematic apparatus was still firmly rooted in the technologies of celluloid (as it was to be for decades to come), engineers and computer scientists working at MIT and IBM began the process of automating the production processes of industrial imaging in a digital form that sat uncomfortably between both celluloid and television and which, more importantly, was to ultimately result in the decoupling of cinema's technological basis in celluloid. For while the cathode ray tube was the obvious means by which real-time data could be visualized, it was not suitable for visual storage or large-scale exhibition in a context in which celluloid was still the preeminent technology for both these tasks. So, for instance, when IBM released its 701 computer they also produced a peripheral with which data could be represented. The 740 cathode ray tube output recorder marked an interesting early example of negotiation between cinematic and televisual hardware technologies—a negotiation that was to continue for another 50 years. The system had both a 21-inch display and a 7-inch display and an interesting relationship with film technology to capture cathode ray output. As the IBM archives explain,

Formally announced on October 12, 1954, the 740 CRT output recorder was an electronic device attached to the IBM 701 Data Processing System. It provided output which recorded data points on the faces of a pair of television-like tubes at the rate of 8,000 per second. The larger tube, used for visual display and inspection, was a 21-inch tube. The smaller tube, used in conjunction with a camera, was a 7-inch tube. A customerfurnished camera was controlled by the 701 and automatically photographed information directed by the program. ("IBM 740")

Fred N. Krull, one of the original engineers to work on the IBM GM project has described in detail the large, multimillion-dollar research and development project that he was involved in. Though he does not identify directly by model number, Krull is likely referring to the 740 CRT output recorder when he explains that

During this period IBM marketed a film recorder for the IBM 704 computer that could be used to record "point plots" on 8-mm film. This facility provided engineers with their first opportunity to view computer generated graphs and computer animated movies. Computer generated traffic simulations were recorded on film using this equipment. For demonstration purposes, IBM also provided a display unit that operated as a slave to the film recorder so that the plotting could be seen by the machine operator. The film recorder and display unit became the basis for the initial GMR experiments in interactive computer graphics. (41)

Negotiations between IBM and GMR (General Motors Research) eventually led to the development of the DAC-1 (Design Augmented Computer) system (see Figure 1) and in June 1960, IBM proposed to GM that they design and build a "Graphic Expression Machine" based upon

the IBM 7094.

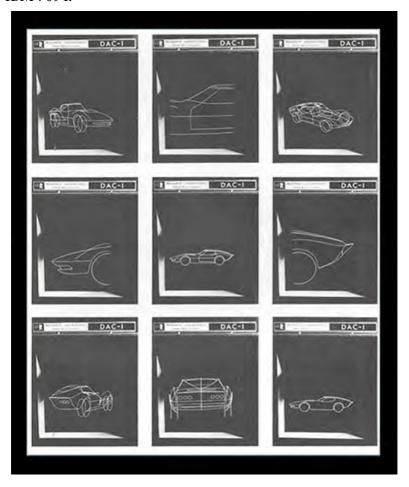


Figure 1 – IBM and GMR Labs DAC-1 CAD Program

As Krull explains, IBM proposed to design and construct a number of hardware components, three of which in particular were a display unit, a photo-recorder-projector, and a photo scanner (44). These output devices were ultimately marketed by IBM as the 2250 display device, the 2280 film

recorder, and the 2281 film scanner. What we see in both IBM's archival description of their CAD R&D project and the hardware that came from it, and from Krull's corroborating descriptions, then, is an amalgam of both televisual and celluloid technologies deployed in the process of extracting CAD images from early computer hardware and software.

Beyond image storage and exhibition, however, the CAD-based image also negotiated another path between televisual and cinematic forms that was as cultural in dimension as it was technological. As Manovich has argued, the computer automation of mathematically described space in imaging began to complete a process initiated with the emergence of perspectival rendering during the Renaissance; in other words, long before celluloid or televisual technologies and industries. With the emergence of automated computer perspective came image forms that were both technical and mathematical at the same time they were spectacular. As Da Vinci's notebooks attest, visualizations of vast and innovative engineering projects acting as fascinating and astonishing spectacle have existed for many hundreds of years. What the computational automation of engineering-based visualization did for the relationship was, however, new in terms of scale and circumstance.

To return to Don Ihde's assertion that Da Vinci's notebooks function within a history of European visual culture and demonstrate the rise of "technoscience's visualism": one of Ihde's central claims is that the spectacles of science and engineering were not simply functional but also ideological. For Ihde, the genre of isometric exploded visualizations exemplified in Da Vinci's drawings sought to lay out a way of seeing the world and an ideology of empirical design and engineering that communicated scientific and industrial prowess as much as they operated functionally. This form of "technoscientific visualism" was not restricted to drawings, however, as it also found impetus in the machine and industry exhibits that emerged across Europe and America, culminating in the great exhibitions of the 1850s onward. In both Da Vinci's drawings

and the machine exhibits several centuries later, the relationship between the spectacular technical plan and the spectacular technical object that resulted was mediated by the industrial processes required to turn an inert plan into a three-dimensional and fully operational moving spectacle governed by the physics of the world. In the 20th century, however, the CAD-based image collapsed the boundaries between the spectacular industrial plan and the object that results from it, and the nature of the way this change has been effected reveals much about its existence as a cinematic, as well as industrial, form of imagining.

CAD-Based Cinema and Cinema-Based CAD

Perhaps one of the more revealing aspects of the emergence of both CAD and early CGI simulation in the middle of the 20th century was the commitment that many computer systems engineers had to the technological specificity of celluloid and, by extension, the wider cultural and economic value of cinema. Around a decade after GM and MIT produced their pioneering work in CAD-based systems, two software scientists, Robert Goldstein and Roger Nagel, published a research paper outlining an (at that point, in 1971) advanced process whereby industrial objects were not only described according to mathematical vectors, but were also to be rendered according to the mathematical simulation of light. This early description of the ray tracing process in which light rays are simulated (originally, it was nuclear radiation rays in the military-funded research that precipitated this description) is fascinating when seen in the context of cinematic and post-cinematic media:

The simulation approach treats an object as a set of three-dimensional surfaces that reflect light, and it is this *reflected light impinging on photographic film* . . . that forms an image of an object. The result is, therefore, a fully toned picture, *closely resembling a photograph of the real object*. It is this added degree of realism that makes the simulation approach attractive for many applications. (Goldstein and Nagel 25, emphasis added)

Interestingly, Goldstein and Nagel chose the photographic process and the physical, indexical, and chemical specificities of film as their reference point with which to explain ray-traced light simulation. Of course this is understandable given that they could not at that point know the technological developments that were to come for the exhibition of large-scale and high-definition imaging. At that point, both high-quality and large-scale imaging was inextricably bound up in celluloid-based photographic and cinematic technologies. [1] However, Goldstein and Nagel's bid to have the value of ray tracing recognized was not solely based upon its potential to operate in the technological arena of the celluloid-based image; the authors explained toward the end of their paper that:

The area where visual simulation will find its greatest application is in the field of computer generated motion pictures, or, as it is more commonly called, computer animation. Although the term animation has traditionally been synonymous with simple hand-drawn cartoons, we are concerned here with the more realistic, fully shaded pictures obtainable with visual simulation techniques. (28)

There are many telling points in this statement worth consideration. Firstly, we might ask why Goldstein and Nagel would identify computer-generated (CG) visualization's "greatest application" as that of the motion picture industry? After all, they must surely have been cognizant of its potential also to transform industries as diverse as architecture, industrial design, engineering, construction, and manufacture, to name just a few. This first point aside, however, what is also telling about their claim is the pains that they go to clearly articulate the distinction between potentially photorealistic computer-generated simulation and more traditional animation (far less culturally valued and therefore not the market the authors wanted to suggest their research might affect).

Despite the fact that the first feature-length CG movie was in fact an animated one (*Toy Story*, 1995) rather than the more photorealistic

film form they may have been imagining when they carefully qualified the use of the term "computer animation" and rejected the notion of the "cartoon," Goldstein and Nagel's prediction turned out to be accurate. To be sure, industrial design, game design, architectural design, engineering, construction, and manufacture have been no less transformed by computer-aided design and computer-generated imaging than the movie industry. Nevertheless, their paper, like the accounts of CAD research and development before it, suggests that celluloid in general and cinema specifically held a cultural value for the software engineers envisaging potential futures for their applications. Goldstein and Nagel did not simply utilize celluloid as a handy reference point with which to explain the mechanism that allowed computer simulation to render "light"; they utilized celluloid because of the cultural value that both the technology and the industry could provide to a whole new media of image rendering.

Ironically, these image forms—including Goldstein and Nagel's own spinoff firm MAGI—got their first breaks in television rather than cinema. In an early history reminiscent of cinema's own emergence as both a promotional attraction (see Gurevitch, "The Cinemas of Transactions") and a disposable form considered culturally insignificant at the time, early computergenerated designs were employed as a spectacle valuable to the attention economy of television advertising. These advertisements all followed a familiar pattern, first conjuring the wire frame vector graphics of industrial objects underlying computer-aided design, before subsequently wrapping these designs in primitive ray-traced skins. Unsurprisingly, the subjects of these advertisements tended to be the industries that contributed to the development and utilization of the CAD software in the first place: automobiles, airplanes, home appliances, and any number of architectural and industrial manufactures. Just as Westinghouse Works had utilized cinema at the turn of the 20th century to advertise the spectacle of their production lines, so Braun, Phillips, Nissan, Siemens, and Ford, among others, used CAD and the cathode ray tube in the run up to the 21st century to advertise their virtual production processes as industrial spectacle.

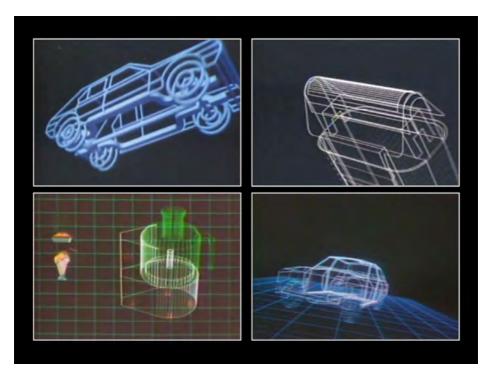


Figure 2 – From CAD of industrial objects to CAD of industrial advertising

With the rise of high-concept cinema (see Wyatt) in the 1980s, it was not long after these advertisements arrived on broadcast television that Hollywood made its first large-scale attempt to incorporate such imaging into a feature-length movie: *Tron* (1982). My point in all of this is not to draw a dichotomy between televisual and cinematic imaging industries and technologies—in fact, quite the opposite. By the time Disney made *Tron*, the companies that they contracted to do the work were hired precisely because they were already leading the production of such image forms in television. [2] This tells us much about the relationship between cinema and television during the emergence of CAD-based visual effects; namely, that the two production industries and exhibition technologies interacted significantly over the cultivation of early CAD-based VFX.

More precisely, what this somewhat convoluted history of negotiation between television and cinema suggests for our understanding of CAD-based VFX is that despite computer generated imaging's logical affinity with the continual real-time update technology of the cathode ray tube, the cultural value of the "cinematic" was a central force in the emergence and development of the form (see Mulvey, "Passing"). Initially, software designers and engineers working with computer imaging strove hard to overcome the limitations of cathode ray-based exhibition systems so that the results of their research could function in a cinematic context—because the cinematic equated to widespread cultural legitimacy in a way that its industrial use (be it in product production or in televisual promotion) did not. Ironically, in the long term the technologies and institutions of computer imaging that recruited the cultural and economic power of cinema were also to be some of the very things that helped to transform cinema into a digital form and move its industrial base away from celluloid.

Today, despite the transition of cinematic technology to a digital screen that more closely resembles televisual technologies, we still see the legacy of the cultural value of the "cinematic" in CAD-based VFX. As scholars have argued for a long time now, Hollywood cinema as an industrial entity has rarely represented a major proportion of the US economy when compared to other sectors such as oil, manufacturing, or IT, and yet Hollywood's role at the apex of the audio-visual food chain has long provided it with credence far greater than its immediately quantifiable economic footprint (see Wasko, *Hollywood*). With this in mind, though CAD-based software may have started out as a means by which any number of industrial production processes (automotive, aerospace, health, engineering, architecture) were automated and revolutionized, it was in cinema that computer-aided design was able to break out of its niche in industrial production and make its way into the mass consumption of the public domain.

There is a danger here, however, that we draw a false distinction between other forms of industrial CAD in terms of "production" and cinematic forms of CAD in terms of mass "consumption." This would be a mistake, for cinematic production itself was no less revolutionized by CAD than every other industry. Ironically, given Nagel and Goldstein's earlier protestations that cinematic VFX must be distinguished from the computer-aided design of (cartoon-style) animation, perhaps the first instance in which the transformational nature of CAD-based rendering software became abundantly clear was in the meteoric rise of Pixar animation. In an already familiar industrial trajectory, Pixar, like many of its contemporaries, began its life as a company involved very broadly in the process of industrial visualization. As I briefly mentioned at the beginning of this chapter, private industrial buyers far beyond the movie industry were mooted for Pixar a number of times during its pre-cinema period (for more details, see Price). Apparently, following a number of failed bids involving Siemens, Phillips Electronics, and General Motors, Pixar (then owned by Steve Jobs) made modest sums of money (though by no means enough to cover its costs) as a producer of television advertisements. Like its predecessors, then, Pixar's early life was intimately bound up in the promotional value of its capacity to visualize modern industrial products. Indeed, the company's choice of iconic brand mascot, The Luxo Jr. Architectural/Designers desk lamp (Figure 3), could not be more of a quintessential signifier of the industrially designed object (for more on this, see Gurevitch, "Computer"). Naturally, this tendency toward CAD as a structuring principle underpinned Pixar's first feature, Toy Story—a movie in which everything from the packaging of the Buzz Lightyear action figure on up was industrially product-designed (Figure 3).

"Design, Engineering, and Entertainment Software"

Not only did CAD revolutionize cinematic *production* processes but it has revolutionized, and still is revolutionizing, the relationship between cinematic spaces, objects, and the structures of 21st-century industrial production and consumption. More specifically, we are now not only reaching a point at which cinema *is literally designed* but also a point at which the potential for this design process to be ever more automated and

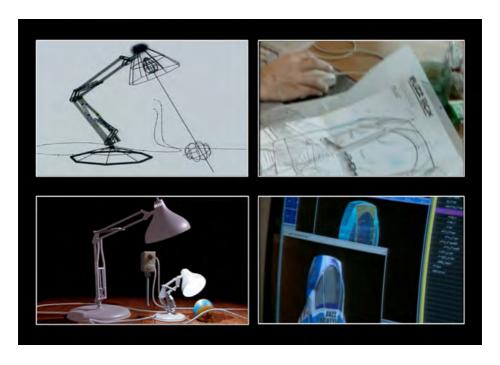


Figure 3 – The Industrial wireframe design of Luxo Jr. (left), and Buzz Lightyear Packaging (right)

democratized is apparent. Of course, for all the heady talk of "revolutions," the production and distribution monopolies across Hollywood's global cinema industry will not melt away even with a democratization of cinematically designed VFX. Whatever can be achieved in a bedroom by one person can and will always be achieved in exponentially greater quantities by an industry that has spent a century consolidating its position as a mechanism to turn capital into image (see Debord; Beller). Nevertheless, the direction of travel in this new environment of "cinema designed" holds fascinating questions for the cinema scholar, and here again we can return to Pixar's emergence as a feature filmmaker for instructive examples.

Currently, the Disney Corporation (which eventually bought Pixar, long after Siemens et al. had rejected it a decade earlier) is developing 3D-printed toys in its research and development labs. This is a logical development of Disney's well-studied corporate strategy of several decades now (see Smoodin; Giroux; Wasko, Understanding; Pallant), but what it demonstrates is the potential for cinema designed. Where the music, television, and film industries have "dematerialized" their content through the delivery system of the Internet, the same cannot be said of their vast merchandising empires. It does not, however, take a great leap of imagination to envisage a future in which a 3D printer in every home equates to a Disney Store in every home. Of course, at present 3D printers are both much hyped and much undeveloped as a technology. It is entirely possible that current 3D-printing technology sits at an equivalent level of development to VR headset technologies of the 1980s: utterly enthralling for its possibilities and utterly incapable of delivering such possibilities in its present form. Nevertheless, the possibility that CAD-based characters (think Buzz from Toy Story) could be selected by children watching a movie on a mobile touch screen for print-out as a toy (at an additional and no doubt much-anticipated cost) is consistent with the research emerging not only from Disney but also corporations such as Lego who are pioneering the capacity to seamlessly translate virtual and physical objects between one space and another (see Milne; Gardner). In light of this, Toy Story's narrative of an insecure wooden Woody character, feeling threatened by the plastic fantastic Buzz Lightyear, was remarkably prescient. Not only did this storyline stand as a metaphor for the changing of the guard between cel-based animation and CAD-based animation (Gurevitch, "Computer"), it also spoke (if somewhat unintentionally) of a future in which the "toyetic applications" of this CAD-based animation could be made physical again at the touch of a screen and the initiation of a 3D printer. All that was really missing from the Toy Story narratives which are even replete with self-conscious references to the transformed digital screen (Gurevitch, "Computer"; Gurevitch, "From Edison")—were the 3D printers themselves. Watch this space.

This, then, marks an entirely new relationship between the screen and the wider domain of industrial objects, spaces, and production and consumption cultures of the 21st-century digital screen. In his work on contemporary culture, Andrew Wernick describes a condition of "promotional culture" spawned during the industrial revolution, defined by endless circularity of both the industrial object and the promotional practices by which its consumption is encouraged. For Wernick, this historical (and now contemporary) condition has "no unique startingpoint nor any unique terminus in a specific commodity offered for sale." Rather, Wernick contends, the "intertext of promotion is an indeterminate circle which may be entered anywhere" (94). For Wernick the inception of this unique condition can be located in the design and production of Wedgwood ceramics, dating back to the latter half of the 1700s. Wedgwood's genius, Wernick argues, was that he not only developed a means of mass producing classical ceramics but that he harnessed a whole system of integrated promotional networks with which to sell these new industrial products. Wernick is at pains to argue that this production/consumption nexus may have a definable initiation point with the Wedgwood ceramics of the 1780s, but notably did not reach its apotheosis until the 20th and 21st centuries. In this sense, Wernick's thesis could be—and indeed has been—applied to previous iterations of cinema. Justin Wyatt's articulation of a "high-concept" cinema, in which promotional process and final product are intimately interwoven so that they create a "product differentiated through an emphasis on style in production and through the integration of the film with its marketing" (20), constitutes a cinematic take on Wernick's broader thesis. For the remainder of this chapter, however, I suggest that what we see now with the rise of CAD-based cinema is an order of magnitude more integrated with the operative processes of contemporary industrial production, design, and promotion than in the past.

To flip on its head my earlier point that notions of the "cinematic" had a profound effect upon the development of CAD, then, we might also ask:

what is now the lasting legacy of CAD upon the cinematic? This is where we truly begin to see the rise of "cinema designed": the move to center stage of design as simultaneously a concept, a structuring principle, and even a rhetoric of the contemporary (post-)cinematic image. The rhetoric of cinema designed is a unifying narrative of the cinematic image's production, exhibition, and consumption alike, while at the same time this rhetoric is moving beyond cinema and manifesting itself in games culture, advertising, and contemporary audio-visual culture more generally. In all of these media forms and more, there is frequently an explicit acknowledgement of the structuring principle of cinematic design.

To focus, for the sake of brevity, upon mainstream cinematic production, in the contemporary industrial context the vast majority of visual effects software is underpinned by the same principles of CAD that underlie a multitude of 3D industrial visualization packages; so much so that many of the CAD-based VFX companies often fail to make a distinction between the types of industries that will utilize their software or the types of uses to which their packages will be put. To take one of the leading VFX industry software production packages, Maya, as an example, the platform is owned and distributed by Autodesk, the company that also owns and distributes the leading CAD packages of the automotive, engineering, design, and construction industries. The briefest of Internet searches on Autodesk will return a banner that indiscriminately advertises its industrial reach as encompassing "3D Design, Engineering & Entertainment Software" (Figure 4).

Here, then, we have a practical example of the way in which, for Autodesk, cinema becomes simply one industry among many whose production practices have been rationalized under the requirement to call upon the computer-aided design software that it creates and retails. After cinema helped define the emergence of CAD in the late 20th century, it is perhaps only logical that the next step would be to see CAD returning the favor.

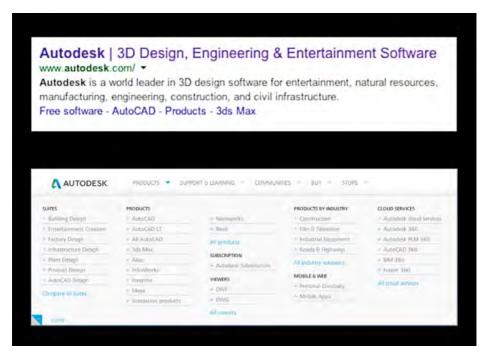


Figure 4 – Autodesk, 3D Design, Engineering & Entertainment

The degree to which computer-aided design is now shaping contemporary mainstream Hollywood cinema is apparent, not only in paradigmatic moments of transformation such as Pixar's entry into, and rise to dominance of, the animation industry, but also in more seemingly mundane cinematic fare. While his films receive little critical attention amongst film scholars, Michael Bay's *Transformers* franchise has changed the nature of the VFX blockbuster through its extreme adoption of both CAD-based cinema and the rhetorical acknowledgement of the designed image. Having grossed 1.3 billion dollars over seven years, the *Transformers* franchise currently stands as one of the most economically lucrative franchises in Hollywood's history. Certainly (though this is the complaint of every film critic), its success is not based upon the artful

construction of complex and thought-provoking narratives. Rather, in the Transformers franchise we see an extreme example of cinema designed in which narrative revolves, in every instance, around the spectacle of cinematic design. Robots, cars, fighter jets, trucks, cell phones, stereos, and just about any other modern industrial object to be thought of writhes and metamorphoses on screen. In her essay "Visual Pleasure and Narrative Cinema," Laura Mulvey describes a film audience constantly presented with moments of show-stopping, narrative-halting spectacle based around the female body. In Bay's Transformers movies a very different audience is presented with a similar dynamic, but the object of erotic desire in this new attention economy is not only the woman's body (though that does feature too) but also the non-human objects of industrial capitalism. The high-definition renderings of car bodies are represented in all their industrially refined and perfectly packaged beauty, at the same time as their transformation into otherworldly robots allows for something more to feature in their spectacle.

In the Transformers franchise, the act of transformation itself is an act of revealing to the audience the prowess of contemporary cinema's capacity to utilize, master, and redeploy the language of contemporary industrial production.[3] Of course, the relationship between cinema and industrial production is not at all new and can be traced back to the inception of cinema itself. Indeed, a quick scan of the archives of 20th-century cinema reveals a long and close relationship between cinema and automobile production. It has hardly been lost on scholars of film that both cinema and the automobile went together as interrelated cultural and industrial forms at the beginning of the 20th century (see Singer; Arthurs and Grant). The current moment, however, is quantitatively and qualitatively different in the sense that the operative processes by which the automobile and film industries brought their products into being were never before so intimately interrelated. Admittedly, early 20th-century Hollywood quickly rationalized its production practices in accordance with the Fordist modes of production that spread across all industries at that time, but the tools and techniques

with which cars were made were never the same as those by which films were made. In the contemporary context in which the automotive industry literally funded and developed the CAD-based software systems that were then adopted by cinema, this is no longer the case.

Conclusion: Cinema Designed

In this light we can see that it is no accident that *Transformers* has become one of the most successful franchises of all time to date. General Motors Research Labs' development of the first industrial CAD software and IBM's early development of traffic simulation and its inscription on film technology suggest a certain inevitability of future redeployment. As Manovich has argued, the development of forms of computer graphics is frequently the result of R&D investment made by various military and/or industrial (including cinematic) actors (*Language* 175). It stands to reason, then, that cinema, the quintessentially modernist kinetic technology, would enter its 21st-century computational renovation hand-in-hand with the auto industry. It also stands to reason that this relationship would be grounded in a context in which contemporary Hollywood cinema functions first and foremost as a fundamentally promotional form (see Gurevitch, "Cinemas"). In his analysis of the car and its promotional culture, Andrew Wernick argues that:

The production of cars as signs is a special case of the way in which, since the industrial revolution of the late eighteenth century, all mass-produced consumer goods have come to intersect with the world of meaning. That is: their visual appearance is designed to be continuous with the advertising through which they are mass marketed. But, as a self-promoting commodity-sign, the modern automobile has two additional distinctive features. . . . First, besides their function as transport, cars have always had a promotional role for users themselves. . . . Secondly, unlike such products as pottery, furniture, and clothes which were previously hand-made, the automobile was a new invention. It never existed outside the framework of industrialized mass production. (71)

And here, succinctly articulated, we have the heart of the relationship between the *Transformers* franchise and cinema designed. To paraphrase Wernick, we might say that, unlike such products as cinema props, film sets, and costumes which were previously physically constructed and hand-made, cinema designed (of which the virtual automobile is symptomatic) is a new invention. It never existed outside the framework of industrialized mass production. In other words, just as cars never existed outside the framework of industrialized mass production, the cinema, which emerged at the same time, found itself in a similar situation. But what is so telling about the *Transformers* franchise as the quintessential example of cinema designed is the way in which the automobile forms contained within these movies have never existed at all in physical reality. The endless parade of new robotic cars that pass across, through, around, and over the screen do not occupy a physical, industrially manufactured space, nor will they ever. Rather, the product really advertised here is industrial convergence: the capacity to imagine, design, and showcase industrial fabrication and transformation in action. The objects themselves are secondary to the capacity to photo-realistically simulate them: their existence (onscreen only) stands testament to cinema designed and its continued intimate relationship with the auto industry.

We should note, however, that it is not only the cinema screen itself on which the drama of cinema designed is performed. Crucial to the Hollywood blockbuster today (and for some time now) are the constant cycle of post-release "making of" videos in which the rhetoric of the designed cinema image is rehearsed over and over. This can be found across all of the Hollywood majors output, and Industrial Light and Magic (ILM) with its very own YouTube channel is no different. Here, the design of the image at every level is picked apart, analyzed, and treated as a centrally promotional subject in its own right. Videos circulate that reveal the many hundreds of "passes" performed on a scene as it moves through the VFX production pipeline from initial pre-visualization to wireframe construction to particle effects simulation, lighting, and

finalcomposite (not to mention all the many other stages in between). In these videos the ideology of the designed cinematic image is reinforced repeatedly. These videos are explicit in demonstrating to the spectator that the objects on screen are calculated, simulated, and constructed like any other product-designed object. Here, in the same way as a new Apple product is obsessively fetishized in each new advertisement eroticizing each layer of the industrial object, VFX "making of" videos likewise strip down and rebuild the layers of the special effects movie for spectators to witness the depth and detail of design work invested in each cinematic image (Figure 5).

To return, finally, to where we started, contemporary visual effects movies not only utilize technoscience's visualism in the construction of the many spaces and objects that make up the fabric of these films, they also proudly display such visualism as a badge of honor that encapsulates this new cinema and its industrial promotional foundations: this is cinema designed.

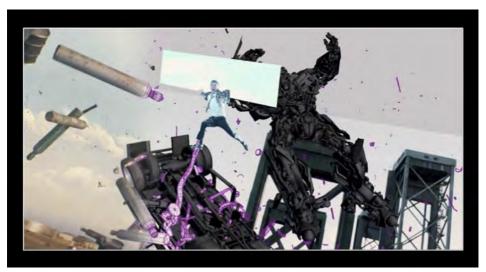


Figure 5 – Cinema Designed. CAD as a rhetorical and ideological principle of VFX Cinema

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Notes

- [1] Ironically however, the development of computational imaging eventually led to the industrial decline of celluloid.
- [2] Chiefly these companies were MAGI, Able and Associates, Information International, and Digital Effects.
- [3] See also Denson, who emphasizes the self-reflexively demonstrative nature of these transformations in a somewhat different context.



3.2 Bullet Time and the Mediation of Post-Cinematic Temporality

BY ANDREAS SUDMANN

I've watched you, Neo. You do not use a computer like a tool.

You use it like it was part of yourself.

—Morpheus in The Matrix

Digital computers, these universal machines, are everywhere; virtually ubiquitous, they surround us, and they do so all the time. They are even inside our bodies. They have become so familiar and so deeply connected to us that we no longer seem to be aware of their presence (apart from moments of interruption, dysfunction—or, in short, *events*). Without a doubt, computers have become crucial *actants* in determining our situation. But even when we pay conscious attention to them, we necessarily overlook the procedural (and temporal) operations most central to computation, as these take place at speeds we cannot cognitively capture.

How, then, can we describe the affective and temporal experience of digital media, whose algorithmic processes elude conscious thought and yet form the (im)material conditions of much of our life today? In order to address this question, this chapter examines several examples of digital media works (films, games) that can serve as central mediators of the shift

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to a properly post-cinematic regime, focusing particularly on the aesthetic dimensions of the popular and transmedial "bullet time" effect. Looking primarily at the first *Matrix* film (1999), as well as digital games like the *Max Payne* series (2001; 2003; 2012), I seek to explore how the use of bullet time serves to highlight the medial transformation of temporality and affect that takes place with the advent of the digital—how it establishes an alternative configuration of perception and agency, perhaps unprecedented in the cinematic age that was dominated by what Deleuze has called the "movement-image."[1]

1. (Post-)Cinematic Bullet Time

As an aesthetic technique or special effect that allows us to witness an impossibly fast-moving (virtual) camera revolving around human actors and nonhuman objects (such as a bullet) as they move in extreme slow-motion (or as they are frozen in the form of still images whose perspective can be manipulated), bullet time gained notoriety through its use in the first installment of the Wachowskis' popular *Matrix* film trilogy.

On the basis of its spectacular and innovative appearance, the effect itself was replicated and disseminated across a variety of media—including the videogame tie-ins and transmedial universe of *The Matrix*, as well as diegetically unrelated games and game series like *Max Payne*, among others.[2] Yet, despite the cultural hype about its novelty at the time[3], *The Matrix*'s use of bullet time was not without conceptual and technical antecedents, in terms both of media-technical procedures that anticipated the effect's contemporary execution and media-aesthetic forms that laid the groundwork for its reception. The effect draws upon a scattered history of similar or related aesthetic effects and techniques, from the chronophotography of Eadweard Muybridge and Étienne-Jules Marey to Paul Debevec's short film *The Campanile Movie* (1997), which visual effects designer John Gaeta himself cited as a central reference for the conception of bullet time in *The Matrix* (qtd. in Silberman 3). Moreover, bullet time in *The Matrix* also recalls the aesthetics of slow-motion violence, "the ballet of

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the bullet," in works ranging from Peckinpah's *The Wild Bunch* (1969) to the films of John Woo (e.g. *A Better Tomorrow* [1986] or *Hard Boiled* [1992]).

Despite these many forerunners, however, the film used the effect to underscore a phenomenon that seemed to be genuinely new, and that a number of popular movies (e.g. *Terminator 2: Judgment Day* [1991], *Jurassic Park* [1993], *Forrest Gump* [1994]) had been gesturing towards for several years: namely, that by virtue of digital technologies, cinema had finally arrived at a point in its history where virtually anything imaginable could be depicted in a photorealistic way (see Sudmann). Thus, it was no longer possible to optically distinguish computer-generated (or digitally processed) images from traditional filmic images. According to Lev Manovich, the process of generating photorealistic scenes entirely on a computer, where each frame can be modified individually by the use of 3D software tools, not only marks a fundamental break with cinema's indexical quality, but can also be considered a return to "pre-cinematic practices of the nineteenth century, when images were hand-painted and hand-animated" (295).

The use of bullet time in *The Matrix* illustrates and accentuates the fact that cinema in the digital age is no longer an indexical media technology. Particularly, bullet time draws attention to itself not despite, but paradoxically *because of* the aforementioned optical indistinguishability, as a *digital effect* (even if the effect is not *exclusively* produced by digital technology). If we are no longer able to distinguish digital from traditional images, this could also mean that we may simply overlook those images that are digitally produced. In the case of *The Matrix*, however, an audience interested in the media-technological conditions of film aesthetics realizes that the concrete and technically sophisticated form of bullet-time images is only possible by means of digital technology. Indeed, the audience expressed a strong interest in understanding the exact technical background of the effect; in some cases, this interest even gave rise to attempts to reproduce the effect, albeit with more modest means. [4]

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Whereas the narrative techniques or visual spectacles of popular media in the 20th century always evoked an interest in their (partly hidden) operationality, i.e. an interest in how they worked and were produced, in the case of bullet time we are confronted with an effect of a new sort: one in which the operational dimension of its visual spectacle is, from the very start, identifiable as the specific operationality of the digital.

As a result, the bullet time effect was more than simply a powerful demonstration of what could be achieved by means of computer-generated imagery in cinema. It was a form that corresponded seamlessly to the movie's thematic and philosophical focus: the post-apocalyptic vision of the world as a digital illusion. The world in question is the world that gives the movie its title, the Matrix, a computer simulation built by A.I. machines to keep enslaved humans under control and to make them believe they are still living on earth in the year 1999. The other world is the "the desert of the real," as the character Morpheus calls it: outside the simulation of the Matrix, it is what remains of the planet long after humans lost their war, sometime in the 21st century, against the intelligent machines they created.

The Matrix is also one of the first blockbuster movies following the advent of the digital to explicitly address the question of how it *feels* to live in a digital world. When Neo meets Morpheus for the first time, the latter says to him: "It's that feeling you have had all your life. — That feeling that something was wrong with the world. — You don't know what it is but it's there, like a splinter in your mind, driving you mad, driving you to me." It is, accordingly, nothing more than a "feeling" that motivates Neo to follow the white rabbit in the first place, to take the red pill instead of the blue one in order to "to stay in Wonderland," following further the path that began with his first questioning of the world in which he lived. Obviously, *The Matrix* draws on anxieties that are deeply entangled with (historical) discourses of cyberspace and artificial intelligence from the very beginning and that seem to accompany almost every "Promethean

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step" (Hansen 174): anxieties about the self-inflicted loss of natural life and the creation of a technology that is no longer controllable, that takes on a life of its own and turns against humankind. And yet, even though these discourses are deserving of criticism, especially with regard to their redundancy and omnipresence, it is also important, as Mark Hansen has pointed out, not to trivialize them or simply regard them as misguided, but to take those anxieties seriously as a "constitutive dimension of the human experience of cultural change" (174).

However, *The Matrix* does not invite us to occupy the position that Neo comes to take up in the desert of the real—a position from which the problematic inauthenticity of the digital world becomes tangible to him. Rather, *both* worlds depicted in the film evoke a kind of strangeness, as if one were looking at them from an external or even meta-perspective. Responsible, to a large extent, for this specific gaze is the film's peculiar placelessness and timelessness, which underscores its overall postmodern, but also post-cinematic form (see Shaviro). Actions, characters, and things seem to exist outside a substantial temporal-spatial and systemic logic of situatedness, especially in the first third of the film. Here, *The Matrix* quickly jumps from one scene to the next, without specifying the spatial connections among different locations. It seems as though the movie wants to confuse viewers, to make them unable to determine whether certain plot events are real or just a dream. More than once, we see Neo waking up confused in his bed.

It is not until Neo finally joins the rebels on board the Nebuchadnezzar that the narrative really starts to provide temporal and spatial orientation. From this moment on, the movie invests more effort in explaining what the Matrix is, how it came into being, and so on. Accordingly, it is henceforth always transparent when exactly the rebels are inside the Matrix and when they are not (given that there is also a training program similar to the Matrix—a point to which I return below). Furthermore, plot time progresses linearly; there are no flashbacks or flashforwards.

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Most importantly in our context is the fact that the bullet time effect is narratively motivated. The film shows us in great detail how Neo acquires the superpowers that allow him to manipulate time and space. Thus, in terms of spatiality and temporality, *The Matrix* does not totally suspend the basic principles of classical Hollywood cinema such as linearity, transparency, or causality (Bordwell, Thompson, and Staiger).

And yet, despite all these efforts at narrative transparency, we are witnessing the unfolding of a story world whose diegetic elements seem to be unrelated, transposable, and unstable in an almost oppressive way. Where exactly is the place called Zion? We hear about it, but it is not (yet) shown to us. Nor do we learn, for instance, why the rebels choose a particular location as an entry point into the Matrix. For the most part, distances and geographical relations do not play any particular role. The world inside the Matrix is first and foremost an interchangeable setting. The same applies to the world outside the simulation program. It is a dark and uninhabitable space, hostile to life, without meaningful locations (see Figure 1). And all this makes perfect sense: there is simply no room for spatial integrity, neither in the desert of the real nor inside the simulation program called the Matrix.

Thus, just as *The Matrix* invests in the performance of a world where everything can be simulated, the film suspends—or sublates, in the sense of a Hegelian *Aufhebung*—the logic of narrative coherence and representational integrity so characteristic of classical Hollywood cinema—and this suspension affects the narrative world as a whole. This is especially obvious in the famous sequence where Morpheus shows Neo the virtual workspace that operates similar to the Matrix itself: "This . . . is the Construct. It's our loading program. We can load anything, from clothing . . . to equipment . . . weapons . . . training simulations . . . anything we need." And because seeing is believing, the function of the "Construct" is also visually demonstrated: at one moment Neo is standing next to Morpheus inside the empty white space of the Construct (see Figure 2), and at the very next moment he finds himself (together with Morpheus) in the desert of the real.



Figure 1 – THE MATRIX: "The desert of the real"

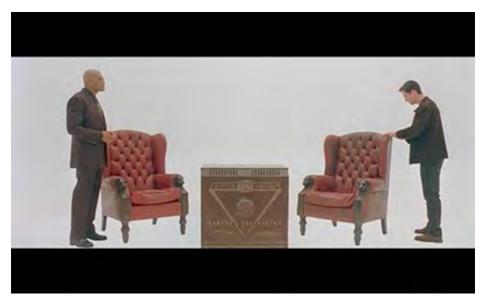


Figure 2 – "The Construct"

Given that Neo and the other rebels are able to create any environment or identity they want (without substantially changing the Matrix itself), there is no stable connection between characters and place. This fits perfectly into the narrative of flexible and open identities, always present (if not dominant) in the discourses on cyberspace, especially with regard to popular media culture. Just recall how often the Internet is (still) imagined as a virtual space, where people can adopt any identity they want.

But what is crucial here is that *The Matrix* is a movie whose narration serves to help us perceive what exists outside the logic of narrative order[5], i.e. the *relative autonomy* and *modular functionality* of aesthetic forms—like bullet time. What *The Matrix* exposes by way of this modular functionality is nothing less than one of the key features of our contemporary digital culture—that is, the "logic of the database," as Manovich has called it, "from which time and again, new selections are made, new narratives can be constructed, in endless series" (Pisters 109). Of course, neither database logic nor modular functionality is an exclusive characteristic of our recent digital culture. Yet in our contemporary age the logic of the database seems to have become the dominant form that permeates all levels of culture, from its production to its different channels of distribution to the very level of consumption.

Bullet time is therefore not simply an innovative or spectacular effect but one that exposes itself as a paradigmatic form of a digital, post-cinematic media regime, a regime that also changes the very conditions of how we engage with those forms in terms of our affective experience (Shaviro). In *The Matrix*, the specific mediation of temporality qua bullet time articulates this specifically post-cinematic sensibility.

One of the most iconic bullet time sequences of the film takes place when Neo and another character try to rescue Morpheus, who is held captive by agents inside a highly guarded military building. On the building's

rooftop helipad, Agent Brown aims his weapon at Neo. First, the camera focuses directly on the weapon, framed in close-up, until the moment it is fired. In the next image, the perspective changes to a medium long shot that shows Neo (from behind) in the foreground and Agent Brown in the background. In extreme slow motion, we see the trajectory of the bullet flying towards Neo, who, since he is also moving in slow motion, has just enough time to dodge the first bullet (see Figure 3).

Now the camera starts to circle around Neo, revolving on the vertical axis in order to get a better view of Neo's graceful movements as he evades the next projectiles. The movement of the bullets is slowed to such an extent that we can easily follow their trajectory—slowed so much, in fact, that we can see the vibrations they cause in the air (see Figure 4). At the end of the camera's circular movement, one bullet flies directly into the camera (see Figure 5), hence towards us, while two others graze Neo's body. All in all, the whole bullet time sequence takes less than twenty seconds of screen time. The perceived duration might be shorter, though, given how







Figures 3-5 – Iconic bullet time: "The helipad sequence", THE MATRIX

cognitively challenging and overwhelming the screen events are. But what exactly have we seen? We observe three objects, simultaneously moving, but at different speeds: The virtual camera has its own speed, while the slow-motion speed of Neo's body is also different from the speed of the much faster bullets.

As Byron Hawk has argued, bullet time in the *Matrix* films illustrates Brian Massumi's concept of the virtual in that it depicts something that happens so fast that the human brain is incapable of perceiving it: for example, the trajectory of bullets. And clearly, this form of visualization would not have been possible without digital technologies. Yet, according to Massumi, "nothing is more destructive for the thinking and imagining of the virtual than equating it with the digital" (137). As he states, the digital is about "possibility, not virtuality, and not even potential"; indeed,

[e]quating the digital with the virtual confuses the really apparitional with artificial. It reduces it to a simulation. This forgets intensity, brackets potential, and in that same sweeping gesture bypasses the move through sensation, the actual envelopment of the virtual. (137-38)

Apart from this argument that, effectively, the digital is always perceived analogically, bullet time in the *Matrix* films is not simply a matter of pure simulation. There is still a profound—even deadly—connection to the real analog world. If a human dies inside the Matrix, he also dies in the real world. As Morpheus says: "The body cannot live without the mind." Hawk further claims that bullet time marks an outstanding moment in film history, because up to that point audiences had experienced only "static points" but no real motion: for example, an image that depicts a gun being fired is directly followed by another image showing the impact of the bullet. "[Now] with bullet time, viewers see the trajectory, the movement of the bullet, slowed down, intensified, so they can get a sense of that movement, which is a primary form of reality beyond static points of visual perception" (Hawk 118). Approached from a slightly different

perspective and expressed in different terms, bullet time visualizes the inexpressible "interval" that gives rise, according to Deleuze (in *Cinema 2: The Time-Image*), to the "time-image" in postwar cinema (see also Tofts), the very "time zone" between action and perception (or action and reaction).

But how can we assess the specifically *digital* dimension of this time-image, without falling prey to the problematic equation of the virtual with the digital, as critiqued by Massumi? To what extent can we speak of it as a post-cinematic time-image? As I already have claimed, bullet time is a time-image appropriate to our current digital age because it is presented as an image explicitly and inseparably connected to the logic of the database. Not only does *The Matrix* visualize the aesthetics of the database through the use of bullet time, but it also explicitly addresses the database as bullet time's (im)material source or basis. Neo's actions and abilities inside the Matrix are thus not simply "his" mental projections, since the latter only come into being as long as he is materially coupled to a simulation program (either to the Matrix or the training program, the Construct).

Even more important, while physically linked to the machines on the Nebudchadnezzar (see Figure 6), Neo (or more precisely, his brain) is also turned into a computer, transformed into a machine into which another computer can upload virtually any information that might be needed (combat abilities, for example). In other words, while connected to the Matrix, Neo is a cyborg—part human, part machine. And yet, due to his human nature and his "spiritual" status as "The Chosen One," he can break the rules of the Matrix and successfully fight the agents.

But, again, how can we theorize this special type of time-image in the digital age? Recently, Patricia Pisters has suggested the term "neuro-image" to designate images which let us experience "mental landscapes" in a direct way, while these images are at the same time closely linked to

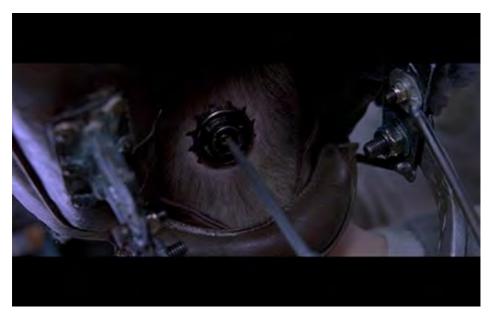


Figure 6 – Neo as a cyborg

the database logic of the digital with its "endless series of new combinations, orderings and remixes" (109). Pisters even claims that the neuro-image has to be seen as a new kind of image that is situated at the very "heart' of cinema," which has moved beyond the movement- or the time-image of classical and modernist cinema, without (fully) replacing these image regimes of the pre-digital era. In terms of its temporal dimension, the neuro-image (as well as the logic of the database in general) corresponds to, as Pisters claims, the Deleuzian concept of a third synthesis of time, that is "the repetition of the future as eternal return" (*Difference* 90), "the time of (endless) serial variations and remixes of pasts and presents" (Pisters 106).

Prima facie, all these considerations seem to be applicable to *The Matrix's* bullet time, which, to be clear, Pisters does not discuss in her essay. Indeed, thematically, bullet time is "an image from the future," but as an aesthetic

form of cinematic practice at the end of the 20th century, "[it] also indicates that the future is now" (113). The only point where I would disagree with Pisters is regarding her claim that the neuro-image tends to "unground" the temporal order of the time-image "due to the dominance of the third synthesis" (110). At least, *The Matrix* doesn't seem to support this claim. On the contrary, regarding bullet time as a "neuro-image" highlights why it makes sense to think of the effect as a specific *post-cinematic* time-image. The aesthetic form of bullet time (as a time-image) is through and through shaped by and connected to the logic of the database, which itself expresses the disjunctive and recombinant temporality of computation.

2. Ludic Bullet Time

Another instance of "the repetition of the future as eternal return" is perhaps the speed with which the bullet time effect, after its popularization in the first *Matrix* film, spread out to different media like computer games; in this sense, its dissemination among other media can also count as one of the "signatures" of our current digital age. Once an aesthetic effect has become culturally visible, it seems to be everywhere, in all kinds of media forms, its appearances occurring simultaneously rather than successively. Hence, it is all the more important to explore how the temporality of bullet time might be shaped differently by another medium, such as the (software) medium of digital games; for as we shall see shortly, games in themselves express the temporal logic of simultaneity.

Let us turn, then, to the first installment of the game series *Max Payne*, which was developed by Remedy Entertainment in cooperation with Take 2 Entertainment and published by Gathering. Although it was in development before the first *Matrix* film's release, *Max Payne* became the first video game to make use of bullet time, while its game aesthetics also draw inspiration from John Woo's films. Apart from bullet time, allusions to Hong Kong action cinema are a key feature of the game series as a whole, just as its overall cinematic look is informed by the style of neo-noir. *Max Payne* is a so-called third-person shooter (where the camera takes a

perspective from behind the avatar) situated in contemporary New York; Max Payne is also the name of the main playable character, a broken hero with a tragic backstory. While he was still working as an NYPD detective, his wife and child were murdered by criminals high on a drug called "Valkyr." Three years later, after being transferred to the DEA where he is investigating the Valkyr case, Max is framed for the assassination of his colleague and friend Alex in the course of an undercover operation. Henceforth, he not only has to fight against the drug mafia, but he is also hunted by the police.

The game commences with a very cinematic intro: on a stormy, snowy night in New York City, a helicopter heads across the Hudson River towards the skyline of Manhattan. The images are accompanied by the sounds of police radio: we hear reports of a shooting at a place called "Plaza Aisir." Two police cars are driving through the urban canyons. They finally reach their destination, a huge skyscraper. The camera moves up the façade of the building. Finally we see a man standing on the roof, holding a sniper rifle in his hands. It's Max Payne, whom we have just heard in voiceover:

They were all dead. The final gunshot was an exclamation mark to everything that had led to this point. I released my finger from the trigger. And then it was over. To make any kind of sense of it, I need to go back three years. Back to the night the pain started.

Payne's words are confusing at first, but soon we understand: this dark and atmospheric sequence depicts the game's final scene, which is situated in the present. Everything else, almost the entire game, is framed as a flashback. The first analepsis, which is also the first playable sequence, recounts the events when Payne's family was murdered at his home. In this sequence, Max (and hence the player) is unable to prevent the criminals from killing his wife and child, but they have not yet left the building, and the avatar's task is to take them out. The next game sequence presents events that happened only two days earlier: Max Payne is called to a train

station to meet Alex. Again, he has to witness the death of a person close to him. What follows is a long revenge mission that continues up to the point when "they were all dead" (thus bringing us to the point at which Max's narration begins—at the beginning of the game and the end of the story).

Before *Max Payne*, flashbacks were rare in digital games. And even in the contemporary game world, they do not occur very often. It is important to note, in this regard, that flashbacks in Max Payne have a *narrative* function only, without any effect on the gameplay itself: none of the avatar's actions during these flashbacks produce consequences for further gameplay. We cannot change the future of the past. Another prominent element of *Max Payne*'s temporal aesthetics are graphic novel panels that narratively juxtapose the game sequences in place of animated cut scenes (see Figure 7).[6] Besides this function, these panels serve to underscore the "narrative ambition" of the game as well as to contribute to the neo-noir aesthetic.



Figure 7 – Max Payne: Graphic novel panels

What does this have to do with bullet time as a post-cinematic time-image? In the first part of this chapter, I argued that The Matrix's use of bullet time corresponded to the logic of the database, specifically the disjunctive temporality of computation, which the film sought to mediate by visual means. When we turn now to the more directly computational medium of the computer game, we notice a number of important differences. In terms of visual performance, the staging of bullet time in a game like *Max* Payne might not be able to compete with its big-budget staging as a special effect in the Wachowskis' movies. In games, this spectacular quality has not disappeared (indeed, the last installment of Max Payne, in particular, has established a new level of cinematic visuality), but it is now secondary to the effect's ludic functionality: bullet time serves to help players master in-game events by reducing the speed of onscreen movements—not only one's opponents' but also one's own—while the technical polling of input devices still happens in real time (i.e. the computer is still "listening" for instructions from the player, and is capable of registering them, when they are sent through the keyboard, mouse, or controller, at a speed that is a mere fraction of the temporal window of human perception). This provides players with a decisive advantage, particularly in situations where they are significantly outnumbered, or when the specific game challenge demands superhuman precision. And, of course, one outstanding function of bullet time in games is that it helps players dodge incoming bullets while still being able to fire at their enemies (in Max Payne this maneuver is called "shootdodging", see Figure 8). Granted, slow-motion game-play has frequently been an important aesthetic/ludic feature since the early days of commercial video games, not least as a distinct function of so-called cheats.[7] Yet the Max Payne series took the game aesthetics of slowmotion to a completely new level, especially in terms of visual spectacle.

A significant difference from the first *Matrix* movie is that the bullet time in *Max Payne* is in no way narratively motivated within the game story. There is no explanation for why Max possesses this special skill—and it is significant, indeed, that bullet time *becomes a skill* (rather than



Figure 8 – Max Payne: Shootdodging.

merely an effect) when it is subject to the player's performance, which is to say when bullet time moves from the more cinematic medium of the blockbuster film to the thoroughly computational medium of digital games. Furthermore, the player does not have to fulfill any special tasks to acquire this skill; she can use it right away. Nevertheless, the bullet time effect is a limited resource, only lasting for a few seconds and depleting with every activation. An hourglass-shaped meter (or, in case of the third installment of *Max Payne*, a vertical bar) in the bottom corner of the screen informs the player how much bullet time is left for use. In the first installment of the game series, bullet time replenishes only by killing enemies. This changes with the second installment, where bullet time is restored automatically, yet more slowly. And whenever a player in *Max Payne 2* is able to take out several opponents at once within the limit of available bullet time, the meter turns yellow, and she can move even faster while the "objective" flow of time simultaneously gets slower. And

the more intensely yellow the meter turns, the more intense the bullet time effect is. Unsurprisingly, *Max Payne 3* offers the most sophisticated version of bullet time. Not only is it reloaded through the act of killing opponents, but also by injuring them. Furthermore, there is a special bullet time mode in this installment called "Last Man Standing." If Max's health is declining, but he still possesses painkillers (tablets that regenerate the health status of the character) as well as a loaded weapon, he automatically switches into the bullet time mode that allows him to locate the enemy and attempt to take him out. If the player succeeds in killing the attacker, Max recovers; if not, the player dies with Max.

Apart from the dominance of its ludic function, *Max Payne*'s use of bullet time provides a significant visual spectacle, similar to that of the *Matrix* films. For example, already in the first installment of *Max Payne*, when Max kills the last member of an enemy group, the camera changes to a third-person perspective rotating around the fallen body. Another prominent feature that alludes to the aesthetics of the *Matrix* films is the camera following the path of a bullet (see Figure 9).

Hence, in order to understand the specific temporality of bullet time in games, we have to take into account both a representational or narrative level as well as an operational or ludic level (the level of gameplay). This distinction between narrative and ludic levels—a distinction that was itself a site of intense debate in the early history of game studies as a discipline—plays a significant role especially in temporal terms, not least with respect to the specificity of digital games compared to other media (including cinema). It is here that the difference between cinematic and specifically post-cinematic time-images may be sought. For this reason, we have to return briefly to the so-called narratology-versus-ludology debate, one of the field's formative discussions around the year 2000, in order to assess the radical difference between *The Matrix*'s still cinematic mediation of post-cinematic time, on the one hand, and *Max Payne*'s more direct operationalization of post-cinematic temporality on the other.



Figure 9 – Max Payne 3: Path of the bullet

On the one hand, narratologically oriented scholars like Janet Murray or Marie-Laure Ryan claimed that, through the introduction of interactivity, computer games (and digital platforms in general) considerably transformed the parameters of storytelling. At the same time, these scholars more or less implicity argued that storytelling remains one of the central functions of digital games. On the other hand, and against these narratologists' claims, "ludologists" like Markku Eskelinen or Jesper Juul regarded the narrative dimension as marginal compared to the "core" of gameplay, which situated the player first and foremost in interaction with formal rules, not with the elements of a story. For Juul, the medial specificity of digital games expresses itself by the fact that it provides spaces for action, movement, and decision-making rather than presenting narratives in a linear way. According to Espen Aarseth, these spaces can also be addressed in terms of "ergodic phenomena" (32); derived from the Greek words *ergon* and *hodos*, work and path, the notion of ergodicity

specifies digital games as articulating a type of discourse "whose signs emerge as a path produced by a non-trivial element of work" (32). This type of discourse is significantly different from other textual (or audiovisual) forms. The narrative "script" of a game is not just "given" for us to read or watch; instead, it is generated on the fly, in the moment of interaction between the game and the player. And, as Juul shows, this implies a profound paradox in terms of how we usually address the different temporal levels of non-interactive storytelling forms (i.e. in the categories of classical narratology). Due to their ergodic form, it is not possible to distinguish between the levels of story time (or histoire), plot time (the time of discours, or of narration itself), and reception time (the empirical time of media consumption). According to Juul's early ludological position, the distinctiveness of these temporal levels collapses in and through the very act of gameplay; story time, plot time, and reception time coincide with one another in a way that is unprecedented in non-computational media (see Denson and Jahn-Sudmann).

If we take the arguments of the radical ludologists seriously, that games and films are fundamentally different forms of media, it is questionable to what extent games can articulate time-images. Let's recall that the time-image replaces the temporality of succession, the crucial temporal principle of the movement-image, with the principle of simultaneity. Now, if the digital game is always already bound to the principle of simultaneity, how, then, can the time-image stand out as a specific temporal form that puts into play a different relationship of movement and time by replacing the logic of succession with the logic of simultaneity?

Yet, as we know from McLuhan, the "content' of any medium is always another medium" (8). Of course, games are able to remediate (or simulate) the aesthetic forms of other media (like cinema, for example). And since we can analytically differentiate between the representational level of computer games and their operational level (including game-play and game-mechanics), this means that time-images are not rendered

impossible by the fact that the ergodic form of digital games collapses the distinction of story time, plot time, and reception time, because timeimages can simply be situated on the representational or interface level of games.

But how does the dominance of bullet time's ludic function over its visual function affect its very temporal characteristics? As to the affective dimension of the gamer's experience, I would argue that this has consequences that are not altogether different from its cinematic version. The bullet time sequences in games are still time-images in the sense outlined above with regard to the *Matrix* films. The only major difference is that the bullet time sequences in the *Matrix* films are marked as outstanding moments, while in games like the Max Payne series, they are a frequent feature. In digital games, however, bullet time is furthermore specifically characterized by the way it "mediates" (in the Latourian sense) *algorithmic time*. [8] It makes tangible, that is, exactly that level of digital microtemporality that a player does not and cannot perceive, especially when she is wrapped up affectively and responding quasi-automatically to the constant flow of challenges that the game presents.

On the basis of our blindness to computational temporality (which operates at scales and velocities beneath or beyond the temporal frames of conscious human experience), bullet time sequences allow players to experience an otherwise unprecedented level of control over space *via* the manipulation of time, with the result that an algorithmically generated time paradoxically becomes a *haptically experientiable duration*. What is produced here in this process of transduction is not so much a substantial as a *relational duration*—a duration, that is, which marks *the gap between the temporality of conscious experience and the imperceptible time of microtemporal computation processes* taking place during each and every act of gameplay. And this haptic dimension marks, I contend, an important difference with respect to the way the bullet time effect functions in media such as film or television to point to "subliminal" zones of temporality (cf.

Wentz). Stressing the haptic experience of bullet time does not mean to downplay the overall tactile dimension of digitality, tactility understood here in the McLuhanian sense as the "interplay of senses" (see Heilmann). On the contrary, we might argue that the haptic engagement with bullet time sensitizes us to an understanding of digitality as a historically specific modality and technical implementation of tactility (Heilmann).

Moreover, since the bullet time effect can be repeatedly but only intermittently reactivated under certain predefined conditions—which implies not simply the effect's repetition but its variation in a range of different forms (recall the variations of bullet time described above)—the phenomenological implications outlined above are aggregated over time: the perception of an in-principle invisible time of algorithmic computation, as mediated by digital games employing the bullet time effect, is intensified through repeated exposure, over the course of which such experience is given the quality of an experimental configuration, a setting that lets us ludically test the temporal modalities of a new form of "anthropotechnical interface" (see Denson).

Furthermore, in games bullet time is not only organized serially in terms of being continually repeatable. In addition, the modularized deployment of bullet time results in the effect's partial autonomy. That is to say, bullet time emerges as part of a broader series of related processes when it is activated beyond immediate gameplay challenges, independent from the functional (or diegetic) motivational structure of the effect within the game. Players can test the bullet time ability precisely in those sequences or spaces of a game where they do not face enemies, for example in the safe area of an empty corridor or in an empty room, in order to learn how to make more effective use of it or simply to understand the skill in the first place. But this is by far not the only consequence. They are also testing the spatio-temporal dimensions of their interfacing with the computer. In these moments of bullet time, the players become aware of and explore a specifically digital temporality. To play with bullet time

is also an act of observing it. It is exactly with regard to such events of "gratuitous" experimentation that the aesthetic alterations between various deployments of bullet time—in games and over the course of ongoing game series, as well as in various media and transmedial assemblages—becomes most obvious and open to critical study. Here, we witness digital media works probing the aesthetic limits and courses of the effect's transition to a computational environment. [9]

3. Conclusion: The Autonomy of the E/Affect

Bullet time is a specific and paradoxical encounter between the invisible, algorithmic time of computation on the operational level and a culturally "sedimented" temporality on the representational level (inherited from pre-digital media such as cinema). As such, it is also an encounter of different speeds, the very fast and the relatively slow. It is this specific conjunction of temporalities that most of all contributes to the relative autonomy of bullet time, i.e. its autonomy from narrative and even discursive orders, both in terms of its operational and its cultural logic.

Bullet time, as a post-cinematic time-image, makes visible the time of the interval, the temporal "zone" between action and reaction (or perception). It expands and furnishes this interval with a specific duration and movement. Therefore it is not the *time* of post-cinematic (or computational) affect that is displayed (because it simply can't be displayed), but an *image* of this affective temporality. Still, it precisely addresses the very temporality that it substitutes. Simultaneously, it establishes a new time (or duration) of affect, yet on a different level—namely, between game and player.

As I have already pointed out, there is ultimately no fundamental difference—no ontological divide—between games and films in this respect. Yet games are characterized by a different temporal logic that comes into play here: ergodic time. Due to their ergodic form, the temporal differences of story time, discursive (or narrative) time, and consumption

(reception) time, as we know them from classical narratology, are extinguished in the interactive conjunction between game and player (see Juul; Denson and Jahn-Sudmann). As a consequence, the time of the interval becomes a haptic experience of duration, which also points to the overall tactile dimension of affection, in the McLuhanian sense. Finally, and this again applies both to its instantiations in film and games, what the autonomy of the bullet-time effect exposes is nothing less than the "autonomy of the affect" (Massumi) itself.

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Notes

- [1] This chapter expands upon considerations developed for the essay "Digital Seriality: On the Serial Aesthetics and Practice of Digital Games," co-authored with Shane Denson.
- [2] For a substantial list of further games that have implemented bullet time, see < http://www.gamesradar.com/a-videogame-history-of-bullet-time/>.
- [3] As part of this cultural hype, many academic and non-academic works have been published on *The Matrix* in general and on bullet time in

particular (see Constandinides; Denson and Jahn-Sudmann; Glasenapp; Hawk; Meinrenken; Sudmann; Tofts). Although some of these works (see, for example, Hawk) discuss temporal implications of the bullet time, they do not address the effect as a specific post-cinematic temporality.

- [4] For instance, the following video, as one of many examples, shows how to produce the bullet time effect with a GoPro camera and a ceiling fan: http://www.youtube.com/watch?v=wTQjIZR6xHA&feature=youtu.be>.
- [6] A "cutscene" (sometimes called an event scene) designates a sequence that is situated between the ludic or playable parts (levels, worlds) of a game. In these scenes the player has little or no control over the screen events.
- [7] So called "cheats" or "cheat codes" are typically used to make a game easier (beyond standard gameplay). For example, cheat codes can be activated to reduce the general game speed or just the speed of the player's opponents. Cheating has a long-lasting history in digital game culture, dating back at least to the early 1980s (see Consalvo).
- [8] According to Latour, "a mediator . . . is an original event and creates what it translates as well as the entities between which it plays the mediating role" (81).
- [9] Not surprisingly, we find countless examples exposing the "serial autonomy" of the effect on social network platforms like YouTube, where users upload "Let's Play" videos as well as "Best of Bullet Time" compilations, thus providing individual experiences of serialized temporal-technical mediation that can be commented upon, compared, or used for the purpose of community-building. For discussions of community-building as a serialized practice, see the contributions to Kelleter.



3.3 The CHORA Line: RealD Incorporated

BY CAETLIN BENSON-ALLOTT

What the majority of spectators seem to want and value from animation is not a gloss on "metaphysical effort" but rather . . . "metaphysical release."

—Vivian Sobchack. "Final Fantasies"

Be careful what you wish for.
—Coraline

Before Avatar (James Cameron, 2009) grossed \$2.7 billion in worldwide ticket sales, Henry Selick's Coraline (2009) was widely hailed as the best 3-D movie ever made ("Avatar"). By offering uncanny adventure "for brave children of all ages," Coraline bestowed digital stereoscopic filmmaking with artistic and cultural prestige, affirming exhibitors' and cinemagoers' growing interest in digital projection.

Film distributors were already sold; for the previous eleven years, they had pressured exhibitors to adopt a digital delivery and projection system and abandon expensive celluloid prints. They also wanted exhibitors to pay for this technological overhaul even though the theater-owners did

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not foresee any recompense in replacing their existing celluloid projectors with digital substitutes. RealD gave theater-owners a reason to convert when early experiments in polarized stereoscopic image projection, including *Chicken Little 3D* (Mark Dindal, 2005) and *Beowulf 3D* (Robert Zemeckis, 2007), demonstrated that more viewers would come out—and pay more per ticket—to see movies in digital 3-D.[1] Subsequently *Coraline*, *Up* (Pete Docter and Bob Peterson, 2009), *Avatar*, and *Alice in Wonderland* (Tim Burton, 2010) launched a genre of high-profile, high-concept digital 3-D movies and confirmed that RealD projection can be exceedingly profitable for all involved.

Ironically, the spectatorial pleasures of digital 3-D cinema are nowhere near as clear as the profits, although scholars have now begun to explore what value this third dimension adds to the spectatorial experience (see Elsaesser; Higgins). Previous incarnations of 3-D cinema—such as the red-and-cyan anaglyph system of the 1950s or the (analog) polarized Stereovision of the early 1980s—came and went quickly and without lasting industrial or aesthetic impact, but RealD proved much more popular with viewers, popular enough that major studios (specifically Dreamworks Animation SKG) converted to entirely 3-D production. In 2010, Samsung introduced consumer-grade 3-D HDTV sets to capitalize on the success of digital 3-D cinema. Thus it is time investigate what sort of desire digital 3-D produces and satisfies in its spectator and how it integrates itself into Western systems of representation. To paraphrase Vivian Sobchack's earlier work on 2-D digital animation, we need to ask what we want from RealD and what RealD wants from us: what new dimension is it opening up (Sobchack 172)? Henry Selick's Coraline occasions related questions about desire, space, and embodiment through its representation of a young girl opening the door onto an Otherworld concealed within her own. Unlike previous RealD features, Coraline harnesses the uncanniness of stereoscopic animation and uses it to acknowledge and produce a locus for the digital uncanny.[2] It manipulates biocular vision—the human physiology that enables depth perception and thus "3-D imagery" or

stereoscopy—to offer viewers a new receptacle of uncanniness for digital mimesis, namely, the 3-D image's virtual depth of field. By exploiting biocular vision as binocular vision, the movie returns our visual perception to us as mediated spectacle and as uncanny in the Freudian sense. In both its optics and its metaphysical tropes, Selick's movie suggests that RealD is "nothing new or alien, but something which is familiar and oldestablished in the mind and which has become alienated from it" (Freud, "Uncanny" 363-64). In short, *Coraline* promotes the uncanniness of the digital image to give its spectator a new experience of—one might even say a new standard for—visual verisimilitude to replace indexical realism now that the latter has been rendered obsolete by digital image capture, distribution, and exhibition.

Coraline's narrative also provides context for these metacinematic reflections by narratively and figurally taking up an ongoing debate about the relationship between form, matter, and femininity. Both the film's title and its representation of the new dimensionality of the image cite Plato's chora, the receptacle "at the very foundations of the concept of spatiality" (Grosz 9). Its story thus invokes recent debates among Jacques Derrida, Julia Kristeva, Luce Irigaray, Elizabeth Grosz, and others about the *chora*'s significance as a metaphysical figure—an unintelligible space that gives form to matter—and a trope within traditional patriarchal theories of representation. Grosz also suggests that the *chora* "contains an irreducible, yet often overlooked connection with the functions of femininity" (24), which emerges in Coraline as the Beldam, a wicked witch who lives outside yet supports the materialist and gender-normative fantasies of Coraline's world. Through the Beldam, Coraline gives the chora a voice and a character, one who wants to imagine herself as an Other Mother and her house as a nurturing receptacle outside the ever-changing world, but who is ultimately undone by her desire to incorporate as well as produce. As the maternal threat of *jouissance*, the Beldam provides *Coraline* with an occasion to perform material excess and a means to represent both the allure and the horror of virtual worlds.[3]

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The virtual depths associated with the Beldam render the digital 3-D image visible as a dematerialized inscriptional space in which relationships between Form and Matter, ideal and embodiment, can be worked out. To that end, the gendered terms of Coraline's narrative invite the spectator to reconsider the patriarchal dynamics behind Western metaphysics of representation. By focusing on Coraline's depiction of the Beldam and the formation of her character, I suggest that the movie uses its chora to produce a post-cinematic "bridge between the intelligible and the sensible, mind and body" that can replace celluloid's indexical invocation of the material while also providing catharsis for that loss (Grosz 112). The movie realizes these tensions through its digital approach to stopmotion animation, which enables it to contemplate figurally the transition into and out of materiality. Coraline's stop-motion technology blends computer-designed profilmic models and computer-generated imagery (CGI) to place the uncanny frisson of stop-motion in conversation with the uncanny surplus of digital 3-D projection. Thus as it shifts between digital and analog image production, the movie invites its spectator to meditate on the psychic dynamics of dimensionality—not to mention the gendered dynamics of materiality. As Sianne Ngai has argued, the inherent instability of stop-motion produces a tendency towards excessive movement, an excessive animatedness that she links to long-standing racist stereotypes (89-125). For the spectator, stop-motion resembles an apparatus always on the verge of escaping, running amok, subverting the social hierarchies of the bodies and matter it is asked to produce. Coraline builds on the racialized overtones of excessive animation and the uncontrollable animatedness of its stop-motion to capture the instability of matter and image, as well as the inherent uncanniness of the body, and offer them back to the spectator as the post-cinematic experience.

* * *

Technically, any film not computer-animated or illustrated by hand could be described as stop-motion; at its most basic level, "stop-motion

animation" describes any filmic record of a physical, profilmic model that moves or is moved between frames. The earliest surviving stop-motion movie dates from 1902 and revels in the expressive potential of material manipulation. In "Fun in a Bakery Shop" (Edwin S. Porter), a baker smothers an intruding rat with a lump of dough and then delights in molding the latter into a series of facial likenesses. Subsequent animators advanced this technique with puppets and model animation, which uses internally-framed dolls to create the illusion of motion. Because model animation requires extremely exacting adjustments between shots, 1940s stop-motion artists turned to swapping out different modular components of a doll between shots, also known as replacement animation, and their 1970s counterparts tried Claymation, which uses wire skeletons coated in plasticine to increase pliability. Although replacement animation first entered Hollywood through George Pal's Puppetoons in 1940, it did not yield a full feature until Henry Selick's The Nightmare Before Christmas (1993). Selick continued to explore replacement animation in James and the Giant Peach (1996) and Monkeybone (2001) before turning briefly to computer animation for Coraline's predecessor, Moon Girl (2005). In this digital short, a young boy travels to the moon, meets its current protectress, and helps her defeat the evil ghosts who would darken it. Moon Girl anticipates Coraline's interest in the relationship of (outer) space to image production, and it also marks an important evolution in Selick's approach to animation. Before RealD brought stereoscopy into the twenty-first century, computer animation was widely marketed as "3-D animation" because it employs virtual 3-D models to produce its 2-D graphics. Selick's brief foray into computer animation for Moongirl thus suggests an aesthetic preparation for Coraline's subsequent experiments with perspective. As animation legend Ray Harryhausen recently observed, "many of the techniques used in stop-motion animation are part of the process in preparing CGI work" (qtd. in Wells 97), and both Moongirl and Coraline invite the spectator to reflect on the fluidity between matter and image, modeling and 3-D image production, that defines the latter film.

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Indeed, Selick's 2009 stop-motion feature is visually distinct from yet shares many production techniques with the other computer-animated features released that year. Most computer-animated films use virtual models designed through mathematical (usually Cartesian) coordinate systems to make two-dimensional images look three-dimensional. These virtual models are often based on artists' three-dimensional sculptures, and in that sense, CGI animation captured the designation "3-D animation" because it looked like stop-motion animation (or at least more like it than cel animation ever could) while offering the smooth transitions and impossible effects typically associated with cel animation. Today, stop-motion is able to mimic computer-animation's smoothness and surrealism by (re)materializing digital models. 3-D printers, colloquially known as "fabbers," enabled Selick and Laika Studios to manufacture quickly the thousands of modular components needed to animate a feature-length stop-motion film. Without digital models and 3-D printing, Laika could never have produced the 15,300 faces necessary for Coraline's twenty-one characters to replicate human speech and expressions.

Thus Coraline's blend of computer-designed stop-motion puppetry and computer-aided special effects returns three-dimensional animation to its historic medium while also bringing the latter into the future of three-dimensional film: RealD. RealD is the most popular format for digitally projecting stereoscopic images, and although it has competitors, such as Dolby 3D and MasterImage 3D, it controlled 85% of US theatrical 3-D exhibition as of 2011 (Bond). Most of its perceived competitors are actually licensed corporate partners—e.g., Disney Digital 3D—or are not actually digital, such as the original IMAX 3D system. RealD uses a liquid crystal adapter attached to a digital projector to polarize 144 frames per second in opposite directions, half clockwise and half counterclockwise (see Cowan). For a viewer wearing RealD's polarized glasses, each eye picks up only every other image, while the distance between images onscreen creates a variable illusion of depth. Because

RealD uses polarization instead of the traditional red-and-cyan anaglyphs of the 1950s, it produces higher color saturation and sharper image resolution than its predecessor. RealD also alleviates the eyestrain and "ghosting," or fringes of color around imperfectly aligned 3-D images, that bothered viewers of previous 3-D platforms, and it allows the viewer to turn or tilt her head without ruining the illusion. In short, RealD enables the 3-D viewer to experience herself as three-dimensionally enworlded, to inhabit the embodied spectatorial practice foreclosed by previous 3-D technologies. A viewer can now move in three dimensions while watching a movie that features and is about three-dimensionality; for the first time, she can experience 3-D vision as properly uncanny, rather than simply unwieldy.

* * *



Figure 1 – Coraline, the stop-motion star of CORALINE (Henry Selick, 2009 – frame grab image)

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Coraline engages RealD's new three-dimensional visuality with a narrative about the problems of gender, vision, and identity. It dramatizes the *chora* line, or the contested genealogy of materiality and maternity, femininity and form. The movie begins when its eponymous young heroine (voiced by Dakota Fanning, see Figure 1) moves with her parents into the Pink Palace, a subdivided mansion outside Ashland, Oregon. Its opening vista also announces its entry into film history, because the establishing shot of the Pink Palace recreates Gregg Toland's famous establishing shot of Xanadu, the stately pleasure-dome of Orson Welles's Citizen Kane (1941) (see Figure 2). In Citizen Kane, Toland vertically pans up a series of increasingly ornate fences before Xanadu finally appears, an architectural behemoth, behind Charles Foster Kane's monogrammed gate. The mansion reigns over a series of abandoned animals and pleasure craft like a warning: be careful what you wish for. Toland's Xanadu is a matte painting, but its vertical stature and superimposed foregrounds nonetheless introduce the viewer to the film's innovative deep-focus cinematography, the technique that would make both Toland and Citizen Kane legendary. Coraline cites this innovation through its establishing shot of a similarly menacing mansion on a hill, and its house likewise heralds the arrival of a new form of visual pleasure. For as the family's silver VW Beetle weaves up through the foreground, past the sign for the Pink Palace and into Coraline's new milieu, the viewer becomes aware of the various planes of image within a 3-D motion picture. The film thus draws on Toland's celebrated deep-focus cinematography to contextualize RealD stereoscopy as another technological advancement in cinematic art. Citizen Kane becomes the background for Coraline's 3-D gimmickry, the credential behind more typical conventions, such as aiming sewing needles and other protrusions at the viewer's eyes.

Unfortunately, *Coraline*'s characters begin their adventures on a less optimistic note. Coraline's parents (voiced by Terri Hatcher and John Hodgman) were recently involved in an automobile collision that the film implies may have been Coraline's fault. Her mother is now confined to a



Figure 2 – CORALINE (Henry Selick, 2009 – frame grab image) cites CITIZEN KANE's legendary deep-focus cinematography as a historical precedent for its stereoscopic artistry.

neck brace and incapable of turning her head (unlike the viewer). Between unpacking and finishing an overdue writing assignment, she has little time to attend to her daughter's loneliness and frustration, which only increase when Coraline meets her new neighbor, a know-it-all boy named Wyborn (voiced by Robert Bailey, Jr., see Figure 3). Wyborn—also known as Wybie-introduces himself by making fun of Coraline's dowsing rod and calling her a water witch. He later apologizes by giving her a doll, but Coraline's dissatisfaction continues to mount until she discovers a childsized door hidden beneath the living room wallpaper. Her mother brusquely reveals the door's bricked-over passageway, but Coraline's neighbors—Mr. Bobinsky (voiced by Ian Shane), the irradiated and irrational shut-in in the attic, and Miss Spink and Miss Forcible (voiced by Jennifer Saunders and Dawn French), the bickering former burlesque queens who live in the basement—nonetheless warn her not to go through it. Naturally, Coraline goes to bed that night thinking of nothing else and subsequently dreams (or discovers) that the small door leads to an Otherworld.

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Figure 3 – Wyborn Lovat, Coraline's critically underappreciated friend. Frame grab from CORALINE (Henry Selick, 2009)

This Otherworld is an exercise in cinematic spectacle and the uncanny wonders of RealD. Coraline's transition into her new world begins when she follows one of Mr. Bobinsky's never-before-seen trained mice and glimpses it disappearing, impossibly, behind the bricked-up door. When she opens the door, a long pillowy purple tunnel unfurls in front of her, its dynamic dilation suggesting that this is no ordinary vaginal passageway (see Figure 4).

In its 3-D undulations, the tunnel both resembles and surpasses the fleshy gates of hell that carry off little Carol Anne in *Poltergeist* (Tobe Hooper, 1982). Coraline might not appreciate that comparison, however, as she seems pretty touchy about her name; for some reason, the people in her real world keep calling her Caroline. Coraline soon discovers that in the Otherworld, everyone knows her name . . . and what she likes to eat and how she likes to garden and why she feels unsatisfied at home. Her spectacular reception begins in the kitchen, where her Other Mother



Figure 4 – The pillowy purple vaginal passage way to the Other Mother's Other World. Frame grab from CORALINE (Henry Selick, 2009)

(also voiced by Teri Hatcher) immediately greets Coraline with a cornucopia of delectable comfort foods and, with the help of Coraline's Other Father (also voiced by John Hodgman), showers her with the attention she desperately craves. Entranced, Coraline soon returns to the Otherworld for more attention and s(t)imulation. Her Other Mother seems perfectly prepared to oblige, producing for Coraline a veritable wonderland of delights, delights that also happen to play to the strengths of RealD. At the Other Mother's behest, Coraline's Other Father flies her through a glowing garden of animated flowers and tickling vines (see Figure 5); later an ersatz Wybie escorts her to see Mr. Bobinsky's mythical mouse circus (see Figure 6) and a revival of Spink and Forcible's old burlesque acts, including a trapeze number in which they shed their aging, overweight bodies and emerge the starlets they may never have been.[4] These phantasmatic visions defy the laws of botany, biology, and physiology; they are wonders, and as such they emphasize the wonder of RealD cinema: reality, uncannily enhanced.

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Figure 5 – Coraline's Coraline-shaped garden. Frame grab from CORALINE (Henry Selick, 2009)



Figure 6: The "Other" mouse circus for which there may be no original. Frame grab from CORALINE (Henry Selick, 2009)

When Coraline returns from her tour, the Other Mother offers her an opportunity to join this spectacular world forever, but in order to become part of the ensemble, Coraline must give up her role as a spectator. Specifically, she must allow its matriarch to sew buttons over her eyes. In his essay on the uncanny, Freud encourages his reader to regard such threats as castration anxiety, but Coraline will pursue a less phallocentric metaphor. After Coraline refuses to become part of Other Mother's world, she attempts to return to her "normal" world by going to sleep but quickly finds that she can no longer slip between states so easily. Coraline then tries to leave Other Mother's terrain on foot and discovers that this world responds to laws of psycho-aesthetic—rather than terrestrial-distance. As Coraline marches away from the Other Mother's unheimliches Heim, the woods around her devolve, becoming increasingly pale, unearthly, and abstract. At first, they seem to reveal themselves as images, specifically as storyboard sketches of trees, but later they dissolve entirely, leaving Coraline lost in a blank white field. Fortunately, a wise feral cat (voiced by Keith David) arrives to talk her through her predicament; he explains that the Other Mother "only made what she knew would impress you." When Coraline asks why the Other Mother wants her so badly, the cat corrects her solipsism; the Other Mother does not desire Coraline specifically, just "someone to love—I think. Something that isn't her. Or maybe she'd just love something to eat."

Coraline finds out precisely what *that* means when she and the cat arrive right back where they started. Enraged by Coraline's resistance, the Other Mother throws her through a mirror into a dimly lit holding cell between image regimes until she can "learn to be a loving daughter." Had she read her Freud, Coraline might recognize the Other Mother's conflicting desires as incorporation, as the desire to fuse with and cannibalize a love-object (see Freud, *Totem and Taboo*). During incorporation, the subject takes in an outside object but cannot integrate it. As Derrida explains, such abortive assimilations both fortify and threaten the ego:

Incorporation is a kind of theft to reappropriate the pleasure object. But that reappropriation is simultaneously rejected: which leads to the paradox of a foreign body preserved as foreign but by the same token excluded from a self that thenceforth deals not with the other, but only with itself. (xvii)

To wit: the Other Mother confines Coraline to the mirror room, her chamber of incorporation—what Derrida calls "the crypt . . . the vault of desire" (xiv)—both to exile and to contain her. There Coraline meets the Other Mother's other "children," all of whom have given up their eyes to the Other Mother, whom they call the Beldam. The Other Children explain to Coraline that after they let the Beldam sew buttons over their eyes, they forgot their names and eventually lost their bodies as well—a cryptic introduction to matter and metaphysics, if you will. The ghosts beg Coraline to find their eyes and thereby release what remains of their souls, but she demurs until she discovers that the Beldam has trapped her parents in a snowglobe. Then, armed with a magic monocle made of salt-water taffy, Coraline returns to the Otherworld to reexamine the three spectacles that previously captivated her: the garden, the mouse circus, and the burlesque show. Each one turns out to be animated by a brightly colored marble (one of the ghosts' eye-souls), but when Coraline confronts the Beldam with her plunder, the witch does not simply release her prisoners as promised. Instead, she shatters the illusory Otherworld and reveals the sticky spider's web undergirding its architecture of incorporation. Here, RealD and Renaissance perspective unite to reveal the depth of the trap Coraline has wandered into (see Figure 7). Coraline tries to climb the sides of this monstrous grid, but her only egress is the vaginal tunnel, now brown, desiccated, and cluttered with cobwebs. When Coraline tries to close the door on this barren canal, she inadvertently catches the Beldam between worlds, severing the Beldam's right hand. In the film's dénouement, Coraline must dispose of this claw by returning it to another infertile vagina, this time an abandoned well. Only then are the Pink Palace and its occupants safe from feminine incorporation. [5]



Figure 7: Coraline races to escape the Beldam's stereoscopic web of de-formation. Frame grab from CORALINE (Henry Selick, 2009)

* * *

Throughout this narrative, *Coraline*'s figural focus on webs, wells, caves, and portals unifies its metaphoric and technological interests. As *Wired* columnist Frank Rose observes, the digital 3-D "is even better [than its predecessors] at sucking you in—into the endless shadows of a cave or into the vortex of a shrieking face." Scott Higgins notes that *Coraline* capitalizes on 3-D cinema's "shoebox diorama effect as an aesthetic choice rather than as a deficiency . . . by exploring flamboyant depth effects that remain anchored to character experience" (200). These effects also allow the film to comment on Western theories of perspective that have long emphasized depth over protrusion. From Leon Battista Alberti's *De pictura* (1435) to the contemporary cinema screen, dominant representational traditions have conditioned viewers to experience the film image as a window, and the very physics of projection make it extremely difficult for

a film image to successfully occlude that frame and appear to pop into the theater. [6] For that reason, stereoscopic illusions of depth have always looked more believable than emergence effects, which extend images out at the audience. In fact these would-be protuberances are recognizable as a convention of US 3-D filmmaking precisely because of their failure, because they make the spectacle of 3-D visible instead of blending into the diegesis. *Coraline*'s many caverns and cavities do not exactly disappear into the narrative either, but they make visible the narrative's investment in what its technology makes possible. Moreover these stereoscopic vaginal spectacles reveal how contemporary philosophical debates about the *chora* elucidate recent crises of faith regarding the post-cinematic image, particulary the crisis of form and indexical reference brought on by digital media.

The *chora*—or *khōra*—refers to the metaphysical crucible in which form is imprinted on matter, "the space within which the sensible copy of the intelligible is inscribed" (Caputo 99). The term originates in Plato's *Timaeus*, during the eponymous character's discourse on the origin of the universe: how demiurge created the gods, who were unchangeable and unchanging, and the world, which changes. In this cosmology, ideal and unchanging Form must be imparted to changeable Matter. The space within which this happens, although part of Matter, cannot take on any of the Forms that pass through it; thus Timaeus characterizes this space—or interval, since it represents both a physical and a temporal alterity—as that which "comes to be but never is" (par. 27d).[7] It exceeds representation and cannot possess any characteristics of its own, yet somehow it still seems to have a gender—or rather its narrator is unable to conceive its passivity outside a binary gender system. As "the receptacle of all material bodies," the *chora* is inherently both unintelligible and feminine:

[T]he mother and receptacle of every created thing, of all that is visible or otherwise perceptible, we shouldn't call it earth or air or fire or water, or any of their compounds or constituents. And

so we won't go wrong if we think of it as an invisible, formless receptacle of everything. (par. 51a)

Elsewhere, Timaeus describes the *chora* as "the nurse of creation" (52d) that can only be "grasped by a kind of bastard reasoning" (52b). These metaphors, although not intended to describe the *chora* as it actually is, nonetheless produce a system of associations based on female anatomy and patriarchal interpretations of femininity. They thereby reduce both the *chora* and the feminine to passive and unimpressionable blankness.

In recent years, some French, Australian, and US theorists have reinvigorated *chora* as a key concept for understanding the exclusion of women and the feminine from Western metaphysics, an exclusion that characterizes *Coraline*'s Other Mother as well. These reinvestigations, most profitably led by Luce Irigaray, Elizabeth Grosz, and Judith Butler, often begin by departing from Jacques Derrida's reading of *khōra* as the ungendered, inassimilable origin of *différance* in Western philosophy. For Derrida, *khōra* is an aporia, that which philosophy cannot incorporate and is undeserving even of a definite article:

The definite article presupposes the existence of a thing, the existent $kh\bar{o}ra$ to which, via a common name, it would be easy to refer. But what is said of the $kh\bar{o}ra$ is that this name does not designate any of the known or recognized or, if you like, received types of existent. (236)

Because "what *there is*, there, is not," *khōra* cannot have a gender, which means—according to Derrida—that all the gendered metaphors Timaeus uses to describe *khōra* are catachreses; they mislead the reader into an overly definite sense of *khōra*'s nature.[8] For Derrida, Plato's feminine figures only represent barred destinations of incorporational desire; like the children the Other Mother craves, they are held at a distance that both underscores their inadequacy and sustains a fantasy of materialization.

Derrida's attempt to cleanse khōra of gender has been rebuked by an international coterie of feminists, whose critiques contextualize my reading of the Beldam as a figure of the *chora*'s disavowed epistemological value, labor, and desires. For instance, Julia Kristeva uses the chora to describe the psychical space and developmental process of signification, a process in which the mother plays a pivotal role. In the *chora* stage, an infant both finds all its needs satisfied by a (nondifferentiated) maternal body and experiences the first breaks between itself and that material plentitude. These breaks initiate the process of semiogenesis and subjectification (Kristeva 37). Kristeva emphasizes that "the mother's body is therefore what mediates the symbolic law organizing social relations," making it "the ordering principle" that precedes and underlies figuration and specularization (37). Her reading interprets Derrida's extra-grammatical aporia as the founding state of semiosis and inaugurates an important debate about the chora's gender (Is it maternal? Is it feminine?) and its ideological role (Can it experience desire or only produce it?) that ground other feminist interpretations of the *chora* and my reading of the Beldam.

Many feminist philosophers read the *chora* as a symptom—even the origin—of the routine exclusion of the feminine from Western (which is to say patriarchal) metaphysics of representation. Historically, this critique begins with Luce Irigaray; as Judith Butler explains, Irigaray understands the *chora* to be "what must be excluded from the domain of philosophy for philosophy itself to proceed" (37), but she reads that exclusion as the very process through which the *chora* becomes (dis) figured as the feminine. Irigaray argues that feminine metaphors for the *chora* are both catachreses and precisely on point: to the extent that the *chora*'s role in figuration can be understood as "participation by the non-participant" (Irigaray 175), it makes the female present only to exclude it from the process of generation. [9] In other words, the *chora* manifests the patriarchal metaphysics endemic to Western theories of representation. As a metonymy for the maternal—and thus the feminine—in the origins

of Western metaphysics, the *chora* dehumanizes, disempowers, and dematerializes women, placing them outside the real in some Other Space. Like the Other Mother, the *chora* exists beyond and beneath material existence and makes the latter possible, but only to be excluded from it. Her necessity contains the terms of her exile, and as *Coraline* suggests, any conscious resistance to that ontological servitude amounts to villainy.

Coraline is a movie about world-building, about the desires behind the image and its relationship to space, and the Other Mother captures the ways that women have systematically served and been excluded from that discourse. The Other Mother is the chora endowed with voice and rage. In "Woman, Chora, Dwelling," Elizabeth Grosz contends that Western philosophers designate the *chora* as a kind of barren femininity, an ungrounded, unspecified condition that can generate but cannot participate, "whose connections with women and female corporeality have been severed, producing a disembodied femininity as the ground for the production of a (conceptual and social) universe" (113). This nonspecificity marginalizes the feminine and essentially reverses its generative powers: "Though she [the chora] brings being into becoming she has neither being nor the possibilities of becoming; both the mother of all things and yet without ontological status, she designates less a positivity than an abyss" (Grosz 116). Once the chora is designated an abyss, its labor is systematically obfuscated and the chora can be dismissed as "a space of duty, of endless and infinitely repeatable chores that have no social value or recognition, the space of the affirmation and replenishment of others at the expense and erasure of the self" (Grosz 122). As part of an origin story for the universe, then, the chora both does work and obscures work, the work required of women for the perpetuation of their own effacement.

* * *

Were she a philosopher, the Beldam might make a similar point: endlessly engaged in a production of the sensible, she exists as that which must be expelled and repressed for the real world to maintain its heteronormative futurity. Like the chora, she is an Other Mother vilified for her (allegedly) illegitimate desire to take in or take on materiality. Constantly looking for something to call her own, she tries to incorporate spectators into the worlds she materializes for them, but once they become hers, she finds that they are not enough: being cannot live up to form. Thus although she identifies herself as an Other Mother, it is equally helpful to call her by her other name: the Beldam. Originally used to designate any great- or grand-mother, by 1586 beldam began to refer to "any aged woman," but especially "a loathsome old woman, a hag; a witch, [and] a furious raging woman."[10] Thus she is both a figure of nurturance and reproduction and explicitly marked as barren. As Coraline's Other Mother, the Beldam represents both the return of the maternal plenitude Coraline's real mother cannot offer her (because she has a job and because Coraline is no longer an undifferentiated infant) and the threat of that plenitude. The Beldam is jouissance, and she makes jouissance visible through her ultimate annihilation of the symbolic Otherworld.

The Beldam is also the force of creation that begins *Coraline* and establishes its metaphysical conceit and stereoscopic aesthetic. Although the viewer does not know it at the time, the Beldam is actually the first character to appear in the movie, which begins with two disembodied needle-hands deconstructing a young girl doll via fantastic emergence effects. Viewers do not meet the Beldam face-to-face until Coraline goes through the portal into the Otherworld where the Beldam is once again cooking something up, trying to entice Coraline with her ideal home-cooked meal. At her first appearance, then, the Beldam creates an existential crisis for Coraline, who must learn to value material reality over virtual ideals. [11]

Belief in ideal forms is precisely what trapped the three Other Children, who haunt Coraline as narrative and figural failures. They failed to appreciate their imperfect material lives and to discern the Beldam's desire, which is how they became trapped in her world of illusions. They are also aesthetic failures, their dialogue mawkish and their models hackneyed and unattractive. Nonetheless, the precise nature of their figural failure enables important observations about the film's metaphoric investment in celluloid materiality. When Coraline first discovers the Other Children, hiding under a sheet inside the Beldam's mirror-limbo, they resemble bobbing balls of light. After Coraline exposes the Other Children, they start to float and flicker around her, their images ghosting like bad 3-D anaglyphs. In short, the movie uses a defect of stereoscopic celluloid cinematicity to suggest that these children have passed away. Whereas Coraline's model exudes reliable material fortitude, the Other Children flicker, like poorly projected film, and thereby connote death within the film, the death of film, and the death that has always haunted film. Their limbo is the lifedeath Alan Cholodenko describes as undergirding all animation, "the spectre in the screen [that] gives all form, but is 'itself' never given as such" ("The Spectre" 47). The ghost children invite one to reread the cinema for the inanimation haunting all animation, to regard the projector as an apparatus that gives existence to intelligibility, that like the *chora*—must be excluded from the representable world and its animating principle.

Yet by setting the ghost children apart as failures, *Coraline* reverses the power structure inherent in animation's lifedeath and Plato's *chora*. Unlike her precedents, *Coraline*'s Beldam is both a crucible of materiality and spectacle and capable of divorcing intelligibility and sensibility when she feels she is not being appreciated. As Coraline races to defuse the Beldam's world of wonders, the Beldam vents her frustration by dematerializing it, first erasing color and then tearing up the woods and gardens around her Pink Palace, leaving only a gray haze (see Figure 8).



Figure 8 – Coraline tries to outrun the spectacular dematerialization of spectacle in Coraline. Frame grab from CORALINE (Henry Selick, 2009)

This ruination very much resembles a conceptual inversion of Dorothy's escape from the grey plains of Kansas in Victor Fleming's *Wizard of Oz* (1939), as now the Technicolor Oz is being pulled out from under the little girl who could not appreciate it. Inside the Pink Palace, the Beldam demolishes her domestic spectacle as well, ripping up the floorboards and stripping the paper from the walls. Previously, the Beldam had always been an engine of materialization; now she throws that engine into reverse, the maternal *jouissance* withdrawing its previous support of the symbolic and thus destructuring her world. To be sure, *Coraline* does not sympathize with the Beldam in this rebellion; it represents her exposed web as a space of decay and absorption (desanguinated bugs and all). When the *chora* demands acknowledgement for her work, *Coraline* characterizes it as a space of *selfish* reception. Thus it leaves the Beldam trapped alone in her own web, blind and maimed, even as it gives her a chance to articulate her desire: "Don't leave me, don't leave me. I'll die without you." Coraline

is hardly sympathetic to the *chora*'s line (what child wants to hear that its mother has needs too?), but by offering its material functionary a chance to explain, the movie indicates a desire to understand its own uncanny animating principle. Like the filmmakers themselves, the Beldam has brought dolls and worlds to life for her spectator's amusement. Coraline rejects such ersatz-worlds as crypts she can escape from. She would like to believe that by exiting the Beldam's web she can exit the system, but *Coraline* suggest incorporation is not so easy to evade.

* * *

To be more precise, Beldam's desire to incorporate Coraline into her crypt exposes a political uncanniness in stop-motion animation and ultimately digital 3-D as well. Derrida suggests that during incorporation, "[t] he dead is taken into us but doesn't become a part of us. It occupies a particular place in our body. It can speak on its own. It can haunt and ventriloquize our own proper body and our own proper speech" (qtd. in Cholodenko, "The Crypt" 101). Derrida's metaphor also describes the excessive material presence through which stop-motion becomes political—the way in which it materializes and excessively animates the social world that produced it. As Sianne Ngai has suggested, replacement animation enables past—but evidently not dead—stereotypes about the racialized body to erupt across its surfaces. *Coraline* toys with the trope of animatedness that Ngai unpacks and extends her theory of excessive animation to the feminine, the *chora*, and thus the impact of Western metaphysics on post-cinematic systems of representation.

Ngai pursues the political implications of excessive animation—which she calls animatedness—as "one of the most 'basic' ways in which affect becomes publicly visible in an age of mechanical reproducibility . . . a kind of innervated 'agitation' or 'animatedness'" (31). Tracing excessive animatedness through nineteenth- and twentieth-century US cultural production, Ngai borrows Rey Chow's figure of the "postmodern

automaton" to read stop-motion as a metaphor for the mechanization of the female and working-class body under modernity. Chow contends that modern visual culture provides both the logic and the locus for contemporary regimes of difference, that "the visual as such, as a kind of dominant discourse of modernity, reveals epistemological problems that are inherent in . . . the very ways social difference—be it in terms of class, gender, or race—is constructed" (55). Specifically, Chow argues that "One of the chief sources of the oppression of women lies in the way they have been consigned to visuality . . . which modernism magnifies with the availability of technology such as cinema" (59-60). Ngai argues that different forms of visual production engender different modes of constructing the other and that stop-motion "calls for new ways of understanding the technologization of the racialized body" (125). Ngai goes on to examine how the body becomes a technological object for the performance of race (or, one might argue, for the performance of maladaption to US racism) in FOX's stop-motion sitcom, The PJs (1998-2001). Chronicling the misadventures of a disenfranchised public-housing community in Detroit, The PJs requires characters' mouths to move very quickly to deliver its comedic dialogue, yet such rapid replacement animation leads to visible modular instability. As conversations progress, characters' mouths become excessively mobile, even volatile, and for Ngai, this excessive animation suggests "an exaggerated responsiveness to the language of others that turns the subject into a spasmodic puppet" (32). Such unintended animation contributes to the show's critique of racism, as "in its racialized form animatedness loses its generally positive associations with human spiritedness or vitality and comes to resemble a kind of mechanization" (32). Excessive animatedness thus elevates stop-motion above the innocuousness of advertisements and children's programming and emphasizes the genre's commentary on the social body, on the body as a cog conditioned by the social machine.

Ngai's analysis of *The PJs* marks a significant break with previous analyses of stop-motion animation, which tend to focus on its industrial history

and its uncanny timelessness. Indeed, not only does Ngai call attention to the social and political implications of animation as a technology of vision, but she also suggests that the uncanniness of animation metonymizes the uncanniness of the subject under industrialized capital. In the twenty-first century, this subject no longer produces wealth through labor but struggles with quandaries of consumption, representation, and virtual existence. *Coraline* exposes this production of difference through its representation of African-American characters not present in Neil Gaiman's original novel. These characters, Wyborn Lovat and his grandmother, own the Pink Palace where Coraline lives; in fact, the film hints that Ms. Lovat (voiced by Motown artist Carolyn Crawford) began fighting the Beldam long before Coraline arrived. Ms. Lovat only chimes in as an off-screen voice for most of the movie, but when she finally does appear, her skin color and accessories make race retroactively visible in the film. Indeed, Ms. Lovat marks Wyborn as African-American for audience members who may not previously have acknowledged him as such. For although Wyborn is the only brown character in most of the film, another is blueskinned, and others have blue hair, so his brown skin and brown moptop may not suggest blackness to a viewer not used to recognizing race in animation. With the arrival of Ms. Lovat, the race that was always implicit in Wyborn's excessive animation becomes visible. Not only does Ms. Lovat look darker than Wyborn, she also physiologically resembles a PJs character. She even wears a gardenia in her hair, an homage to both Billie Holiday and Hattie McDaniel, who wore the flower while accepting her 1939 Academy Award for Best Supporting Actress.

For the spectator who has been looking for it, however, race has always been visible in *Coraline*, politicizing its animation from the opening scenes of the movie. Its first shot depicts an African-American doll floating down through an open window to be grasped by the Beldam's needle-fingers. These hands then begin dissembling the doll's clothes and features, removing form from matter, before exposing the hegemonic whiteness of US film by reconstituting the doll as Caucasian (and

specifically as Coraline). This (de)materialization sequence is crucial for the movie's artistic and political projects because it binds the production and obfuscation of race in *Coraline* to its new 3-D aesthetic. The scene works on the doll—and the viewer—with both classic 3-D projectiles (in this case a needle poking up through the doll's button-eye and waving toward the viewer) and deep focus shots of the doll descending into and floating out of an open window. These virtual expansions of screen space inaugurate a new approach to 3-D visuality, wherein the screen becomes a receptacle for the nebulous materialization of the image. Because this prologue reinscribes screen space as receptacle during a scene of feminine production, moreover, it fosters a political association between *chora*, race, and materiality in animation that frames the film's depiction of its central African-American character, Wyborn.

Wyborn first arrives in *Coraline* dressed as a "spook"; outfitted to resemble a ghost, in a black fireman's coat and a welder's mask painted to resemble a skull, he appears on top of a cliff, rearing up his bicycle as lightning crashes and Coraline gasps. Once she recovers from her fright, Coraline immediately begins undermining—or unpacking—Wyborn's name; she ignores his preferred nickname, Wybie, and calls him "Why-were-youborn" instead. As cunning as this sobriquet might sound, it obscures the degree to which the film uses race to signal ontological uncertainty. Not only is Wyborn an annoyingly animate little boy, he is also excessively tied to the film's representation of its own animation process. Wyborn unwittingly brings the Beldam's doll to Coraline, and his gift reminds the spectator that Coraline is herself a doll while naturalizing her dollhood by comparison. Wybie also becomes the model against which Coraline's animatedness develops, where animatedness is defined (by Ngai) as "threatening one's own limits (or the roles in which one is captured and defined) not by transcending these limits from above but by inventing new ways of inhabiting them" (124). In the Otherworld, the Beldam produces an Other Wyborn to guide Coraline through her cinema of attractions; however, this Wyborn's mouth is sewn into an exaggerated rictus that emphasizes the horror of being animated (as opposed to being animate). Thus Wyborn's name and his epistemological role in the film indicate his centrality for understanding the greater visual and material crisis in *Coraline*. Wyborn brings out the animatedness in *Coraline* and in Coraline; his character produces the connection between Selick's movie and Ngai's affect theory that ultimately unveils the contemporary stakes of the *chora* for digital mediation.[12]

Thus Wyborn's politicized embodiment helps the spectator understand Coraline's architecture as a film and its commentary on contemporary theories of gendered architecture and materialized form. Coraline draws its viewer into the experience of scenic space and narratively thematizes that experience, and by attending to that intersection, we can better understand our spectatorial investment in digital 3-D. Coraline reminds its viewer that embodied experiences of vision and animatedness do not come without social conditioning. It reproduces the lived experience of biocular vision as virtual and fantasmatic and in so doing, it allows the spectator to acknowledge that such embodied participation in vision is necessarily uncanny. Simultaneously, it proffers the chora as the guiding structure of a paradoxical desire for incorporated spectacle and incorporation into spectacle. The film thus enables viewers to experience the desire for RealD as an extension of an existing trope for understanding the deep interweaving of gender and representation that persists into the digital. Moreover, Coraline's return to the uncanny trope of the chora can direct us toward a new theory for the uncanniness of digital spectatorship and a new investment to replace many viewers' loss of faith in the photographic index.

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Coraline negotiates the relationship of form to matter no matter which platform one sees it on, but its significance for spectatorial investment in digital cinema is most pronounced when the film is exhibited in

RealD. Through Coraline, the RealD viewer receives a visual exercise in the relationship of image to matter for digital cinema; the film provides metaphors for those questions through its narrative and its excessively digital and excessively material production techniques. Coraline's figural and dramatic chora invites the spectator to reconsider the crisis facing cinematic indexicality. Since the early 1980s, media critics have questioned how digital image capture, processing, and exhibition—and their allegedly "infinite capacity" to manipulate an image—would affect the truth-value of photochemical photography. Such ruminations demonstrate that digital imagery has undermined the spectator's historical faith in the photograph as indexical record. As Philip Rosen explains, photographic indexicality—"minimally defined as including some element of physical contact between referent and sign"-represented the standard of historiographic probity from roughly the 1830s through the 1980s, but lately its credibility has come unmoored (302). Rosen points out that digital image production and exhibition do not necessarily carry their viewer any further from the profilmic referent than analog transcription, but they may make the image's capacity for duplicity more visible. Popular US film genres have also shown a marked predilection for "digital mimicry," exploiting CGI's capacity for hyperrealism in blockbusters like Independence Day (Roland Emmerich, 1996), Spider-Man (Sam Raimi, 2001), and Transformers (Michael Bay, 2007) (see also McClean). These films use digital image production to bolster photorealism, and thus indexicality, as a representational norm or standard, even as indexicality also stands as the limit they must overcome (Rosen 309). Moreover, the very crispness and "perfection" of computer graphics also induce digital skepticism that prevents many post-cinematic spectators from psychically investing in digital projection. As Sobchack so eloquently explains, the cold perfection—the "deathlife"—of computer animation fails to provide its viewers with any substitute for or diversion from the loss of the impossible fantasy of indexicality (180).

Coraline incorporates this "deathlife"—or digital uncanny—into its

third dimension; it constructs the 3-D screen as receptacle for a new experience of form and matter. It exploits the instability of the index while experimenting with the chora as a potentially more useful metaphor for the relationship of image to matter for this platform. Recall that Coraline was made with digital stop-motion, with digital illustrations that produced plasticine models that later became digital photographs. The movie's whole technique is premised on the uncanniness of the motion picture's precarious relationship to indexicality, but it also creates an image that can reassure the viewer that there is a referent for digital 3-D's uncanny screen depth. At root, the trouble with RealD—like 2-D digital imagery before it—is its uncanny loss of indexicality: how can a digital motion picture reproduce the viewer's faith in a mimetic image famously devoid of film's characteristic indexical trace? Stereoscopic visual technologies aim to produce a more material experience of vision than their two-dimensional counterparts, but digital 3-D projection does so-and does so more successfully-by (further) cleaving the image from material, profilmic referents. Lev Manovich, D.N. Rodowick, and others have already demonstrated that the digital photograph is neither more nor less indexical than the chemical photograph, but Coraline precipitates a new theory of digital spectatorship based on the historically unstable relationship of form to matter. In Coraline, the chora returns to replace the index as the dominant metaphor for the relationship of image to matter in cinema. It does so through RealD's illusory spaces and its stop-motion dolls' uncanny physicality. By mimicking materiality on screen, Coraline provides the spectator with a locus—a stain, if you will in which to locate her anxieties about visuality and material existence.

Even if the juggernaut of Hollywood studio marketing succeeds in overshadowing *Coraline* and relegating it to the footnotes of future histories of digital stereoscopy, this low-budget independent animation nonetheless constitutes a pivotal moment in the history of digital projection, an important metacinematic contemplation of the pleasure of post-cinematic spectatorship. The movie not only positions its new

exhibition platform in relationship to previous cinematic innovations like deep focus, it also enables us to see digital cinema through older philosophical inquiries into the relationship of image to matter. Moreover, the political overtones of its production medium should remind the spectator that "the production of the West's 'others' depends on a logic of visuality that bifurcates 'subjects' and 'objects' into the incompatible positions of intellectuality and spectacularity" (Chow 60)—or in the case of the *chora*, into incompatible categories of intelligibility and femininity. *Coraline* allows us to screen the problematic tropes governing Western metaphysics of visuality; it reminds us that these issues condition our relationship to the image just as much as the RealD spectacles perched over our eyes. Like the Beldam, we have filled our virtual receptacles with ghosts who whisper: the pleasures of new media are built on ancient regimes of power and visuality.

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Notes

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[1] Digital 3-D movies can make three times as much per screen as their 2D versions, which explains why distributors and exhibitors embraced digital projection. In the early 2010s, distributors also offered exhibitors financing packages to subsidize their transition to digital projection. See Rose; Bordwell.

- [2] Coraline thus resolves the shortcomings of digital animation that Sobchack identifies in her case study of the early digital feature Final Fantasy: The Spirits Within (2001), which she argues failed (both critically and financially) because it removed the indexical trace of hand-drawn cel animation without providing an alternative locus for the uncanniness of cinemagraphic motion.
- [3] To be clear, I am arguing that *Coraline* progressively—even radically—reinterprets an age-old patriarchal trope of Western metaphysics. I am aware that other critics critique this film for its allegedly conservative, even reactionary gender representations. However, these scholars focus almost exclusively on the film's central character and her narrative without considering its animation or stereoscopic techniques. Thus they miss its important formal experiments with representation as such. See Halberstam; Myers.
- [4] This sequence is bawdy, but just bawdy enough, because *Coraline* cannot afford either a G or a PG-13 rating in the US. While G indicates a film is appropriate for "general audiences," PG-13 suggests that it may contain objectionable violence, sexual activity, or language. PG's "parental guidance" warning suggests that a film will be neither tediously tame nor offensively titillating, making it the most profitable and hence most desirable rating for many US filmmakers. While analyzing the corporate deal that would bring RealD to Regal, Cinemark, and AMC theaters across the US by 2009, *Variety* columnist Pamela McClintock cites a recent study by Nielsen Co. that discovered that "family-friendly, PG-rated films without profanity generated the best box office results." McClintock's article ties PG-ratings to RealD as the financial future of the studio system; indeed, eight of the top ten RealD movies have been rated PG or PG-13. See also *Box Office Mojo*'s article on "3D."
- [5] Barbara Creed offers perhaps the most cogent analysis of femininity, Freudian incorporation, and maternal monstrosity in *The Monstrous Feminine*, wherein she points out that many cultural narratives about subject-formation hinge on the defeat of a mother's consuming desire.
- [6] For more on window metaphors in Western visuality, see Friedberg.

- [7] He goes on to explain that "it only ever acts as the receptacle for everything, and it never comes to reassemble in any way whatsoever any of the things that enter it" (par. 50c).
- [8] Derrida writes, "To that end, it is necessary not to confuse it in a generality by properly attributing to it properties which would still be those of a determinate existent, one of the existents which it/she 'receives' or whose image it/she receives: for example, an existent of the female gender—and that is why the femininity of the mother or the nurse will never be attributed to it/her as a property, something of her own" (237).
- [9] She contends that "[chora] is an approximate name chosen for a general conception; there is no intention of suggesting a complete parallel with motherhood . . . by a remote symbolism, the nearest [its philosophers] could find, they indicate that Matter is sterile, not female to full effect, female in receptivity only, not in pregnancy" (179).
- [11] This is where my reading of *Coraline* departs from those of Judith Halberstam and Lindsay Myers, who consider *Coraline* a fundamentally conservative film. Halberstam argues that Selick's movie is "about the dangers of a world that is crafted in opposition to the natural world of family and the ordinary" (180). In fact, the Otherworld is crafted to reflect the ideology dominating Coraline's real world, the ideology she must learn to see past. Halberstam's reading ignores Coraline's growth over the course of the film; Coraline's adventures in the Otherworld teach her to reject the heteronomativity she thought she wanted and to value community as much as her own ego-satisfaction.
- [12] Adrienne Foreman draws our attention to a third, more problematic use of racialized imagery in *Coraline*, namely the mystical black cat voiced by Keith David. Foreman suggests that "the cat is racialized in his position as well as his voice" because he plays the role of "the magic negro" whose supernatural powers help the white protagonists achieve her goals (12). The cat is the first character to see through the Beldamn's tricks, suggesting perhaps the crucial role race needs to play in our understadning of politicized regimes of vision.



3.4 Splitting the Atom: Post-Cinematic Articulations of Sound and Vision

BY STEVEN SHAVIRO

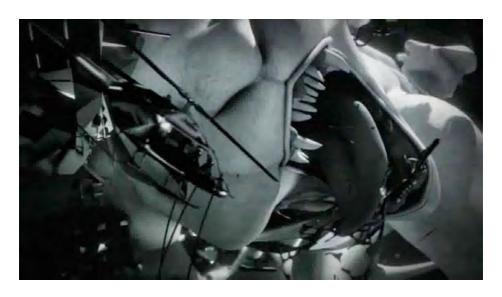


Figure 0 – Massive Attack, "Splitting the Atom" (Edouard Salier, 2009)

In the past few decades, something has happened to the way that we engage with sounds and images. There has been a change in audiovisual media. Electronic technologies have replaced mechanical ones, and analog forms of coding, storage, and transmission have given way to digital ones. These developments are correlated with new ways of seeing and hearing, and of combining seeing and hearing. We have contracted new habits, and entertained new expectations. A new audiovisual aesthetic is now emerging. In what follows, I attempt to describe this new aesthetic, to speculate about its possible causes, and to work through its potential implications.

1. The Audiovisual Contract



Figure 1 – DJ Snake & Lil John, "Turn Down for What" (Daniel Scheinert & Daniel Kwan, 2014)

During the middle third of the twentieth century, sound cinema established what Michel Chion calls "the audiovisual contract": a basic paradigm for the relationship between sounds and moving images. In both classical

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and modern cinema, sound brings "added value" to the image: "a sound enriches a given image" in such a way that it seems to us as if the added "information or expression" were "already contained in the image itself" (5). That is to say, cinema sound is *supplemental*, precisely in Jacques Derrida's sense of this word: "an *addition* [that] comes to *make up for* a deficiency . . . to compensate for a primordial non-self-presence" (lxxi). We rarely pay attention to film sound in and of itself; we always regard it as secondary to the images of the film. And yet it turns out, again and again, that sound endows those images with a potency, a meaning, and a seeming self-sufficiency, that they never could have established on their own. "Added value," Chion says, "is what gives the (eminently incorrect) impression that sound is unnecessary, that sound merely duplicates a meaning which in reality it brings about" (5).

It can be plausibly argued that this was already the case, through a sort of anticipation, even in the era of silent film. As Mary Ann Doane suggests, silent film was understood even in its own time "as incomplete, as lacking speech" (33). The missing voice plays a crucial role in silent film; for, denied any direct expression, it "reemerges in gestures and the contortions of the face—it is spread over the body of the actor" (Doane 33). In this way, speech already plays a supplemental role in cinema from the very beginning; by its very absence, it underwrites the seeming autonomy of moving visual images. In addition, most silent films were shown with live musical accompaniment. Chion discusses at length the way that soundtrack music and ambient noises temporalize the sound film, giving it a sense of forward movement, and of duration (13-21). But musical accompaniment already performs this service for silent film. (Indeed, most "silent" films are excruciatingly difficult to watch in actual silence). We can conclude from all this that the audiovisual contract was already in effect, to a large extent, even in the silent era. When the talkies finally arrived, sound had a place marked out for it. It was already doomed to be supplemental. It immediately functioned—as Deleuze puts it, citing and extending Chion—not as an independent sensorial source, but rather "as a new dimension of the visual image, a new component" (*Cinema 2* 226).

Mainstream cinema since the talkies has generally synchronized sound to image—as so many film theorists have noted and lamented. Despite the fact that sounds and images are recorded on separate devices, and that many sounds are added in postproduction, the dominant tendency has always been to create the illusion that the image track and the soundtrack coincide naturally. "The voice must be anchored by a given body," and "the body must be anchored in a given space" (Doane 36). Even non-diegetic soundtrack music is naturalized; for the role of the soundtrack's "unheard melodies" is to blend seamlessly into the visual action, and thereby subliminally instruct us in how to understand and feel the images (Gorbman). This demand for naturalism is the basis for sound's traditionally supplemental role in the movies.

Of course, every dominant practice inspires a counter-practice. The illusionistic synchronization of sound to image has long been opposed by radical filmmakers and film theorists. Already in 1928, Eisenstein denounced the "adhesion" of sound to image in Hollywood film, and demanded instead "a contrapuntal use of sound... directed along the line of its distinct non-synchronization with the visual images" (258). Eisenstein was never able to put his ideas about sound montage into practice; but, starting in the 1960s, directors like Jean-Luc Godard, Marguerite Duras, and Jean-Marie Straub and Danièle Huillet experimented with separating sound from image, and giving sound its own autonomy as a source of perceptions and of information. They demonstrated the arbitrariness of synchronization, and explored the possibilities of setting sounds and images free from one another, or even directly against one another. As Deleuze puts it, in the films of these directors "talking and sound cease to be components of the visual image; the visual and the sound become two autonomous components of an audio-visual image, or better, two heautonomous images" (Deleuze, Cinema 2 259).[1]

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I do not wish to minimize the importance of these dialectical explorations. But we should not exaggerate their novelty either. Fundamentally, the films of Godard, Duras, and Straub/Huillet still belong to the traditional cinematic regime in which images are primary, and sound only provides a supplemental added value. Modernist films may well call attention to the arbitrariness of soundimage relations, instead of dissimulating this arbitrariness. But these films do not actually alter the terms of the underlying audiovisual contract. In positing sound as an independent "image," and making the role of sound (as it were) "visible," they point up a certain way that cinema functions—but they do not thereby actually change this mode of functioning.

This is part of the general malaise of modernism. Twentieth-century aesthetics grossly overestimated the efficacy, and the importance, of alienation-effects, self-reflexive deconstructions, and other such demystifying gestures. Aesthetically speaking, there is nothing wrong with these gestures; they are often quite beautiful and powerful. I am second to no one in my admiration for Two or Three Things I Know About Her and India Song. But we should not deceive ourselves into thinking that these films somehow escape the paradigms whose mechanisms they disclose and reflect upon. They still largely adhere to the audiovisual contract—as Chion explicitly notes in the case of *India* Song, where "the sounds of the film congregate around the image they do not inhabit, like flies on a window pane" (158). The audiovisual contract allows both for the seamless combination of sounds and images, and for their more or less violent disjunction. Sound can add value to a visual presentation, Chion says, "either all on its own or by discrepancies between it and the image" (5). The sound fulfills its supplemental function either way, energizing the images while remaining secondary to them.

2. From Film to Video



Figure 2 – Rihanna, "Rude Boy" (Melina Matsoukas, 2010)

In recent years, however, post-cinematic media have altered the terms of the familiar audiovisual contract. [2] Today, audiovisual forms no longer operate in the same ways that they used to. "In the cinema," Chion says, "everything passes through an image"; but television and video work instead by "short-circuiting the visual" (158). The technological transformations from mechanical to electronic modes of reproduction, and from analog to digital media, have accomplished what avant-garde cinematic practices could not: they have altered the balance between images and sounds, and instituted a new economy of the senses. The new media forms have affected what Marshall McLuhan (taking the term from William Blake) calls the "ratio of the senses." For McLuhan, new media always "alter sense ratios or patterns of perception" (McLuhan 18). Indeed, "any invention or technology is an extension or self-amputation of our physical bodies, and such extension also demands new ratios or

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new equilibriums among the other organs and extensions of the body" (45). When media change, our sensorial experiences also change. Even our bodies are altered—extended or "amputated"—as we activate new potentialities, and let older ones atrophy.

Specifically, McLuhan claims that, as mechanical and industrial technologies give way to electronic ones, we move away from a world defined by "segmentation and fragmentation," and into "a brand new world of allatonceness." (McLuhan 176; McLuhan and Fiore 63). Mechanical technologies, from Gutenberg's printing press to Ford's assembly line, broke down all processes into their smallest components, and arranged these components in a strict linear and sequential order. But electronic technologies invert this tendency, creating patterns and fields in which processes and their elements happen all together.

This transition also entails a reordering of the senses. When we leave mechanical technologies behind, we move away from a world that gives itself to the eye, and that is organized around the laws of Renaissance perspective (McLuhan and Fiore 53). We move instead into a world that no longer privileges sight: "an acoustic, horizonless, boundless, olfactory space" in which "purely visual means of apprehending the world are no longer possible." (McLuhan and Fiore 57; 63). Of course, this doesn't mean that we will stop reading words and looking at images.[3] But however much time we spend today looking at multiple screens, we can no longer privilege the model of a disembodied eye, detached from, and exerting mastery over, all it sees. Electronic media foster "audile-tactile perception," an interactive and intermodal form of sensibility, no longer centered upon the eye (McLuhan 45). This is one reason why video is significantly different from film, even when we watch movies on our video devices. Walter Benjamin famously wrote that "it is another nature which speaks to the camera as compared to the eye. . . . It is through the camera that we first discover the optical unconscious" (266). But when cinematic mechanical reproduction is displaced by video-based electronic reproduction, such ocularcentrism is no longer valid. The sound recorder becomes as important as the camera. We discover, not an optical unconscious, but a thoroughly audiovisual one.

Of course, this change is not thoroughgoing or total. For one thing, the transformation of media forms is still in process. For another, new media and new sensorial habits do not usually obliterate older ones, but tend instead to be layered on top of them. For instance, very few people use typewriters any longer; but computer keyboards continue to be modeled after typewriter keyboards. Similarly, lots of people still go to the movies; and lots of newer video and digital moving-image works continue to be modeled after the movies. Traditional movies continue to be made, even as they increasingly rely upon post-cinematic (electronic and digital) technologies for production, distribution, and exhibition. In both contemporary Hollywood films and contemporary art films, sound still often functions as it used to, providing added value for the moving images.

Nevertheless, electronic media work quite differently than the movies did. Video and television tend to bring sound into greater prominence. Chion goes so far as to suggest that television is basically "illustrated radio," in which "sound, mainly the sound of speech, is always foremost. Never offscreen, sound is always *there*, in its place, and does not need the image to be identified" (157). In these electronic media, the soundtrack takes the initiative, and establishes meaning and continuity. The televisual image, on the other hand, "is nothing more than an *extra image*," providing added value, and supplementing the sound (158). Images now provide an uncanny surplus, subliminally guiding the ways that we interpret a foregrounded soundtrack. In the passage from cinema to television and video, therefore, audiovisual relations are completely inverted.

Chion also argues that electronic scanning, the technological basis of television and video, changes the nature of visual images themselves.

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Where cinema "rarely engages with changing speeds and stop-action," video does this frequently and easily. "Film may have movement *in* the image"; but "the video image, born from scanning, *is* pure movement" (162). The intrinsic "lightness" of video equipment replaces the "heaviness" of the cinematic apparatus (163). All this leads to yet more paradoxical inversions. For "the rapidity and lability of the video image" work to "bring [it] closer to the eminently rapid element that is text" (163). There is a certain "visual fluttering" in video, a speeding up that makes it into "visible stuff to listen to, to decode, like an utterance" (163). This means that "everything involving sound in film—the smallest vibrations, fluidity, perpetual mobility—is already located in the video image" as well (163). In other words, where classical cinema subordinated sound to image, and modernist cinema made sound into a new sort of image, in television and video visual images tend rather to approach the condition of sound.

3. From Analog to Digital



Figure 3 – Rihanna, "You Da One" (Melina Matsoukas, 2011)

The ratio of the senses—the balance between eye and ear, or between images and sounds—has also been altered by the massive shift, over the course of the last two decades, from analog to digital media. Digitization undermines the traditional hierarchy of the senses, in which sight is ranked above hearing. On a basic ontological level, digital video consists in multiple inputs, all of which, regardless of source, are translated into, and stored in the form of, the same binary code. This means that there is no fundamental difference, on the level of raw data, between transcoded visual images and transcoded sounds. Digital processing treats them both in the same way. Digitized sound sources and digitized image sources now constitute a plurality without intrinsic hierarchy. They can be altered, articulated, and combined in numerous ways. The mixing or compositing of multiple images and sounds allows for new kinds of juxtaposition and rhythmic organization: effects that were impossible in pre-digital film and television. These combinations may even work on the human sensorium in novel ways, arousing synesthetic and intermodal sensory experiences. Digital technologies thus appeal to—and also arouse, manipulate, and exploit—the fundamental *plasticity* of our brains (Malabou). They can do this because, as McLuhan says, they do not just exteriorize one or another human faculty, but constitute "an extension," beyond ourselves, "of the central nervous system" in its entirety (McLuhan and Fiore 40).

Digitization reduces sounds and images alike to the status of *data* or *information*. Images and sounds are captured and sampled, torn out of their original contexts, and rendered in the form of discrete, atomistic components. Additional components, with no analog sources at all, may also be synthesized at will. All these components, encoded as bits of information, can then be processed and recombined in new and unexpected ways, and then re-presented to our senses. In their digital form, no source or component can be privileged over any other. Digital data conform to what Manuel DeLanda calls a *flat ontology*: one that is without hierarchy, "made exclusively of unique, singular individuals, differing in spatio-temporal scale but not in ontological status" (47).

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Digital information is organized according to what Lev Manovich calls a *database logic*: "new media objects do not tell stories; they do not have a beginning or end; in fact, they do not have any development, thematically, formally, or otherwise that would organize their elements into a sequence. Instead, they are collections of individual items, with every item possessing the same significance as any other" (218).

Strictly speaking, Manovich's point is not that narrative ceases to exist in digital media, but that its role is secondary and derivative. All the elements deployed in the course of a narrative must first be present simultaneously in the database. The database therefore pre-defines a *field of possibilities* within which all conceivable narrative elements are already contained. And this is why, "regardless of whether new media objects present themselves as linear narratives, interactive narratives, databases, or something else, underneath, on the level of material organization, they are all databases" (228). The temporal unfolding of narrative is subordinated to the permutation and recombination of elements in a synchronic structure.

This structural logic of the database has several crucial consequences. For one thing, digital sampling and coding takes precedence over sensuous presence. Not only do all sounds and images have equal status; they are also all subordinated to the informational structure in which they are stored. Images and sounds are stripped of their sensuous particularity, and abstracted into a list of quantitative parameters for each pixel or slice of sound. These parameters do not "represent" the sounds and images to which they refer, so much as they are instructions, or recipes, for reproducing them. As a result, sounds and images are not fixed once and for all, but can be made subject to an indefinite process of tweaking and modulation. In addition, sounds and images can be retrieved at will, in any order or combination. Even in the case of older media forms like classic films, digital technologies allow us to speed them up or slow them down, to jump discontinuously from one point

in their temporal flow to another, or even—as Laura Mulvey has recently emphasized—to halt them entirely, in order to linger over individual movie frames. Databases allow in this way for random access, because their underlying order is simultaneous and spatial. In digital media, time becomes malleable and manageable; Bergson would say that time has been spatialized.

4. Out of Time and Into Space



Figure 4 – Massive Attack, "Splitting the Atom" (Edouard Salier, 2009)

The movement from narrative organization to database logic is just one aspect of a much broader cultural shift. Along with the transitions from cinema to video, and from analog technologies to digital ones, we have moved (in William Burroughs's phrase) "out of time and into space" (158). The modernist ethos of duration and long-term, historical memory has given way to an ethos of short-term memory and "real-time" instantaneity. This shift has been widely noted by social and cultural theorists. Already in the 1970s, Daniel Bell argued that "the organization of space . . . has become the primary aesthetic problem of mid-twentieth-century culture, as the problem of time . . . was the primary aesthetic concern of the first decades of this century" (107).

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Fredric Jameson's early-1980s reading of "the cultural logic of late capitalism" sees our culture as being "increasingly dominated by space and spatial logic"; as a result, "genuine historicity" becomes unthinkable, and we must turn instead to a project of "cognitive mapping" in order to grasp "the bewildering new world space of late or multinational capital" (Jameson 25; 19; 52; 6). More recently, in his survey of turn-of-thecentury globalization, Manuel Castells has argued that "space organizes time in the network society" (407).

Any audiovisual aesthetics must come to terms with this new social logic of spatialization. How do relations between sound and image change when we move out of time and into space? In the first place, it is evident that images are predominantly spatial, whereas sounds are irreducibly temporal. You can freeze the flow of moving images in order to extract a still, but you cannot make a "still" of a sound. For even the smallest slice of sound implies a certain temporal thickness. Chion says that "the ear . . . listens in brief slices, and what it perceives or remembers *already* consists in short syntheses of two or three seconds of the sound as it evolves" (12). These syntheses correspond to what William James famously called the *specious present*:

The practically cognized present is no knife-edge, but a saddle-back, with a certain breadth of its own on which we sit perched, and from which we look in two directions into time. The unit of composition of our perception of time is a *duration*. . . . We seem to feel the interval of time as a whole, with its two ends embedded in it. (574)

Such a *duration-block*, "varying in length from a few seconds to probably not more than a minute," constitutes our "original intuition of time" (James 603).

Chion suggests, along these lines, "that everything spatial in a film, in

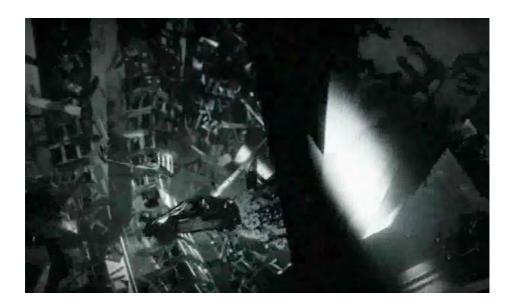
terms of image as well as sound, is ultimately encoded into a so-called visual impression, and everything which is *temporal*, including elements reaching us via the eye, registers as an auditory impression" (136).[4] Sound has the power to temporalize an otherwise static flow of cinematic images, precisely because "sound by its very nature necessarily implies a displacement or agitation, however minimal" (9-10). The logic of spatialization would therefore seem to imply a media regime in which images were dominant over sounds.

However, the fact that hearing is organized into "brief slices," or discrete blocks of duration, means that, according to Chion, hearing is in fact atomized, rather than continuous (12). William James similarly writes of the "discrete flow" of our perception of time, or the "discontinuous succession" of our perceptions of the specious present (James 585; 599). Many distinct sounds may overlap in each thick slice of time. In contrast, images cannot be added together, or thickened, in this way. We can easily hear multiple sounds layered on top of one another, while images superimposed upon one another are blurred to the point of illegibility. In addition, cinematic images imply a certain linearity, and hence succession, because they are always localized in terms of place and distance. You have to look in a certain direction to see a particular image. As Chion puts it, cinema "has just one place for images," which are always confined within the frame (67). Sound, however, frees us from this confinement; "for sound there is neither frame nor preexisting container" (67). Although sound can have a source, it doesn't have a *location*. It may *come from* a particular place, but it entirely fills the space in which it is heard (69).

By entirely filling space, sound subverts the linear, sequential order of visual narrative, and lends itself to the multiplicity of the spatialized database aesthetic. McLuhan always associates the predominance of sound with simultaneity, allover patterns, and "information" as the "technological extension of consciousness" (McLuhan 57). In acoustic

space, McLuhan says, "Being is multidimensional and environmental and admits of no point of view" (McLuhan and McLuhan 59). Chion similarly notes that sound promotes the effects of simultaneity and multiplicity in post-cinematic media. [5] In music video, for instance, "the . . . image is fully liberated from the linearity normally imposed by sound" (167). This means that the music video's "fast montage," or "rapid succession of single images," comes to function in a way that "closely resembles the polyphonic simultaneity of sound or music" (167). Precisely because the music video's soundtrack is already given in advance, we are offered "a joyous rhetoric of images" that "liberates the eye" (166). In cinema, sound temporalizes the image; but in post-cinematic, electronic, and increasingly digital forms like music video, the sound works to release images from the demands of linear, narrative temporality.

5. The Death of Cinema



 $Figure\ 5-Massive\ Attack, "Splitting\ the\ Atom"\ (Edouard\ Salier,\ 2009)$

The movement out of time and into space has crucial ramifications for cinema as a time-bound art. In his recent, beautifully elegiac book *The* Virtual Life of Film, David Rodowick mourns what he sees as the death of cinema at the hands of electronic and digital technologies. Rodowick argues that cinematic experience is grounded in the closely related "automatisms" of (Bazinian) indexicality and (Bergsonian) duration (41). In both classical and modernist film, every cinematic space "expresses a causal and counterfactually dependent relation with the past as a unique and nonrepeatable duration" (67). That is to say, the space of the film is indexically grounded in a particular span of time past, which it preserves and revivifies. Analog film "always returns us to a past world, a world of matter and existence"; and it thereby allows us to feel "an experience of time in duration" (121). Moreover, cinematic space is actively assembled through the time-dependent processes of camera movement and montage. For both these reasons, cinema presents to us the pastness, and the endurance in time, of actual things.

But according to Rodowick, digital media no longer do this. Where analog photography and cinematography preserved the traces of a preexisting, profilmic reality, digital media efface these traces, by translating them into an arbitrary code. [6] Without the warrant of analog cinema's indexical grounding, Rodowick says, digital moving-image media are unable to express duration. [7] They are only able to transmit "the expression of change in the present as opposed to the present witnessing of past durations" (136). Indeed, in digital works not only is time undone, but even "space no longer has continuity and duration," since "any definable parameter of the image can be altered with respect to value and position" (169). In sum, for Rodowick, "nothing *moves*, nothing endures in a digitally composed world. The impression of movement is really just an impression . . . the sense of time as *la durée* gives way to simple duration or to the 'real time' of a continuous present" (171).

I do not think that Rodowick is wrong to suggest that time plays a different role in electronic and digital media than it did in the cinema. I take it as symptomatic, however, that Rodowick only discusses cinema as a visual medium; his book has almost nothing to say about sound. This is a problem; for even in the indexical, realist cinema valued by Bazin, Cavell, and Rodowick, sounds work quite differently than images do. Images may be understood as indexical traces, or as perceptual evidence of a former presence, [8] but sounds cannot be conceived in this way (Rodowick Virtual 116). This is because of sound's inability to be contained. Even the simplest and clearest sounds resonate far beyond the bodies or objects that have produced them, and thus can easily be separated from their origins. Also, as Chion reminds us, even the most direct or naturalistic cinematic sound is rendered rather than reproduced (109-17). For these reasons, cinematic sounds can never be indexical traces, and warrants of profilmic reality, in the way that analog cinematic images are.

Chion notes that even classical sound films are filled with "invisible voices," or with what he calls the *acousmêtre*: a sound source that is "neither inside nor outside the image," neither onscreen nor off, but rather haunts the image without being manifested within it (127; 129). Even when sound serves only as "added value," its phantasmatic effects complicate Rodowick's sense of "an image expressive of a unique duration that perseveres in time" (*Virtual* 117). With sound's increasing prominence in electronic and digital media, the question of audiovisual temporality becomes even more convoluted and complicated. Post-cinematic media may not express Bergsonian or Proustian duration, just as they do not lay claim to indexical realism; but their "spatialized" temporalities may well be more diverse and fertile than Rodowick is willing to allow for.

6. Splitting the Atom



Figure 6 – Massive Attack, "Splitting the Atom" (Edouard Salier, 2009)

Keeping all these considerations in mind, I would now like to examine audiovisual and space-time relations in one particular recent media object: Edouard Salier's music video for Massive Attack's song "Splitting the Atom," from their 2010 album *Heligoland*. "Splitting the Atom" is a trancey and mournful song, with a strong reggae-inflected beat that is just a bit too slow to dance to. The sparse, and mostly synthesized, instrumentation is dominated by an organ-like keyboard sound, whose repetitive minor-key chords reinforce the clap-like beat of the percussion. A second, more dissonant synthesizer line plays in the upper registers. The skeletal melody is carried by male vocals that scarcely go above a whisper. Massive Attack co-leader Daddy G sings the first two verses in his extraordinary deep bass voice; Horace Andy's quivering baritone sings the later verses. The song's lyrics are atmospheric, opaque, and generally bleak: "The summer's gone before you know / The muffled drums of relentless flow/ You're looking at stars that give you vertigo /

The sun's still burning and dust will blow. . . . "

Overall, "Splitting the Atom" is a contemplative, melancholy work. Its steady pulse implies stasis, despite the steadily increasing chaos of the dissonant upper synthesizer register. The song refuses both the dynamic churn of polyrhythmic dance music, and the forward movement of anything that has a narrative. The sound just drifts; it never reaches a climax, and it never really gets anywhere. Indeed, one reviewer complained that "the song doesn't move toward anything; it just plods quietly along for five minutes" (Breihan). I would argue that, while this is descriptively correct, it is not a bug, but a feature. "Splitting the Atom" is profoundly autumnal. It stands on the verge of incipient change, but without actually yielding to it. It seems to be poised at the moment of impending death, barely holding on in the face of oblivion. "It's easy, / Don't let it go," the singers exhort us in the chorus; "Don't lose it." But despite this suggestion of resistance, the overall sound of the song seems already resigned to loss. "Splitting the Atom" is dedicated to endurance in the face of pain, or simply to maintaining oneself in place—as if this were the best that we could hope for.

Salier's video does not attempt, in any direct way, to illustrate the song's lyrics, or even to track its musical flow. But in its own way, it responds to the song's dampened affect, its bleak vision, and its sense of stasis before catastrophe. The video is entirely computer-generated, and almost entirely in grayscale. It implies a narrative, without explicitly presenting one. And although the video simulates camera movement, the space through which the virtual camera seems to move is itself frozen in time, motionless. Something terrible has just happened, or is on the verge of happening; but we cannot tell exactly what it is. The director's own description of the video is cryptic in the extreme:

The fixed moment of the catastrophe. The instant the atom bursts on the beast, the world freezes into a vitrified chaos. And we go through the slick and glistening disaster of a humanity in distress. Man or beast? The responsibility of this chaos is still to be determined. (van Zon)

The video consists of a long single take: a slow virtual crane shot, passing over a bleak and dense landscape. The (simulated) camera moves freely in three dimensions. Sometimes it tracks forward; at other times it pivots sideways, or spirals around slowly. At first, we pass over fracture lines running across a smooth surface, in which vague, blurry shapes are reflected. Then the camera rises, and swoops over a series of abstract geometric forms: multifaceted mineral crystals, or perhaps the polygons that are basic to 3D modeling. But shortly, the camera moves into an urban scene; the polyhedral crystals now congeal into the forms of buildings. We see heavy traffic on skyscraper-lined streets. Human figures are posed in upper-floor apartment windows, having sex or watching the traffic below. The camera then moves through a series of plazas and open squares. Here there are more human figures milling about; often, their forms are not completely rendered, but appear as masses of polyhedrons. There are also robots firing what seem to be huge laser guns.

As the song continues, the urban space through which the camera passes becomes increasingly dense; it is jammed with closely-packed tall buildings, and crisscrossed by overpasses. There is also a lot of wreckage, suspended motionless in mid-air: falling bodies and vehicles, and shards of debris. Nothing moves except for the camera itself, as it swings and swirls around the wreckage. Stabs of light occasionally penetrate the murk. Eventually the camera approaches what seems to be an enormous organic form. The camera circles and pans around this form, and then moves back away from it. From a distance, the form looks vaguely catlike, with a rounded body, uncertain limbs, and whiskers jutting out just above an open mouth filled with gigantic teeth. It is apparently dead, and surrounded by devastation. Is this the "beast" of which the director speaks? Perhaps the monster has attacked the city, though we do not

know for sure. In any case, the video seems to have progressed from the inert to the mechanical to the organic, from sharp angles to curves, and from abstract forms to more concrete ones.

Twice in the course of the video, there is a burst of bright red light. This red is the only touch of color in "Splitting the Atom," which is otherwise composed entirely in shades of gray. The red first appears at around the 3:56 mark, where it seems to be reflected in, and to glimmer out from, the dead monster's eye. But the video ends with a second red flash; this time it originates in the eye or head of a distant, skeletal human figure. It glistens there, and then explodes outward to fill the screen. This pulse of red is the last image that we see, aside from the white-letters-on-black of the final credits. Strictly speaking, the explosion of red light is the only event in the course of the video, the only thing that takes time and actually happens. Its brief flashing across the screen is the only movement in the entire video that cannot be attributed to the implicit motion of the virtual camera. The flash seems like a nuclear explosion; it obliterates everything that has come before. Perhaps this is the "catastrophe" of which the director speaks, the "instant" in which "the atom bursts." In any case, the video is restricted to the "fixed moment," the "vitrified chaos," of the explosion's advent. We see the devastation, but not what leads up to it, nor what comes after. Just as the song refuses us any sense of progression, so the video suspends time in order to explore the space of imminent disaster.

7. Movies vs. 3D Modeling



Figure 7 – Korn, "Freak on a Leash" (Todd McFarlane, 1999)

The video for "Splitting the Atom," like the song on which it is based, is five minutes and nineteen seconds long. But the time that passes within the video's diegesis is close to zero. "Splitting the Atom" explores a landscape that has been immobilized, frozen at a single point in time. All motion is halted. People are poised in mid-action. Things have been blown up into little pieces; but the fragments hover in mid-air, never falling to the ground. Each object in the video suffers the fate of the arrow in Zeno's paradox: arrested in mid-flight, unable to reach its goal. The catastrophe here, like the disaster evoked by Maurice Blanchot, is one that never quite arrives. But this also means that, as Blanchot puts it, "the disaster is its imminence" (1). It is always impending, always about to arrive: which is to say that it never ceases arriving. This also means that the disaster is never over. It is like a trauma: we can never have done with it, and move on. "Splitting the Atom" places us within a heightened present moment; and yet this present seems disturbingly hollow—precisely because it does not, and cannot, pass.

But there is more to the haunted, imploded temporality of "Splitting the Atom." For Salier's computer-generated landscape—given all at once, in a single moment of time—is hardly unique. Similar stop-time and slow-time effects have become increasingly common in recent movies, videos, and computer games. What's noteworthy about these effects is that they are no longer produced by means of traditional cinematic techniques like slow motion and freeze frames. Instead, they rely upon computer-based three-dimensional modeling. This makes it possible to move around within, and freely explore, the space of the slowed or stilled image. The most famous and influential example of this is *Bullet Time*® in The Matrix (1999). The flight of a bullet shot from a gun is slowed down to such an extent that we can actually locate the bullet, like Zeno's arrow, at a particular point in space for every moment of its trajectory. At the same time, the camera circles around Neo (Keanu Reeves) as he dodges the bullets. Within the diegesis, Bullet Time® exemplifies Neo's superhuman powers. But for the audience, the effect is to undermine the "cinematographic illusion" of continuous movement (Deleuze, Cinema 1 1). Time is stopped, and the individual moment is isolated. The bullet or arrow is halted in mid-flight.

Bullet Time® is in fact achieved through the use of multiple cameras, deployed in a full circle around the action. Still images from these cameras are converted into individual movie frames; by choosing among these simultaneous images, the filmmakers are able, as Alexander Galloway puts it, "to freeze and rotate a scene within the stream of time," and to view the scene, at each moment, from any desired angle ("Tripartite" 14). In this way, Bullet Time® spatializes time. It undoes Bergson's "concrete flow of duration," analyzing it into a series of instantaneous stills (Bergson 62). Deleuze argues that, contrary to Bergson's own prejudices, "cinema does not give us an image to which movement is added, it immediately gives us a movement-image" (Deleuze, *Cinema 1* 2). That is to say, cinema is inherently Bergsonian, even though Bergson himself failed to recognize this. However, modeling techniques like Bullet Time®, in

contrast to traditional cinematic techniques, actually do succeed in reducing duration to "an immobile section + abstract movement," just as Bergson feared (Deleuze, *Cinema 1* 2). Reality is decomposed into a series of spatialized snapshots that are only secondarily put back into motion.

Fully computer-generated three-dimensional modeling systems—like the one used to create the "Splitting the Atom" video—go even further than Bullet Time®, as they allow us to move through the rendered space at will in any direction, and to take a view from any point within it. This means, not only that spatiality is unmoored from duration, but also that the presentation of space is no longer governed by, and no longer anchored to, any particular point of view. There is no longer any implicit ideal observer, as was the case in the whole tradition that started with Renaissance perspective and the camera obscura. There is no longer any such thing as a Kantian transcendental subject, for whom space would be the "form of outer sense," just as time would be the "form of inner sense." (Kant 80) More generally there can be no "metaphysical subject," defined as "a limit of the world," external to the "visual field" that it views (Wittgenstein 57). Three-dimensional rendering, as Galloway says, is fundamentally "anti-phenomenological," as it is not grounded in "the singular experiences of a central gazing subject or technical eye" ("Tripartite" 11).

8. A Post-Cinematic Ontology



Figure 8 – Rihanna, "What Now" (Darren Craig, Jonathan Craven, Jeff Nichols, 2013)

Galloway argues that cinema and three-dimensional modeling represent opposed "ontological systems," which radically differ in their origins, their presuppositions, and their effects ("Tripartite" 15). Cinema is primarily temporal, whereas modeling is primarily spatial: "time becomes the natural infrastructure of the cinematic image, while spatial representation and visual expression become variables. But with 'bullet time,' time becomes the variable, and space is withheld in synchrony" (13). The relation between the observer (or the camera) and the scene being observed is not the same in these two systems: "To create motion one must move the world and fix the camera, but to create three dimensionality one must move the camera and fix the world. . . . In the cinema, the scene turns around you, but in the computer you turn around the scene" (14). In short, these two technologies have diametrically opposed goals: "if the cinema aims to present a world, the computer aims to present a model. The former is primarily interested in movement,

while the latter is primarily interested in dimension" (14). Cinema seeks to capture and preserve duration, and thence both the persistence and the mutability of appearances; computer modeling rather seeks to grasp and reproduce the underlying structural conditions that generate and delimit all possible appearance.

Although three-dimensional modeling has become increasingly common in recent Hollywood movies, its fullest development comes in other, postcinematic media, and most notably in computer games. In The Matrix, Bullet Time® is integrated within, and ultimately works in the service of, cinematic action. As Galloway notes, even as "the time of the action is slowed or stopped . . . the time of the film continues to proceed" (Gaming 66). This means that however much the Bullet Time® sequences stand out by calling attention to themselves as "attractions," or spectacular special effects, they ultimately return us to the onward thrust of the narrative. But this is not the case with three-dimensional modeling in computer games. For games articulate space, and privilege space over time, in ways that films do not. The duration of a movie is preset. But most computer games do not have any fixed duration. They are organized, instead, around a series of tasks to fulfill, or a quantity of space to explore. They often contain optional elements, which a player is free either to take up or to ignore. To the extent that computer games still have linear narratives, they may have multiple endings; and even if there is only a single ending, getting there depends upon the vagaries of player input. The time it takes to play a game thus varies from session to session, and from player to player.

In other words, games take place in what Galloway calls "fully rendered, actionable space," which must already exist in advance of the player's entry into it (63). For Galloway, "game design explicitly requires the construction of a complete space in advance that is then exhaustively explorable without montage" (64, emphasis added). Gamespace may in fact be composed of many heterogeneous elements; but these elements are fused together without gaps or cuts. As Lev Manovich puts it, the

production of digital space involves

assembling together a number of elements to create a singular seamless object. . . . Where old media relied on montage, new media substitutes the aesthetics of continuity. A film cut is replaced by a digital morph or digital composite. (139; 143)

Gamespace requires the use of digital compositing in order to produce continuity; as Galloway says, "because the game designer cannot restrict the movement of the gamer, the complete play space must be rendered three-dimensionally in advance" (*Gaming* 64). Gamespace is therefore abstracted, modeled, and rendered, rather than—as is the usual case in cinema—constructed or revealed through the montage and juxtaposition of indexical fragments.

How does this all relate to "Splitting the Atom"? The video is more like a movie than like a game, in that it does not allow for any sort of user input or initiative; its presumptive audience is still the traditionally passive spectator-auditor of the cinema. [9] Nonetheless, "Splitting the Atom" does not engage in cinematic narration, and does not employ montage. Instead, it presents and explores an abstract, seamless virtual space that has been wholly rendered in advance. Insofar as it freezes time, the video works—in the spirit of Galloway's post-cinematic ontology—by moving the camera and fixing the world. In "Splitting the Atom," time is neither expressed through action (as in the films of Deleuze's movement-image), nor presented directly as a pure duration (as in the films of Deleuze's time-image). Rather, time is set aside as a dependent variable. To this extent, "Splitting the Atom" conforms to Galloway's post-cinematic ontology.

However, this conclusion only applies to the images of "Splitting the Atom," ignoring the music. Galloway, like Manovich and Rodowick, makes his argument in predominantly visual terms, and pays little attention to sound. It is crucial to Galloway's claims that "rendered, actionable space" is entirely reversible: you can move through it at will, or have the camera

"turn around the scene" in any direction. But even if this is the case for the space defined by the video images, it does not hold for the audio filling that space, or playing along with it. Chion reminds us that all sounds and noises, except for pure sine waves, are "oriented in time in a precise and irreversible manner. . . . Sounds are vectorized," in a way that visual images need not be (19). I have noted that the song "Splitting the Atom" is largely static, without narrative or climax; but it still has a single, linear direction in time. The song does not *progress* on the macro-levels of melody, harmony, and rhythm; but its notes are oriented on the micro-level, moment to moment, by unidirectional patterns of attack and decay, resonance and reverberation.

The ontology of audiovisual post-cinematic media is therefore more complicated than Galloway's model allows for. Time is indeed suspended, or spatialized, in the diegetic world of "Splitting the Atom." We are presented with a "fully rendered, actionable space" that must be presupposed as existing all at once. But despite the suspension of time within this space, it still takes time for the virtual camera to *explore* the space. Paradoxically, it still takes time to present to the spectator-auditor a space that is itself frozen in time. This time of exposition is a secondary and external time, defined not by the visuals, but by the "vectorized" soundtrack. Just as the song is not heard within the diegetic world of the video, so the virtual camera movement does not "take place," or have a place, within this world. Instead of time as "inner sense," we now have an exterior time, one entirely separate from the time-that-fails-to-pass within the video's rendered space. It's telling that (as I have already noted) the only actual event in the course of the video is the explosion at the end. For this violent red flashing does not take place within the video's rendered space; rather, it obliterates that space altogether. The absence of time is the imminence of catastrophe. Time is eliminated from the world of the video-and more generally, from the world of three-dimensional modeling, which is also the world of "late capitalism," or of the network.[10] But a certain sort of irreversible temporality returns anyway, acousmatically haunting

the space from which it has been banished. We might think of this, allegorically, as time's revenge upon space, and sound's revenge upon the image.

9. Conclusions



Figure 9 – Rihanna, "Rude Boy" (Melina Matsoukas, 2010)

"Splitting the Atom" is somewhat unusual among music videos, with its full-fledged three-dimensional modeling. But there are many other processes and special effects in current use in electronic and digital media that also work to generate new audiovisual relations.[11] For instance, consider the slitscan technique,[12] in which slices of successive frames are composited together, and put on screen simultaneously. The result is that the video's "timeline [is] spread across a spatial plane from left to right" (blankfist).[13] A slitscan video sequence looks something like a wipe, except that, instead of transitioning from one shot to another, it transitions from earlier to later segments of the same shot. In this way,

time is quite literally spatialized, smeared across the space of the screen. The image ripples and flows, and the sound is divided and multiplied into a series of fluttering echoes and anticipations, slightly out of phase with one another. [14] The result is almost synesthetic, as if the eyes were somehow hearing the images in front of it.

More generally, new audiovisual relations are even produced by music videos that use more common techniques, like "the stroboscopic effect of the rapid editing" described by Chion (166), and the manic compositing of images in a way that "openly presents the viewer with an apparent visual clash of different spaces" described by Manovich (150). Consider, for instance, Melina Matsoukas' video for Rihanna's "Rude Boy" (2010), with its overt two-dimensionality, its fast cuts, and its deployment of multiple cut-out images of the singer against brightly colored backgrounds of abstract patterns and graffiti scrawls. In this music video, as in so many others, we find what Chion calls "a joyous rhetoric of images," which "creates a sense of visual polyphony and even of simultaneity" (166). When time is spatialized, as it is here through the song's verse-and-chorus structure and insistently repetitive beats, images themselves are no longer linear, but enter into the configurations typical of McLuhan's acoustic space, with its "discontinuous and resonant mosaic of dynamic figure/ ground relationships" (McLuhan and McLuhan 40).

Beyond the movement-image that Deleuze ascribes to classical cinema, and the time-image (or pure duration, *un peu de temps à l'état pur*) that he ascribes to modernist cinema, we now encounter a third image of time (if we can still call it an "image"): the *extensive time*, or *hauntological time*, of post-cinematic audiovisual media. [15] In the last several decades, we have passed what McLuhan calls a "break boundary": a critical point "of reversal and of no return," when one medium transforms into another (38). We have moved out of time and into space, but the consequent spatialization of time need not have such bleak consequences (homogenization, mechanization, reification) as Bergson and Deleuze

both feared, and as film theorists like Rodowick still fear today. Instead, it may well be that postmodern spatialization permits a fully audiovisual medium "worthy of the name" to flourish as never before (141-56).

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Notes

- [1] As David Rodowick explains, the word "heautonomous," taken from Kant's Third Critique, "means that image and sound are distinct and incommensurable yet complementary" (*Gilles Deleuze's Time Machine* 145). Heautonomous components are not entirely autonomous from one another, but neither are they inextricably determined by one another.
- [2] I discuss the question of the "post-cinematic" at greater length in *Post-Cinematic Affect*.
- [3] Nor does this necessarily mean that we are about to enter an age of olfactory cinema and olfactory computing. We should not entirely dismiss the notion of olfactory media, however. Recall, for instance, the analog smell technology, Odorama®, in John Waters's 1981 film *Polyester*. More recently, there has been at least some research into the possibilities of digital smell synthesis (Platt).
- [4] Chion warns that this formulation "might be an oversimplification"; but he nonetheless maintains that it is generally valid.
- [5] Some theorists argue for the existence of a "point of audition," as the

sonic analogue of a visual point of view. But Chion warns us that "the notion of a point of audition is a particularly tricky and ambiguous one . . . it is not often possible to speak of a point of audition in the sense of a precise position in space, but rather of a place of audition or even a zone of audition" (89-91). Furthermore, for us to associate a sound with a particular on-screen auditor, a "visual representation of a character in closeup" is needed in order to enforce this identification (91). For these reasons, sound does not allow for a specific point of audition, in the way that visual imagery does for a point of view.

- [6] Rodowick emphasizes the "fundamental separation of inputs and outputs" in digital media, and the way that "digital acquisition quantifies the world as manipulable series of numbers" (113; 116). In partial opposition to Rodowick, I discuss the question of indexicality in digital media at greater length in my article "Emotion Capture: Affect in Digital Film."
- [7] Rodowick three times cites Babette Mangolte's question, "Why is it difficult for the digital image to communicate duration?" (53; 163; 164).
- [8] Rodowick is citing Roland Barthes here.
- [9] This statement needs to be qualified slightly, because "Splitting the Atom" is not made to be viewed, and for the most part is not viewed, in a movie theater. Most people see it on a home video monitor or computer screen. However, these days we often tend to watch movies on home video monitors or computer screens as well. The important point is that "Splitting the Atom," like most movies, is non-interactive, and does not feature any user controls beyond the basic ones built into any DVD player or computer video program.
- [10] These are large generalizations, which I evidently lack the space to explain, let alone justify, here. I refer the reader to the extended discussion of these matters in my books *Connected* and *Post-Cinematic Affect*.
- [11] Many of these effects, along with things like rotoscoping and three-dimensional modeling, in fact precede the development of digital technology. But digital processing makes them so much easier to accomplish, that in the last twenty years or so they have moved from

being difficult and infrequently-used curiosities to accessible options in any digital editor's toolbox.

[12] This technique is described in great detail in Wikipedia, "Slit-scan Photography." See also Levi.

[13] This page also links to a video in which a scene from *Singin' in the Rain* is transformed by the slitscan technique.

[14] Strictly speaking, slitscan is an image-processing technique. But if the sound is broken into small units, each of which corresponds to a "specious present" or atom of attention, and these are then coordinated with the slitscan-processed flow of images, this will lead to the auditory results that I have described.

[15] I suggest these names only as stopgaps; perhaps better ones can be found. *Extensive time* refers to the way that time is spatialized, only to return at the very heart of the new configurations of space. *Hauntological time* refers to the way that other, revoked temporalities return in the suspension of the present. Both of these names have resonances in the work of Jacques Derrida, and in particular in Martin Hägglund's recent reading of temporality in Derrida.



4.1 Demon Debt: PARANORMAL ACTIVITY as Recessionary Post-Cinematic Allegory

BY JULIA LEYDA

One of the most striking things about watching the horror movie Paranormal Activity nowadays is the way it portrays the American home just before the housing bubble burst, at the height of what President Bush called "the ownership society." The film is set in September and October of 2006, the same year it was shot on a shoestring budget by writer, director, cinematographer, and editor Oren Peli, but it only gained wide release in 2009, when it was picked up by Paramount-DreamWorks. That year there were 2.8 million foreclosure filings and unemployment reached 10% in the United States (Adler). Made just before the real estate crash and released two years after, at the height of the credit crisis, the movie centers on a young California couple in their vast new house. Things begin to go wrong for them when, eerily foreshadowing the housing crisis, a demon begins to toy with them, trying to collect on an ancestor's Faustian bargain. The demon-creditor in Paranormal Activity resonates within the movie's economic milieu, calling in its debt at the expense of all other concerns; the affective experience of this horror movie aptly foreshadows the creditcrisis 'structure of feeling'[1] of insecurity, helplessness, and dread in the face of enforced compliance with an economic contract.

To be clear, the *Paranormal Activity* franchise is not explicitly "about" the neoliberal condition of debtor capitalism; there is no indication that the filmmaker consciously constructed it as an allegory, or, indeed, with any intended message beyond its overt plot about a demon terrorizing a young couple. However, given that the first film was made in the last year of the housing boom, and that its wide release came at the height of the credit crisis, such a cultural interpretation is actually unavoidable despite film critic Dana Stevens's self-deprecating comment that her reading of the first film, as a "parable about the credit crisis" that is "all about spiritual and ethical debts coming due," is "possibly crackpot." I had the same interpretation of the film before reading her review, and I contend that it is decidedly not crackpot. Indeed, while some films explicitly take on the horrors of the housing crisis—such as Sam Raimi's Drag Me To Hell, which premiered in early 2009—and the subsequent films in this franchise were made during the crisis, the first Paranormal movie's housing crisis subtext is largely unintended and all the more telling for that reason.

This chapter reads the *Paranormal Activity* franchise as an ongoing post-cinematic allegory of debtor capitalism, attending to three levels of analysis and the ways in which they interpenetrate one another. To begin, I examine the ways in which gender, race, and class coalesce within the domestic space of the 21st-century American home. Second, a formal analysis of the movies' post-cinematic aesthetic calls attention to their cinematography and editing, which both portray and employ digital technologies that have become commonplace in most American homes, as well as crucial in the global circulation of information and capital. The final section looks at the incorporation of immaterial labor in the marketing of the first film in particular, through transmedia paratexts and engagement of horror fans' social media activity in the cultural production of the *Paranormal Activity* brand.

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Demon Domestic: 21st-Century Horror at Home

The first movie centers around Katie, an English major, and her partner Micah, a day trader: a young, white, middle-class couple who have just moved into what several reviewers call their "starter home," implying that it is the first in a series of houses that they will own over the course of their lives (see Solomons). The movie's action takes place exclusively in this house, producing a claustrophobic effect of isolation and imprisonment, in stark contrast to the idealized notion of the family home as a sign of stability and refuge from the outside world. The movie, shot entirely on Micah's home video camera (see Figure 1), documents the incidents of daily life and paranormal activity in the house that culminate in the demonpossessed Katie killing Micah.



Figure 1 – Micah admires himself and his new video camera when he isn't pestering Katie with it.

Paranormal Activity 2 was released one year later in 2010, when the US saw 2.9 million foreclosure filings and 9% unemployment. It, too, is set in

a family home in southern California in 2006: this movie tells the story of Katie's sister Kristi in parallel prequel mode, filling in gaps from the first movie and showing more of what happened beforehand (see Figure 2). In the course of the film, the sisters allude to unusual incidents from their childhood, as Katie tells Kristi about the strange things that have started happening in her new house (viewers who have seen the first film already know how the Katie and Micah situation will turn out). Salient facts also emerge as Kristi's stepdaughter Ali researches demonology online and deduces that one of Kristi's ancestors must have made a pact with a demon to deliver the family's next male child: Kristi's newborn son, Hunter. This movie, made up of home video and footage from a series of home security cameras, ends with the demon-possessed Katie killing Micah and fleeing their house (as we know from the first movie), then killing Kristi and husband Dan and running away with Hunter. Although I don't focus on them here, the two subsequent films, Paranormal Activity 3 and Paranormal Activity 4, show the two sisters in their childhood and involve other characters such as their parents and grandmother.



Figure 2 -The parallel prequel narrative in PARANORMAL ACTIVITY 2 assumes that we have seen the first film and reminds us of its ending.

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Tim Snelson points out that the last American boom in paranormal movies was during a similar moment of national decline, at the end of the recession- and inflation-plagued 1970s. Back then, anxieties about economic and social upheavals, including feminism and the sexual revolution as well as Watergate and the Vietnam War, fueled a cycle of possession and haunted house films such as The Exorcist (1973) and The Amityville Horror (1979). In the haunted house movies, families experienced hauntings that were place-bound to their homes: ancient burial grounds and gory crimes committed on the site in the past were discovered to be the causes of the paranormal torments those families underwent. These suffering families demonstrate Natasha Zaretsky's argument that in the crisis-ridden 1970s, "the family served as the symbol for the nation itself," as "both perpetrator and victim, as the site where the origins of national decline could be discovered and where the damages wrought by it could be assessed" (4). Families in 70s haunted house and possession films underwent agonizing paranormal experiences but, more often than not, survived intact and still together, reinscribing the value of the strong family in times of national crisis.

The *Paranormal Activity* movies are clearly postfeminist, fitting the representational regime of gender relations that coincided with the economic upturn of the 90s and featured a superficial nod to the gender equality for which 70s feminists fought, while at the same time deemphasizing economic equality, often removing women from the workplace, and centering on heterosexual relationships, domesticity, and consumerism (Negra 4). Made in the context of the housing bubble, the first movie is poignant in its prescience, introducing the fairly traditional young couple in their over-sized, anonymous-looking house surrounded by consumer goods, yet in the second movie, post-crash, we meet an extremely similar young couple in an unnervingly similar, yet even more gender-normative, domestic setting.

Horror movies in the 21st century have shown a marked tendency to appeal to female as well as male spectators. As Pamela Craig and Martin

Fradley point out, a hallmark of recent American horror cinema is an "overt courting of a female demographic which both refers back to and updates the proto-feminism of the slasher film's Final Girl from the late 1970s and early 1980s" (87). Unlike contemporary descendants of the solitary Final Girl figure, the lone female survivor of the conventional slasher horror film whom Carol Clover describes as "boyish" and "virginal" as well as competent and paranoid (204), Katie and Kristi conform to more stereotypically feminine roles: neither works outside the home, both usually defer to their male partners, and neither takes an aggressive role in eliminating the villain. Young adult viewers, whom the movie's marketing campaign directly targets (more on this below), might find it difficult to sympathize with passive women like Katie and Kristi whose partners disregard their wishes and advice about the demon, positioning them as postfeminist female horror movie leads rather than as more assertive and independent Final Girls. Interestingly, the teenaged girl characters with similar, androgynous names in the second and fourth films, Ali and Alex, take on important Final Girl characteristics even though they are not exactly virginal: they are independent, intelligent, and active, in contrast with the older and more gender-normative Katie and Kristi (see Figure 3).[2]

In their characterization of Katie and Kristi, these movies bear out what Diane Negra and Yvonne Tasker argue: that times of recession are also often times of gender retrenchment, when women's role in the family home is reinscribed in the face of unemployment and scarcity, as if "equality is a luxury that can no longer be afforded." In recessionary popular culture, women are more often cast in care-giving roles that emphasize their domestic resourcefulness and protectiveness; Katie and Kristi in the *Paranormal Activity* movies adopt maternal attitudes toward the men, in contrast to the men's childish behavior. Indeed, the first three films feature three heterosexual couples in which the women strive in different ways to protect their families within the domestic realm of the home, and in which the men consistently and defiantly behave in ways that endanger them all. Even in the third movie, set in the pre-recession 1980s, Dennis

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Figure 3 – Ali Rey, Kristi's stepdaughter, researches demons online in PARANORMAL ACTIVITY 2.

conceals videotaped evidence of the demon from his girlfriend, Katie and Kristi's mother Julie, because he doesn't want to frighten her, thus endangering the whole family. Thus, the first two *Paranormal* movies conform to Tim Snelson's argument that post-crash domestic horror "expose[s] the inequalities of recession-era households," while this "centering of housewives and mothers as the only defense against the (re)possession of the American home might ultimately act to reinforce the ideology of female domesticity." Giving their male partners the upper hand in domestic and economic arrangements allows the men to justify disrespecting the post-feminist characters Katie and Kristi in various ways that lead to more danger.

Katie and Kristi thus manifest the postfeminist tendency toward retreatism, as Diane Negra defines it: women choosing not to work, depending on parents or male partners for economic support, while tending to the family and the running of the household (15). In the 1990s, this retreat to the domestic sphere often figured as a personal choice, as career women opted out of the stressful world of work for the rewards of the home; after the housing crash, women appear more frequently as the stalwart force holding the family together. The first movie is centered around the bedroom, pointing to the centrality of the romantic relationship between Katie and Micah (see Figure 4). Echoing this retreat to the domestic and shifting interest from romance to nurturing, much of the paranormal activity in the second movie occurs in the kitchen and nursery. The demon's target, stay-at-home mom Kristi, spends most of her time in these two rooms (see Figures 5 and 6). In the earliest scenes, we see the demon behaving as if it knows it is being recorded, spinning the baby's play-mobile when she steps out and stopping it abruptly just before she returns. The movie's lowbudget domestic horror works powerfully with minimal special effects: one of the biggest "jumps" in the movie occurs as Kristi sits placidly in the kitchen, when suddenly every cupboard door flies open violently at the same moment. The demon assaults the quiet of these otherwise quotidian moments in the most feminine-coded spaces.

The postfeminist qualities of Katie and Kristi appear even more pronounced when contrasted with earlier generations of women in their family. We meet their mother Julie and grandmother Lois in *Paranormal Activity 3*, which portrays career woman Julie in the late 80s, supporting her boyfriend and daughters Katie and Kristi, much to the disapproval of her domineering mother. Indeed, it was Lois's demonic entrepreneurship—in making a deal with a demon—that created the condition of indebtedness that dogged her family for generations. In effect, Lois borrowed against a future male descendent, creating a hereditary obligation shouldered unknowingly by her granddaughters when Kristi bears a son.

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Figure 4 – Micah and Katie's bedroom is the site of much of the first movie's paranormal activity, shot on Micah's home video camera with tripod.



Figure 5 – Kristi spends a lot of time in the kitchen in PARANORMAL ACTIVITY 2, where several unexplained incidents take place.



Figure 6 – Baby Hunter's nursery is another frequent location for Kristi in the second movie, as well as the site of many demonic interventions.

But the retreatism in Katie and Kristi's domesticity is still part of the demonic capitalist economy. Kristi's maternity means that she performs traditional reproductive labor in bearing and caring for her child, though she has opted out of the formal labor market. Even outside of biological motherhood, Katie and Martine, the domestic worker in *PA2*, also participate in reproductive labor. Katie, although child-free, expresses her desire to be a teacher and shows genuine affection for her baby nephew; she later becomes a kind of foster-mother of demon-children in *Paranormal Activity 4*. Martine is condescendingly called a "nanny" at the beginning, when in fact she straddles the public/private divide as she performs physical housework in the form of laundry, cooking, and cleaning, as well as affective labor in her mutual emotional bonding with the children as well as waged work for Kristi and Dan's family (see Figure 7).



Figure 7—Martine, the ostensibly Latina Catholic domestic employee in PARANORMAL ACTIVITY 2 not only helps around the house, but possesses expert knowledge of demons.

In her study of immigrant women's domestic labor and its representations in popular culture, Mary Romero demonstrates that

[p]urchasing the caretaking and domestic labor of an immigrant woman commodifies reproductive labor and reflects, reinforces, and intensifies social inequalities. . . . Qualities of intensive mothering, such as sentimental value, nurturing and intense emotional involvement, are not lost when caretaking work is shifted to an employee. (Romero 192, citing Silbaugh)

The ironic hierarchies of gender, race, and class in *Paranormal Activity* 2 crystallize around the figure of Martine, whom Ali sincerely refers to as a part of the family when she learns that her father Dan has fired her. Patriarch Dan exercises his power over Martine when he learns that, despite his instructions, she has continued to burn smudges of dried herbs around their house in her efforts to cleanse the space of the evil spirits she believes abide there

Yet the figure of the Latina domestic worker, although marginalized in her classed and raced position within the domestic economy, also functions similarly to other female figures such as Katie, Kristi, and Alex: as a source of information about the demon. In his desperation, Dan recalls the fired care worker back to his home to ask for her help; Martine obligingly teaches Dan how to shift the demonic attention from Kristi to Katie, expertise that she appears to have acquired in addition to her domestic skills. Ungrudgingly, Martine offers her advice and assistance to the family that had so recently cast her aside, yet neither she nor Dan realizes that the demon's ultimate goal is to obtain possession of Hunter regardless of which sister it instrumentalizes to get him; despite successfully switching the demon from Kristi to Katie, the possessed Katie promptly kills Dan in the living room and Kristi in the nursery and absconds with baby Hunter.

Demon Day-to-Day: Ordinary Horror

Descended from the Gothic novel, paranormal horror trains attention on the private home as a domestic site: in which families live, in which power hierarchies co-exist with complex emotional ties, and in which paranormal beings terrorize humans, showing that daily life is both normal and paranormal. Ordinariness gone awry is the mode of many horror movies, and the *Paranormal Activity* series is no exception. Everything in these movies appears unremarkable, even generic, from the houses themselves—newly built suburban tract homes—to the standard bland furnishings and costumes (see Figures 8 and 9). Nothing stands out as unique, making it easy to imagine that the movie took place in a real home and that it could take place in any home. These lifestyles appear to be typical upper-middle-class, white, and suburban, with plenty of square footage as befits the expansionist American dream of home ownership.

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Figure 8 – Micah and Katie live in a generic-looking new development in San Diego.



Figure 9 – Dan and Kristi's house in PARANORMAL ACTIVITY 2 is slightly grander than Micah and Katie's but in a similar subdivision in southern California.



Figure 10 – Sisters Katie and Kristi have similar names and few distinguishing character traits, making it easy to confuse them for one another.

The houses of Katie and Kristi are so similar that they appear interchangeable; moreover, the sisters themselves are also ordinary. For many viewers, their ordinariness led to difficulties in distinguishing Katie from Kristi, particularly when viewing the movies one year apart, as they were released—both have dark hair and are close in age, and they have similar names (see Figure 10). When Kristi's husband Dan succeeds in displacing the demon's interest from his wife to her sister Katie, thus explaining in the second film why the events of the first befell Katie, it appears that the sisters are as interchangeable as their houses as far as the demon is concerned. Martine performs domestic work as well, thus demonstrating that one mothering figure can replace another. Baby Hunter is revealed as the demon's rightful property, according to Lois's decades-old contract: he becomes the currency with which it can be paid off. So even the baby—the material result of the women's reproductive labor—is transformed into an object of exchange.

In many ways, too, Micah's career as a day trader is predicated on domesticity, ordinariness, and exchange. Many reviewers seem to equate "day trader" with "stockbroker." However, they are not the same: a day trader buys and sells a high volume of stocks from a home computer connected to the Internet, attuned to minimal market movements (see Figure 11). As Randy Martin explains, "day trading came into existence with the 1990s stock market expansion as a function of that confluence between home access to live data on stock price fluctuations and lowered costs per trade" (46). Instead of having to telephone in trade orders, suddenly Internet brokerage account holders could transact—and get rich—with a mouse click, almost by magic. This practice is a key example of the financialization of American life since the 90s, as Martin demonstrates, in that it features the privatization and individualization of a finance-centered livelihood while transposing the risks and anxieties of the market into the domestic space of the home (46). Careers in finance have received scholarly attention in recent decades, often focusing on stockbrokers working for financial services corporations; hypermasculinity accompanies the moral perils of high-risk investing from the first Wall Street film (1987), to the more recent Margin Call (2011), a timespan that the Paranormal series bridges in its four movies (see Negra and Tasker; Annesley and Scheele).

But distinct from these representations of the high finance fraternity in their sleek designer suits, popular images of day trading emphasize the solitary, at-home trader. Micah sports casual clothes, including a t-shirt promoting Coin Net (an online precious metals exchange) (see Figure 12). Instead of competing with colleagues and rivals, day traders are average men who exude "ordinariness" (Martin 49). Micah enjoys spending his money on consumer goods, brandishing a new home video camera that cost him "half of what [he] made" that day. The ordinary-looking lifestyle in the first movie can also be explained in part by the fact that Oren Peli, the filmmaker, used his own new house as its location, including an enormous rear-projection television he bought with the proceeds of his own day trading career in the 90s (Turek).

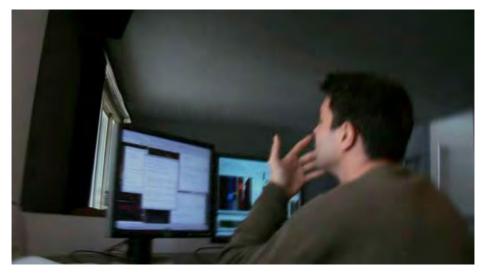


Figure 11 – Day trader Micah spends a lot of time in front of his multiple computer monitors, following financial markets.



Figure 12 – Micah sports a Coin Net tee shirt, reaffirming his identity as a day trader.

However, Martin emphasizes the macho albeit solitary egoism of day traders in their compulsion to mask or minimize the (often) massive losses they incur by playing the market so intensively and precariously: "an incessant comparison of success lost" and "hypersensitivity to loss in the eyes of others" characterize the day trader's persona, whose daily routine is "repeatable until the money runs out, in which each moment is unique and each day is the same" (46). Micah's obsession with recording the demon on time-stamped videos captured in the bedroom where he and Katie sleep, and around the house as they go about their lives, eerily echoes this repetitive day trader lifestyle in digital form: it takes place in the private space of the home, it foregrounds his prowess with digital technology, and it provides him with a chance to be aggressive and successful (although he merely succeeds in provoking the demon which leads to his death) (see Figure 13).



Figure 13 – In PARANORMAL ACTIVITY, Micah constantly annoys Katie with the video camera, whining that she should let him film her having sex with him or brushing her teeth.



Figure 14 – The demon toys with us in PARANORMAL ACTIVITY, as the video records the sheet billowing up over Katie and Michah while they sleep unaware.

Indeed, thanks to Micah's home video camera and the home surveillance cameras in the second film, the movies themselves, and the "real" video footage in them, are instead a digitization of the characters and their bodies, as Steven Shaviro has pointed out—unlike celluloid, there needn't have been an actual material body before the camera interacting with light to make a physical imprint on a negative, and the images are reduced, literally, to data and digits (Grisham et al.). That abstraction away from materiality is in itself disconcerting; maybe if there were more conventional splatter visuals the movie would feel more grounded, more material. Instead we are left with what Shaviro calls "the low-level dread and basic insecurity that forms the incessant background to our consumer-capitalist lives today," hours of uneventful video showing Katie and Micah sleeping in fast forward, punctuated by moments of baffling terror that the characters (and often the audience) never fully understand (Grisham et al.) (see Figure 14). Even the alleged safety and

security of the mother-child relation appears to be somehow flimsy and insubstantial, like the thin walls of the cheaply made suburban houses that offer no real protection to the families inside from "demonic capital" (Shaviro, in Grisham et al.).

Demon Data: Post-Cinematic Digital Aesthetics

These horror movies foster affective responses appropriate to the recession-strapped 21st century, an era that few will deny is postcinematic. Shaviro argues that "[d]igital technologies, together with neoliberal economic relations, have given birth to radically new ways of manufacturing and articulating lived experience" (2). As that definition suggests, post-cinematic media "generate subjectivity and . . . play a crucial role in the valorization of capital," just as they draw our attention to the parallel uses of technology in entertainment and finance: "the editing methods and formal devices of digital video and film belong directly to the computing-and-information-technology infrastructure of neoliberal finance" (Shaviro 3; reprinted in this volume). Here in their form and in the movies' diegesis, the digital is the link between the nightmare of debtor capitalism and the horror of the camera as non-human agent that captures the malevolent actions of the non-human demon. The Paranormal Activity films, as I have shown, exemplify postfeminist recessionary texts in their representations of gender and the domestic; they are also post-cinematic in their interest in the themes and technologies as well as the structures of feeling of the digital age. Caetlin Benson-Allott places the *Paranormal Activity* films within the recent trend in what she names "faux footage films" that call attention to the plethora of now ordinary video technologies in the American home, which are increasingly figured as malevolent (186).

The video cameras in the movies digitize their human subjects, thus turning something we might call private reality into data. Extending and elaborating on the handheld digital aesthetics of *The Blair Witch Project*

(1999), the first two *Paranormal* films also "reveal the extent to which the amateur, unpolished technique of faux footage horror represents the psychic boundary between public and private" by allowing access to what are presented to us as rough unedited footage, home movies, and private surveillance videos (Benson-Allott 182). The domestic digital aesthetics of the *Paranormal Activity* franchise are integral to the troubling of the public-private boundary that Benson-Allott indicates; the home-made and faux footage only escalates the horror in these movies as it depicts the penetration of invisible, financialized demon capital into the refuge of the family home.

The faux footage horror movies, including the Paranormal Activity films, are also "weapons in a format war being fought by copyright holders and pirates over our e-spectatorship" at a time when, thanks to the possibility for rapid digital data transmission via the internet, piracy has become a major concern of the entertainment industry, as Benson-Allott argues (171). The cycle of faux footage horror at the beginning of this century instills in audiences a sense of fear and anxiety about the "repercussions for watching the wrong video or watching the wrong way," and thus contributes to the spirit of industry anti-piracy campaigns that threaten viewers with legal action (Benson-Allott 183). In Paranormal Activity, breaking the rules also carries strong punishments. We learn that the demon gets stronger and more aggressive as Micah records it on video and watches the footage, ignoring Katie's warnings. He childishly continues to break her "rules," smirking to the camera when he promises he won't "buy a Ouija board," fully intending to borrow one; his mockery of her directives parallels the defiance inherent in piracy, although obviously with more severe penalties (see Figure 15). Beyond their context within the copyright wars, however, the Paranormal films also underscore the dire consequences of defying the rules of debtor capitalism in the digital age.



Figure 15 – Micah smirks like a naughty child as he sets up the Ouija board that Katie has emphasized is not allowed in the house.

The Faustian contract that Katie and Kristi's grandmother made with the demon becomes the engine of deadly destruction as the demon takes possession of what is owed. Whatever benefits Lois gained in the past by making this contract, her granddaughters now must pay the balance due: Kristi's son, Hunter. The movies thus dramatize in hyperbolic horrormovie style the condition of indebtedness that Maurizio Lazzarato argues "represents the very heart of neoliberal strategy, [and] now occupies the totality of public space" (38). Released during the foreclosure crisis in 2009, Paranormal Activity portrays the horror of a debt that cannot be evaded or expunged, which can lead to the repossession of a cherished object such as the family home, or in this case, a child. Through her reproductive labor and assisted by Martine and Katie, Kristi must assume the debt of her grandmother Lois, and pay the demon-creditor what is owed.

The hereditary nature of this particular debt also plays on the growing sense of resentment among white, middle-class Americans who are realizing

that younger generations will not have access to the same advantages and opportunities as their antecedents—as the debt economy engulfs ever-increasing percentages of personal income, a record low 14% of Americans believe that today's children will do better than their parents ("New Low"). While at least the belief in upward mobility has long been taken for granted in American life, now it is mainly capital that moves, and most often it is leaving. As Randy Martin points out, financialization has ushered in changes in American structures of feeling around the home itself: whereas owning property used to be a sign of stability for previous generations, it is now a potential vulnerability, and in fact, "[w]hat was once a source of security is now a source of risk" (Martin 31). The *Paranormal Activity* movies allegorize the way in which possession and re-possession have become horrific concepts in the 21st century.

The mobility and invisibility of the demon, its ability to navigate the home unseen and to inhabit the body through possession, echoes the insidious, digitized mobility of transnational finance capital, which has forced so many homeowners into foreclosure and repossession. Just as the demon demands payment of an ancestor's debt, the predatory mortgage, abstracted beyond verifiable recognition into digitally traded securities, allows an outsider to take away one's very home and hearth. Moreover, the digitization, agility, and decentering of financial systems and instruments make them harder to see or resist; the Paranormal Activity movies portray the demon as an elusive, disembodied, vet personalized evil entity. Demonic possession—as well as the transfer of the demon's possessive attention from Kristi to Katie—recalls the contemporary phenomenon of identity theft, which can have serious repercussions: you can lose everything, not to mention your damaged credit rating. These digital forms of theft are only possible in an increasingly data-driven, disembodied, financialized world. The nonhuman demon, like a bad credit rating or identity theft, trails the sisters throughout their lives until one of them bears a son, which makes it

more frightening than a site-specific haunting, in that moving away will not allow them to escape the hostile, disembodied demonic force.

The absence of an embodied evil in the movies invests the video cameras with sinister overtones, raising the complex question of point of view. In this way, too, the movies repurpose the horror convention of de-familiarizing the home as haven to make it a site of terror and the uncanny. Digital imaging technologies—home video, surveillance, and security cameras, in particular—are ubiquitous, ordinary artifacts of contemporary American life. Indeed, security cameras exist in order to make us feel safer, yet reviewing the interminable, repetitive videos produces more anxiety for us and the characters by revealing what a character can never see firsthand: herself sleeping and what goes on while she sleeps. Watching the speeded-up videos of Katie and Micah sleeping as lights switch on and off, the door moves closed and open again, and the sheet billows up around their bodies, the footage emphasizes their unconsciousness and vulnerability (see again Figure 14, above). Moreover, while a sleeper can never see herself from outside, the demon, like the camera, can; it can also move her around, inhabit her body, and then look out from within her body. However, unlike conventional horror cinema's use of point of view to increase suspense, such as filming a sequence from the killer's perspective observing the unsuspecting victim, this camera does not represent any human point of view. Positioning the camera in a non-human POV, the movie produces an uncanny sense of helplessness; we occupy neither the demon's perspective nor the sleeping characters', but that of a machine, the diegetic digital camera.

In the *Paranormal* movies, the digital modes of production condition the kinds of affect the movie generates: their cinematography and editing corral us into certain perceptive modes. The omniscience of the "unmanned" cameras, however, begins to resemble a form of mastery over the humans—the cameras are superior, all-seeing witnesses, and force people—characters and spectators alike—to watch helplessly. An

almost sadistic tone emanates from this kind of enforced and hobbled surveillance. Unlike other kinds of horror that emphasize the excessive wounding of the flesh, bodies are *not* mutilated or tortured in these movies; all of the Paranormal Activity movies are surprisingly free from gore and protracted violence. Yet they still fit the classification of body genres, as Linda Williams defines them: "trashy" movies of the horror, melodrama, or pornography genres that provoke strong physical responses from the audience (4). There are plenty of "jumps"—involuntary physical expressions of fear and surprise in the Paranormal series, but the movie also controls the viewer's body in other ways. For example, the camera fixed on its tripod in *Paranormal Activity* and the static security cameras in each room in Paranormal Activity 2 force the spectator to scan the frame continuously, because the fixed camera cannot highlight action or details using close-ups or editing, as in classical cinema (see Figures 16 and 17). Calling attention to the film's form in a way that makes viewers more anxious and uncomfortable, this camera work produces a form of digital dramatic irony. That is, when recording while humans are sleeping, absent, or looking the other way, the always-on cameras "know" and "see" more than the characters, and thereby we viewers do as well, as long as we assiduously do the extra work and pick out by our own effort what is important in the frame. In the next section, I examine some of the other kinds of extra work the *Paranormal* movies assign to their viewers. Figure 16 – In PARANORMAL ACTIVITY 2, the home security camera films the kitchen and living room as a pan on the stove in the background slowly catches fire. Without the assistance of editing to direct our attention to the burning pan, viewers must actively scan the frame to find it. Figure 17 – After the fire grows, the smoke alarm goes off and Dan finds it and extinguishes it.

Demon Branding: Immaterial Fan Labor and Blurred Boundaries

Paramount-DreamWorks has built the *Paranormal Activity* franchise from an ultra-low-budget production into a blockbuster series; the films thematize and exemplify the extent of digital technology's permeation

into contemporary US life not only in their story and cinematic form, but also in their marketing and branding. Picking up the rights to the first Paranormal Activity movie, which Peli made for \$15,000, the studio reportedly paid \$350,000; subsequently, the movie has grossed over \$193 million worldwide ("Paranormal Activity"). Despite debate over whether to include marketing costs (\$10 million) when calculating return on investment, the first Paranormal Activity movie is widely considered the most profitable movie ever made, and subsequent movies in the franchise have set other records (O'Carroll). But still uncounted is the added value of the fan labor as a significant component in the marketing of the movie. The specifically 21st-century variety of dynamic online fan participation serves as a contrast—and perhaps an antidote—to the affective register of the movie, consisting of helplessness, fear, and anxiety. Just as the movies' post-cinematic aesthetics enact a peculiar form of bodily control over viewers—making us actively search within the frame to locate suspicious movement, the movie's branding entails a variety of viewer activities in addition to simply buying access to the film (in the form of a cinema ticket, DVD purchase or rental, or streaming event).

One of the reasons the franchise became so successful may be that it resembles the young horror movie fan's social media communications: the public, performative online behaviors that we practice every day on Twitter and Facebook, sharing shaky homemade video and private domestic scenes with our so-called "friends." The new media publicity campaign for the first film, under producer Jason Blum and spear-headed by the PR company Eventful, encouraged fans to click a button on the movie's website to "Demand It!" promising that those towns with the most clicks would get the movie's release sooner. Thus the executives could see the buzz around *Paranormal Activity* grow day by day and were able to pinpoint specific locales where it was attracting more attention. Eoin O'Carroll points out that just urging "the small, initial commitment of clicking on a button makes that person more likely to follow through and go see the film." But the other reason the "Demand It!" marketing

campaign was (and continues to be) so successful is the way it drafts the fans into unpaid labor as marketers themselves, targeting viewers like themselves. This campaign exemplifies what Sarah Banet-Weiser argues is a hallmark of the new "brand culture" of the 21st century, in which

[c] onsumers contribute specific forms of production via voting, making videos for the campaign, workshopping, and so forth, but the forms of their labor are generally not recognized as labor (e.g., participating in media production, DIY practices, consumergenerated content). (42; see also Hamilton and Heflin; Jarrett)

As the fans went to the website and clicked the "Demand It!" button, they reinforced their own consumerist desire for the movie, and at the same time demonstrated it publicly for both the movie studio and the rest of the movie's fan base to see, thus contributing to the production of publicity and the market research for the movie.

Blum explains using a domestic metaphor: "You bring it home to yourself, instead of feeling that it's being pushed on you" (qtd. in Cieply). By taking an active role in demanding the movie, and taking part in the movie's PR activities on Facebook, Twitter, and other social media platforms, fans build "a kind of affective, authentic engagement into the product itself," participating in the branding campaign instead of just being addressed by it (Banet-Weiser 38). This form of immaterial labor—which binds the consumer to the product through monetized, unpaid online activity—also blurs the boundaries between consumers and producers, employing "the emotive relationships we all have with material things, with products, with content, and seeking to build culture around those brands" (Banet-Weiser 42; 45). The studio expected it would take weeks to attain one million "Demand It!" clicks, but the fervent online horror fans did it in four days (Evangelista). A similarly active marketing role for fans worked through the Twitter campaign using the official Paranormal Activity account, @ <u>TweetYourScream</u>, to encourage fans to post their reactions.[3]

Indeed, given the widespread practice of piracy among the movie's young target audience, the extraction of immaterial labor online through Demand It!, Twitter, and other social media platforms—serves as a form of payment in addition to, or in lieu of, the legitimate price of the commodity, which many of them avoid by viewing it illicitly. The movie corporations thus profit not from their ownership of copyright, which they still hotly defend in the current battles over intellectual property laws, but they also accumulate capital in the form of voluntary, even enthusiastic, online immaterial labor. That is, they benefit from the online activity of others just as Google's Page Rank algorithm does according to Matteo Pasquinelli: "Google is clearly a supporter of the free content produced by the *free* labor of the *free* multitudes of the internet: it needs that content for its voracious indexing" (original emphasis).[4] The immaterial labor of online Paranormal Activity fans and would-be fans, then, constitutes a kind of hedge bet against the alleged losses to piracy that the industry decries in the war on piracy.

The first Paranormal Activity movie's trailers were also innovative in their active incorporation of audiences and digital technology into the publicity campaign. The ads mimic the film's low-budget visual aesthetic, with descriptive title cards setting the stage at a test screening in Hollywood, presenting both the movie and the trailer "as historical events" (Benson-Allott 170). The trailers dramatize the experience of the audience, along with the characters in the film, producing a parallel narrative about one of the first groups to "experience" the movie (see Figure 18). Then the lights go down, the night-vision camera engages, and we see the darkened theater, filled with spectators and shot from the back with a view of the screen, as well as from down in front, where we can see their faces reacting in horror as they watch the movie: mouths open, eyes covered, jumping involuntarily, screaming out loud. As Benson-Allott points out, through its use of similar technology to shoot the audience footage, "the ad's night-vision scenes ostensibly document real reactions, just as Peli's movie ostensibly documents real demonic

possession," thus blurring the distinctions between the real theater audience and the fictional characters in the movie (188). By encouraging viewers of the trailer to place themselves in the position of the terrified viewers of the movie in that test screening, the trailer also reinscribes the ordinariness that pervades the movie, as viewers see regular people in the trailer consuming the movie, which is purportedly about regular people (see Figure 19 and 20).



Figure 18 – The official trailer shows fans lined up to see a screening of PARANORMAL ACTIVITY overlaid with the same type of captions as in the film itself.

The trailer also blurs the boundary between the product being sold (the movie) and the target buyers (the audience), as it places "viewers" both within the trailer and in the position of watching the trailer. The pro-filmic objects of the trailer are "viewers" like you, watching the movie, just as the characters in the movie are "really" Katie and Kristi. The *Paranormal Activity* trailer, as an artifact of brand culture, demonstrates the way in which the "separation between the authentic self and the commodity self not only is more blurred, but this blurring is more *expected and tolerated*"— and, I would add, enjoyed (Banet-Weiser 13, original emphasis).



Figure 19 - In the trailer, the camera allows us to watch the audience watching Micah watching himself in the mirror.



Figure 20 – The trailer uses night vision to depict audience members reacting to the screening in the trailer.

Conclusion

Paranormal Activity and Paranormal Activity 2 trace a family's troubled history with a demon across several generations, but always located within a family home and centered around a female character. The demon in the first two Paranormal films has come to claim a debt resulting from a contract with an ancestor, who has in a sense "mortgaged" future male offspring in exchange for power and wealth. Given the series' immediate context within the credit crisis and the Great Recession, we can interpret the demon as an allegory for debt under neoliberal capitalism: it is just as invisible, inescapable, and imperfectly apprehended via digital media. Like the video data that constitutes the "film" itself, and like the transnational finance capital and the intangible systems of consumer credit that permeate contemporary life, the demon is unseen and immaterial, yet it exercises enormous power.

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Notes

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[1] Raymond Williams coined this expression to describe emotions and perceptions common to a specific time and place and expressed in

contemporaneous arts and other cultural forms. Steven Shaviro draws on this concept from Williams in his definition of post-cinematic affect (reprinted in this volume).

- [2] Thanks to Caetlin Benson-Allott for pointing this out.
- [3] This <u>Twitter account</u>, like the franchise's official Facebook page, is still active and is now publicizing *Paranormal Activity: The Ghost Dimension* and upcoming productions, with over 101,000 followers. The original official website <<u>www.paranormalmovie.com</u>> also still exists and publicizes the latest release, although it currently doesn't allow IP addresses outside the US to view the site.
- [4] Thanks to Shane Denson for pointing me to Pasquinelli here.



4.2 On the Political Economy of the Contemporary (Superhero) Blockbuster Series

BY FELIX BRINKER

A decade and a half into cinema's second century, Hollywood's top-of-theline products—the special effects-heavy, PG-13 (or less) rated, big-budget blockbuster movies that dominate the summer and holiday seasons attest to the renewed centrality of serialization practices in contemporary film production. At the time of writing, all entries of 2014's top ten of the highest-grossing films for the American domestic market are serial in one way or another: four are superhero movies (Guardians of the Galaxy, Captain America: The Winter Soldier, X-Men: Days of Future Past, The Amazing Spider-Man 2: Rise of Electro), three are entries in ongoing film series (Transformers: Age of Extinction, Dawn of the Planet of the Apes, 22 Jump Street), one is a franchise reboot (Godzilla), one a liveaction "reimagining" of an animated movie (Maleficent), and one a movie spin-off of an existing entertainment franchise (*The Lego Movie*) ("2014 Domestic"). Sequels, prequels, adaptations, and reboots of established film series seem to enjoy an oft-lamented but indisputable popularity, if box-office grosses are any indication.[1] While original content has not disappeared from theaters, the major studios' release rosters are

nowadays built around a handful of increasingly expensive, immensely profitable "tentpole" movies that repeat and vary the elements of a preceding source text in order to tell them again, but differently (Balio 25-33; Eco, "Innovation" 167; Kelleter, "Einführung" 27). Furthermore, as part of transmedial entertainment franchises that expand beyond cinema, the films listed above are indicative of contemporary cinema's repositioning vis-à-vis other media, and they function in conjunction with a variety of related serial texts from other medial contexts rather than on their own—by connecting to superhero comic books, live-action and animated television programming, or digital games, for example. The current prominence of serialization and franchising practices in American blockbuster cinema thus points to a redefinition of the individual feature's role within the larger media landscape: big-budget tentpole features, it seems, no longer function as singular apexes of cinematic production whose central task is to outperform other movies, but have instead become nodes in networks of related media texts and fulcra for audiences' ongoing engagement with constantly expanding entertainment franchises.

This chapter engages with the current prominence of film series at the box office and argues that it is expressive, on the one hand, of the economic and medial logics that undergird much of popular culture in the era of digitization and media convergence, while it is also indicative, on the other hand, of a shift in the subsumption of cultural activity under the needs of capital—a shift that entails a remodeling of leisure time and recreational media consumption into a source of economic value. Blockbuster series, I argue, participate in this shift by redefining cinematic experience as a gateway into a set of attendant consumption practices, and by encouraging audiences to participate actively in the proliferation of entertainment franchises. This endeavor entails turning the reception practices of audiences into what Tiziana Terranova has termed "free labor"—i.e. unpaid and voluntarily given cultural work that provides and manages content (73-94)—and it hinges on blockbuster

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cinema's ability to transform viewers from passive spectators into active participants in the array of cultural production that accompanies major feature films. Contemporary blockbuster cinema's embrace of serialization practices, I argue, thus amounts to a politics of audience activation aimed at encouraging viewers to follow a serial franchise over longer periods of time and across media platforms.

This politics of activation manifests itself centrally at the level of narrative form, in textual devices and mechanisms tailored to encourage attendant consumption practices. The second half of this chapter identifies narrative strategies that become productive for this politics of activation by discussing a particularly successful group of blockbuster series, namely the current wave of adaptations of Marvel superhero comics properties. More precisely, this chapter looks at the recent entries in the Disney/Marvel Studios' "Marvel Cinematic Universe," a franchise of interconnected films in which each centers on the protagonists of Marvel Comics titles. These superhero movies constitute exemplary cases for blockbuster cinema's turn towards serial formats because they combine different modes of serialization that are, taken separately, also at work elsewhere in contemporary Hollywood production. In fact, I suggest that it is their particular combination of linear serial storytelling, a transmedial serialization of content across different platforms, and the less linear seriality typically associated with remakes and adaptations, that provides these (and other) superhero blockbusters with a competitive advantage over non-serial film releases.

As I will discuss towards the end of this chapter, contemporary blockbuster cinema's propensity for serialization practices points us to the media-saturated environment of the digital era in which all kinds of content are just a mouse-click or a Google search query away, and in which the Internet's countless legal and illegal streaming and download archives provide audiences with unprecedented possibilities for accessing popular culture. Before I examine blockbuster series' narrative mechanics and

their relationship to the media ecology of the digital era, however, I will delineate the relationship of serialization practices to some basic aspects of the political economy of large-scale, commercial cultural production (or mass-addressed popular culture) in general.[2] Commercial cultural production, I argue, is always characterized by a basic seriality of products and consumption practices—a seriality which results, on the one hand, from producers' attempts to outdo competitors by carefully balancing established success formulas and innovative ideas in the creation of their products, as well as, on the other hand, from the social context of capitalism that configures the recreational consumption of cultural commodities as a recurring activity that is never exhausted by an isolated film or media text. After discussing these basic aspects of the political economy of culture-industrial production, I will turn my attention to how contemporary blockbuster series situate themselves in relation to these social processes, and to digitization's role in this respect. Successful media franchises, like the ones built around superhero blockbusters, I suggest, tap into popular culture's basic seriality, make it explicit and operationalize it for their own competitive advantage. The post-cinematic condition of the digital era and its exponential proliferation of media channels, on the other hand, brings the basic seriality of cultural commodity production back into the spotlight by foregrounding the character of individual films as mere moments in an ongoing flow of content.

Political Economy, the Culture Industry, and the Seriality of Mass Culture

While films that are part of established series and franchises, and superhero movies in particular, do exceptionally well at the box-office, they also prompt complaints by cultural critics who bemoan the recycling of established properties and narratives as proof of Hollywood's lack of originality and the decreasing quality of its products, which they take as symptomatic for a more general cultural regression. [3] Such discourses, as Kathleen Loock and Constantine Verevis have pointed out, usually characterize practices of remaking, rebooting, adaptation, and

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sequelization as a cultural malady or "sequelitis," and "condemn serial film ... for its commercial orientation and automatic self-cannibalization" (2). These easy dismissals of cinematic serialization practices, however, not only disregard "the fact that cinema has repeated and replayed its own narratives and genres from its very beginnings" (Loock and Verevis 2) they also underestimate the centrality of popular seriality as a principle for large-scale commercial cultural production in general. Understood as the constant repetition, variation, and development of successful plots, characters, properties, iconographies, and motifs in the commercial production of culture, seriality is at the heart of the film business as a particularly capital-intensive arm of the entertainment industries (see also Tryon, "Reboot" 433). It is thus not a coincidence that modernist accounts of mass culture like Max Horkheimer and Theodor W. Adorno's theory of the culture industry identify the reliance on familiar narrative patterns, schemata, stock scenarios and characters, as well as styles as a defining feature of capitalist cultural production (see Horkheimer and Adorno 94-97; 106-07).[4] The repetition or imitation of established success formulas allows producers to capitalize on material whose features have already proven their mass appeal; through product differentiation and variation, on the other hand, producers seek to gain a competitive advantage over other commodities on the market. Seriality in this sense is neither the exclusive domain of serial narratives nor a pathological exception to the normal operations of the market, but rather a fundamental aspect of the industrial production of culture that results from its commercial orientation and producers' attempts to meet popular demand.

At the same time, as Horkheimer and Adorno point out, it would be a mistake to attribute the culture industry's propensity for successful formulas to popular demand alone, as the needs of audiences are always already shaped by the specific social contexts and power relations of capitalist societies (see Horkheimer and Adorno 96; Adorno, "Thesen"). Within this context, Adorno argues, "[f]ree time," and with it, recreational media consumption, is "shackled to its opposite," i.e. to time that is not



Figure 1 – Iconic characters restaged for contemporary audiences. CAPTAIN AMERICA: THE FIRST AVENGER (2011)

free but "heteronomous" and dictated by the necessity to work and earn a living; the social function of recreational activities is therefore defined by their relation to work and the daily routines of the working day ("Free Time" 187).[5] Activities like reading a novel, listening to the radio, or going to the movies, Adorno suggests, need to prove their usefulness for individuals by contributing to the reproduction of their labor-power as entertainment or amusement (see Horkheimer and Adorno 109; Adorno, "Free Time" 187-90). Recreational media consumption therefore needs to blend smoothly into the rhythms of everyday life, and to further the productive integration of the individual into society.

What interests me about Adorno's thoughts on leisure time here is that they allow us to conceptualize the production and consumption of cultural commodities as interconnected realms of social practice that are both informed by a serial logic: on the one hand, the culture industry's commodities are marked by the constant repetition and variation of familiar formulas; on the other, the reception of these mass cultural products is part of a recurring everyday practice that reiterates

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itself on a regular basis, within slightly varying situations, and against a backdrop of previous media consumption. Cultural commodities, such as the entries of popular film and media franchises, are thus doubly implicated in the reproduction of capitalist relations: as products of a profit-oriented industry that realize their surplus value by circulating through markets, and as objects of our recreational media consumption practices that offer a temporary escape from the routines and (a) rhythms of work, school, or unemployment, but simultaneously prepare us to face them again. It is this constellation which allows blockbuster movies and other popular media texts to become socially productive—not as isolated works or through singular acts of reception, but as part of what Jason Edwards calls "everyday practices of production and consumption" that, because they recur on a regular basis, reconstitute capitalist relations on a micro level (283).

If commercial cultural production is always already implicitly serial, then serial narratives make this seriality explicit and exploit it for their purposes.[6] Popular series, like the blockbuster series that interest me here, accommodate the contradictory demands for innovation and repetition put forward by the capitalist marketplace by turning them into an organizing principle that governs the relationship between individual installments and the consecutive unfolding of their narratives over longer periods of time. Serialization in this more specific sense involves, as Frank Kelleter notes, telling "the same [story] again, but in a new way," i.e. the repetition and variation of established character constellations, plots, and motifs in ever new constellations ("Einführung" 27—my translation; see also Eco, "Innovation" 166-172). Perhaps the most obvious form of serialization entails the unfolding of a story across several installments within the same carrier medium, along with the creation of a continuity across the "narrative break" between episodes (Hagedorn 7). Blockbuster series implement this mode of serialization by centering each of their installments on one or several recurring characters—like the titular heroes of film adaptations

of superhero comics, or *Pirates of the Caribbean*'s Captain Jack Sparrow and his sidekicks—who are developed over the course of a serial unfolding that might span several years, or even decades (as is the case with the *Star Wars* films). Typically, the individual installments of film series offer all the appeals of stand-alone blockbusters, including the attractions of diverse ensemble casts and the performances of bigname actors, spectacular special effects and action scenes, as well as the reassuring framework of a relatively self-contained three-act narrative built around the eventual resolution of a central conflict.

Like serial narratives of other media and periods, however, serial blockbusters usually leave several plotlines unresolved and open for further development; at times, they even foreground this refusal to offer complete narrative closure by relying on tropes like the cliffhanger and ending "at a point of unresolved narrative tension" (Hagedorn 7). Back to the Future (1985), for example, ends with the prospect of another time travel adventure that is continued in the 2015 time-frame of its sequel, much like Thor: The Dark World (2013) concludes with a scene that has the protagonist's evil brother Loki impersonating their father Odin, thus setting the stage for the next Thor movie. By refusing to provide complete narrative closure at the level of individual films, each installment of blockbuster series, to borrow Roger Hagedorn's words, "functions to promote consumption of later episodes" and invites audiences to return to the series in the future (5). To put it differently: like all serial narratives, blockbuster series seek to exert control over the recreational media consumption practices of audiences and attempt to encourage a regularly recurring consumption of their installments. Accordingly, Hagedorn characterizes serial narratives as an "ideal form of narrative presentation under capitalism," as uniquely attuned to "a social system which perpetually defers desire in order to promote continued consumption, and whose mass media represent a major form of commercial enterprise" (12).

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Figure 2 – Promoting the consumption of future installments: BACK TO THE FUTURE (1985)

Popular Seriality, Free Labor, and Media Convergence

By encouraging a serialized reception, blockbuster series, like other serial narratives, link otherwise disparate instances of media consumption, set them into a larger serial context, and structure them according to their specific rhythms of publication—like all series, in other words, they subscribe to a politics of ongoing engagement and, since they are unashamedly commercial, tell their stories in a way that attempts to inspire more consumption. Serial narratives, however, also exhibit a number of features that are not easily accounted for within the Marxist framework that I have sketched thus far. While helpful to understand how films and other kinds of media content do not merely represent or reflect social processes, but in fact "lie at the very heart of social production, circulation, and distribution" (Shaviro, *Post-Cinematic* 3), Horkheimer and Adorno's sketch of structurally coupled spheres of production and consumption cannot, for example, adequately account for the active role that audiences take in the proliferation of contemporary media franchises. For the

authors of the *Dialectic of Enlightenment*, mass media like film, radio, or television know "[n]o mechanism of reply" through which audiences could exert influence on the output of the culture industry (Horkheimer and Adorno 96); as a result, they conceive production and consumption as mutually interdependent but separate systems whose operations do not interfere directly which each other. Serial narratives like the blockbuster series I will discuss in the next section, however, owe a large measure of their popular appeal to their responsiveness to the reactions and opinions of audiences that results from a temporal overlap between their production and reception. In addition, the convergence of formerly separate media in the supra-medium of digital code, the widespread availability of Internet access, and the resulting formation of a global online public have had a significant impact on the way in which contemporary popular culture is produced, circulated, as well as consumed, and given rise to new dynamics of interaction between producers and consumers.

In this context, it is significant that the consumption of serial narratives provides an occasion and a framework for the imagination of communities and collective action, or, in the words of Shane Denson and Andreas Jahn-Sudmann, for processes of "collective serialization," as they offer themselves as "potential bases for the recognition and negotiation of shared experience" (12, 16; see also Mayer 14-21). The collective activities of audiences (which might be more or less organized, and range from mere viewing to active participation in fan communities), in turn, have the potential to feed back into the production processes of the series itself. Because the production of later installments of a film series typically does not begin until well after earlier ones have been released, producers, directors, authors, and other creatives can observe and react to the popular reception of their works as it manifests itself in the returns from the boxoffice and ancillary markets, in reviews and other journalistic discourse, as well as in the cultural and textual production of non-professional audiences which the Internet makes accessible to a global public. Serial films thus unfold recursively, in constant dialogue with their viewers, the

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medial discourses surrounding them, and in competition with other series (see Kelleter, "Einführung" 19-25; Jahn-Sudmann and Kelleter 207). Rather than representing a closed-off, self-contained, and static body of films produced by an unresponsive culture industry, then, blockbuster series can be considered to emerge from "the complex and uneven interactions of authors, audiences, and larger institutional configurations," in Ruth Mayer's formulation, as these are "propelled by the varying media and medial formats of choice, [and the] technological, political, and cultural contours of these media environments" (6).[7]

Considering audiences as active participants in the proliferation of contemporary media franchises has implications for the sketch of the political economy of commercial popular culture that I presented above. If serial narratives emerge from constellations of interaction between producers, consumers, media, institutions, and their cultural and political contexts, we can consider the activities of audiences as part of blockbuster series' unfolding rather than as something that is opposed to or strictly separated from the activities of producers or the operations of the films themselves. From this perspective, consumers' engagements with contemporary media franchises—from steady and regular reception of new installments to the consumption of paratextual materials and the active participation in online forums dedicated to the discussion of film series appear as a form of work that productively contributes to the cultural visibility, commercial success, and continuation of film series. Somewhat paradoxically, for the audiences who engage in it, this work constitutes part of their recreational (or reproductive) practices—in other words, it appears precisely not as work, but as a leisure activity that is nonetheless economically productive, i.e. as a form of what Tiziana Terranova describes as a "knowledgeable consumption of culture [that] is translated into excess productive activities" (78; see also Stanfill and Condis).

This type of "simultaneously voluntarily given and unwaged" work, Terranova argues, constitutes "a feature of the cultural economy at large, and

an important, yet unacknowledged, source of value in advanced capitalist societies [in general]," but it is of special significance for commercially operated online communities, which thrive on their users' readiness to generate, share, and manage content online (74, 73). Similarly, Mel Stanfill and Megan Condis have noted that the activities of textually and culturally productive film and television fans can be understood as "free labor" in this sense: i.e. as pleasurable activities that do "not register as labor at all," but which, by fulfilling promotional and marketing functions for the franchises to which they relate, nonetheless become economically productive once they feed back into the production process (see also Terranova 73-97; Bolin 807-808; De Kosnik).[8] More categorically, however, I would argue that it is not just the activities of dedicated fans that can be captured and appropriated as "free labor," but that any kind of reception practice is potentially economically productive once it is captured by digital and networked environments and becomes accessible to both producers (as a means of feedback and audience surveillance) and to other members of the audience (as a form of free promotion, marketing material, or other kind of paratextual discourse) (Bolin 797, 801).[9] By encouraging audiences to engage in active (and, at times, textually productive) reception practices, blockbuster series (and the franchises of which they are part) thus entangle the spheres of production and consumption. In this respect, blockbuster series might be understood as contraptions for the exploitation of audiences' time, attention, and cultural activity, or, to put it differently, as mechanisms for the extraction of economic value from the recreational practices of their viewers.

The importance of audience practices for the commercial success and continued proliferation of media franchises has not gone unnoticed within media and cultural studies, although research on the subject rarely discusses these issues explicitly in terms of labor and its economic productivity (nor in terms of seriality, for that matter). Producers' vested interest in encouraging particularly active reception practices, however, also registers in the work of media scholars like Henry Jenkins, whose perspective on matters of

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"participatory" culture is more optimistic than the one presented here. [10] In his study Convergence Culture, for example, Jenkins describes how building and steadily expanding a base of loyal consumers is one of the main objectives of contemporary content providers, and how it accordingly affects industrial practices from marketing to storytelling strategies. Jenkins suggests that the activation of viewers is a key element in what, in passing, he terms "affective economics," i.e. producers' attempt to establish an affective or emotional bond between product and consumers to encourage repeated acts of consumption (63; see also 63-72). For the industry, Jenkins argues, the ideal viewer is one who not only consumes several installments of the same franchise, but who also acts as a "brand advocate" or "inspirational consumer," actively promoting a franchise by spreading the word online (Convergence 73; see 68-74). Producers of popular media franchises, in other words, attempt to capitalize on the "viral" marketing possibilities of digital and networked media in which, as Steven Shaviro notes, information seems to flow freely and multiply in a kind of "massive self-replication" by passing "from person to person in the manner of an epidemic contagion" (Shaviro, Connected 13). Producers, as Jenkins observes, encourage audiences to engage in this kind of voluntary marketing and promotion activity by increasing the "the sum total of interactions with the customer [in] an ongoing process that . . . occurs across a range of different media" (Convergence 63). For Jenkins, franchises built around blockbuster film series like the The Matrix Trilogy (1999-2003)—franchises that address audiences through a variety of additional media channels, from short films to digital games and online content—constitute prime examples of this endeavor to involve and activate audiences (Convergence 93-130). From a similar perspective, Chuck Tryon has pointed out that contemporary Hollywood production has redefined the role of the individual feature in the lineup of its products: since feature films now serve "primarily as a means of stimulating interest in the wider media franchise," film production has embraced a notion of textual "incompleteness" that reframes "the narratively contained world of the feature film . . . [as] the exception, as

target audiences are encouraged to extend their consumption into other outlets beyond the initial screening" (*Reinventing* 29, 26, 30).

Returning to the terminology introduced above, we can re-articulate these observations about contemporary Hollywood cinema's marketing logics to describe what one could call the formal and medial politics of blockbuster series: in order to remain competitive in a situation in which audiences consume a variety of media texts on a regular basis, Hollywood studios rely on practices of narrative serialization—within the medium of film, but also across different media—in order to increase consumers' exposure to their products, to encourage them to consume installments of a franchise on a regular basis, and to capitalize on viewers' free cultural and textual production. As I will discuss in the remainder of this chapter, these politics of activation become manifest predominantly on the level of narrative form, in the ways in which (post-) cinematic serialization practices delineate or demarcate specific vectors for audiences' engagement with the texts that make up blockbuster franchises.

Blockbuster Cinema, Serial Narration, and the Marvel Cinematic Universe

The ubiquity of serialization practices in contemporary blockbuster cinema is closely related to a number of larger economic and medial transformations of the last two decades—developments which are themselves intricately connected to digitization's impact on the ways in which films are produced, distributed, and consumed. Tino Balio has noted how a number of interrelated shifts and crises within the film industry have put increased economic pressure on the major studios: the bursting of the dot-com bubble in the early 2000s and the resulting financial losses for American media conglomerates, the decline of DVD sales resulting from the emergence of (legal and illegal) video streaming services and the proliferation of cable television channels, as well as the falling returns from theatrical and home video releases in the wake of the 2008 financial crisis "placed increasing demands on the major studios to improve their

parent companies' bottom line" (Balio 23; see also 8-24). As a response, Balio argues, studios have shifted their focus to the production of "more and bigger franchises that are instantly recognizable and exploitable across platforms and all division of the[ir] [parent] compan[ies]" (25). This turn towards franchising and serialization practices in a moment of industrial crisis is not without precedent. Since serial texts, as Hagedorn notes, "serve to promote the medium in which they appear," they have repeatedly played a central role in the promotion of specific historical carrier media, and they have done so typically in moments of medial transformation (5). The serialization of cinematic output therefore constitutes a strategy for securing cinema's standing in a situation in which it no longer operates as a cultural dominant, and in which audiences' access to all kinds of media content and, with it, the competition between formats and channels—has increased exponentially (Jenkins, Convergence 2-3, 74-79; Shaviro, Post-Cinematic 1-2).[11] What is new in this respect is the degree to which today's producers of media content aim for a horizontal integration of different markets and media under the banner of shared brands, and how the objective to produce content that provides intensified, long-term immersive experiences now informs film production from the beginning (see Grainge 54-60; Jenkins, Convergence 95-96). The goal of such efforts, as Paul Grainge points out, is the creation of "total entertainment," i.e. "an expansive entertainment and communication environment in which [media conglomerates] have a . . . near total stake in terms of ownership and control," and in which revenue streams are maximized across a range of media channels (54).

The reach of cinematic serialization practices, in other words, is no longer limited to the medium of film alone; instead, blockbuster films are now designed from the outset as parts of franchises that expand transmedially as well. At the same time, and as noted at the beginning of this chapter, practices of remaking and adaptation also enjoy a perhaps unprecedented popularity in contemporary Hollywood production. Recent releases are thus frequently embedded in complex relationships to other media texts—like 2006's *Southland Tales* by director Richard Kelly, for example, whose

plot only covers the final three "chapters" of a six-part narrative begun by a trilogy of graphic novels—or they present themselves as adaptations, remakes, or reboots of established properties, characters, and source materials from other medial contexts (as is the case with the *Harry Potter* film series, Sony's recent reboot of the *Spider-Man* franchise, or 2008's remake of *The Day the Earth Stood Still*).

In this respect, the recent wave of cinematic takes on comic book superheroes most saliently embodies the serial logics of contemporary blockbuster cinema, as these films—as adaptations of comic book properties which unfold serially within the medium of film, but also expand into other media—combine different modes of serialization more consistently than other recent productions. For example, Marvel Studios' "Marvel Cinematic Universe" (or MCU), the most successful superhero film franchise to date, represents a confluence of linear serial storytelling, transmedial serialization, and remaking/adaptation practices. Starting with the releases of Iron Man and The Incredible Hulk in 2008, the MCU has since expanded to an immensely profitable entertainment franchise that encompasses multiple feature films, including the Captain America, Guardians of the Galaxy, and The Avengers movies, as well as a number of series in other media.[12] All entries of the MCU take place within the same shared story-world and, in the case of the feature films, each focuses on the exploits of one or more superhero characters originating in Marvel comic books. Rather than simply constituting one series, then, the MCU is organized into a number of interconnected but nominally separate sub-series—i.e. Iron Man, Hulk, Thor, and Captain America films whose narratives occasionally overlap and intersect. Each of the films nonetheless functions as an installment in the larger series of Marvel Studios films, and not only because they are marketed accordingly: each release shares narrative elements with other films in the series, and relates to the preceding and following installments of the MCU within a relatively straightforward, linear temporal sequence. The diegetic events of Iron Man (2008), for example, are followed by those of The Incredible

Hulk (released later that same year), and have an impact on the plot of Iron Man 2 (2010), which, in turn, foreshadows events from Thor (2011); The *Incredible Hulk* similarly introduces plot elements that would resurface in Captain America: The First Avenger (2011); finally all protagonists join forces in 2012's The Avengers, followed by further individual adventures in Iron Man 3, Thor: The Dark World (both 2013), Captain America: The Winter Soldier (2014); 2014's Guardians of the Galaxy and 2015's Ant-Man add new superheroes to the franchise, and so on. The MCU's take on serial storytelling in this respect mirrors the "multi-linear" organizational logics of the Marvel comics oeuvre and its order of multiple parallel and occasionally overlapping plots (Kelleter and Stein 274-282). Within this order, various characters, objects, and events routinely cross over from one film and sub-series into the next—the character of Agent Coulson, for example, is introduced in Iron Man, reappears in Iron Man 2 and Thor, and eventually dies in *The Avengers* (only to be resurrected as one of the main characters of the ABC television show *Agents of S.H.I.E.L.D.* a year later).



Figure 3 – The blockbuster as cross-over event: Iron Man in Marvel's THE AVENGERS (2012)

Aside from progressing linearly within the cinema, however, the MCU also reaches across media to include not only the television series *Agents* of S.H.I.E.L.D. (ABC, 2013-), but also a series of short films titled Marvel One-Shots (included as bonus content on the Blu-Ray releases of the franchise), as well as several comic books and digital games (not to mention truckloads of licensed merchandising products). While the serial unfolding of the MCU within the medium of film is relatively linear, this transmedial expansion complicates the narrative linearity of the franchise by introducing additional, media-specific models of serialization, each with its own norms of episodic closure or openness, rhythms of publication, and demands for audience engagement. While the films of the MCU have by now established a rhythm of two releases per year, Agents of S.H.I.E.L.D. follows the model of what Jason Mittell has called "narratively complex television," relying heavily on ongoing storylines that it develops on a weekly basis, and which unfold over the course of several episodes and seasons ("Narrative Complexity" 29-33). Despite these differences, Agents of S.H.I.E.L.D connects directly to the films of the MCU; accordingly, the alien invasions, government conspiracies, and character deaths that occur in The Avengers, Thor: The Dark World, and Captain America: The Winter Soldier produce immediate consequences for the protagonists of the television show, whose adventures frequently involve dealing with the fallout from these and other world-shattering events. In contrast, the Marvel One-Shots—which are included on the Blu-Ray releases of the MCU's feature films, but also circulate informally via online video portals like YouTube, Vimeo, and Dailymotion—present themselves as self-contained, anecdotal short films or vignettes that center on minor characters from the movies. Taken together, the One-Shots function along the lines of an anthology of episodic installments, whose narratives remain mostly inconsequential for the larger storyworld of the franchise but nonetheless "derive their significance from the larger context in which they were produced" (as Ruth Mayer puts it in her contribution to this volume).[13] In combining feature films with short films and the television series, the MCU represents the quintessence of what Henry

Jenkins has termed "transmedia storytelling," i.e. a mode of narration in which "integral elements of a fiction get *dispersed systematically across multiple delivery channels* for the purpose of creating *a unified and coordinated entertainment experience*" ("Transmedia," emphasis in the original).

Transmedial and multi-linear serial narration are, however, not the only modes of serialization at work in the MCU, as the franchise as a whole presents itself as merely one among many incarnations of the Marvel comics universe. Since the MCU adapts the adventures of well-established figures like Iron Man, Captain America, and the Hulk to the big screen, its iconic characters also exist elsewhere, in other narrative continuities and media. Before Edward Norton took on the title role of 2008's The Incredible Hulk, for example, Eric Bana played a different version of the same character in the Ang Lee-helmed Hulk (2003), which was, in turn, only the first cinematic incarnation of a figure that had been the protagonist of a long-running television show, The Incredible Hulk (CBS, 1977-1982, starring Lou Ferrigno and Bill Bixby as Hulk and his alter ego Dr. Banner, respectively) and a series of follow-up made-for-television movies. In the same vein, the cinematic and televisual takes on the Hulk follow, and co-exist with, other versions of the character from Marvel's comic book series. The protagonists of the MCU's feature films all possess similar prehistories of appearances in other media and contexts—they are, as Shane Denson and Ruth Mayer have put it, "serial figures" that undergo a virtual reboot or rebirth with each new incarnation, but that nonetheless remain recognizable and familiar since they retain (and accrue) their iconic features across their multiple reincarnations (186-191; Denson 537). The relationship between the MCU and earlier and alternative versions of its titles is thus marked by what Denson has termed "a non-linear form of 'concrescent' (compounding or cumulative) seriality" that characterizes practices of rebooting, remaking, and adaptation in general (Denson 532). As part of this larger, non-linear serial trajectory, the MCU shares its central characters—but not a narrative continuity—with the comic

book properties on which it is based. In telling their stories, the films of the MCU can thus function, to borrow a formulation from Umberto Eco, as "catalyzers of collective memories" that draw on a wealth of preexisting storylines, character constellations, motifs, and iconographies, and restage these elements in a different context in order to present them as simultaneously new *and* as already familiar ("Casablanca" 3).



Figure 4 – Comic book (pre)history reincarnated: Steve Rogers as USO stage performer in CAPTAIN AMERICA: THE FIRST AVENGER (2011)

The MCU's combination of linear serial storytelling, transmedial serialization practices, and the concrescent seriality typically associated with reboots and adaptations provides the franchise with several possible vectors along which it engages its audiences. Most obviously, the linear serial unfolding of the MCU serves to aggregate an (ideally steadily growing) base of cinemagoers who watch more than one film, and who eagerly await the next installment. At the same time, its transmedial spread enables the franchise to capitalize on the different affordances and temporalities of film, television, and home video to sustain public interest (as well as revenue streams) during the months-long gaps between film premieres, and helps to reach groups of consumers that otherwise fall outside of the movies' target demographic. While the series' linear

and transmedial trajectories encourage the consumption of further installments and thus direct the attention of audiences to the future of the franchise, the MCU's character as a cross-medial reboot locates it within a larger history of Marvel productions and calls attention to other parts (and pasts), of the Marvel canon.

This multidimensional seriality expresses itself in a wealth of overt and hidden references to canonic storylines and characters, as well as to upcoming films and transmedia extensions, which reliably turn up in each of the MCU's installments. Most obviously, this intraserial intertextuality is on display in the post-credits sequences that have become a trademark of the franchise: after Iron Man's end credits, for example, one such sequence foreshadows the Avengers team-up movie through an appearance of the character Nick Fury, known to readers of Marvel comics as the director of the fictional spy agency S.H.I.E.L.D.; Iron Man 2 similarly ends with the discovery of Thor's hammer Mjolnir as a connection to the next film (see also Stork, "Assembling"). In the same fashion, the first of *Captain America*: The Winter Soldier's two post-credits sequences introduces the mutants Quicksilver and Scarlet Witch, as well as the villain Baron von Strucker (all three equally familiar from many appearances in Marvel comics), who afterwards feature as key characters in 2015's The Avengers: Age of Ultron. In a similar manner to this inclusion of iconic figures and objects, the core narratives of the films regularly include characters that also turn up in the One-Shots or television series: S.H.I.E.L.D. agents Coulson, Sitwell, and Carter, for example, each appear in two or more films, star in at least one One-Shot, and feature as series regulars or recurring characters in ABC's Agents of S.H.I.E.L.D. (In addition, an Agent Carter television series is set to premiere on ABC in 2015.) Other entries reference events from comic book lore that have not yet occurred in the MCU—The Incredible Hulk, for example, alludes to the supersoldier program that resulted in the creation of Captain America (in the character's canonical comic book origin story, which also featured prominently in the first Captain America film, released two years later). In seeding these references, the MCU

invites knowledgeable fans (and attentive viewers with access to online databases like the *Marvel Cinematic Universe Wiki*) to parse and trace various connections to multiple sources in preceding films, television shows, and comic books—and it simultaneously encourages its audience to return for future installments.



Figure 5 – From film to short film to television series: AGENT CARTER (2013)

In foregrounding the connections between films, transmedial extensions, and other Marvel properties, however, the MCU not only encourages further media consumption, but also invites its viewers to become active in the cultural production that accompanies it. The MCU's complex relationships between films and television productions, as well as between the film franchise and other parts of the Marvel canon, has prompted considerable efforts to catalogue and annotate the multiple references, allusions, hints, and nods to other texts that can be found

in each installment. Appearing in a variety of online spaces from commercially operated sites like *Wired.com*, *io9.com*, or *Newsarama.com*, to community-operated sites like the *Marvel Comics Database* or the *Marvel Cinematic Universe Wiki* (not to mention various private blogs and fansites), these paratexts provide what Kelleter and Stein have called a "metanarrative perspective" that reduces the narrative complexities of the franchise and renders it accessible to a broader audience (Kelleter and Stein 275—my translation; see also Mittell, "Orienting"; see Kistler; Rogers for examples). Together with the large body of other media coverage of the MCU, these metanarratives exemplify the contribution of audiences' textual production for the further proliferation of blockbuster series, functioning as a form of free promotion that increases the cultural visibility of the franchise.

It is no coincidence that blockbuster cinema is developing a propensity for serial narration at a point in time in which the widespread availability of digital and networked consumer electronics have elevated audiences' access to media content to unprecedented levels. In more ways than one, the technical infrastructure of the convergence era makes viewers' engagement with complex transmedial franchises like the MCU possible in the first place, as digital video formats from DVD to Blu-ray and (legal and illegal) streaming services enable easy access and allow for a reception of serial blockbusters at viewers' own pace, at home, back-to-back, and in conjunction with all kinds of related media content (see also Harper 97-99). In this regard, we can understand the complex web of intertextual references spun by the MCU's superhero films as resulting from what Lev Manovich more than a decade ago termed "the computerization of culture," i.e. "the projection of [algorithmic and database logics] onto the cultural sphere" (Manovich 84). In this respect, the MCU's referenceladen narratives operate as quasi-hypertextual interfaces that index a larger, constantly expanding body of interconnected franchise products to which access is mediated by various digital technologies and archives. From an economic perspective, in turn, the MCU's "multidimensional"

seriality appears as a means to address and mobilize viewers on multiple interlocking levels, which serves to direct their consumption practices towards a number of different offerings whose returns all benefit the same company. The combination of different modes of serialization thus constitutes a central element in the MCU's overall commercial success, even if not all viewers engage with the franchise to the same degree. In fact, one could argue that it is one of the appeals of the MCU that, although the larger serial context is constantly evoked and referenced to encourage an ongoing serial reception, its entries still function as self-contained narratives that can be enjoyed on their own terms. In any case, while the multidimensional seriality of the MCU seems to represent an extreme example even in light of the contemporary prominence of cinematic serialization practices, the franchise's profitability has already elevated it to the status of a model for other blockbuster series—as is evidenced by the current attempts of Warner Bros., Fox, and Sony to extend their own superhero properties into similar franchises (see Anders).[14]

Conclusion

What does the prominence of serialization practices in blockbuster cinema tell us about the current state of the medium? At the most basic level, it alerts us to the fact that blockbusters today rarely function in complete isolation from other texts, but that they instead constantly point beyond themselves, to the next installment of the series, to transmedial extensions, or to source materials from other medial contexts. Serial blockbusters thus exhibit a concern with narrative frames that are larger than just one film—an insight that, at least at first, seems to pit this particular group of films in opposition to other formal trends in post-cinema. Writing about post-continuity editing styles in contemporary American action cinema, Steven Shaviro has argued that recent action films exhibit "a preoccupation with immediate effects [that] trumps any concern for broader continuity—whether on the immediate shot-by-shot level, or on that of the overall narrative" (*Post-Cinematic* 123; see also Stork's "Chaos Cinema"). In contrast to action films like Neveldine and

Taylor's Gamer, or the entries of the Transformers and Bourne series, which eschew an emphasis on matters of narrative continuity in favor of a concern for immediate somatic responses and the modulation of affect, then, (superhero) blockbuster series foreground narrative coherence and the creation of an overarching framework (Shaviro, Post-Cinematic 122-24). Such a reading, however, would open up a false dichotomy between individual films and film consumption as an ongoing, inherently serial engagement, and occlude the circumstance that both post-continuity editing styles and (post-)cinematic serialization practices can be understood as different responses to the larger technological and medial transformations connected to processes of digitization. If, as I have argued, media consumption is always already marked by an implicit seriality of media texts, and if the digitization of entertainment media has increased the amount of content that is available to the individual consumer in an unprecedented manner, then post-continuity aesthetics and cinematic serialization both represent attempts to resituate cinema prominently within the never-ending flow of post-cinematic content: one attempt does so by employing an "accelerationist" film aesthetics that emphasizes cinematic kinetic potentials in a sensationalist fashion (Shaviro, Post-Cinematic 136-138), the other by foregrounding the serial character of media consumption and attempting to steer audiences' reception practices towards an ongoing engagement with a specific franchise.

In a certain sense, the MCU's combination of different modes of serialization takes the current trend towards a serialization of blockbuster cinema to its logical conclusion. By presenting itself not so much as a string of singular event movies but instead, as Matthias Stork puts it, as several movies "rolled into one long-term marathon-like viewable package," the MCU highlights the status of individual instances of film reception as mere links in a chain of similar and regularly recurring acts ("Assembling"). At the same time, it advocates an intensified and ongoing engagement with the franchise across films, transmedial extensions, and related texts as an ideal form of reception. In doing so, the entries of MCU

and of other blockbuster series like it participate in an entanglement of production and consumption, and in a blurring of the boundaries between labor and free time that resonates with larger socio-economic trends in neoliberal capitalism.

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Notes

This chapter is part of an ongoing research project, which considers contemporary film and television adaptations of Marvel and DC properties as paradigmatic cases for the logics of popular seriality in the digital era. As such, it draws strongly on the work of the German Research Foundation's research unit on "Popular Seriality—Aesthetics and Practices." In particular, I would like to thank research unit members Frank Kelleter (Free University Berlin), Ruth Mayer, and Bettina Soller (Leibniz University of Hannover), as well as the participants of the FU's Graduate School of North American Studies' cultural studies colloquium, and the members of Leibniz University's American Studies colloquium for providing helpful feedback and input during the writing of this chapter. [1] The trend towards the serialization of cinematic output is a Hollywood phenomenon, but blockbuster series enjoy great commercial successes on the global market as well (and have done so for at least the last 15 years). Box-Office Mojo's non-inflation-adjusted list of highest-grossing films worldwide represents this trend as clearly as the 2014 list cited above:

its Top 15 features 12 sequels, prequels, adaptations or remakes—from Marvel's The Avengers, Harry Potter and the Deathly Hallows 2, Iron Man 3, Transformers: Dark of the Moon, and Lord of the Rings: Return of the King, to Skyfall, Transformers: Age of Extinction, The Dark Knight Rises, and Pirates of the Caribbean: Dead Man's Chest, as well as Toy Story 3 and Pirates of the Caribbean: On Stranger Tides—all of which were released after 1998. In a broader sense, the rest of the Top 15—Avatar, Titanic, Frozen and Jurassic Park—can be considered serial as well: Jurassic Park is an adaptation of Michael Crichton's bestselling novel of the same name and, in turn, spawned a series of sequels and a lucrative media franchise; Avatar has sequels currently in production (and constitutes an entry in James Cameron's cycle of science fiction films). Finally, Titanic is not the first film about the 1912 disaster, but instead a particularly successful installment of a series of Titanic films that all tell similar stories; similarly, Frozen belongs to the roster of Disney's animated movies based on fairy tales. The overwhelming majority of the titles in the Top 50 of the list are serial in one way or another, too—i.e. sequels, prequels, adaptations, reboots, or remakes ("All Time").

[2] I use the concept of political economy here roughly along the lines suggested by Vincent Mosco, who offers the definition of "the study of the social relations, particularly the power relations, that mutually constitute the production, distribution, and consumption of resources" (24). Accordingly, the purpose of this chapter is to locate popular serial formats within the social relations that structure and link the production, distribution, and consumption of cultural commodities (as a particular kind of resource) in capitalist societies. While the discipline of political economy encompasses a variety of theoretical and political perspectives, I draw on a more narrow Marxist tradition and consider media texts first and foremost as commodities, i.e. as products of profit-oriented cultural production whose form and function is determined both by commercial ends (i.e. their contribution to capital accumulation by the realization of their exchange value on the market) and by the needs of consumers (who seek to actualize the use value of commodities by consuming them

as part of their everyday recreational practices) (see Marx 125-131). My understanding of a "Marxist political economy" corresponds to Jason Edwards's characterization of historical materialism as "a heuristic for social and political study" put to use for an "analysis of the current social and political conditions of contemporary capitalist societies in light of their historical development, their embedded institutions and practices, and the contingent circumstances that serve to reproduce them . . . over time" (Edwards 282).

[3] These ideas turn up again and again in journalistic as well as academic discussions of cinematic serialization practices, frequently prompted by the release of superhero movies (see Loock and Verevis 1-3). Commenting on the release of 2013's *Man of Steel*, *Guardian* film critic Joe Queenan (echoing filmmaker Steven Soderbergh), for example, complains that blockbuster series "are sucking the life out of motion pictures." Similarly, comic book auteur Alan Moore reads the current popularity of superhero texts in film and elsewhere as a "culturally catastrophic" withdrawal from an ever more complex social reality, a view that echoes Slavoj Žižek's diagnosis that Hollywood's recycling of established properties and narratives is a "sign of a global ideological regression [that undermines] (emancipatory) reason" (Flood; Žižek). These positions usually go along with an idealization of popular culture (and Hollywood cinema) of the past, failing to consider the impact of social and technological change on the forms and functions of cinema.

[4] While Horkheimer and Adorno's account also dismisses commercial cultural production as allegedly shallow and derivative, it does not limit this diagnosis to a specific subset of the field, but instead it identifies the principles of repetition and variation as endemic to mass culture in general (accordingly, the industry's penchant for recycling established types of plots, characters, and styles is a recurring motif in their chapter on the culture industry). While their wholesale dismissal of mass culture is undoubtedly problematic (and strongly indebted to an ideal of aesthetic experience as disinterested, reflexive contemplation of works of art, to which mass- and pop-cultural products cannot live up), their application

of concepts from the Marxian critique of political economy to mass culture is still helpful, as it allows us to conceptualize the production and consumption of cultural commodities as interconnected realms of social practice.

[5] Adorno here presents an argument that repeatedly resurfaces in his works on the culture industry, which, proceeding from the famous line from the chapter on the culture industry that "[e]ntertainment is the prolongation of work under late capitalism" (Horkheimer and Adorno 109), categorizes mass cultural artifacts as "commodities through and through" (Adorno, "Reconsidered" 100), and suggests that these cultural commodities are consumed as part of what Marx in Capital terms "means of subsistence," i.e. those goods and services that wage-dependent workers consume in order to reconstitute their labor-power (whose exploitation, in turn, is the engine of capital accumulation) (Adorno "Thesen," and Marx 274-275). This line of reasoning locates the role of cultural commodities for the reproduction of capitalist orders firmly within the realm of everyday practice; all further, more specific social functions of commodities—for the spread of ideology or the modulation of affect, for example—can occur because of their centrality for individual reproduction.

[6] Following Frank Kelleter, I understand serial narratives as "continuing narratives with constant sets of main characters which are produced according to rules of economic standardization (i.e. with a specialized division of labor and industrial means), which rely heavily on narrative schematization, and which target a mass audience" ("Einführung" 18—my translation). Along similar lines, Jennifer Hayward defines "serial narrative" as follows: "A serial is, by definition, an ongoing narrative released in successive parts. . . . [S]erial narratives . . . include refusal of closure; intertwined subplots; large casts of characters (incorporating a diverse range of age, gender, class, and, increasingly, race presentation to attract a similarly diverse audience); interaction with current political, social, or cultural issues; dependence on profit; and acknowledgement of audience response" (Hayward 3). Serial narratives in this sense have

been a mainstay of popular culture since the first half of the 19th century and can be considered, as Roger Hagedorn notes, "a dominant mode of narrative presentation in western culture—if not in fact the dominant mode" (Hagedorn 5; see also Kelleter, "Einführung" 18-19).

[7] Drawing on Deleuze and Guattari's concept of the "machine" and the "machinic," Mayer discusses popular serial narratives as "contraption[s] or ensemble[s] that conjoin . . . living beings and technological apparatuses into intricately layered arrangements of interaction" (7); within such constellations of interaction, the agency of authors and audiences is only "one among many factors within a larger network of cultural meaning making" (12). In a similar manner, Kelleter and Stein understand popular series as actor-networks in which agency is dispersed among different kinds of actors (see Kelleter, "Einführung" 20; Kelleter and Stein 260).

[8] For an overview on conceptualizations of audience practice as labor, see Bolin 796-801 as well as Stanfill and Condis; for a number of recent takes on fan production as labor, see De Kosnik, as well as the *Transformative Works and Cultures* special issue on "Fandom and/as Labor" edited by Stanfill and Condis; for a discussion of television fan practice as labor, see Stork, "Cultural Economics." Terranova's notion of "free labor"—which in my opinion is the most useful conceptualization of labor in this context—constitutes a conceptual bridge between the Marxian category of "reproductive labor"—which refers to typically unpaid work carried out in the private sphere for reproduction of labor-power (see Bolin 804, Duffy 315)—and Maurizio Lazzarato's concept of "immaterial labor" (which refers to the predominant form of work in postindustrial and computerized societies and involves, among other things, the handling of information, communicative processes, and the navigation of tastes and cultural distinctions) (Lazzarato 132-139).

[9] Bolin argues that, while active and textually and culturally productive audiences have always been central to cultural production, it is the "new information and communication technologies that . . . provide tools for creativity [to] . . . media users, [and] also the media and culture industries with the means of surveillance and control" (797; for discussions of pre-

digital active audiences, see Hayward). In all likelihood, the importance of audiences' online practices—from user data gathered by algorithmic surveillance mechanisms that operate in the background of video-on-demand services, to audiences' activities in social media services—is only going to increase in the era of "big data," as services like Adobe's Digital Index—which mines and processes user activity on social media sites like Twitter, Facebook, and YouTube in order to predict the box-office performance of blockbusters before their release—become widespread tools for marketing and production of media franchises (Bond).

[10] Jenkins's conception of "participatory culture," which informs his *Convergence Culture* as well as his conception of transmedia storytelling, describes the cultural and textual production of audiences and its expressions online as examples of fundamentally democratic communication and problem-solving processes that could be productively transferred into a more traditionally political context and thus "prepar[e] the way for a more meaningful public culture" (228; see also 25-58, 206-239; Kelleter and Stein 262n8). Jenkins's overly enthusiastic appraisal of the democratizing potentials of contemporary popular culture comes at the cost of a disregard for the socio-economic context in which the products he discusses circulate. For a critical engagement with Pierre Lévy's notion of "collective intelligence" (which informs Jenkins's discussion of convergence-era popular culture and its politics), see Terranova 73-97.

[11] It is thus not a coincidence that serialization practices in cinema become more prominent and visible during a period that also witnesses a renewed interest in, and experimentation with, serial formats on network and cable television, as well as serial television's move to VOD services like Netflix—each of these media channels tries to capitalize on the potential of serial narratives to build and steadily expand a loyal base of consumers in a moment in which digitization results in a larger transformation of the media environment.

[12] I present a longer and more detailed discussion of the franchise's storytelling strategies and its combination of different modes of serial narration in my article on "Transmedia Storytelling in the 'Marvel

Cinematic Universe' and the Logics of Convergence-Era Popular Seriality" (see Brinker). At the time of writing, the films of the MCU are: Iron Man, The Incredible Hulk (both 2008), Iron Man 2 (2010), Thor, Captain America: The First Avenger (both 2011), Marvel's The Avengers (2012), Iron Man 3, Thor: The Dark World (both 2013), Captain America: The Winter Soldier as well as Guardians of the Galaxy (both 2014). For an updated overview on the spread of the franchise, see the Wikipedia-entry on the "Marvel Cinematic Universe." For an examination of the MCU's marketing logics, see Stork, "Assembling," as well as Johnson. Aside from the films, the MCU also prominently features the ABC television series Agents of S.H.I.E.L.D. Further cinematic installments, along with 6 additional television series (five limited-run shows based on the characters of Daredevil, Jessica Jones, Iron Fist, Luke Cage and The Defenders for the for VOD provider Netflix, and the ABC show Agent Carter) are currently in (pre-)production. As Derek Johnson notes, the MCU resulted from Marvel Entertainment's endeavor to regain control over the production of Marvel superhero films and to profit more directly from adaptations of their properties—before 2008, Marvel Studios (Marvel Entertainment's film production subsidiary) licensed its lucrative properties and characters out to other studios (prominently, to Fox and Sony, which still possess the rights to the Spider-Man and X-Men franchises, whose entries compete with the releases of Marvel Studios at the box-office) (10-12).

[13] The "Marvel One-Shots" so far encompass the shorts *The Consultant* (included on the *Thor* Blu-ray), *A Funny Thing Happened on the Way to Thor's Hammer* (included on the *Captain America: The First Avenger* release), *Item 47* (bonus content for *Marvel's The Avengers*), *Agent Carter (Iron Man 3)*, and *All Hail the King (Thor: The Dark World)*. Each of the One-Shots narrates the exploits of minor characters from one of the preceding films, though usually not from the film for which they function as bonus content (i.e. *The Consultant* expands on the post-credits scene from *The Incredible Hulk*, while *Agent Carter* centers on the eponymous character who also appeared in the first *Captain America*movie, etc.); by doing so, they expand on the shared storyworld and alert

viewers to the larger series context. While the narratives of the One-Shots remain episodic and largely inconsequential for the films or the television series, they serve an important purpose for the MCU as a whole, as they function to test the waters for the potential success of future installments of the franchise. The positive reception of the *Item 47* and *Agent Carter* shorts, for example, played a key role in Marvel Studios' greenlighting of the ABC television shows *Agents of S.H.I.E.L.D.* and *Agent Carter* (Breznican). See also Ruth Mayer's contribution to this volume.

[14] Among these efforts, Warner's upcoming string of DC comics adaptations (following Zack Snyder's Man of Steel and building up to a Batman Vs. Superman event movie, and an eventual Justice League film) is probably the most prominent, but not the only example that seems to mimic the MCU's model of serialization; Sony's The Amazing Spider-Man and Fox's X-Men franchises fit the bill as well, as do several other attempts to create similar "megafranchises" (see Anders, as well as Stork, "Assembling"). It should be noted that the MCU's combination of different modes of serialization follows in the wake of other successful media franchises that work according to similar logics—the Men in Black franchise, for example, which began by adapting Lowell Cunningham's The Men in Black comic book series for the 1997 movie starring Will Smith and Tommy Lee Jones, spun-off an animated television series in 2001, and spawned two film sequels in 2002 and 2012. The Star Wars and Star Trek franchises also unfold in a similar manner and across several media. The MCU is nonetheless unique in its transmedial scope, rapid expansion, and short-term commercial success.



4.3 Reality Effects: The Ideology of the Long Take in the Cinema of Alfonso Cuarón

BY BRUCE ISAACS

Between 2001 and 2013, Alfonso Cuarón, working in concert with long-time collaborator, cinematographer Emmanuel Lubezki, produced several works that effectively modeled a signature disposition toward film style. After a period of measured success in Hollywood (*A Little Princess* [1995], *Great Expectations* [1998]), Cuarón and Lubezki returned to Mexico to produce *Y Tu Mamá También* (2001), a film designed as a low-budget, independent vehicle (Riley). In 2006, Cuarón directed *Children of Men*, a high budget studio production, and in March 2014, he won the Academy Award for Best Director for *Gravity* (2013), a film that garnered the praise of the American and European critical establishment while returning in excess of half a billion dollars worldwide at the box office (*Gravity*, Box Office Mojo). Lubezki acted as cinematographer on each of the three films. [1]

In this chapter, I attempt to trace the evolution of a cinematographic style founded upon the "long take," the sequence shot of excessive duration.

Each of Cuarón's three films under examination demonstrates a fixation on the capacity of the image to display greater and more complex indices of time and space, holding shots across what would be deemed uncomfortable durations in a more conventional mode of cinema. As Udden argues, Cuarón's films are increasingly defined by this mark of the long take, "shots with durations well beyond the industry standard" (26-27). Such shots are "attention-grabbing spectacles," displaying the virtuosity of the filmmaker over and above the requirement of narrative unfolding. While the long take has fascinated (and continues to fascinate) numerous filmmakers working within and beyond the mainstream, Cuarón is unique in modeling the long take as foundational to his filmic method. Although Andrei Tarkovsky, Martin Scorsese, and Nuri Bilge Ceylan have repeatedly and imaginatively explored the aesthetic capacity of the long take in their work, I argue that none can be designated "long take" filmmakers in the sense that I employ the concept here. Brian De Palma, one of the great long take directors, who frequently utilizes the Steadicam to track the complexity of space, is also a great exponent of expressive montage (Martin). I thus distinguish Cuarón (and Lubezki as cinematographer) precisely because their aesthetic disposition is founded upon the effect of space and time uninterrupted by a conventional cinematic cut. This is a long take style that, as Bazin once argued of the neorealist filmmakers, confronts the aesthetic limitation of a contemporary normative editing system (Bordwell, "Intensified Continuity" 16-28). Against this normative model, Cuarón's and Lubezki's overarching long take style is quite idiosyncratic.

The long take serves a number of philosophical and aesthetic functions in film studies discourse. The desire for realism, the mark of the pro-filmic event, experiential immersion in the diegetic world, and spectatorial ambiguity have all filtered through competing discourses surrounding precisely what constitutes the long take (Bazin, "Evolution" 23-40; Rombes 38-40). In an image-based medium built on discrete sections of time, the radical artificiality of the medium is perceptually

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normalized through classical montage, which serves a very particular spatial and temporal regime. We see the harmony of spatial and temporal arrangement quite literally *through* montage; montage is in this sense a revelation of that which is otherwise hidden from view, the diegetic "whole." In contrast, the long take, in its objection to the perceptual harmony of classical montage, manifests as an image of what Kristin Thompson has called "excess" ("Cinematic Excess" 513-24). The shot of marked duration exceeds not only the perceptual orientation of montage, but manifests its stronger, potentially more transgressive mark of excess in its unwillingness to conform to a generalized spectatorial regime. The long take is frequently, and certainly for Cuarón and Lubezki, a liberation from the constrictive spatial and temporal regime of tradition. The further Cuarón and Lubezki shift into the montage regime of contemporary Hollywood studio filmmaking, the more emphatic their subsequent departure from an aesthetic of classical montage.

Following what Cuarón deemed the aesthetic failure of Great Expectations (McGrath), Y Tu Mamá También represents the formative development in the Cuarón/Lubezki signature collaboration. Long-take, hand-held camerawork with inconspicuous movement captures the harmonious relationship of objects within a single spatio-temporal field. Children of Men's dystopian genre narrative is realized almost entirely in extraordinarily complex, highly visible movements synthesizing handheld and Steadicam aesthetics; in fact, Cuarón opted for a hand-held apparatus fixed to the body of the operator, thus in a literal sense animated by both the central weight of the body and the peripheral, contingencybased animation of the hand (Frederick). Gravity's spatio-temporal field of the image (in this article I focus on the 13-minute opening long take) is digitally constituted through a virtual apparatus increasingly divorced from the material presence of the body (both that of the screen performer and the camera operator), the embodied technology of the apparatus, and the spatio-temporal field of the pro-filmic environment. Each film, I argue, not only affirms an aesthetic and philosophical style founded on

the long take, but represents Cuarón's and Lubezki's negotiation of the long take as a cinematographic signifier of transgression.

These questions of aesthetic style are, as Udden argues, also questions of meaning, or questions of intent. "What do these long takes imply?" (27). But further, why the long take over some other potentially transgressive montage regime, such as the radical discontinuity cutting in recent mainstream action cinema (Stork)? In this chapter, I want to ask, what is the ideological function of the long take in Cuarón's work with Lubezki, particularly as the products of their filmmaking collaboration become increasingly popular and they are compelled to negotiate the aesthetic, commercial, and cultural space of global Hollywood? Cuarón's sojourn in Mexico for Y Tu Mamá También was precisely that: a departure as a precursor to return. This return inserted him and Lubezki into the heart of mainstream studio production with Harry Potter and the Prisoner of Azkaban (2003), effectively amalgamating a radically distinctive aesthetic style with the franchise ethos of contemporary Hollywood. Children of Men (Universal) and Gravity (Warner Brothers) are examples of what Mirrlees has labeled the "global blockbuster," productions of enormous scale calibrated to return a specific profit percentage on investment (5). Within the mainstream globalized Hollywood milieu, I argue that the long take resonates as ideology within a complex production and consumption network over and above pure style.

The negotiation of the contemporary studio system further implicates the production, distribution, and exhibition itineraries brought about by the "digital turn" (Runnel et al. 7-12). *Y Tu Mamá También*, shot in 2000 and exhibited through film projection, is in essence a "filmic" film, bearing that special imprint of the pro-filmic on film stock, materializing through celluloid and developing chemicals, and the movement/time of the film reel through a projector. Exhibited in digital form, the filmic material maintains a second-degree indexicality, an indexical relation once removed from the pro-filmic event but nevertheless maintaining that

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existential bond that Doane equates with indexicality ("Indexicality" 2). A film shot on film but screened digitally escapes the void of Rodowick's digital cinema bereft of all indexicality, without that pro-filmic world of the past being present to the image. Fittingly for Rodowick, shooting digital but reprinting to film for exhibition "seems not to be able to return to digital movies the experience of watching film" (164). Children of Men, a digital "film" in terms of its compositional logic,[2] as well as in the more significant context of the digital's non-indexical sign, contrives spatial and temporal regimes afforded by digital production and post-production technologies. As has been well documented, Children of Men's magnificent long takes are in fact digital assemblages of discrete intervals comprising the "sequence shot" [3] we see on screen (Fordham 34; Udden 30-34); the sequence *shot* as a spatial and temporal designation is only appropriate, in its purest sense, to filmic technology. The concluding hand-held/Steadicam sequence that tracks Theo's (Clive Owen) passage through the prison riot was captured in several discrete segments, and in two separate shooting locations. Cuarón was reluctant to reveal the digital compositional truth behind Children of Men (Udden 32) simply because the filmic long take is long (in the Bazinian sense) only if uninterrupted by a cut or an otherwise invisible digital interpolation. [4]

In *Children of Men*, the digital long take repackages the ontological basis and existential allure of the filmic long take. Cuarón takes great pains to ground this digital duration in a discourse of filmic realism. As Udden suggests, Cuarón sounds very much like Bazin when explaining his cinematographic style (27). In 2014, eight years after Cuarón's obfuscation of the digital "truth," the objection to its artifice seems almost *passé*; the digital long take is artificial only if its obverse, the filmic-indexical long take, maintains its allure. In Scorsese's *Hugo* (2011), digitality's discretized long take is celebrated as a composite captured on several sets, stretching time and space into a fantastic digital amalgam (Seymour). *Gravity* (2013), a film that required years of digital pre-production

development, has set a new benchmark in demonstrating the radical non-filmic capacity of digital cinema to depict discretized duration. Almost a decade after *Children of Men*, who would experience *Gravity*'s long take as anything other than a digital image form? The contemporary spectator is increasingly aware of—and sensitive to—digital spaces and times. In fact, I would argue that digital duration is properly the experience of time (in the Bergsonian sense)[5] inflected through an awareness of digitality's fundamental discretization. And this coming to self-awareness of "the digital" is part of what we might productively call, projecting from Bazin, the "aesthetic of digital realism": an awareness of a spatial and temporal field exhibited as a digital "whole" (Brown 72).

Reading technology and style through an ideological lens recalls the series of articles (1971-1972) produced by Jean-Louis Comolli on a materialist mode of filmic analysis. Working against Bazin and Mitry, whom Comolli labeled idealist for ascribing to film a pure capacity for revelation, Comolli reads the evolution of film style as a function of the values, beliefs, and choices inherent in a hegemonic system: "Thus it is indeed an ideological discourse about (notably) the ideological place of cinematographic technique which the fixed syntagm 'for the first time' [Comolli is referring to Bazin's and Mitry's romance of film's technological 'first times'] incessantly maintains" (426). Film style and its evolution through technology, which has advanced in fits and starts since the late nineteenth century, is always already implicated in the question of why: why the long take, why now, when the long take as an existential recourse to the real seems so outmoded by a montage of (increasingly digitally interpolated) attractions? While Bordwell has very convincingly argued against Comolli's own ideological reading of cinematographic style (On the History of Film Style 159-163), still, Comolli's desire for a materialist criticism of style is surely shared by all who wish to understand the implications of a mode of cinematography emerging through the industrial, commercial, and cultural apparatus of digital technology. I share Steven Shaviro's position: "I really do love traditional cinematography, as

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has been provided by Chris Doyle for Wong Kar-wai, or by Gregg Toland for Orson Welles . . . But I still feel it is important to come to grips with the ways that cinematography is changing in response to 21st-century digital technologies" ("The new cinematography"). These "ways," if I understand Shaviro correctly, are not only technological and aesthetic (for example, "new affordances provided by CGI"), but *ideological*, and thus profoundly implicated in how contemporary cultural meanings attach to new ways of contriving space and time in digital cinematographic images.

The index as the site of an essential filmic substance—the affecting present of a world past—is profoundly limited in a contemporary digital image regime. Of course, I acknowledge the allure of the indexical image-sign of cinema, or photography—for Barthes, the most provocative of all mediums (Camera Lucida 97-100). But to wish to recuperate the index as the substance of "cinema" essentially means excluding contemporary digital filmmaking from the category of the "cinematic"; the digital image would have to be something else, it would have to mean other things, affect us in non-cinematic ways. We see this rejection of digital cinema in mainstream filmmakers such as Christopher Nolan, Quentin Tarantino, and Martin Scorsese. This is Scorsese on the digital image increasingly pervasive in contemporary cinema production: "My big concern is that the image, ultimately, with CGI . . . I don't know if our younger generation is believing anything anymore" (Side by Side). For Scorsese, belief in the image is founded upon the index's imprint of a pro-filmic event space and time materialized in filmic form. But beneath this desire for belief in the indexical sign is a more complex ideology underpinning the contractual relationship between the producers and consumers of mediated experience. Why must the spectator unproblematically believe in an image, or in the image's primal relationship to the pro-filmic event? We might productively advance on Scorsese's position to ask: in lieu of the affect of belief afforded by a filmic image, what forms of affective engagement are generated through the digital composition of a pro-filmic event? Even on a very basic iconographic and symbolic level, the digital

sign *points back* to an object referent (Lefebvre and Furstenau 103-104). Where then, in lieu of the sacred relationship to the index, does the affective (and ideological) contract of the digital sign cohere as a meaningful image?

In attempting to read Cuarón's and Lubezki's ideology beneath a cinematographic style, I engage the image of the long take (whether filmic or digital) as a composition of material properties and processes: as an image of the materiality of the pro-filmic event, rather than the event in itself. I construe materiality less as index—that which is imprinted, preserved and unchangeable—than as the image-exhibition of a "nexus of finely interlaced force fields" (Highmore 119). In the most basic terms, applicable to the vast majority of contemporary image experiences, I argue that the materiality of the digital image is located in the capacity of digital technology to shape its itinerary, to take the pro-filmic event and materialize it anew within a digital image regime. When viewed as materialization (whether through rendering and compositing, or more radically through full image creation), the digital image is always already the materialization of the world: its physicality in space and time, as well as the "physical actuality of culture" (Highmore 119). Digital image materialization implicates the interlaced "force fields" of technologies of production, distribution, exhibition, and consumption; the evolution of a digital cinematographic style; and the spectatorial modes that confront contemporary audiences. The iPhone image (see Figures 1-2, below), digitally reincarnated here, bears the special affect of what Barthes called the photograph's punctum. Like Barthes's image, this casual capture of a time and place through an iPhone swells into the greater resonance of temporal experience—an experience of inhabiting *that* temporal moment. And yet, in contemplating this image within a fully digitized image environment (the iPhone image instagrammed), I no longer enter into a reverie situated in a hermetically sealed past, but rather, into a spatial and temporal network of undetermined image possibilities. Less than preserved past, the iPhone image affects the spectator as a discretized, infinitely dispersed whole.

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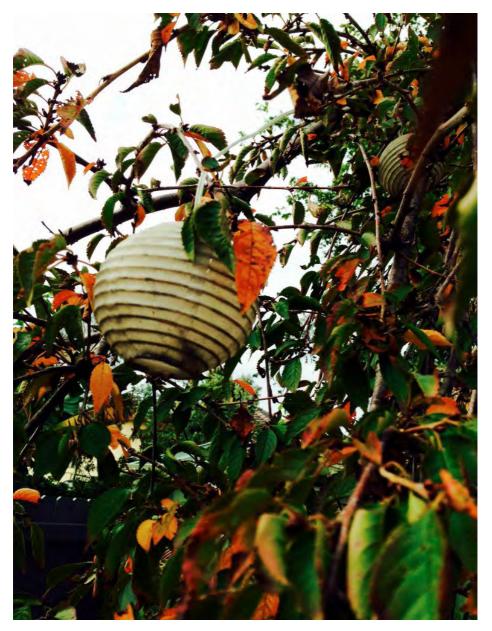


Figure 1 – The iPhone image



Figure 2 – The iPhone image Instagrammed

The ontological foundation of the digital image seems to me the special resonance of the pro-filmic world as a series of material signs in transition: the physical ephemera of the world captured in an image, and then the affective potential of such ephemera on the spectator. In recent affect-based theory, the viewer's body is privileged as the site of this material encounter;

this is the embodied spectatorship of Sobchack (*Carnal Thoughts*) and Rutherford (*What Makes a Film Tick*), among others. But in my use, in the specific context of the digital sign, material also connotes the materiality of pro-filmic time and place (a historical actuality) and all it encompasses—the substance of an always already ideological whole. My approach here follows Dudley Andrew's recent work in *What Cinema Is!* (2010), in which he rejects the value-based distinction between a filmic and digital cinematographic mode. Andrew suggests that "cinema must press forward into the new century, by *taking into itself* the subject matter that surrounds it, increasingly a new media culture" (94; my emphasis). I attempt to reveal digital cinema's "taking into itself the subject matter that surrounds it," focusing on the myriad ways in which new cinema materializes the world as a digital construct.

Beyond the Indexical: Y Tu Mamá También and Children of Men

Cuarón and Lubezki employ several different kinds of long takes across Y Tu Mamá También, Children of Men, and Gravity, and indeed, within each film. Y Tu Mamá También uses a plethora of what Peter Bradshaw calls "unobtrusively long takes." In the opening sequence in which we're introduced to Tenoch (Diego Luna), one of the film's protagonists, the camera moves freely within a single room, holding the action long after the spectator has anticipated a cut. The camera is imbued with the capacity to move where it chooses, to depict background and foreground in concert, to erase the traditional perspectival hierarchy of the object's relation to the spatial field. The frame is held in a medium-long shot, yet it is never stable; it is never an objective shot depicting the narrative action of a sequence. Captured entirely with a hand-held apparatus that jitters with the movement of the body and hand of the operator, the long take evinces the indexical relationship to the pro-filmic event (the camera operator is shooting film), but here, as in many of the spatial environments that constitute Y Tu Mamá También, the technology of film is not the ontological basis of "integral realism" (Bazin, "The Myth of Total Cinema" 21). Cuarón's film certainly approximates the neorealist style through long takes and depths of field, but in this instance the Bazinian real is less a matter of indexicality than of a materialization of the real within an image. Surely what Bazin desired in the style of the filmmaker, whether Welles or Renoir or Rossellini, was an *ethical* commitment to depicting the material properties of the real; and as such, materiality was part of both "the real," and an "aesthetic of reality" (Bazin, "An Aesthetic of Reality"). Realism in *Y Tu Mamá También* is less a matter of an *a priori* real than the materiality of a physical environment: the bodies on the bed, the background space of the room and its contents, the contents of the receding room beyond, all contained harmoniously in a freely accessible, densely populated space. The long take and emphatic presence of the hand-held apparatus intensifies the materiality of place, time, and a spectatorial subjectivity within the pro-filmic environment.

Y Tu Mamá También's story about border crossing and transgression is depicted in several sequence shots that expand the purely physical profilmic event to encompass a wider historical/political milieu. Julio (Gael García Bernal) and Tenoch literally pass through a transformational moment in Mexican political history (evincing a generational apathy that Cuarón seems to be criticizing) by seeking out car keys from Julio's sister at a demonstration. While the boys are unconcerned with the political exigencies, the hand-held camera is granted access to a complexly integrated spatial field, dissociating from the narrow perspective of the protagonists to reveal a diversely articulated mass of protesting bodies (Figures 3-5, below). The camera encompasses separate narrative frames—the boys' ensuing road trip and the political demonstration—within a spatial and temporal whole, moving between the two without encumbrance. This sequence demonstrates Cuarón's aesthetic of the long take as a form of spatial revelation. Foreground and background, rather than discrete frames within a traditional perspectival hierarchy, materialize as a physical and "acculturated" whole. Captured in duration through the hand-held camera, fixed in its movements to the body of the operator and increasingly drawn to the crowd, political history and its subject materialize within the diegesis,

implicating the road-trip narrative as merely one (and not necessarily the primary) affective field. This long take strategically documents a narrative diegesis while revealing a historical past that is now made present to the spectator.



Figure 3 – Frame grab from Y TU MAMÁ TAMBIÉN (Alfonso Cuarón, 2001)

History's materiality—what Žižek refers to as the "background" of the frame—is emphatically foregrounded in the use of the long take in *Children of Men*. The shot of excessive duration is now more elaborate and challenging, and more overtly situated as Cuarón's and Lubezki's signature cinematographic style. Unlike the image of duration captured and exhibited through filmic material in *Y Tu Mamá También*, in *Children of Men* Cuarón employs what I refer to as a digital compositional logic. Freed from the burden of an indexical mapping of the pro-filmic environment, this image materializes the "nexus of finely interlaced force fields" (Highmore) in increasingly impossible temporal stretches. The



Figure 4 – Frame grab from Y TU MAMÁ TAMBIÉN (Alfonso Cuarón, 2001)



Figure 5 – Frame grab from Y TU MAMÁ TAMBIÉN (Alfonso Cuarón, 2001)

opening long take is succeeded by the astonishing complexity of a car chase captured through a "doggie-cam" (Fordham), which is bettered again in the final act in one of the most complex and awe-inspiring sequence shots in cinematic history (Frederick).

Referring to the conventional quest narrative of Children of Men, Žižek suggests that "the true infertility is the very lack of a meaningful historical experience . . . And it is clear that the true, most radical impact of global capitalism is that we lack this basic, literally, world view, a meaningful experience of totality." This encompassing of a world viewed in its totality is clearly one of Cuarón's aesthetic motivations in both Y Tu Mamá También and Children of Men. The long take reveals a material reality that is grounded in the meaning of a totalized historical experience. In Y Tu Mamá También, an innocuous long take covering a busy dialogue exchange in a car suddenly departs from the narrative foreground to depict a pictorial background: a police roadside stop victimizing a group of locals, symbolic of a wider, long-practiced, and endemic social repression of the individual (Figures 6-9). Such political "backgrounds" are steadfastly present in Y Tu Mamá También, but it is the casualness of the hand-held gaze, in even more casual duration, which need not fixate on this brief interruption to the narrative, that is most striking as a depiction of historical experience. And Cuarón's historical snapshot is not a discrete historical event. Rather, a materialist analysis reads this history as *process*, as encompassed within a process of becoming. Thus, the sequence shot—that does not cease in its revelation of the pro-filmic world simply because it is cut from the field of vision—materializes also as the constant evolution of historical forces. The image speaks to both past and future, internal to Mexico's national context, while speaking outwardly toward the threat of a globalizing "ideological despair of late capitalism" (Žižek). Ironically, 20th Century Fox (Mexico) distributed the film, which recouped 40 million dollars worldwide on an art-house budget of 5 million, in part paving the way for Cuarón's and Lubezki's return to Hollywood.

I argue that in *Children of Men*, with Cuarón and Lubezki now filtering the image through a digital production apparatus, time and space are even more emphatically material concerns. The human world is dying as women are infertile; the environment no longer has the capacity to replenish itself; state apparatuses are totalitarian and repressive. Within this globalized dystopia, Theo wears a jacket that celebrates a utopian past-time of the London Olympics 2012, still six years away during the film's production. The image of a future-historical event functions both as a glib joke about the contemporary fetish for empty (globally produced and consumed) spectacle, and as an image of a lost utopia, registering quite literally for Theo and the spectator as "loss." In 2027, a dystopian London is revealed through the material detritus of a diseased city: a hierarchical and class-conscious place where refugees line streets in cages, environmental degradation is pervasive, and garbage is strewn openly in public space. The opening long take (a set of two discretized digital durations) first follows Theo, then freely dissociates from its primary



Figure 6 – Frame grab from Y TU MAMÁ TAMBIÉN (Alfonso Cuarón, 2001)

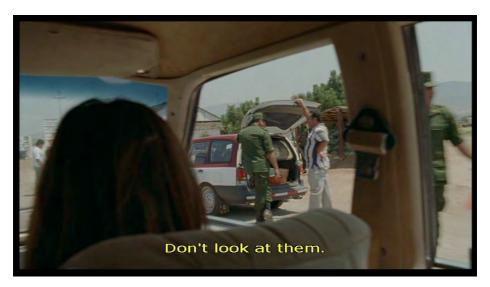


Figure 7 – Frame grab from Y TU MAMÁ TAMBIÉN (Alfonso Cuarón, 2001)



Figure 8 – Frame grab from Y TU MAMÁ TAMBIÉN (Alfonso Cuarón, 2001)



Figure 9 – Frame grab from Y TU MAMÁ TAMBIÉN (Alfonso Cuarón, 2001)

object (the film's protagonist) and displays the world as a background encapsulating narrative foreground. The image of the city, seen through the gaze of an autonomous apparatus, is neither an image of attraction nor a narrative cue; it is, merely, the revelation of the materiality (physical/historical/ideological) of a London city street in the near, though very recognizable, future.

It is clear when viewing Y Tu Mamá También and Children of Men through a materialist lens that each film demonstrates a profound ethical commitment to depicting a material historicity. Cuarón's depiction of road trips in both films demonstrates a desire to recuperate history as the experience of subjectivity and difference. This ethical commitment to the material real is surely greater than any ontological field founded upon an indexical relationship between object and image. Indeed, I would go so far as to say that digital cinematographic and editing practice presents the technology to more emphatically represent materiality. And in a world in

which digital code contaminates, and then gradually subsumes, analogical form, paradoxically, the world as historical materiality becomes all the more alluring, all the more affecting. Of course, Manovich has convincingly demonstrated the logic of Vertov's filmic image that exceeds the real. In revealing what is hidden from the subjective gaze, Vertov's technological image exceeds the world viewed through the subjective senses, exhibiting the cinematographic world as more than the world the spectator inhabits (293-308). But for all of Manovich's ingenious argument for the analogy between Man With A Movie Camera and the contemporary digital moment, Vertov was nevertheless constrained by the all-encompassing technology of celluloid. He was shooting film and cutting frenetically within the material parameters of that medium. Following Elsaesser and Hagener, I argue that in the emergence of cinema as a digital image itinerary, the materiality of the pro-filmic event is potentially intensified through "its re-embodied manifestation of everything visible, tactile and sensory" (174). The digital image, in effect, potentially re-materializes the world in image form.

A Mark on the Digital Lens

In my reading of *Children of Men*, materiality registers as a non-indexical image phenomenon. Of course, my desire for a material real and its historical totality clearly recuperates a Bazinian realist myth. Yet in the era of what Shaviro has already called "post-cinema" (*Post-Cinematic Affect*) we increasingly need new ways to conceptualize the material real through an experience of non-indexical signs. We have to find new ways of living with images.

One such new way of being with the digital image materializes in the bravura sequence shot in the final act of *Children of Men*. To begin, we must give up our desire for the ontological and existential plenitude of duration: Cuarón and Lubezki efface a series of cuts from the spatial environment, compositing separate image durations as a singular spatial and temporal whole. Theo, Kee (Clare-Hope Ashitey), and her newborn

baby flee Bexhill prison as a riot breaks out. Within the diegesis, the riot serves as precursor to a future national, and potentially global, revolution. Cuarón and Lubezki frame the escape in a long take captured in what I will call the embodied hand-held apparatus, fixed to both the hand and body of the operator. The camera follows Theo for the duration of the sequence, but here again, as in the hand-held aesthetic in Y Tu Mamá También, the apparatus in its radical autonomy within the environment exceeds both the eye of the protagonist and the traditional viewing subject. At 1:26:32, 6 midway through the sequence shot, blood (a broken squib) splatters onto the lens of the camera. Apparently Lubezki or the operator called "cut" to reset for the next take (Frederick). In filmic-indexical terms, the marking of the lens constitutes an ontological rupture; the natural impulse is therefore to cut—to cut that section away—and reconstitute the insularity of the pro-filmic event. But the sequence shot was not cut, Clive Owen and the other actors remained oblivious to what had happened, and the action continues with blood clearly showing on the lens.[7]

The mark on the lens is not a mark of "the digital itinerary" per se; such ruptures in the diegesis, while uncommon, occur in celluloid production. For example, in the opening sequence of Saving Private Ryan (1998), Spielberg's documentary style encompasses this ontological slippage between diegetic and non-diegetic apparatus (Figures 10-11). But Spielberg's marks are carefully choreographed, and indeed, rationalized by a reduced color ratio in the image, hand-held camerawork, and frenetic discontinuous cutting. In my viewing of Saving Private Ryan, the affective encounter with the mark on the lens occurs within a clearly articulated, highly formulaic visual and aural style. Spielberg's mark on the lens is displaced to a generalized location within the diegesis, the arrival at Omaha Beach. The affect of the mark thus resonates within a generic historical field and its well-trodden, familiar representational aesthetic. In displacing the mark from the frame to the diegesis, Spielberg's image renders the apparatus again invisible, and strategically subdues the potential transgression of the ontological rupture.



Figure 10 – Frame grab from SAVING PRIVATE RYAN (Steven Spielberg, 1998)



Figure 11 – Frame grab from SAVING PRIVATE RYAN (Steven Spielberg, 1998)

But consider the radical difference of the mark on the lens in Children of Men. First, in the Cuarón-Lubezki sequence shot, the mark appears accidentally, at 1:26:58 (Figures 12-13, below). The pro-filmic event is marked through what Doane has called "contingency," a spontaneous opening up of a field of "the new" (Emergence 100); in spontaneously opening into the pro-filmic environment, the mark re-materializes that environment. Second, unlike Saving Private Ryan's mark, which is choreographed within a complex montage itinerary (a montage of distraction!), in Children of Men, the mark is subjected to the weight of its own duration: the diegetic/non-diegetic rupture is held for 1 minute and 18 seconds before its erasure through a digital splice. The curious affect of this mark incorporates the base materiality of the pro-filmic environment (physical matter marking the lens, and in turn materially marking the physical environment), as well as the discretized nature of the digital mark as a spontaneous irruption within the pro-filmic field. Discretization—the material logic of digitality—could in this sense be construed as an infinite field of "marking the real," reconstituting the pro-filmic environment through production and post-production processes. The impulse to cut for director or cinematographer is thus weakened, and the digital mark in duration instead opens onto new and potentially richer ways of accessing the pro-filmic event.

Cuarón could have removed the mark by searching for that one perfect take. But why search for an indexical sign—the sign of the uncontaminated real—in an era of discretized image production? He could have removed the mark in digital post-production. But again, why erase the mark when leaving it within the frame merely rematerializes the pro-filmic environment, when it is merely one further adornment of a wonderfully rich digital cinematic background? In its open display within the frame, the mark on the lens in *Children of Men* is precisely not an ontological rupture, but a symptom of the logic of digital discretization.



Figure 12 – Frame grab from CHILDREN OF MEN (Alfonso Cuarón, 2006)



Figure 13 – Frame grab from CHILDREN OF MEN (Alfonso Cuarón, 2006)

Abstraction and Virtuality in *Gravity*

In this article, I have read the long take as a material phenomenon, shifting in its aesthetic register freely between film and digital technologies of production and consumption. Materiality connotes the actuality of a place and time, as well as what Highmore has called the "interlaced force fields" that emanate from it. In concluding this reading, I turn to the opening 13-minute sequence shot of the most critically praised Cuarón-Lubezki collaboration, *Gravity*. In contrast to much of the critical reception of *Gravity*, I argue that the dominant image of the film's spatial field is not that of the unfathomable depths of space—and certainly not the kind of threatening spatial void conventional in the science fiction genre. Rather, the center of *Gravity*'s sequence shot is the Earth, the gloriously simulated globe in a constant virtual rotation. While the field of the shot incorporates several discrete narrative frames—Lieutenant Kowalski's (George Clooney) spacewalk, Dr. Stone's (Sandra Bullock) work on the Hubble telescope, Engineer Shariff's actions in the background [8]—each



Figure 14 – Frame grab from GRAVITY (Alfonso Cuarón, 2013)



Figure 15 – Frame grab from GRAVITY (Alfonso Cuarón, 2013)

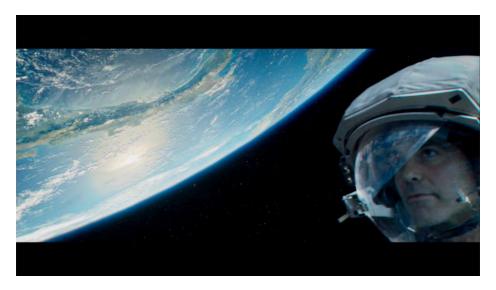


Figure 16 – Frame grab from GRAVITY (Alfonso Cuarón, 2013)

frame is composed only to subsequently *reframe* into a strategic revelation of the digital globe. Such strategic re-framings occur at 7:40-7:48 and 8:25-8:55.[9] At 8:25, Kowalski turns from Stone to gaze upon the Earth: "You've gotta admit one thing: you can't beat the view." It is an awestruck murmur in contemplation of nature's sublime image of the world (Figures 14-16).

A number of very interesting cinematographic signs are deployed here. Kowalski not only gazes up at the Earth, but the resplendent image is reflected in the glass of his helmet, presenting a doubling of the object. Cuarón makes this doubling emphatic through a continuity trick: the eye of the virtual camera begins on Kowalski, moves left to right, relegating Kowalski to off-screen space, only to pick up Kowalski again, now at the right of screen. Kowalski's repositioning occurs without a cut in the image, revealing the discombobulating multi-directionality of zero gravity space. In this movement of the cinematographic eye, the Earth is both an image in itself and the reflection of a subjective gaze; we see and, simultaneously, see ourselves seeing. There are several ways we might read the affect of this doubled spectatorship. On the one hand, the Earth becomes an autonomous object, a spectacle image divorced from the operation of story and character, or indeed, a field of signification. It seems foolish to ask what this image *means*. Instead, as the eye moves from left to right, we encounter a spatial and temporal field of revelation, nature's impossible image. This is Kowalski's view, which is literally the object of his seeing. But in its doubling through a digital effect—the object as reflection—the Earth signifies as an abstraction. The reflected Earth is an image of colors, contours, and textures, the virtuality of space, movement, and time, and less so the materiality of a planet and its people, or the aesthetic design of a God-creator. This is an Earth rendered in what Manovich might call the digital brushstroke, and as spectators we happily fetishize its discretized perfection. In the era of expanding virtual technologies of production, you can't beat that digital cinematic view.

Gravity's image of the Earth in this 13-minute sequence shot represents a paradigmatic transformation of the long take cinematographic style utilized in Cuarón's and Lubezki's earlier films (Bergery). Consider what I have called the materiality of the long take in *Y Tu Mamá También* and *Children of Men* alongside the following description of *Gravity*'s virtual cinematography:

The only real elements in the space exteriors are the actors' faces behind the glass of their helmets. Everything else in the exterior scenes—the spacesuits, the space station, the Earth—is CGI. Similarly, for a scene in which a suit-less Stone appears to float through a spaceship in zero gravity, Bullock was suspended from wires onstage, and her surroundings were created digitally. (Bergery)

Digital "surroundings" are not merely pictures, but entire image fields composed of movement and time. Thus, the image of the Earth in rotation encompasses not only that image as a pictorial form (colors, textures, shapes, etc.), but more significantly, the image animated in relation to material bodies within the frame. In the digital duration of Children of Men, I argued that the digital splice in fact presented an emphatic materiality of a physical and acculturated world in excessive duration. In each of Children of Men's sequence shots, Theo's body is a material object within the discretized duration, affecting his environment while also being affected by it. The cuts are obfuscations only in an image regime desiring an indexical bond with the pro-filmic environment, which the digital image itinerary clearly does not. But in Gravity, the affect of the body (whether Stone's/Bullock's, or what I will refer to as the body of "The Earth") is toward inertia, a mode of suspension within the animation of a digital surrounding. The relatively inactive body (at least within a wider spatial and temporal field), rather than the site of embodiment, that is, infused with the body's capacity to affect its material surroundings, is background to the foreground of a virtual image field. Visual Effects Supervisor on Gravity, Tim Webber, explains, "we created a virtual world and then worked out how to get human performances into that world" (qtd. in Bergery). In contemporary virtual cinematography—nowhere more brazenly deployed than in *Gravity*—digital surroundings significantly affect the material body and its capacity for articulation, while the affect of the material body is significantly diminished.

The paradigmatic transformation in contemporary digital cinematography is toward the virtual apparatus and its unique cinematographic properties, increasingly a foundational part of high budget production. The desire among a great deal of contemporary filmmakers, Cuarón and Lubezki included, seems to be for "complete dimensional freedom," or what is described as "true space operation" (Bergery). Mike Jones argues quite similarly of virtuality's "pure and unique cinema . . . [that] delivers an experience that is cinematically autonomous, [and] unable to be obtained from any other art form" (242). But surely virtuality does not configure spatial freedom as much as *spacelessness*, or a virtual field without material properties. I read Lubezki's notion of "truth" (Lubezki, qtd. In Bergery) as the expression of a category of the real and its materialization in space and time. There is nothing new here in the desire for the foundational "truths" of space. In the early 1920s, Murnau had already imagined

[t]he fluid architecture of bodies with blood in their veins moving through mobile space; the interplay of lines rising, falling, disappearing; the encounter of surfaces, stimulation and its opposite, calm; construction and collapse; the formation and destruction of a hitherto almost unsuspected life; all this adds up to a symphony made up of the harmony of bodies and the rhythm of space; the play of pure movement, vigorous and abundant. All this we shall be able to create when the camera has at last been de-materialized (qtd. In Eisner 18).

Murnau sounds very much like a champion of new virtual cinema, with its de-materialized environments and apparatus. Except, in Murnau, mobile space is not virtual space. Mobile space affects—and is affected

by—bodies. Mobile space reveals "the formation and destruction of a hitherto almost unsuspected life." Murnau's de-materialized apparatus opens into a "harmony of bodies" in perfect and permanent mobility. Murnau's mobile space is thus a revelation of the materiality of the body and its relationship to a material environment.

But against the desire for the materiality of mobile space that surely gave rise to the first camera movements in the late 19th century, to tracking and dolly shots, to the crane movement, the Steadicam and hand-held cinematographic devices—the purely virtual space encompasses the digitally animated frame as well as the material relationship between the frame and the real bodies situated within it. Virtual backgrounds move; virtual backgrounds act upon bodies, situating them, affecting them. Space and time in the virtual environment are strategically calibrated to move around the body, creating an illusion of zero gravity, or discombobulating directionality. Light animated through pre-visualization within a virtual digital environment affects the "naturalistic light on the faces" of actors (Lubezki, qtd. in Bergery), and so on. The unique affect of virtual space is, as Mike Jones suggests, "rooted in a depiction of fantasy and the impossible" (236), depicting bodies in a field of movement and time bereft of the material affect of "the body."

Kristin Thompson's recent essay on *Gravity* emphasizes its "strong classical story" that privileges "excitement, suspense, rapid action, and the universally remarked-upon sense of immersion alongside the character" ("*Gravity*—Part 1"). I agree with Thompson here: alongside its paradigm-shifting virtual cinematography, *Gravity* is an astonishingly formulaic narrative film. In Stone's "rebirth after despair" (Cuarón, qtd. in Thompson, "*Gravity*—Part 1"), the spectator encounters conflict (physical, emotional, and existential—the inciting incident occurs precisely when it should, at the 9-10 minute mark) and undergoes a series of neatly calibrated trials to deal with that conflict. The journey toward home and mastering the trauma of the past (the death of a child is

especially affecting) articulates with great clarity the reconstruction of the individual common to mainstream American cinema. Stone's character arc is therefore toward *groundedness*, and the reassurance that all is well again.

Within this narrative field, I read *Gravity*'s ideological subtext as the rebirth of a subject in relation to a newly realized virtual image of the Earth. Implicated in this ideology of self and world is a technological evolution in cinema production that has fundamentally altered the medium of moving images; this is an Earth recreated through a virtual apparatus. Mirrlees is thus correct to read the contemporary global blockbuster as an integrated production and consumption mode (7-10). Virtuality is a high-end production field attached to new modes of digital image creation and consumption. In such high-end productions, virtual cinematography has rolled out through the industrial and commercial mechanisms of contemporary American studio practice, and it is thus part of a wider economy of contemporary Hollywood and its hegemonic dominance of global cinema cultures.

What is this view of the Earth, that so astonishes Kowalski and the spectator? De-materialized, spaceless and timeless, *Gravity*'s virtual Earth resonates as the image of what Henri Lefebvre called "abstract space." This is contemporary global Hollywood's virtual world object that seeks to "erase the felt or intangible distinctions between places . . . fragmenting space into sites of specific use in order to make it increasingly controllable and marketable" (Nick Jones, "Quantification and Substitution" 254). I have used the term "materiality" to refer in part to a mode of spatialized representation, the image that captures and represents the material "real." Such spaces, which I argue are the basis of Cuarón's and Lubezki's cinematographic style in *Y Tu Mamá También* and *Children of Men*, constitute a field of "architectonic' determinants . . . [in which] pre-existing space underpins not only durable spatial arrangements but also *representational spaces* and their attendant imagery and mythic

narratives" (Lefebvre, *The Production of Space* 230; original emphasis). Following Žižek, I have argued that such places and times—a history as material process—open onto a "meaningful experience of totality."

But Gravity is bereft of such historical processes. Historical place and time are virtualized as two convergent moving image simulations. First, we have Kowalski's view of nature: de-historicized, de-materialized, disembodied. Kowalski's virtual Earth exceeds our capacity to ground its materiality in an actual here and now, the here and now of Mexico City in Y Tu Mamá También or the dystopian London in Children of Men. Second, there is the Earth of Stone's return, an ideal, utopian world upon which she is grounded. Intriguingly, Cuarón chooses to depict this Earth as a state of nature, a pristine, timeless land, as if encountered for the first time (Figures 17-18, below). The arrival simulates both a first encounter with the native, and the discovery of a pre-colonized world. In this encounter, Stone's rebirth is precisely not materialized within a space as historical process, but within a utopian imaginary virtualized as an undifferentiated whole. This is a ground Stone encounters without people and cultures. I read this journey toward home and rebirth as the regeneration through conflict of a global (American) subject in a borderless, undifferentiated world. The virtualization of this world is made all the more emphatic, and all the more ideal, through the duration of the long take. As astonishing as it is in the opening sequence, duration—even digitality's discretized duration—is merely one more virtual tool, one further simulated form within a de-materialized field

The object of virtual duration for Cuarón and Lubezki seems to me part of a wider virtual image-rendering of global, capitalist space, which enables Hollywood to export its hugely popular narratives within a global cinema industry. In my reading of *Gravity*, "The Earth" bears the technological, aesthetic, and ideological signature of late capitalist American studio film production, "sustaining the global market dominance of Hollywood and its cross-border trade in blockbuster films" (Mirrlees 7).



Figure 17 – Frame grab from GRAVITY (Alfonso Cuarón, 2013)

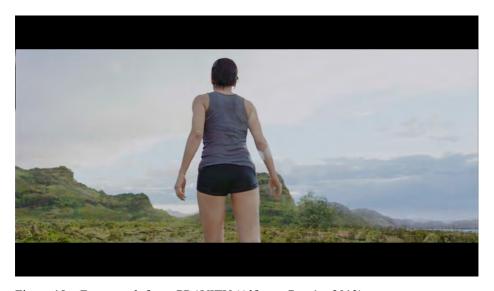


Figure 18 – Frame grab from GRAVITY (Alfonso Cuarón, 2013)

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Notes

- [1] In this article, I attribute a "visual style" (rather than a more traditional "auteurism") to the collaboration between Cuarón and Lubezki, which of course further incorporates the creative and technical input of several production departments.
- [2] It is important to distinguish between several registers of contemporary digital film production in the Cuarón-Lubezki collaboration. I am describing *Y Tu Mamá También* as a "filmic" film in which the production of the image is primarily a function of film stock production processes: the image is produced exclusively through film stock, post-produced in a manner approximating the editing rationale of film-stock editing, and exhibited on theatre screens through celluloid

projection. Conversely, I describe *Children of Men* and *Gravity* as "digital films," to refer to the digital itinerary of the production image. While both *Children of Men* and *Gravity* utilize film stock in production, following the critical formulation of David Rodowick, film stock is now always already incorporated within a discretized data field of "digital intermediates and images combining computer synthesis and capture" (164).

- [3] Here I draw on Bazin's formulation of the "sequence-shot" ("plan-séquence"), a long take that captures an entire sequence of action without a cut. For a fascinating reading of the evolution of the term in Bazin's writing, see Hervé Joubert-Laurencin.
- [4] For a provocative discussion of digital cinema's deceptive long takes, see Rodowick, 163-174. For Rodowick, the digital image, whether shot digitally or digitally composited through computer programs, "is not 'one" (166), but a myriad of compositional materials masquerading as an imagistic whole.
- [5] For an excellent overview of Bergson's philosophy of temporal experience, see Guerlac. She offers the following provocative summation of Bergson's project: "At the turn of the century, Bergson urged us to think time concretely. He invited us to consider the real act of moving, the happening of what happens (*ce qui se fait*), and asked us to construe movement in terms of qualitative change, not as change that we measure after the fact and map onto space . . . Bergson thinks time as force. This is what he means by duration" (1-2).
- [6] Time code refers to *Children of Men* (DVD, 2-Disc Special Edition). Universal, 2007.
- [7] For a comprehensive and compelling account of the function of the digital camera across a range of contemporary films, see Denson et al. Denson suggests that the "unlocatable/irrational camera in [digital films] 'corresponds' (for lack of a better word) to the basically non-human ontology of digital image production, processing, and circulation." In addition, I would also locate this ontology of the digital image in its basic correspondence with a non-material pro-filmic environment.

[8] On first seeing *Gravity*, I was astonished at what I perceived to be the grossly stereotypical depiction of the Indian-American male, derived in part, I would suggest, from the characterization of Apu in *The Simpsons*. For a similar reading, see Chitnis.

[9] Time code refers to *Gravity* 3D Blu-Ray release, Warner Bros., 2014.



4.4 Metamorphosis and Modulation: Darren Aronofsky's BLACK SWAN

BY STEEN CHRISTIANSEN

Black Swan (Darren Aronofsky 2010) tells the story of Nina Sayers (Natalie Portman), a ballerina who dreams of dancing the Swan Queen in Swan Lake. When she wins the lead role, Nina slowly begins losing her mind, in a curious and intense mix of melodrama and horror. Pressured by the ballet director Thomas Leroy (Vincent Cassel) and her overbearing mother (Barbara Hershey), Nina first finds escape in her friendship with understudy Lily (Mila Kunis), but begins to suspect that Lily wants to kill her to get her role. Slowly Nina's body also begins to change, culminating in the opening performance, where Nina's body transforms into a terrifying hybrid figure of swan-woman, before Nina falls to her death. In this chapter, I wish to investigate how digital morphing works as a way of figuring biopower, registering the cultural forces of gender, sexuality, and desire. Black Swan is exemplary in this regard as Nina becomes the locus of stratifications of power, turning biopower into felt sensations rather than pure abstractions of power. In this analysis, I am tracing the coconstruction of an aesthetic logic (the digital morph) and a cultural logic (biopower and corporeal forces). I will read *Black Swan* and its morphing

both as a distinctive formal device of post-cinema, and as an articulation of a certain "structure of feeling."

Structure of feeling is a term coined by Raymond Williams in his *Marxism* and Literature (1977). Williams employs it to designate a certain cultural mood, a concern "with meanings and values as they are actively lived and felt" (Williams 132). Steven Shaviro adapts the term in Post-Cinematic Affect to suggest how films and other media works express "a kind of ambient, free-floating sensibility that permeates our society today, although it cannot be attributed to any subject in particular" (Shaviro 2). My reading of *Black Swan* is informed by Shaviro's emphasis on the tension between metamorphosis and modulation in Grace Jones' music video "Corporate Cannibal" (Nick Hooker 2008). Shaviro points to Jones' shifting body as a way of expressing racial tensions in particular; Black Swan centers more explicitly on gendered tensions, but the struggle between a free-flowing metamorphosis and controlled modulation is similar in both texts (Shaviro 13). In *Black Swan*, oppressive stratifications of gender, sexuality, and desire are registered directly on Nina's body, resulting in her body literally tearing open, while also transforming it into a hybrid body. Through the narrative and the figure of morph, we see how Nina's body is subjected to external forces, which she tries to accommodate while also attempting to express her own desires. The digital morph is therefore the crux of the film, not only revealing central contradictions (an emphasis on self-fulfillment and personal achievement produced by outside demands) but also making sensible the structure of feeling we currently inhabit while serving, as Shaviro puts it, to habituate us to the intensities of neoliberalism (Shaviro 138). The morph can thus be seen as one example of what Shaviro refers to as "intensity effects"—effects that help us endure and negotiate contemporary biopower (Shaviro 138).

Post-Cinema

Post-cinema, as I employ the term here, is strongly influenced by Steven Shaviro's definitive mapping in *Post-Cinematic Affect*, where he argues that

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cinema has lost its preeminent status as a culturally dominant medium, giving way to music videos, video games, and digital network media. Diagrammed in this way, post-cinema becomes a cultural condition which feeds into financial flows, market forces, and the full range of audiovisual culture (Shaviro 138). While post-cinema is still cinema in the sense that films are still produced, the post-cinematic condition is also to some extent a post-medium condition, where influences, people, formal devices, and technologies all traverse previously distinct media forms and industries. Other terms, not used by Shaviro, that theorize this contemporary phenomenon and speak to the same movement are remediation, media convergence, transmedia, spreadable media, and others (see Bolter and Grusin; Jenkins; Jenkins, Ford, and Green). Taken together, all these terms speak to the ubiquity of media and the fact that there is a constant cross-pollination, while formerly discrete objects and media texts such as films, television shows, and video games are permeable and shifting. It is as part of this broader field that post-cinematic films now exist, not at the top of some hierarchical media pyramid.

Black Swan may seem, at first glance, an imperfect fit for the concept of post-cinema. As Shaviro points out, simply because some recent films exhibit post-cinematic traits, the majority of films remain cinematic, drawing on the rich pedigree of film history, conventional continuity editing, and so forth. Less visually hyperbolic than Gamer (Mark Neveldine and Brian Taylor 2009), more conventionally edited than Scott Pilgrim vs. the World (Edgar Wright 2010) and drawing its narrative primarily from Dostoyevsky's The Double, H.C. Andersen's "The Red Shoes," and the 1948 melodrama The Red Shoes (Emeric Pressburger and Michael Powell), Aronofsky's film seems almost as cinematic as can be. However, my argument for considering Black Swan a post-cinematic film is predicated on its deeply integrated use of digital morphing.

From a pragmatic point of view, morphing is a necessary mechanism for melding Natalie Portman's body with that of a stunt performer in order to produce the long takes of Nina dancing; beyond this, the role of morphing is particularly vital in the scenes depicting Nina's body undergoing physical transformation into a swan-like creature. Morphing, then, becomes a central device for *Black Swan* but also introduces a different logic into conventional filmmaking, that of digital media and the use of computers not only to composite images but also to produce new images. Hardly a novel practice in 2010, the use of digital compositing and morphing still show how the transition from film to digital video opens up new avenues for cinema to explore.

Here we can turn to a different conception of post-cinema as the far more formalist shift described in Garrett Stewart's Framed Time. Stewart focuses on narrative techniques and is primarily interested in the development of new figures of time in what he calls a postfilmic cinema, sharing Shaviro's concern with how digital media influence contemporary articulations of time. Content to propose specific and concrete categories for new films, Stewart is more interested in film aesthetics and less concerned with the cultural ramifications. Yet his concepts such as "temportation," "digitime," and "framed time" more generally still speak to the continuing development of new post-cinematic forms. Significantly for the concept of the morph, Stewart's argument revolves around the shift to digitization as one which registers as a temporal shift, where digital cinema marks time as "seeming to stand still for internal mutation" (Stewart 3). While Stewart emphasizes the substantial changes to narrative form exemplified in films such as *Lola Rennt* (Tom Tykwer 1998) or *Memento* (Christopher Nolan 2000), I wish to argue that the digital morph is not only a temporal figure but also a spatial one: it marks the moment when the human body becomes elastic, to rework Yvonne Spielmann's concept of "elastic cinema." Spielmann's argument is that digital media—and digital video in particular—"deprive previous media of their concepts of time and space by re-dimensioning shape and form" (Spielmann 59). In other words, the morph becomes emblematic of post-cinematic media in the way that it constantly mutates time and space.

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Reading Stewart and Spielmann together, we can see that when film's ontology changes, the cinematic body changes. The materiality of the medium matters. The fact that film becomes digital video creates new affordances and allows for the proliferation of sequences that were once costly to produce but now become trivial. Post-cinema works by altering the cinematic body; the decreased need for pro-filmic events reconfigures cinematic ontology, which has resulted in a revival of the cinema of attractions' emphasis on astonishment, visual change, and transformation (Gunning, "Cinema" and "Aesthetic"). While Spielmann's concept of elastic cinema concerns the cinematic image as a whole, I wish to extend her argument and locate the notions of elasticity and internal mutations as a more general cultural condition that express a biomediated relation to the human body, understood as the way that media co-opt human functions. Vivian Sobchack's work on meta-morphing is exemplary in that she reads the morph as an expression of late-capitalist acceleration (Sobchack, Meta-Morphing). Eugene Thacker makes a similar argument in Biomedia, where he points out that biology and technology are not distinct forces but exist on a continuum through which they articulate each other. In essence, Thacker's argument extends from Foucault's earlier argument about biopower as "numerous and diverse techniques for achieving the subjugation of bodies" (Foucault, Sexuality Part Five). While Foucault is interested above all in cultural techniques, Thacker insists that technologies and media play a part in how biopower functions.

Drawing on these theories of post-cinema, then, I argue that a post-cinematic ecology is one through which new relations to human bodies emerge, and one of the forms that these new relations take is that of the morph. This is hardly surprising, considering the many ways that the human body has become increasingly malleable physically, including through plastic surgery, liposuction, tattoos, and other body modifications, as well as more ephemerally but with as much impact through digital airbrushing, slimming, stretching, and other digital manipulations of fashion spreads and celebrity images. Going even further, as Thacker's

argument indicates, is the full range of biotechnologies, including the conflation of genetic code with computer code. All these techniques participate in the articulation of our bodies, how we relate to them, and what we believe a body can do. Morphing thus becomes central to contemporary conceptions of the body, even to the point where the human body itself may be regarded as a medium.

As such, the post-cinematic media ecology and the digital morph are techniques of biopower, the subjugation of bodies through new media forms. *Black Swan* is exemplary in the tensions it articulates through the narrative's many instances of the working of biopower: Nina pushing her body to extremes, Thomas Leroy's sexual exploitation of Nina's ambitions, the uncanny doubling of Lily as the sexual model for Nina, and finally the mother's abusive control over Nina. All of these narrative techniques of biopower play out across and on Nina's body, but only through the form of the morph can Nina's resistance be figured in the film. Paradoxically, then, Nina's bodily metamorphosis stands as both expression of and resistance to biopower. Unpacking the morph in *Black Swan* reveals the formal manifestations of the contradictions inherent in contemporary biopower.

Morphing

Following Sobchack in her study of morphing, I contend that the digital morph is both a mode of figuration—the way that computers produce a blending together of vector graphics into one image—and a narrative figure, particularly in Nina's gradual metamorphosis throughout the film's progression (Sobchack, *Meta-Morphing* xiii). In this way, the morph is the specific visual expression of a cultural concern with the physical status of the human body and its blurred boundaries, the way power plays out across the human body, and the way new media technologies transform and produce our subjectivities. As figure, the morph produces a distinct sensation in that forces are rendered visible through bodily transformation. As figuration the morph constitutes a specific theory

of power, as Rodowick suggests in his work on the figural (Rodowick x). Taken together, the morph as both figure and figuration allows us to experience the way biopower *feels*, the forces and intensities we are subjected to. Only thus can we begin to understand how biopower works, since biopower is precisely the subjugation of bodies.

At its simplest, morphing is the seamless transition between two visual images. While dissolves, double exposures, cross-fading, and other transitions have long been standard practice and account for many of cinema's most memorable bodily transformations, the digital video image is far more malleable than celluloid film. Digital video and computer software enable a more seamless transition between two (or more) images, so that scenes and sequences of both narrative transformations and postproduction composited body stand-ins become far more readily available in a post-cinematic image economy. A good example of morphing is found in *The Lord of the Rings: The Two Towers* (Peter Jackson 2002) where King Theoden (Bernard Hill) goes from old to young in one continuous shot. Done primarily through make-up and prosthetics, several shots were morphed into one seamless whole. My emphasis on a more seamless transition enabled by computer software should indicate the historical nature of seamlessness. While the double exposures in Nosferatu (F.W. Murnau 1922) thrilled its contemporaneous audiences, today's audiences are more likely to feel awkwardly aware of the double exposure. We are more likely to marvel at Portman's ability to dance en pointe and do foutté, because the morphing between Portman and her dance double Sarah Lane appears seamless, exceeding our standards for visual verisimilitude (see Figure 1).

While I have no interest in engaging with the controversy that ensued over how much dancing Portman did on her own, what does interest me about the morphing of the two performers' images is the altered relationship of the actor to the digital camera. The opening sequence, which shows Nina dancing the Swan Queen for several minutes, is a good example of

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Figure 1 – Whose feet, Natalie Portman's or Sarah Lane's? (Frame grab from BLACK SWAN, Darren Aronofsky, 2010)

the imperceptibility of when exactly Lane takes over. Indistinguishable to the human eye (at least as it is currently configured), we know that digital morphing has been employed in the sequence, but we cannot locate the exact moments when Lane's and Portman's bodies mingle and separate again. This suggests a new kind of intimacy among actors' bodies and the camera, while it also suggests a diffused embodiment.

Shot on digital video, the two actors' bodies become interchangeable, although the morphing process privileges Portman's face and to an unknown extent Lane's body. Portman's performance is intensified in the process, allowing her performance (as a composite) to extend beyond its usual limitations. Such intensity draws us further into the film, increasing our immersion more than if the opening scene had been a montage, or even a traditionally edited scene. Unable to identify when the morphing takes place, we are immersed into the sequence as an unbroken whole. Of

course, the performance is diffused between two performing bodies, but we should also keep in mind a third body, that of the computer, which becomes the medium in which and through which the two performing bodies blend into one.

While a form of this diffused embodiment is also found in classical cinema, with the use of stunt doubles, body doubles, and a range of standins used to enhance performances, what is unusual about post-cinematic performance and the digital morph is the co-extensive presence of two bodies in the same frame, blended into one body. The practice of morphing is therefore inherently uncanny because it presents us with a double, something both familiar and radically other, pulling together metaphysical and political contradictions. In her theory of the digital video body, Marks reads the morph as uncanny:

The uncanniness of morphing speaks to a fear of unnatural, transformable bodies. If digital video can be thought to have a body, it is a strikingly queer body, in the sense that queer theory uncouples the living body from any essence of gender, sexuality, or other way to be grounded in the ontology of sexual difference. (Marks 152)

While the opening scene of *Black Swan* is uncanny because we recognize that Portman in all likelihood did not dance the full sequence herself, this is only a very basic example of the volatility of Nina's body in the film, and of the post-cinematic body (my term for Marks' digital video body) more generally. I argue that the post-cinematic body is more volatile than ever, no longer entirely human but instead comprising a multiplicity of variables—consisting of several performers in combination with computer software. The morph, seen in this way, becomes a locus for the confluence of media technologies and human bodies. Morphing software interjects nonhuman agencies into the performing bodies, not only penetrating deeper into the human body, but effectively altering it, turning it into a composite of flesh and pixels. What arises in *Black Swan*

is the terrifyingly beautiful woman-swan-hybrid body, which articulates the stresses and intensities of biomediated power.

Modulation

Change the code and the body changes. For all its simplicity, this encapsulates the logic of biopower and we find this pervasive logic constantly enacted in Black Swan. A range of cultural codes and logics made manifest on her body always pressures Nina. In the beginning of the film, Nina pushes her body and accepts pain and injury as part of the ballerina's body. In a scene where Nina rehearses en pointe pirouettes, several close-ups of her foot are accompanied by the audible creak of the wooden floor, hinting at the weight put on her toes and building suspense through repetition. While the image slows down, ominous music builds and snaps just as Nina's toes give in. Reaction shots of Nina's face in pain, emphasized by the music's deep tones, make us flinch (see Figure 2). A visceral sensation of extreme discomfort erupts as we see her bloodied toes (see Figure 3), signifying the price Nina willingly pays for her art and a life under biopower. While relatively minor considering the intensities we face later in the film, the injured toe is not only a forceful indicator of what is to come, but it also suggests the workings of biopower.

The drive and ambition which leads Nina to abuse her body in this way expresses well the contradictions through which biopower exists. Rosi Braidotti suggests in her work on feminist theory and metamorphosis that "[b]iopower constructs the body as a multi-layered entity that is situated over a multiple and potentially contradictory set of variables" (Braidotti 229). We cannot separate Nina's ambitions from her mother Erica's (Barbara Hershey) dreams and wishes on Nina's (and her own) behalf, alongside cultural expectations of always doing one's best, making the most of oneself, and achieving self-fulfillment. For Nina, self-fulfillment can only be achieved through her body, explaining the extreme regimen she lives under, declining cake for grapefruits and developing an eating



Figure 2 – Nina in pain (Frame grab from BLACK SWAN, Darren Aronofsky, 2010)



Figure 3 – Nina's bloody toes (Frame grab from BLACK SWAN, Darren Aronofsky, 2010)

disorder (we see her throwing up at one point as a result of stress). This neoliberal entrepreneurship of the self indicates the extent to which our lives and behavior are not free but circumscribed by the environment in which we live. Our actions are therefore reactions to actions from somewhere else.

Foucault argues that we are measured based on our ability to produce an income, which is why we become entrepreneurs of ourselves (Foucault, Biopolitics 226). That is to say, we endeavor to make sure that our income is optimal and that we ourselves are optimal for producing an income. For this reason, we must improve and optimize our bodies. While we think, according to Foucault, that the bodies we are born with are free, come at no charge, this is in fact not true. Instead, our bodies are abilities-machines and we must ensure that they work as efficiently as possible (Foucault, Biopolitics 229). For Nina, this manifests as a range of paradoxes. She must be disciplined and avoid temptation in order to be the best dancer she can be (essentially her mother's wishes), yet she must be sexually active and give in to pleasure to be the best Black Swan she can be (Thomas's argument), and finally, she must be free-willed and independent (which is what Lily wants). These different impulses run counter to one other, yet Nina is tasked with resolving them. To be a proper entrepreneur of oneself, one must be increasingly flexible. Nina's body, then, is the conflicted site of several people's desires, including her own, her mother's, Thomas's, and particularly Lily's; as these conflicting desires trigger Nina's dark metamorphosis, violence erupts.

This is why Marks's argument about the queer (cinematic) body is so relevant in the case of Nina, whose body is certainly coded as queer. In addition to the fact that she has sex with both male and female bodies on the screen, Nina's body is queer in a deeper sense: it is unruly and unstable, resisting the astonishing amount of discipline she imposes on it through her training. Any emotional or physical expression on Nina's part is immediately disciplined by Erica or Thomas, both of whom pressure

her to regulate her body's experience of food, drugs and alcohol, sexual stimulation, friendship, and even solitude, all in the desire to perfect her dance performance. As the scene of her mangled toe foreshadowed, the more pressure Nina endures, the more her body buckles. While much of this corporeal warping reflects Nina's unstable mind, it is telling that the line between dance injuries, biopower modulations, and the liberating metamorphosis for which Nina strives are constantly blurred. Everything ultimately comes back to Nina's body and the impact on that body of the forces visited upon her. This is how I understand modulation: forces enacted on our bodies. As Shaviro argues, "modulation requires an underlying fixity," which in this case I take to be the regime of power under which Nina lives (Shaviro 13).

As I demonstrated above, the post-cinematic body is an assemblage of older cinematic logics, such as uncanny doubling and cross-fades, combined with new forms of (bio)media logics whereby digital imaging and animation produce a new, more malleable, conception of the body through its subjugation to new media technologies. As Thacker points out,

The binary code informing the body of digital anatomy makes explicit and materializes Foucault's suggestion that the relation between discourse-language and the body-materiality is one of docility, a "technology" of bodily production. Change the code, and you change (render docile) the body hardwired as that code. This is the strange indissociability and distinctness of the digital image: the binary code doesn't "signify" a body separate from it, yet the unintelligible string of data and the image on the screen are, in some important way, distinct from each other. (Thacker, "Digital Anatomy")

Yet, the figure of the morph also expresses the desire to escape and resist the technologies of bodily production. As much as Nina's body deforms from the pressures placed on her, her metamorphosis into the Black Swan is as

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much a way of getting out from under, or producing a line of flight away from, the control exerted on her body. We can see how these pressures are made sensible through the bodily deformations constantly jolting our body. Even a smaller injury such as a hangnail arrests us when Nina ends up tearing a chunk of skin off her finger in a shaky close-up with a musical stinger for emphasis (see Figure 4). The line between our body and Nina's body is tenuous and permeable as well, partly because of the film's point of view: we cannot always tell if Nina is hallucinating or not. *Black Swan* makes us feel what it means to live under biopower, where power and force manifest corporeally, as a delimitation of bodily expression and fullness. While one might expect that a film about ballet dancing would emphasize sensations of lightness and freedom of movement, the film feels heavy, weighed down, full of collisions and breakdowns that induce what Vivian Sobchack, discussing animation, refers to as "the incredible effortfulness of being" (Sobchack, "Animation").



Figure 4 – Nina peeling back her skin (Frame grab from BLACK SWAN, Darren Aronofsky, 2010)

Sobchack's larger point is that (especially digital) animation has a tendency to obfuscate the labor which goes into producing animated films or special effects (Sobchack, "Animation" 384). Although extending the scope of her argument somewhat, I believe the morph is the perfect example of such obfuscated labor since by its very nature it is contingent on the fluid and seamless integration of multiple images into one. These digital effects succeed precisely because there is no distinction between the digital morph animation and the digital video of which the shots consist; they are both made up of the same digits, ones and zeroes. While Nina's bodily metamorphosis, achieved through the digital morph process, is almost by definition fluid and seamless, Black Swan insists on displaying the corporeal effects of biopower. Through intense sensations of deformation and pain, the film rejects the notion that living under biopower is somehow ephemeral. The digital post-cinematic body in this instance asserts itself through scenes of visceral impact, emphasizing the felt energies of biopower. The figure of the morph therefore comes across as resistance and rejection; while the morph is a corporeal concrescence of adaptability and fluid quick-change, Nina's metamorphosis is a way of negotiating biopower. Here we find again the tension between metamorphosis and modulation.

Metamorphosis

Nina's metamorphosis through the film indicates, as I have argued, her struggle with and rejection of the biopower pressures she experiences. As she desperately tries to reject her subjugation, Nina's body warps and tears, thus registering the destructive corporeal effects of biopower. Essentially, Nina's metamorphosis expresses what Gilles Deleuze has referred to as "affective athleticism," although in the case of *Black Swan* this is a stunted and crippled athleticism, becoming something else (Deleuze 9). For Deleuze, athleticism is the body's attempt to escape itself (Deleuze 14), which is exactly what Nina does by constantly pushing herself to and beyond her limits. Her deformation reaches towards perfection but is held back by the fixity of the people around her. What matters for Nina

is not grounded in sexual desire; she never shows interest in exploring her sexuality or even her gender. In a Deleuzian-Guattarian vocabulary, Nina does not want to become-woman, she wants to become-animal, to step outside human ontology and become something else entirely. This precarious state of Nina's body constantly oscillates between the repulsive and the attractive; her metamorphosis is both disgusting in its bodily abjection and fascinating in its visual spectacle.

Disgust is one of the fundamental responses we feel at Nina's bodily transformation, in which feathers from within rupture her skin. This disgust is directed both at the injury of the body and the breaching of the skin as a safe harbor from the outside world, marking Nina as taboo and unclean, what Julia Kristeva terms abject: "what disturbs identity, system, order. What does not respect borders, positions, rules. The in-between, the ambiguous, the composite" (Kristeva 4). Not only are we viscerally unsettled, feeling queasy as we witness the matter of Nina's body break down and the painful piercing of her skin by sharp quills, we are also unsettled because the skin is symbolic of our identity, our bodily integrity, and breaching the skin therefore triggers an anxiety over identity (see Figure 5). Seeing what is under the skin is inherently sickening and disrupts our sense of a unified self. Nina's transformation into an animal only makes this disgust even more intense.

Yet at the same time, things are a little more complicated. First of all, we know that what repulses us also attracts us; the metamorphosis of Nina's body becomes strangely fascinating in itself. The bodily metamorphosis becomes a visualization of desire through other means. Certainly we are repulsed by the blood and gore; we want to turn away as our innards churn, yet at the same time we cannot take our eyes off this disgustingly affective dissolution of body, identity, and character. Nina balances on the border between person and thing; she remains only marginally human, somewhere on the wrong side of a cultural boundary, but we are drawn to this transgression as well. We see Nina's struggle between social pressures



Figure 5 – Feathers rupturing the skin (Frame grab from BLACK SWAN, Darren Aronofsky, 2010)

and her own desires—Nina seems inhuman in her refusal to truly engage with anything beyond her performance, everything and everyone becomes subsumed to that one goal. In this quest, we can only cheer her on, feel for her, sympathize with her plight, and thereby question the social categories and boundaries that Nina physically attempts to transcend.

If desire is the opposite of disgust, desire is also far more fluid, plural, and amorphous. In itself, the morph functions as desire for changeability and adaptation, just as our desires always change form and morph into something new. Nina's desire is to become the Swan Queen and dance perfectly. Our desire, conversely, is to see the fascinating spectacle of Nina's becoming, but the central paradox of this desire is that it is disgusting. As Sianne Ngai points out, disgust demands assent, as it arrests and polices the boundaries between self and other (Ngai 335). While desire feeds on ambivalence, disgust clarifies what is permissible and what is not. For

this reason, it is problematic that Nina's desire passes through disgust as disgust disrupts our desire. A specific example of this disruption of desire through disgust is the unsettling sex scene between Nina and Lily. Before the film's release, the presence of a sex scene between Portman and Kunis garnered much attention, yet it is hard to imagine the actual scene satisfying the male gaze as much as was expected. Not only is the scene quite straitlaced and proper in terms of what is shown, but morphing and animation make the scene unsettling by shifting the object of the gaze. A lesbian sex scene in a mainstream film conventionally speaks directly to the male gaze; it objectifies the female bodies and entices the male voyeur. However, the scene not only morphs Lily's face into Nina's for a split second, indicating the ambiguous status of the scene, but also makes Nina's skin come alive on its own. Layers of bird skin ripple up and down Nina's body while a wrenching, fleshy sound murmurs under the score. Taken together, these effects turn Nina's body queer, disturbing, and uncanny. Any desire evoked by the images of the two women in bed together turns to disgust and complicates the male gaze's easy objectification. Denied its usual detached position as an outside point of view, the male gaze is brought into dangerous, contagious contact with the scene, unexpectedly becoming viscerally involved instead. This scene's juxtaposition of sex and morphing provokes an overflow of cultural boundaries that disrupts the traditional subject position of the male body as bounded and safe, outside affection.

The metamorphosis Nina undergoes wrenches her from a controlled social position, turning her into a dangerous free-willed woman. *Black Swan* positions Nina not so much in her social station or mobility, nor in her revolt against norms or cultural taboos. Certainly Nina remains a relatively meek woman (or even girl) throughout the film, well aware of her place. But later in the film, Nina steps outside the social order as her body transforms; her metamorphosis into a horrid human-animal hybrid casts her into all the unclean categories of abjection. This unruliness of the body is consequently regarded as disruptive and so subjected to

control. Kristeva's argument about the abject is precisely that the abject threatens to pulverize the subject (Kristeva 5). Therefore, the unruly body must be disciplined so that subjectivity can be maintained. Thus the attraction of the post-cinematic morph is also the repulsion of the uncontrollable body. Nina becomes, by all accounts, a "scary woman," to employ Sobchack's terminology.

In "Scary Women," a chapter in her book Carnal Thoughts, Sobchack argues that female embodiment is complicated through its various stages of aging, and that many horror and monster films correlate aging women with monsters. Sobchack points out that the female body becomes a monster through a conflation of self-recognition—the female body in the monster, and the monstrous nature of the (old) female body (Sobchack, Carnal 41). While Sobchack primarily discusses the use of cosmetic surgery to "correct" this monstrous flesh, she also points to the fact that cinema is inherently involved in forms of cosmetic surgery, in its ability to "fix" the female body—both in the sense of repair and stasis (Sobchack, Carnal 50). Scary women and their bodies are thus placed between metamorphosis and modulation as well; remanded to remain beautiful, their very transformation is what makes them scary. Their bodies become unruly through metamorphosis, even though metamorphosis is what is expected of them. As such, the morphing of scary women expresses the paradoxical and impossible demands visited upon women's bodies.

The morph is precisely the confluence of repair and stasis, as Sobchack argues, on the one hand, and the obfuscation of the labor inherent in the digital production of seamlessness on the other. Although Nina is young, her metamorphosing body produces the same visceral disgust Sobchack emphasizes, but it does so seamlessly and effortlessly, while constantly colliding with the effortfulness of being I emphasized earlier. The fluidity of the morph makes the morph impossible to pin down; the morphing body expresses both the desire for seamless and effortless smoothness

and the disgust at monstrous and disruptive transformation. In this way, the morph simultaneously critiques and maintains biopower. While I cannot help but see *Black Swan* as an articulation of the embodied violence visited upon women in contemporary society, I accept that others may see only misogyny perpetuated, especially since no workable solution is provided for Nina (and by extension women in general). Such is the nature of ideology, constantly morphing itself.

What I do think is evident is how *Black Swan* and post-cinema more generally participates in a prosthetic culture, where the human body is fully immersed in a flow of technological effects, most clearly expressed through the figure of the morph. Contemporary media ecologies are obsessed with fluidity and changeability, and the digital morph is only one example among many such liquid forms. Contemporary animation in general, and its particular uses in videos like Grace Jones's "Corporate Cannibal" or Aphex Twin's "Come to Daddy" with its clone-faced children, all speak to the same fascination with doubling, cloning, metamorphosis, and overall fluidity. In a sense, the human body exists in a post-medium condition in which bodily experiences and sensations are articulated through biomedia and biopower. Nina's tribulations portray how lived experience is conditioned and delimited by biopower's forms.

The morph, as one element of post-cinematic logic, expresses the uncanny, queer potential of digital video and the way that biology and technology seamlessly blur together. The post-cinematic body and the human body under biopower both become malleable, changeable objects open to endless iterations. The lack of essence speaks to a performative function of the body; the body is what it does, rather than a pre-defined structure. As such, the morph indicates a zone of indiscernibility between biology and technology and so dislodges any sense of stable embodiment in the post-cinematic image. Bodies on screen are no longer attached to any prior ontology; pro-filmic space

and time no longer have any ontological stability. Instead, the postcinematic image becomes elastic, open to any mutation or deformation, capable of taking on any form. The dimensions of space and time become attenuated and lose significance as the image can transcend either dimension at will. While similar effects have long been possible, it is their intensification and ready availability that fundamentally transforms cinema into post-cinema.

While the narrative of *Black Swan* never explicitly engages with media technologies as an integral part of the human body, the film still expresses the underlying logic of a body that is subject to multiple variations. Embodiment becomes diffused and stretched over more than one point; embodiment becomes a network of nodes of computer software and multiple performers. No longer located in a single body, post-cinematic performance consists of a larger-scale assemblage than traditional cinema. The long takes of Nina dancing are only possible through such an assemblage, which produces distinct forms and sensations. Digital morphing and animation allow for the triumphant pinnacle of Nina's transformation through which the film gains much of its force.

Morphing's formal, aesthetic logic expresses the cultural logic of *Black Swan* and post-cinema more generally: the way that biopower functions as a binding together of control and force. *Black Swan* reveals the corporeal and affective nature of this binding together; the body's deformations are expressions of the subjugations under which our subjectivities are currently placed. Existing in a state of tension between metamorphosis and modulation, Nina's body becomes trapped within a confined set of possibilities. Although on the one hand she achieves her goal of transcending herself and becoming the Swan Queen (see Figure 6), there is finally no line of flight away from the price of this bodily transgression—Nina dies as a figure of the impossibility of escaping biopower.



Figure 6 – Nina transformed into the Swan Queen (Frame grab from BLACK SWAN, Darren Aronofsky, 2010)

If metamorphosis is the ability to move across and between categories, modulation signals the fact that there is no way to move outside of such categories. Nina's body is constantly in pain because its metamorphosis collides with biopower's modulation; all the people around her represent the constrictions of society. Mothers, fathers, lovers—all converge to limit what Nina can become. This is why, in the end, the post-cinematic body is a matter of deformation, a stunted and crippled becoming which exists under biopower's modulation. Nina's body expresses this violence, revealing the logic of sensation or structure of feeling we inhabit.

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4.5 Biopolitical Violence and Affective Force: Michael Haneke's CODE UNKNOWN

BY ELENA DEL RÍO

We live in a world which is generally disagreeable, where not only people but the established powers have a stake in transmitting sad affects to us. Sadness, sad affects are all those which reduce our power to act. The established powers need our sadness to make us slaves. The tyrant, the priest, the captors need to persuade us that life is hard and a burden. The powers that be need to repress us no less than to make us anxious . . . to administer and organize our intimate little fears.

—Gilles Deleuze and Claire Parnet, Dialogues

My primary concern in this essay is not with the displacement of cinema by other media technologies, nor with a theory of affect as distinctive to these new media. Rather, I am interested in discussing Haneke's *Code Unknown* (2000) as an instance of cinema's attuned interface with the affective climate of our time—cinema as a technologically fluid medium that registers the violent affects relevant to the socioeconomic conditions of life in the 21st century with a particularly strong political and ethical force. This entails not so much a view of cinema as a discrete, self-

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contained medium, hence a break between the cinema and more recent image technologies—as suggested in the notion of the post-cinematic—as an interest in stressing the continuities found in the uneven, differential becomings of the image across a diversity of media. From this angle, what matters is not the disappearance of cinema, but its ongoing transformation by all manner of political, cultural, or technological becomings.

It is beyond the scope of this essay to engage with Steven Shaviro's Post-Cinematic Affect with any degree of specificity. However, I trust that the apparent points of departure between Shaviro's concept of postcinematic affect and my own analysis will be conducive to a productive tension and debate regarding the intersection between media, affect, and politics. In this regard, in contrast with Shaviro's insistence on the totalized subsumption of affect under global capitalism, or, as he puts it, "the continuous transformation of affect into currency" (62), I will be arguing that affects in Code Unknown function in a double modality, simultaneously as effects of biopolitical subjection and expressions that exceed biopolitical calculation. Haneke's film is an example of such a double movement, on the one hand drawing attention to forces that drain life out of bodies, while on the other hand keeping an eye on the aesthetic and affective mechanisms that become politically relevant in their ability to replenish the life forces thus drained. Code Unknown resists biopolitical violence by investing in the incalculability of affective life, and it is this orientation that allows the film to avoid implications of abject despair or cynicism.

Theoretically, my analysis of *Code Unknown* will be positioned between the affirmative potentialities of a Deleuzian/Spinozist ethology of the affects and Agamben's diagnosis of the biopolitical reduction of the human to "bare life"—a term that designates the concept of life as expendable matter subject to the sovereign and arbitrary law of the state. This discussion of *Code Unknown* will extrapolate the concept of bare life from its original theoretical context, the Nazi extermination camp, and into the

contemporary metropolis in order to account for the ways in which every subject in today's societies of control is susceptible to embodying the condition of bare life. The instrumentalization of life pursued by biopolitics is carried out today in close alliance with the aims and procedures of capitalism. Through this alliance between biopolitics and capitalism, life is managed and contained within a series of socioeconomic functions that are purportedly meant to enhance and improve life for all. In intimate collusion with capitalism, biopolitics carries out the public organization of the life process, and, as such, it is inherently violent in its intersection with the realms of necessity and survival. As we shall see, this merging of the realm of politics with the biological realm of necessity and survival is crucial to the way *Code Unknown* stages the chaotic encounters of bodies in the metropolis.

One of the central ways in which Haneke's cinema expresses the violent affective becomings of our time is through a general disarray of the mechanisms of both language/communication and consciousness. But, in itself, this disarray is not a sign of a new modality of cinema exclusive to our most recent times. Looking at the becomings of cinema after WWII, Deleuze's philosophy of the time-image already takes into account such a state of affairs, as it addresses the inability of modern cinema to respond to new affective pressures with the failing models of classical psychology and clichéd emotion, while at the same time underscoring cinema's capacity to generate new perceptual and aesthetic responses to these pressures. Rather, what makes Haneke's *Code Unknown* vibrate absolutely in sync with our time is its bringing to light the affective dimensions of biopolitical violence as it is exercised in response to the aims and procedures of both post-industrial capitalism and control societies.

Code Unknown conspicuously turns away from linguistic communication as an effective form of human contact. As vehicles for a kind of stratified, ready-made psychology, traditional verbal exchanges are ill-suited to express or produce the volatile forces that circulate under a biopolitical

regime as well as within alternative modalities of interaction. Concurrently, the film implies a devaluation of consciousness as control center of human behavior and knowledge. Characters in *Code Unknown* are shown to decide little of what transpires in their lives and to know even less about the forces that lead them into one, as opposed to another, course of action. Consciousness thus ceases to fulfill the function of originating experience in an anterior or transcendent way, and instead emerges simultaneously and immanently with experience. As it gestures towards the erosion of traditional models of communication and consciousness, *Code Unknown* becomes an instance of "agitprop" cinema, in the sense that Deleuze understands it:

the agitprop is no longer a result of a becoming conscious, but consists of *putting everything into a trance*, the people and its masters, and the camera itself, pushing everything into a state of aberration, in order to communicate violences as well as to make private business pass into the political, and political affairs into the private. (*The Time-Image* 219)

As one of the most avowedly political films in Haneke's filmography, *Code Unknown* performs what I would call an "activism of affection." The exhaustive public organization of life processes and the instantaneous capture of subjects by biopower are balanced out and complicated in this film with a nuanced accounting of vital affective forces whose coding remains imprecise or altogether unknown. *Code Unknown* thus takes Deleuze at his word when in his commentary on Foucault's vitalism he writes that "life becomes resistance to power when power takes life as its object... When power becomes bio-power, resistance becomes the power of life, a vital power that cannot be confined within species, environment or the paths of a particular diagram" (*Foucault 77*).

The Code: Closed Regulation, Open Passage

In *Code Unknown*, Anne (Juliette Binoche) is an actress living in Paris with her photojournalist boyfriend Georges (Thierry Neuvic) in a modest

apartment on the Boulevard Saint Germain. Early in the film, Georges's brother Jean (Alexandre Hamidi) suddenly shows up in Paris in an attempt to escape the life of rural farming his father intends for him. Anne finds Jean in the street unable to enter her apartment building because her door code has changed. As Anne shares her new code with Jean, this early moment signals forward to one of several events intertwined in the film's final scene. In this scene, Georges comes back from one of his war reporting assignments to find that he cannot enter the building where he and Anne live because apparently she has once more changed the code in his absence. In a long shot, we see Georges trying to call Anne from a public phone, and, although the camera keeps us rather distant, we realize that she is denying Georges access to the apartment.

With these all-too-familiar scenarios strategically placed at the beginning and end of the film, Code Unknown draws our attention to what is arguably one of its most important concerns—the extent to which our access to goods, services, rights, economic and financial resources, and even to each other's intimate spaces, in today's societies of control is managed and regulated by the pervasive use of passwords or codes. Examples of this supervised access in the film are numerous, but the moments just described are significant for bringing together two different fields of coding, thus making "private business pass into the political, and political affairs into the private," as Deleuze suggests. I am referring to the social forms of coding/overcoding that stratify the circulation and exchange of flows of capital, goods, labor, or people in the social field, versus the potentially more fluid, less segmentarized codes of affective exchange that are the basis for many of our relations and interactions with others. As Haneke's film makes clear, these two forms of coding are no longer segregated. As Anne alternately gives or denies someone knowledge of her door code, she is allowing access to her intimacy or restricting such access by partaking in one of the most effective regulating mechanisms of control societies: the establishing of thresholds "through which one can only pass with the right password" (Patton 96).

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Code Unknown seems to be acutely aware of the transition Western capitalist societies have undergone from the diagram of disciplinary power to a diagram of control.[1] Whereas the regime of discipline relied on physical mechanisms of confinement and punishment, a diagram of control administers lives and regulates actions through less visible, yet more insidious and ubiquitous means. As Paul Patton remarks, "control makes use of pass-words rather than order-words" (96) or commands; it "operates in the open air rather than in confined spaces, by means of various digital and electronic technologies" (96). If in the private sphere of Anne's life the use of a password can either facilitate or prevent someone's access to her actual or virtual space, in the socio-economic and political sphere passwords become key in determining inclusion or exclusion from the right to access various economic and cultural resources, or even political/juridical privileges. Through the intermingling of divergent narratives, which ultimately uncover more affinities than disparities in the lives of French citizens and of Eastern European and African immigrants, Haneke's film is concerned with developing a two-dimensional notion of the code. First, the film, as already mentioned, insists on the pervasiveness of social overcoding mechanisms and their deleterious effects on bodies that are excluded from socio-economic and political exchange; second, and even more crucially, the film contrasts such codes of regulation with what I would call "codes of passage"—codes that open a channel of circulation and possibility where one's power to affect, and be affected by, others can enter into a relation of exchange with the forces of others. The restrictive, stratifying functions of codes, the film seems to suggest, should be softened by attempts to mobilize the code towards non-stratifying functions of open interaction and inclusion.

With its emphasis on the way codes impact lives, *Code Unknown* stages a confrontation between political forces and life forces—their difference as well as their inextricable interdependence. While the film is undeniably invested in showing the subsumption of life under biopolitical control, it simultaneously offsets this trend in two ways: first, by countering the

controlling forces of biopower with a minute dissection of the incalculable affective forces that we see at play in the volatile encounters between individuals of diverse backgrounds, ages, genders, and ethnicities; and second, by drawing the unlikely points of contact, and indeed the biopolitical proximity, between the lives of French citizens, which the sovereign power of the state seems at the outset to recognize as valuable, and the lives of Eastern European and African immigrants, which biopower situates within or in the vicinity of bare life. The snapshot of contemporary Europe provided in *Code Unknown* reveals that the power of language as both a repressive and a creative code has run its course. Language is thus emptied out and surpassed by other codes that prove more effective not only as state tools for managing flows of populations and labor, as well as lifestyles, but also as emergent new ways for initiating expressive and creative contacts and for building communities and possible worlds with others.

The End of Communication, the Beginning of Affect

In their sensibility to a new code of exchange, the opening and closing scenes framing Code Unknown instantiate Haneke's intuitive grasp of the present cultural and historical zeitgeist. In each of these scenes, taking place at a school for hearing-impaired children, a child utilizes gestural language to perform an affect that the other children in the audience are supposed to guess and name. In the opening scene, the girl's gestures and movements of fear and withdrawal (See Figure 1. A girl performs the gestures of fear and withdrawal) are met with the following guesses: "Alone? Hiding place? Gangster? Bad Conscience? Sad? Imprisoned?" In reply to each of these guesses, the girl performer shakes her head. But the children's failure to decipher her affective code may be read as an asset rather than an actual failure. Two things point to this possibility: first, the time and careful attention the children in the audience give to the performer indicates a genuine interest in the other; second, the very multiplicity of responses and their failure to coalesce into a single name or answer is itself indicative of the incapacity of linguistic codes

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to translate affects that are transformative and heterogeneous. As such, this apparent failure in translation is rather a sign of the inexhaustible, altogether unmanageable powers of affective life. What matters here is the incommensurability between the affect performed—a composite of several interrelated affects—and the linguistic codes of fixation and stratification. The challenge this ambiguity poses to our attempt to access or to know the other constitutes a political affirmation of difference, a manifestation of life's resistance against power that the film overall seems intent on stressing.



Figure 1 – A girl performs the gestures of fear and withdrawal (frame grab from CODE UNKNOWN, Michael Haneke, 2000)

Haneke's cinema allows us to see and experience an unprecedented speed of affective becomings. Affects unfold here as complex clusters of varying intensities of emotions that are constantly on the move to becoming different from what they are at any single point. *Code Unknown* makes note of this affective complexity and volatility in multiple instances, thus pointing to the segregation of violent and non-violent moments as a purely

artificial, arbitrary gesture (Coulthard, "Interrogating the Obscene" 180). By considering the affective excess that lingers well after a conspicuously violent encounter has taken place, we can grasp the wild singularities involved in violent forces in absolute defiance of representational containment. It is, for example, at the apparently inconsequential moment when Anne surfaces on the street after being harassed by the young Arab man in the subway, and she walks home, that the affective turmoil of her encounter has a chance to sediment and become visible (See Figure 2. Anne comes out on to the street after being harassed in the subway). And it is also at this point that her facial and corporeal expressions defy any analytic attempt to stratify her affective experience. A multitude of affects guide the movements of her head, the subtle mistrust in the turns of her gaze towards one side of the street and the other, her tentative walk. Yet, no single signifier can capture the affective complexity brewing in the movements and speeds of her body.



Figure 2 – Anne comes out on to the street after being harassed in the subway (frame grab from CODE UNKNOWN, Michael Haneke, 2000)

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Two other scenes in Code Unknown are exceptionally expressive in the way they signal to the correlation between the contemporary breakdown of language—its failure to deliver transparent communication and to produce civilized community—and the exposure of a raw affective layer that refuses any form of coding, hence is marked as unknowable or unknown. In the first of these scenes, Jean and his father (Josef Bierbichler) are having a dinner of beets at their farm. Except for the father's sad words ("That's all there is"), father and son eat and go about their business in total silence. After the father finishes eating and washes his plate in the sink, he shuts himself in the bathroom, and then flushes the toilet to pretend that he's there for a purpose other than simply hiding his misery from his son. As in a later scene where father and son are relentlessly toiling in the barn together in total silence, the lack of speech contributes to the impenetrability of the affects that pass between them. The simple actions they perform—eating, washing, doing hard physical work—are anything but simple or obvious. What the film gives us to feel is immanent to the actions performed, yet it is well beyond what can be articulated in language.

In a way that profoundly marks *Code Unknown* as an accurate ethological chart of the contemporary human situation, some of the characters in the film occupy a no man's land where former codes of exchange such as language have outlived their relevance, and where the emerging affective codes only serve to magnify their vulnerability. Georges and Jean's father offers a primary example of such a disempowered position, having no secure foothold in either the traditional/molar modalities of authority (fatherhood, property [it appears that he kills his own cattle in a desperate gesture], assertiveness through language, etc.), nor in the emergent, less stratified forms of contact and relation.[2] His inability to affectively interact with others is made painfully obvious in the scene where Georges and Anne come to visit him at the farm. On this occasion, the father's speech traverses several conflicting emotions, going from disappointment and anger at Jean's unexplained departure from the farm ("I thought that he'd be married soon and so he'd have a house ready to live in"), to resignation

("In any case, he's right. There's no future here"), and recrimination of Georges for setting a bad example for Jean ("You blazed the trail for him"). Finally, the father reaches a dead-end where what he really feels cannot be articulated: "Jean will come back when he wants to, or. . " to which Georges replies: "Or what?" As language utterly abandons the father, he starts to fidget nervously with his fingers on the tabletop. But when Anne affectionately steps in to hold his hand steady, he cannot handle her touch, excuses himself, and leaves the room (See Figure 3. Anne tries to hold Georges's father's hand).



Figure 3 – Anne tries to hold Georges's father's hand (frame grab from CODE UNKNOWN, Michael Haneke, 2000)

Biopolitical Violence 21st-Century European Style

On a larger geopolitical scale, and through an array of characters variously positioned in relation to the center of Western European culture, *Code Unknown* reflects on the search for identity in the European nation states as fueled by the obsessive exclusionary dynamics of biopower. That is, the film shows how all individuals, included and excluded alike, are affected

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by the controlling mechanisms at work in the European Union's quest for economic and political unity in the face of increasing flows of immigrant labor crossing its borders. It also more importantly reveals the affective consequences of such bureaucratized violence.



Figure 4 – Jean discards some wrapping paper onto Maria's lap (frame grab from CODE UNKNOWN, Michael Haneke, 2000)

The film's first narrative segment submits four people (Anne, Jean, Amadou, and Maria) to a violent affective collision where not only do they confront each other's immediately politicized forces, but they also confront the forces of the state/police summoned to restore order. After Anne meets Jean in the street on her way to work and gives him the code to her apartment, Jean walks past Maria (Luminita Gheorghiu) begging on the street corner and distractedly discards some wrapping paper onto her lap (See Figure 4, above). Amadou (Ona Lu Yenke) happens to take note of Jean's action and demands some form of apology or remorse from him. An immigrant himself like Maria, yet not nearly as destitute,

Amadou takes on the passionate advocacy of her rights, thereby asserting himself against Jean's white, Eurocentric privilege. As Jean persists in walking away from Amadou and ignoring his pleas for an apology, the two young men engage in a rather violent physical fight (See Figure 5, below). Amadou's awareness of his own racial difference vis-à-vis Jean prompts him to explain to the gathering crowd that Jean has humiliated the lady. Amadou's belief in the possibility of recovering the truth of the incident and of transparently reenacting it for their street audience unremittingly continues when the cops show up and he attempts to explain the simple facts of the event as he saw them ("he humiliated a woman begging outside the bakery").

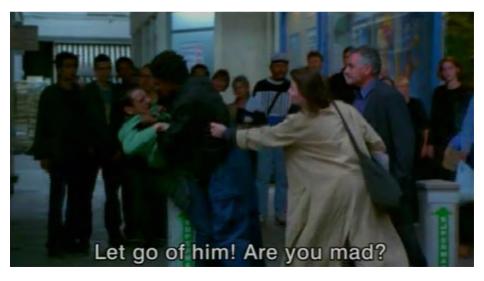


Figure 5 – Amadou and Jean fight (frame grab from CODE UNKNOWN, Michael Haneke, 2000)

Upon arriving at the scene of the incident, the cops immediately give their full attention to Amadou. The gendarmes show no interest in Amadou's ethical argument; rather, they are solely concerned with efficiently managing him as the source of the trouble. The cops' recognition of

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Amadou and Maria as potentially or de facto undocumented immigrants ("sans papiers") works as an act of instantaneous capture that dispenses with any necessity of verbal interrogation. Here, language is fascistically reduced to a matter of instantaneous capture and unconscious pairings of signifiers (black young male = trouble; female homeless immigrant = trouble). Although Amadou produces an ID card, which juridically, at least, entitles him to some legal rights, he is instantly pronounced guilty and handled as a wild force that needs to be subdued (See Figure 6, below).



Figure 6 – Amadou wrestles with the cops (frame grab from CODE UNKNOWN, Michael Haneke, 2000)

We may assess the forces at play in this scene in terms of some very interesting observations Lisa Coulthard has made with regard to the ethical impact of Haneke's cinema. Applying Alain Badiou's model of ethics, Coulthard sees Haneke's films as exposing an ethical failure on the part of the subjects involved in a conflictive situation:

It is in these missed encounters of Haneke's films that we can note an ethical space for interjection, where we see how destruction,

trauma and cruelty *could have been avoided* through acts of fidelity. (emphasis added, "Negative Ethics" 72)

Fidelity would entail "thinking the situation according to the event," which in turn would "compel[] the subject to invent a new way of being and acting in the situation" (Badiou qtd. in Coulthard, "Negative Ethics" 72). In other words, in Badiou/Coulthard's terms, an ethical response to the street encounter in *Code Unknown* would have involved acting against "consensual norms," instead embracing "potentially restructuring, radically truthful acts" (73). Thus, just to speculate on a few of these possibilities, this ethical gesture might have taken place if the cops had listened to Amadou, if they had treated Maria in a humane way or indeed seen her as a human presence, if Amadou had talked to Maria instead of becoming righteously belligerent with Jean, if Anne had become interested in Maria and Amadou instead of being utterly consumed by Jean's altercation with the police, and the list goes on.

Although I find this line of speculation quite appealing, I don't think the ethical force in this or other situations in Haneke's films lies in what's missing or could have happened, but rather precisely in the courage to leave the wound (or in Deleuze's Bergsonian terms, the interval between stimulus and response, action and reaction) open, and the question still unanswered. This involves a slightly different ethical move than the one proposed by Badiou/Coulthard. What could have happened, but did not, submits us to a realm of transcendental possibilities that is very tempting when we are dealing with negative affects. But the key to a more immanent understanding of Haneke's ethics resides in what Coulthard herself perceptively identifies as the "violence of inaction" ("Negative Ethics" 74) in Haneke's films. The ethical force lies precisely in the fact that the violent action is not countered or contained by any reaction or response that might actually repair it or interrupt it. Although this is experienced as something painful or destructive, it also amounts to a political gesture or an "activism of affection" insofar as it allows the viewer to feel the full impact of the negative affect. We may even say that the lack of action

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in response to violence carries out a full affirmation of the negative, and this immanent gesture is the only kind of affirmation possible short of falling into transcendental wishful thinking. In a Deleuzian sense, it is less a matter of missed encounters and more one of virtual forces the film is always on the verge of actualizing: for instance, Anne and Georges never actually meet Maria, yet the film brings them together in the final scene in a virtual, yet real, sense.

Maria does not always appear as an immigrant in the film, but when she does, she is stripped of her dignity and her capacity for joy and action. Whether sitting on the sidewalk as a street beggar or handcuffed and deported back to Romania, Maria is the extreme instance in the film of the notion of "bare life"[3] theorized by Agamben. In their handling of both Amadou and Maria, the cops make clear the extent to which state power has fully and habitually incorporated the condition of a "state of exception," in which the individual's legal and political rights are suspended, within its political system of neoliberal democracy. As made apparent by the cops' refusal to provide any legal justification for arresting Amadou or for dragging Maria along the sidewalk like a dog (See Figure 7. A cop drags Maria along the sidewalk), "the legal order operates only by suspending itself . . . The law is not absent . . . but it is emptied of concrete meaning and suspended in its effective application" (Oksala 33).

Within this biopolitical regime, a wholly different form of language, constituted by the faciality machine and its own rigid system of overcoding, takes over from traditional models of communication. For Deleuze and Guattari, the abstract machine of faciality is aligned with "a generalized collapse of all of the heterogeneous, polyvocal, primitive semiotics in favor of a semiotic of signifiance and subjectification" (180). As *Code Unknown* shows, the faciality machine cancels out any possibility of the exercise of language as a mechanism of either representational efficacy or rhetorical persuasion. This is absolutely made evident in Amadou's vain attempts to use language to rationalize the violence that has erupted between him and



Figure 7 – A cop drags Maria along the sidewalk (frame grab from CODE UNKNOWN, Michael Haneke, 2000)

Jean. The faciality machine works as a social production of faces, and, as such, it obliterates any possibility of independence between the face and language. In other words, the face is no more able to carry an autonomous expression independently from language than language is able to serve as a conduit for transparent communication (179).

Another resonant example in the film of the deployment of faciality as a mechanism of biopolitical capture occurs in the segment showing a series of black and white pictures of people's faces that Georges has taken in the subway unbeknownst to any of the subjects photographed. Besides the obvious violence inherent in Georges's act of invisible capture, which alludes to our unwitting daily capture by a host of intangible, unlocalized surveillance mechanisms around us, one of the things this series of pictures makes clear is that the contemporary makeup of the French population lies far beyond any illusions of a homogeneous national identity predicated upon a single race or ethnicity. The multiracial composition expressed

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in this series of photographs evokes a heterogeneous mapping of the French nation as both a war machine that resists the nationalistic fight for a nostalgic maintenance of self-identity and as a target of the fascist/repressive faciality machine that instantly pronounces non-white faces as deviant (See Figures 8, 9 and 10).

Such a multiracial, non-Eurocentric array of faces forcefully contradicts the idea of French national identity, one that Code Unknown generally identifies with the aims of the European Union to maintain a semblance of economic and political unity in the face of increasing flows of immigrant labor crossing its borders. As Janell Watson has argued, although identity in some instances "serve[s] a positive political function in minority struggles against majority oppression" (198), the "focus on European identity may be a way to avoid talking about not only lingering racist and ethnocentric discrimination, but also and especially about access to the resources which states confer according to citizenship-based hierarchies" (198). The new exclusionary policies the European states utilize to ensure their own identity against foreign or dangerous bodies are not only based on color or ethnicity, but, in conjunction with these visible markers, identity depends on "the juridical categories of citizenship, legalized residency status and work permits" (211). We can identify this bureaucratized level of overcoding as one of the most harmful forms of violence inherent in biopolitics.

Unlike the violence of previous forms of sovereignty in disciplinary societies, the violence that biopower gives rise to in today's control societies of globalized capitalism is neither obviously physical nor, in most cases, spectacularly visible. Moreover, the violent effects of biopower are somewhat masked by its life-preserving goals. In no way, however, do these goals entail a lessening of the powers of subjugation brought down upon the body, but simply a reterritorialization of both the forms of power and their effects. In neoliberal capitalist states, the reterritorialization of power is inextricably connected with the commonly accepted equation

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Figure 8. Non-white faces of the French nation (frame grab from CODE UNKNOWN, Michael Haneke, 2000)



Figure 9 – Non-white faces of the French nation (frame grab from CODE UNKNOWN, Michael Haneke, 2000)



Figure 10 – Non-white faces of the French nation (frame grab from CODE UNKNOWN, Michael Haneke, 2000)

of the forces of life with the forces of the market, a system "in which everything has an equivalence in money" (Adkins 162), and it is this equivalence that produces the most insidious form of subjugation.

We may distinguish two levels at which violence is exercised in control societies, hence two different degrees of vulnerability to our becoming bare life: on a first level that affects all of us, we face the violence of "dividual control." [4] Through pervasive regulatory mechanisms that measure and maximize our capacities for production and consumption, we have all to some extent relinquished our status as whole individual persons, to become instead dividuals. Dividuals consist of

a certain number of functional aspects . . . a bundle of aptitudes or capacities such as the financial means that ensure a capacity to repay a bank loan or the scholarly aptitudes that guarantee entry onto a given program of study. (Patton 96)

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This silent and generalized subjugation of bodies based on our abilities to invest, or be invested by, capital is complemented by the intensified violence that occurs on a second discriminatory or exclusionary level. Here, violence weighs disproportionately on the bodies of those whose capacities for production and consumption are negligible. If persons themselves are no longer marked by power, but only their labor capacities as quantities of surplus value (Adkins 163), those whose labor capacities do not yield surplus value will be branded as superfluous, or even dangerous to the life-enhancing, capital-enhancing, goals of biopower.

Violence in control societies is exercised through invisible and dispersed vectors of control built into the flows of production and consumption in seamless, almost imperceptible ways. Sovereign power today is thus as abstract and elusive as the flows of capital and the speculative forces of global markets. Although, as we see in Code Unknown, there are exceptions to this invisible exercise of violence (as when the police, for example, deport a handcuffed Maria back to Romania, or when they subdue a resisting Amadou), in most cases the violent force is not borne upon the body directly, but through indirect means. As in Maria's case, the flow of immigrant labor is subjected to administrative regulations and procedures which impose a form of violence that is as much economic as it is affective, for the person's inability to enjoy a decent livelihood and to meet the bare necessities of life gives rise to a full range of self-debasing feelings. The scene in Code Unknown where Maria shares her worries with a fellow Romanian immigrant over her lack of a work permit is a good gauge of the kind of violent effects produced by biopower. In this scene, we surmise that Maria is in a house she shares with a group of Eastern European immigrants in Paris. At one point, she walks away from her friends into a nearby room. She leans on the wall, and stooping down on the floor, she covers her face with her hands and starts to cry. A woman asks her if she is sick. Maria explains that a Romanian friend had promised to pass along

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her license to sell newspapers, yet somehow has failed to deliver on her promise. She cannot apply for a license herself because she was deported a few months ago.

But after bringing up the crucial importance of work permits, the scene insightfully proceeds to touch on the deleterious affective consequences of these regulatory mechanisms. Implying the mutability of power relations, Maria tells her friend how disgusted she herself had once felt upon giving some money to a dirty gypsy beggar. But then she turns the tables on her disgusting encounter with the beggar by referring to her own begging experience on the Boulevard Saint-Germain: "A man was about to give me 20 francs. But when he saw my outstretched hand, he threw the bill into my lap as if I nauseated him. I rushed back here and hid myself in the attic. I cried my eyes out all day." Maria's body language during the entire scene recalls the gestural performance of the young girl in the film's opening moments. In both instances, the body insists on its own disappearance by adopting gestures of hiding and withdrawal. These gestures of self-cancellation whereby the subject herself, with no need for overt physical force, comes to assume her own virtual death show the ease with which biopower carries out its discerning selection of useful and useless lives, and the horrific violence behind such ease. In other words, the state abandons certain concrete lives in the interest of preserving not so much many other lives as a generalized ideal of life that is wholly abstracted in its equivalence with capital. The subject abandoned by the state intuitively understands that her life is not as valuable as the life that lends itself to this equivalence. And yet, despite the dismal implications of this scene, it should be said that it is precisely in drawing attention to Maria's performance of self-erasure and to the enormity of the affects it involves that the film opens up a path towards ethical resistance. Code Unknown resists by making visible the process of capital's reduction of the person to surplus value, and in making such process visible, it attests to the possibility of dismantling the mechanisms of knowledge and power complicit with this process.

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As a system of inclusion based upon exclusion—a production of identity dependent upon the negation and repression of difference—the effects of biopower are detrimental to both excluded and included alike. The subway scene, where Anne is unremittingly harassed by a young Arab man (or beur), sheds light on the ways in which the disaffection of the marginalized breeds a violence that cannot be contained at the margins, but spills over into the public spaces shared by all. The scene in the subway illustrates the utter ineffectuality of either the regime of social stratification or the causality-governed rationalizations of representation in containing violence. Suddenly and unaccountably, the violence pushed to the margins by the law bears down on those who are "included" and favored by the system. Inside the subway car, the young beur stands beyond the right edge of the screen and harasses Anne with his gaze directly and relentlessly trained on her body (See Figure 11, below. Anne is harassed by the young beur, who stands beyond the right edge of the screen). As we can see in the faces of those occupying the space of the frame, the out-of-frame presence of the Arab man sends ripples of violent tension into the faces and bodies of those we do see, thus making clear that his exclusion from the visible in no way diminishes the violence of its affective demands on both characters and viewers, if anything increasing our tension precisely due to our lack of access to the space beyond the visible. These in-frame and out-of-frame dynamics not only expose the futility of biopower's efforts to manage life through the binary of inclusion/exclusion, but they also point more generally to the way the self is constituted by the other, the in-frame by the out-of-frame, the actual by the virtual.

Code Unknown makes clear that the fluidity of the current geopolitical and economic realities makes the entrenched insistence on nationalistic identities and economic hierarchies both unsustainable and highly detrimental to the well-being not only of those who are excluded but also those who receive full privileges of inclusion and citizenship. Moreover, Code Unknown submits the regime of faciality and its overcoding of

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Figure 11 – Anne is harassed by the young beur, who stands beyond the right edge of the screen (frame grab from CODE UNKNOWN, Michael Haneke, 2000)

persons to a critique that exposes its own mechanisms as arbitrary and mutable. Just as the cultural judgments associated with the relations between certain faces and their socioeconomic functions are purely capricious and volatile, we can say that identity, whether of the individual or the nation-state, is purely a myth created to consolidate an elusive sense of unity or homogeneity. As *Code Unknown* illustrates by contrasting the denigrated Maria in the streets of Paris with the Maria who dances and rejoices at the wedding celebration in Romania, or by juxtaposing the scene of Amadou's confrontation with the police with the pleasant conversation he shares with his girlfriend at the restaurant, there is no such thing as identity, let alone an inherently or essentially violent identity. There are only multiple becomings of the subject, which are wholly dependent upon the variable field of forces in which we are situated—forces in relation to which we can either be diminished in our capacity to act, feel, or create, or augmented in those very capacities.

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One of the scenes where Anne is acting out a dramatic part uniquely illuminates the idea that socioeconomic positioning or identity is consistently trumped by the volatile, arbitrary designs of biopower. Here, she plays a wealthy woman who is being shown a spacious, luxurious apartment by a realtor. Suddenly, she finds herself trapped and confronting a sure death in a windowless red room. The importance of this moment lies in the forceful way it extends the state of bare life to any and all bodies in the film, regardless of race or socioeconomic status. This scene announces itself as viscerally affective rather than representational. The intrusive, relentless training of the camera on Anne's face suggests a desire to dismantle the real/ fictional divide by piercing through her first layer as fictional character/ actor and into the real affects beneath this mask. A voice-off, supposedly the diegetic director's (Didier Flamand), takes on the lines of Anne's sadistic captor. As the male voice-over says, "The door is locked, you will never get out, you will die here," Anne's facial expression of disbelief and the panicky tone of her voice ("Sorry, is this a joke?") are so utterly convincing that the man's words are no longer part of a script (See Figure 12, below).



Figure 12 – Anne is trapped in the red, windowless room (frame grab from CODE UNKNOWN, Michael Haneke, 2000)

When, at last, Anne asks the man, "What do I have to do?" he replies, "Show me your true face. Not your lies nor your tricks. A true expression. Be spontaneous, react to what's happening." The man's instructions strongly evoke the kind of acting cues and demands a film director would give to his/her actors. The allusions to a "true face" and "a true expression" also resonate with the film's sense of urgency, mentioned earlier, for a new code of affective exchange that might differ from the worn out and empty linguistic formalities and epistemological tricks of past models of communication. This scene thus unfolds in an indeterminate, exceedingly evocative, affectiveperformative space that has let go of its ties to realism in order to resonate affectively with the rest of the film. Anne's violent exposure in the void of her fear as she faces annihilation recalls Georges's father's attempt to hide his own powerlessness from others, Georges's wellpracticed routine of dodging conflict, Maria's painful confrontation of her own dehumanized image reflected in the faces of others, and Amadou's humiliating confrontations with police forces. All characters in Code Unknown are, in varying ways and degrees, trapped by a multitude of stratifying forces, captured by extreme affects, and in search of a true expression that will resist the forces that hold them captive. Thus, it would be disingenuous to think that Anne's status as a French citizen and an actor affords her the privilege of representing bare life as opposed to becoming it. As we see in the red room scene, the privilege of representational distance is all but erased, and this lack of distance functions precisely as an index of how far bare life can reach: in the world of Code Unknown, it is no longer restricted to immigrants, but extended to all. The segregations and classifications set up by the biopolitical machinery are thus challenged by an affective stream that runs unstoppably and indiscriminately throughout the film and exposes the connectivity underlying superficial distinctions. With a chaotic, yet affectively coherent, script and a camera that turns the image into a trance, the film recirculates affects from the technocracies of biopolitics, from the mechanisms of knowledge and

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power that manufacture and validate the general ideas that circulate in our society.

Code Unknown thus appropriately ends on a note of unbreakable affective continuity that defies all causality as well as linguistic understanding. In a tracking shot that covers the space of the sidewalk outside Anne's apartment, the last scene injects a sense of virtual connectivity into Anne, Georges, and Maria's lives of which they themselves remain absolutely unaware. Right after the scene in the subway, a large group of children, apparently the same hearingimpaired children from the opening scene, are seen playing drums by a modern bridge structure (See Figure 13, below). The loud, urgent sound of their drums is heard over the remainder of the film's images, drowning out all other sounds. Images of Maria looking for a begging spot and being removed from it by a salesperson are followed by images of Anne exiting the subway station and walking home. The sound of the drums continues unabated as Georges punches in the code into Anne's buzzer only to realize that she won't let him in. As if evoking a massive, uncontainable force relentlessly marching on, the drums lend an enormous affective resonance to the film's ending. The sense of the images we see can no longer be comprehended through verbal exchanges. At best, language has become a cliché, at worst, an unconscious channel for the violence of biopower. In place of language, the sound of the drums vibrates with all the violence heretofore disclosed by the film, yet it does not try in vain to counter it or quell it down. It is primarily in this way that Code Unknown embraces a truly resistant politics—by branding the awesome violence it registers in the world directly upon our brains.

Biopolitical Violence and Affective Force



Figure 13 – Hearing-impaired children playing drums (frame grab from CODE UNKNOWN, Michael Haneke, 2000)

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Notes

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[1] In his "Postscript on the Societies of Control," Deleuze develops and updates the idea of social control beyond the disciplinary regime theorized by Foucault. In control societies, visible forms of confinement or punishment are no longer prioritized as mechanisms of subjection. Instead, through its ubiquitous expansion, capitalism exercises control by turning every manifestation of human consciousness or activity into surplus-value, and by instituting a system of perpetual assessment, training and education that continues throughout life. Under the socioeconomic requirements of constant modulation and metastability, the individual becomes a "dividual," a concept that breaks down the classical distinction between mass and individual, and points to the function of the subject in terms of abstract marketing data and informational codes that serve the accumulative ends of capitalism.

[2] Georges's father's desperate gesture of killing his own cattle resonates with the socioeconomic plight of farmers in certain European countries. As one of the editors in this volume pointed out to me, this part of the plot links directly with constant media attention to their frequent demonstrations, their deliberate waste of their own produce as gestures of protest against subsidies, free trade, and so on.

[3] In *Homo Sacer: Sovereign Power and Bare Life*, Agamben uses this term in the context of the Nazi extermination of the Jews. However, the concept of "bare life" can be extended to include the abstraction and objectification of life that occurs within today's control societies as well. As Agamben notes, we may look at the camp and its organization of life as expendable matter not as a historical anomaly, but "as the hidden matrix and *nomos* of the political space in which we still live" (*Means without End 37*). The biopolitical designation of life as "bare life" thus takes place whenever living beings are subjected to the explicit calculations made by the sovereign regimes of knowledge and power.

[4] For Deleuze, the transformation of the individual into a dividual also marks a transformation of modalities of control. The dividual is no longer an individuated subject, but a conglomerate of coded matter. In this new

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regime, "what is important is no longer either a signature or a number, but a code . . . [or] password . . . The numerical language of control is made of codes that mark access to information or reject it" ("Postscript" 5).



5.1 The Relocation of Cinema

BY FRANCESCO CASETTI

Tacita

In October 2011, the British artist Tacita Dean presented Film at the Tate Modern in London.[1] Dean's work is a film short, projected in a continuous loop onto a large screen, in a dark space furnished with a bench for visitors. The written explanation at the entrance to the room draws attention to the presence of all these elements: "35mm colour and black & white portrait format anamorphic film with hand tinted sequences, mute, continuous loop, 11 minutes. Large front projection; projection booth; free-standing screen; loop system; seating." In her article in The Guardian, Charlotte Higgins described Film as "pay[ing] homage to a dying medium," and *Film* is undoubtedly an act in defense of film stock the same film stock that Kodak had announced, on June 22, 2009, it would cease to sell after 74 years of production, due to a steep decline in sales. Beyond the preservation of a medium-support, *Film* also seems to invoke the preservation of a medium-device: in the Tate we find a projector, a reflective screen, a darkroom, a bench—all things that the new forms of image consumption, on laptops or tablets, seem to renounce. In essence, Tacita Dean attempts to restore to us all the principal elements of the cinema, those which characterize its material basis. Paradoxically, she sets them before us as components of an artistic installation: she gathers them

together and reunites them for the purposes of a work intended for a gallery or museum. It is no accident then that the visitors to Turbine Hall do not hold the same expectations or display the same behavior as they would if they found themselves at the British Film Institute Southbank (which, by the way, is located not far from the Tate) in order to see a Woody Allen retrospective in one of its small theaters, or even in its Imax theater to see *Mission: Impossible—Ghost Protocol*. This audience did not go to Turbine Hall to experience what is usually called *cinema*, that is to say, a set of images and sounds that provide a particular representation of the world and a particular relationship with a spectator. It went there for *art*. Immediately a question arises: did Tacita Dean, in her attempt to preserve cinema, focus exclusively on its material elements while leaving aside or dispensing altogether with the social practices that it involves?

In an opposite movement, if we exit the Tate—or the British Film Institute, too easily identifiable as a "temple" in which canonical works are worshipped—we find many cases in which cinema, understood as a form of representation and spectatorship, not only continues to live, but expands beyond its traditional support and device. For example, at almost the same time as Tacita Dean's exhibit was being inaugurated, a group of Londoners reappropriated a space alongside a canal, under a highway overpass, and transformed it into a kind of outdoor movie theater where films were projected for the neighborhood residents.[2] In August of the same year, the gardens in front of Paris's Trocadero (the old site of the Cinémathèque) hosted the Moon Light Festival with open-air screenings. [3] Some months prior to this Cairo's Tahir Square, a space that had already been active during the Arab Spring, was reanimated with a projector and a large screen on which videos of various kinds were shown.[4]

Indeed, the diffuse presence of cinema goes well beyond these examples. In 2011 it was still possible to rent a DVD in a Blockbuster shop, and already in a Redbox kiosk; spectators were able to choose a title from the catalog of Netflix or Hulu and have it in a streaming format on their

TV set or on their computer; a good number of films and clips were also available on YouTube. Similarly, movies were screened on airplanes, as well as in cafés and bars, although often mingled with sports and news. The film industry itself supported these new forms of distribution, [5] moving a film from one channel of distribution to another with increasing velocity.[6] There was also an enormous profusion of images and sounds that used a cinematographic language other than that of the feature-film format: we found cinema in TV series, documentaries, advertisements, musical clips, and didactic presentations. We encountered it, in disguise, in waiting rooms, stores, public squares, along streets, and on urban media façades. Finally, we found on the Internet a vast array of objects that still had something to do with cinema, from trailers to parodies, video diaries to travelogues. Today, this trend continues, but the picture has grown even larger. The enormous diffusion of screens in our daily life—including those of the latest generation, which are well-integrated into domestic and urban environments, interactive and multifunctional, in the form of windows or tabletops [7]—brings with it a greater presence of cinema. This diffusion gives movies new trajectories along which to circulate, new formats, new environments in which they can be enjoyed. It allows cinema to continue to live—and not only to survive—as it adapts to a new landscape.

Therefore, we find ourselves before a minor paradox: on the one hand we have an artist defending a traditional technology, even to the detriment of a mode of consumption; on the other hand there is an evident tendency among industry, consumers, and fans to promote the permanence of a mode of consumption even while renouncing a technology. It is precisely this paradox that allows us to begin thinking about the state of cinema today, beyond the facile proclamations that announce its death or celebrate its triumphs. What is happening to cinema in an age in which it is losing essential components and gaining unprecedented opportunities? What is it becoming at a moment in which all media, due to the processes of convergence, seem to be spilling out beyond their usual routes and

embarking along new paths? What is cinema, and moreover, where is it?[8]

I will begin to respond to these questions by analyzing four points, in order to map out the terrain. First of all, a medium is not only a support or a device. A medium is also a cultural form: it is defined most of all by the way in which it puts us in relation with the world and with others, and therefore by the type of experience that it activates. By *experience*, I mean a confrontation with reality (to experience something), the re-elaboration of this reality into knowledge (to gain experience), and the capacity to manage this and similar relations with reality (to have experience).[9] From its very beginnings, cinema has been based on the fact that it offers us moving images through which we may reconfigure both the reality around us and our own position within it. Cinema has always been a way of seeing and a way of living—a form of sensibility and a form of understanding, as a brief overview of the film theories of the early decades of the twentieth century will clearly demonstrate.

Second, the two faces of the medium, its status as a support or device on one hand, and its status as a cultural form on the other, are usually closely linked together: we experience reality in the ways that a technology allows us to. These two faces, however, are also distinct from one another, and it is therefore useful to use two different names for them: it is not by chance that Benjamin speaks of the *Apparat* and of the *Medium* of perception; [10] Rosalind Krauss of mediums and media (57); W. J. T. Mitchell and Mark B. N. Hansen of technological forms and forms of mediation (xi). One is the material basis of a medium, while the other is the way in which this material basis organizes our experiences. The distinction is becoming particularly important today, at a moment in which the type of experience that characterizes a medium seems able to be reactivated even without the full presence of its traditional material basis. Indeed, we have just seen an example of this: the cinematic experience can arise even outside of the traditional darkened theater, thanks to other devices, and though it

is certainly not the same, it still retains many of its characteristic traits. Once again in this case, an overview of the film theory of the 1920s and subsequent years will illuminate how cinema was long ago conceived of as a medium that could also emerge in other situations.

Third, what allows an experience to relocate itself in new physical and media environments? A new context brings transformations along with it. Even so, an experience—for example the experience of cinema—remains in some way the same when the new situation in which we find ourselves conserves, if not the traditional individual elements, at least a "cinematic" profile or shape. In such cases we "recognize" the presence of cinema even when it is no longer as it was, or where it was, before.

Fourth, to recognize a medium, and cinema above all, in a new environment that is not its own is a complex operation. In a sense, this recognition takes us backwards: if our recognition is based on memory and habit, we look for something that corresponds to a canonical model. But recognition can also take on a progressive aspect: before a situation that is necessarily imperfect, we literally imagine what cinema could be, and thus open ourselves to new possibilities. It is also in this sense, in suspension between past and future, between having been and potentially being, that cinema, relocating itself, can survive.

Back to the Experience

The cinema, from the moment of its birth, has been considered a particular form of experience. Obviously, it also involves a technical device; after all, it was born from a set of patents, and the earliest commentators and theoreticians were fascinated by the presence of a "machine." Jean Epstein's famous portrait of the movie camera comes to mind: "The Bell and Howell is a metal brain, standardized, manufactured, marketed in thousands of copies, which transforms the world outside it into art [A] subject that is an object without conscience—without hesitation and scruples, that is, devoid of venality, indulgence, or possible error, an

entirely honest artist" ("Senses" 244).[11] Then there is Antonello Gerbi's description of the projection: "From the back of the long room, seated up high behind the audience—like the drivers of old hackney cabs in London—the projectionist holds in his fist the taut reins of the projection that is taking place. The band of rays that keeps the images bridled on the screen gives unity to the three essential elements of the cinema: it holds the screen, the audience and the projection booth together in a collected and peaceful order" (843). It is no coincidence then that in Europe during the first three decades of the twentieth century, one of the most common epithets for the cinema was "the mechanical art"—a term that is found in the title of a book by Eugenio Giovannetti, a text filled with proto-Benjaminian ideas.[12]

Nevertheless, the "machine" is not valued for what it is, but for what it can do and for what it makes the spectator do. Béla Balázs, in one of the more crucial pages of *The Visible Man*, speaks of cinema as "a technology for the multiplication and dissemination of the products of the human mind" (9). The printing press is such a technology, too, but while it has "gradually rendered the human face illegible" (9), cinema rehabilitates our visual abilities and restores our familiarity with the language of the body. "Every evening millions of people sit [in the cinema] and experience human destinies, characters, feelings and moods of every kind with their eyes, and without the need of words" (10). The emphasis is placed on the way in which the device mobilizes our senses and places us in relation with reality—on the type of experience that it engenders.

This experience owes much to the "machine," but not everything. It relies on a technology, but it also finds sustenance elsewhere. For example, the exaltation of vision is undoubtedly linked to the fact that cinema works through screened images, and furthermore, it presents them to us in a darkened room, which augments our concentration. As Giovanni Papini recalls, "[cinema] occupies a single sense, the sight . . . and this unique focus is ensured even further, in an artificial manner by the dramatic

Wagnerian darkening of the theatre, which prevents any distraction" (1). However, if we are compelled to watch, it is also a result of our curiosity and our obsessions. Jean Epstein notes, "We demand to see because of our experimental mentality, because of our desire for a more exact poetry, because of our analytic propensity, because we need to make new mistakes" ("Magnification" 239). And Walter Serner, in an extreme and fascinating text, speaks of a "desire to watch," which has always pushed humankind to attend the most terrifying spectacles, and has kept us from backing away from blood, fire, and violence. [13]

The filmic image places us in contact with reality—or better, with life.[14] In one of the earliest descriptions of the Lumieres' invention, André Gay connects "the striking impression of real movement and life" directly to the way that the device works (311).[15] A few years later, Ricciotto Canudo, in his celebrated manifesto "The Birth of the Sixth Art," while underlining cinema's ability to capture reality in its wholeness, speaks of a "scientific theatre built with precise calculations, a mechanical mode of expression" (60). And yet Canudo lists other instances that push cinema toward a perfect reproduction of life: the inclination of modern times toward objective documentation instead of fantasy, or Western civilization's predilection for action instead of contemplation. In one of his last contributions, Canudo will draw an even more general picture. He claims that cinema is essentially a new form of writing, and writing, he remarks, is born not only as "a stylization or schematization . . . of ordinary images which had struck the first men," but also as an attempt "to arrest the fleeting aspects of life—internal or emotional—images or thoughts, so others could know them" ("Reflections" 295). From this perspective, cinema meets man's enduring need to achieve "triumph over the ephemeral and over death" ("Reflections" 296).

To capture the real also means to uncover its unfamiliar characteristics. Blaise Cendrars offers a touching description of a filmic séance: "Above the spectator's head, the bright cone of light wriggles like a dolphin.

Characters stretch out of the screen to the lantern lens. They plunge, turn, pursue one another, crisscross, with a luminous, mathematical precision" (183). Cinema is the domain of the uncanny. [16] This surprise, however, is not merely triggered by a technical marvel: rather it is fed by a mix of availability and participation. In a paragraph bearing the extraordinary title "The Naturalism of Love," Béla Balázs reminds us that "In films with many close-ups you often gain the impression that these shots are the product not so much of a good eye as of a good heart" (*Visible Man* 39). [17]

Cinema also activates our imagination, and it does so because the image on the screen lacks its own physicality. Georg Lukács observes that "the world of the 'cinema' is a life without a background and perspective, without difference of weights and of qualities" (12), and therefore it is open to pure possibility. However, the imagination is given free access only because cinema possesses a language, elaborated autonomously and through borrowings from other arts, that clears plenty of space for "fancy," as Victor Freeburg notices. [18]

Nevertheless, cinema offers us a knowledge of the world. This is because its mechanical eye captures the subtle logic that animates reality in a way that no human eye is able to do. Dziga Vertov praises "the use of the camera as a kino-eye, more perfect than the human eye, for the exploration of the chaos of visual phenomena that fills the space" (14-15). And yet, according Sergei Eisenstein, the decomposition and recomposition of visible phenomena which form the basis of such knowledge constitute a process that art and literature—as well as ideographic writing—have been practicing for a long time. Cinema brings this process to its climax. [19]

Finally, cinema makes us feel like members of a community. The sense of belonging that accompanies the watching of a film is born of the possibility of projecting the same film in the same moment in many places. As Louis Delluc affirms, "The semicircle in which the cinema

spectators are brought together encompasses the entire world. The most separated and most diverse human beings attend the same film at the same time throughout the hemispheres" ("Orestes" 257).[20] However, this sense of belonging is also tied to an ancestral desire to create a state of communion in which one can live out collective feelings and values, as Élie Faure imagines,[21] just as it is linked to the capacity of the modern crowd to share interests and foci of attention to the point of forming a true public opinion, as Victor O. Freeburg reminds us.[22]

Therefore, cinema is not only a "machine": it is also an experience in which other factors—cultural, social, aesthetic—play a role. It is one of the technical devices that, between the nineteenth and the twentieth centuries, changed our way of coping with the world.[23] However, it is also something that goes beyond a technology, and that involves anthropological needs, traditional forms of expression, the trends of the day, and the emergence of new languages. It is an apparatus, and yet it puts us in contact with a pristine world, and with "the visible things in the fullness of their primeval force" (Lindsay 290).[24]

The film theory and criticism of the first three decades of the twentieth century consistently developed this "experiential" approach. In the 1930s things changed a bit, and the "machine" took the upper hand. In his influential book, *Film*, Rudolf Arnheim observed that technical limitations, linked to the support and the device, are precisely what push cinema toward its own specific language; it is only by taking them into account that the best expressive solutions may be found. [25] But the "experiential" approach would remain present, making a deep impression in those same years in the thought of Walter Benjamin and Siegfried Kracauer, [26] to then reemerge with even more strength in successive decades in the work of André Bazin and Edgar Morin, as well as in the Filmology movement, [27] whose work was based on a retrieval of phenomenology, psychology, and anthropology.

The elements highlighted by this approach vary over time. For example, it is interesting to note how at the beginning of the century, many scholars stress cinematic experience's resonance with modern experience (for a representative example, see Karel Teige's extraordinary essay "The Aesthetics of Film and Cinégraphie"), while at the mid-century more weight is placed on its anthropological implications (as in Bazin and Morin). Nonetheless, a kind of central nucleus emerges: at the cinema, we face screened moving images; these images surprise us and take hold of us; they lead us directly to living reality, forcing us to see it again in its fullness. Simultaneously, they feed our imagination, opening us up to the possible; they provide a knowledge and an awareness, and they make us live in unison with other spectators. These traits do not belong exclusively to the cinema, and they do not offer a definition of cinema in any narrow sense; nevertheless, as a whole they characterize a phenomenon. If cinema is experience, this is the form that it takes.

"The Home Delivery of Sensory Reality"

A peculiar trait of this experience is that once it is experienced in the darkened movie theatre, it can also emerge elsewhere, even far from the presence of a screen.

In his essay-novel *Shoot*, Luigi Pirandello has his protagonist say, "Already my eyes, and my ears, too, from force of habit, are beginning to see and hear everything in the guise of this rapid, quivering, ticking mechanical reproduction" (8). To confirm such a sensation, a few pages later Pirandello provides a description of a simple event—a motor-car which passes a one-horse carriage—as if it were seen through point-of-view shots and a shot/reverse shot editing. The description ends on an ironical note: "You have invented machines, have you? And now you enjoy these and similar sensations of stylish pace" (77-78).[28]

Referring to the same years in which Pirandello wrote his novel, Jean-Paul Sartre recalls in his autobiography the intertwining of his childhood with

the cinema, and confesses finding the atmosphere of those first movie houses even on the most unexpected occasions: "We had the same mental age: I was seven and knew how to read; it was twelve and did not know how to talk. . . . I have not forgotten our common childhood: whenever a woman varnishes her nails near me, whenever I inhale a certain smell of disinfectant in the toilet of a provincial hotel, whenever I see the violet bulb on the ceiling of a night-train, my eyes, nostrils, and tongue recapture the lights and odors of those bygone halls" (122-23).

In a beautiful essay about his climbing of Mt. Etna, Jean Epstein recognizes something in the spectacle of the volcanic eruption that is typical of cinema: "To discover unexpectedly, as if for the first time, everything from a divine perspective, with its symbolic profile and vaster sense of analogy, suffused with an aura of personal identity—that is the great joy of cinema" ("The Cinema Seen from Etna" 289). Epstein also reminds us that the day before, while descending the mirrored staircase of a hotel in Catania, Sicily, he had experienced an analogous and opposite impression. His image reflected in a thousand profiles had offered him an unforgiving vision of himself, exactly as happens on the screen, on which we see things without the usual filters: "The camera lens . . . is an eye without prejudice, without morals, exempt from influences. It sees features in faces and human movements that we, burdened with sympathies and antipathies, habits and thoughts, don't know how to see" (292).

Finally, Michel De Certeau, years later, when the status of cinema was already changing, observed that watching a Jacques Tati film enables us to see Paris with different eyes, as if the city continued to live on a screen: "So, leaving the film theater, the spectator notices the humor of the streets, as if she shared Tati's gaze. Film made possible a humorous vision that could not have been elicited without it. The same goes for the reading of a poem, meeting somebody, the effervescence of a group. If the register of perception and comprehension changes, it is precisely

because the event has made possible, and in a certain sense made real—it has permitted—this other kind of relation with the world" (210).

The cinema experience is thus contagious, reproducing itself even far from the darkened theater. An essay from the 1920s—which, not coincidentally, Walter Benjamin quoted in the epigraph to the third version of his "The Work of Art in the Age of Mechanical Reproduction"—explains how it is in fact characteristic of media to enable this reproduction of experiences. In "The Conquest of Ubiquity," Paul Valéry, writing about music and the gramophone, notes that through the means of reproduction and transmission that are being created, "it will be possible to send anywhere or to re-create anywhere a system of sensations, or more precisely a system of stimuli, provoked by some object or event in any given place" (225). This means that we would be able to relive elsewhere emotions that seem confined to a particular terrain—including emotions apparently linked to specific fields, like music or literature. "Works of art will acquire a kind of ubiquity. We shall only have to summon them and there they will be, either in their actuality or restored from the past. They will not merely exist in themselves but will exist wherever someone with a certain apparatus happens to be" (225-26). The result would be a system that allows for the reactivation on command of all possible kinds of experience. "Just as water, gas, and electricity are brought into our houses from far off to satisfy our needs in response to a minimal effort, so we shall be supplied with visual or auditory images, which will appear and disappear at a simple movement of the hand, hardly more than a sign" (226). And in this way would be born "a company engaged in the home delivery of Sensory Reality" (226).

The specificity of a medium, *qua* support or device, therefore lies in its ability to move experiences freely. If necessary, a medium may also lift experiences from another medium—as does the gramophone, when it borrows a sound from a musical instrument. This means that an expressive field—a medium, this time *qua* a cultural form—can find

other instruments—other media—in order to venture beyond their own borders. The medium that intervenes does not represent a betrayal, but rather an opportunity: it gives the previous media the chance to survive elsewhere.

Cinema, with its vocation for existing in other contexts, possessed all the prerequisites for following this same route. Valéry, however, never mentioned cinema in his essay. The reason resides in the fact that, when Valéry was writing, there did not yet exist new extensions ready to deliver anywhere, outside the darkened theatre, the characteristic "system of sensations" of a film. [29] It is true that, thanks to portable projectors, cinema was already able to migrate into domestic spaces, into schools, into the squares of little rural villages: but the basic device was almost the same, even if more flexible.[30] And it is also true that a few years later, in its golden age, the radio would offer many film adaptations, thanks to a rereading of their dialogues, their music, and comments providing further information: [31] but the experience—which is in many senses a filmic experience—would lack an essential component, the visual one. In the epoch in which Valéry was writing, cinema had the capacity and the will to live again in countless other situations; but it was waiting for the means to do so fully.

The means would arrive later—when the great theories of the two first decades of the century had become a memory for many, and when "classic" cinema had finished its grand parabola. This moment would coincide with the arrival of television, VHS and then DVD, the personal computer, the tablet, home theaters, and so forth. It is a moment at whose climax we now find ourselves living.

The Relocation of Cinema

Let us return to our original description of the increasing presence of cinema in our daily lives, often far from its traditional support and apparatus. I would like to use the term *relocation* to refer to the process

thanks to which a media experience is reactivated and re-purposed elsewhere than the place in which it was formed, with alternate devices and in new environments. I am thinking of the newspaper: no longer necessarily made of paper, I am now able to peruse its pages on the screen of my iPad; but even from this new site it continues to allow me to experience the world as an infinite stream of news. I am thinking of the radio: no longer a domestic appliance or transistor-powered device, but rather an extension of my television or tablet, it nonetheless continues to supply the soundtrack of my life. And, naturally, I am thinking of cinema: no longer only in a darkened theater and tied to rolls of film stock running through a projector, but now available on public screens, at home, on my cellphone and computer, it is still ready, in these new environments and with these new devices, to offer screened moving images through which we get a sense of proximity to the real, an access to fantasy, and an investment in that which is represented. In all these cases the "system of sensations" that traditionally accompanies each of the media finds a fresh outlet. Thanks to a new medium—thanks to a new support or a new device—an experience is reborn elsewhere, and the life of the previous medium, in its fullness as a cultural form, continues. It is in this way that we can think of "being at the cinema" and "watching a film" even in bright light in front of a digital screen.[32]

The idea of relocation tends to stretch beyond what Bolter and Grusin call *remediation*. Remediation is the process through which "one medium is itself incorporated or represented in another medium" (45). It is a strategy advanced especially with regard to electronic media, and it can lead either to a reabsorption of the old medium in the new one (Bolter and Grusin mention the digitized family photo album on the PC, as well as some videogames that conserve the characteristics and structures of the films on which they are based), or a remodeling of the old medium by the new one (here the example is the shift from a rock concert to a CD-ROM). In remediation, what matters is the presence of a device and the possibility of refiguring it. Relocation, meanwhile, involves other aspects, which are in

my opinion more decisive. On one hand, relocation emphasizes the role of experience. A given medium is defined by a specific type of watching, listening, attention, and sensibility. Therefore, it is not the permanence of its physical aspect, but the permanence of its way of seeing, hearing, and sensing, that assures its continuity. A medium survives as long as the form of experience that characterizes it survives. On the other hand, relocation emphasizes the role of the surrounding environment. A given medium is also defined by the situation in which it operates or which it creates—an experience is always grounded. Therefore, it is not the mere reappearance of a device that counts, but rather the manner in which it literally takes place in the world. The concept of relocation makes clear that the migration of a medium outside its prior terrain involves a type of experience and a physical or technological space.

This attention to the displacement of an experience, as opposed to the simple replication of a device, leads us to confront two other problematic issues. The first is the relation between *flows* and *locality* that Arjun Appadurai references in his *Modernity at Large*. What characterizes our era is the presence of a series of "cascades" that profoundly redesign the surrounding landscape: goods, money, people, ideas, and media are redistributed and rearranged continuously within variable circuits. Their stop-off in a certain place not only involves new equilibria, but also tends to literally create new localities—it founds sites, just as temples and cities were once founded—within which we can locate the traces of a history. The concept of relocation serves to underscore the analogy between cinema's transformations and the processes of circulation that characterize today's world: cinema's movement to new devices and new environments takes place against the backdrop of wider processes of migration that redraw the maps to which we are accustomed.[33]

The second problem is described by Gilles Deleuze and Felix Guattari with the terms *deterritorialization* and *reterritorialization*.[34] Capital, modes of production, power, and institutions often break away from a

structured system, wander through a no-man's land, and then perhaps take root in a new territory. In this movement, what counts is a twofold process: on one hand, the liberation from a bond—the untying of these entities from that which anchors them; on the other, the form that the landscape assumes thanks to these migrations—the environment of arrival is not necessarily as organized as the point of departure, but rather tends to assume a rhizomatic form. The concept of relocation seeks to recuperate this sense of continual destructuring and restructuring, along with the idea of flexibility and dispersion that Deleuze and Guattari emphasize in their analysis.[35]

I have pointed out some of the threads to follow, and I have also managed to tangle them. The following pages will disentangle some of those which now may seem hopelessly knotted. We shall explore the notion of relocation in all its implications and consequences. Now I would like to confront the theme that it evokes more than any other—and which must be the first to be untangled.

Almost

Relocation acts in such a way that an experience is reborn almost the same as it was. Here the emphasis should be placed on "almost." And it can even mean "not at all." In fact, examined from a certain perspective, a relocated experience can resemble "not at all" the experience that it is trying to replicate.

Let's stick with cinema. In its migration, it encounters new types of screens, starting with the four that now dominate the landscape: digital television screens, computer and tablet screens, cellphone screens, and media façades. These screens offer visual conditions that are quite different from those of the traditional movie screen. For instance, the screens of mobile devices do not offer any sense of isolation from the surrounding environment, so that one easily loses concentration on what is being shown. There is also the size of the images, which on smart

phones or tablets renders their spectacular nature hard to appreciate. On a computer, the icons work as instructions more than as depictions of a reality. The screens in public spaces host a plethora of products—from films to commercials, from documentaries to music videos—creating an effect of superimposition, which makes it difficult to isolate any strictly cinematographic properties. These conditions strongly affect the viewer's behavior. As empirical research directly or indirectly suggests, [36] spectators who watch a movie on new types of screens have the tendency, as media users, to activate a multitasking form of attention, which leads them to follow more than one object simultaneously; they work through a process of sampling, rather than trying to grasp everything that is presented to them; they mix images of reality with more abstract information; when possible, they interact with what they see; finally, they attempt to deal with different and contrasting situations. In other words, spectators tend to adopt tactics learned from television, the computer, the cellphone, and social networks. In this case, what they undergo is an experience of cinema-beyond-cinema.

But there is also another outcome that I would like to take into consideration here. Despite these new inflections, vision often remains "cinematographic." It triggers what we may call a *back-to-the-cinema experience*. Indeed, these same spectators succeed in isolating themselves in an environment, in recuperating the magnificence of images, in concentrating on a story, and in enjoying the reality that reappears on these new screens. They accomplish this because, on one hand, the situation is a flexible one, and in some ways adjustable (for example, while traveling one can put on headphones, move the tablet closer to one's eyes, and select a film to watch); and because on the other hand, it still presents a series of recognizable characteristics (there is a screen, a film, an attentiveness). These factors lead to the possibility of minimizing what seems incongruous and highlighting what recalls a more traditional form of usage.[37] Cinema returns to being cinema. This move sometimes also applies to something that is not cinema, but perhaps would like to

be: spectators can adopt the same attitude toward sports or videogames, based on the fact that in sports and videogames, just as in a film, the world is rendered into a high-intensity story and spectacle.

So, "almost" can mean "not at all," but it can also mean "nearly completely." The problem is that in the relocated experience what counts is not so much its material conditions as its configuration. Material conditions make themselves felt: they constitute the concrete terrain on which the experience gains its footing, and they are what give a form its thickness. However, what makes itself felt above all is the way in which the components relate to one another. It is this configuration that tells us what this complex whole is or can be, or in which direction it operates or can operate. In particular, it is this configuration that makes the situation appear cinematographic—and allows us to live it cinematographically. It is not necessarily an *a priori* model, but rather emerges from the situation such as it is, with all its imperfections. Compared with an ideal type, any situation is intrinsically imperfect. It is always de-formed, from the moment at which it takes shape on the basis of contingent and particular conditions.[38] The configuration that emerges, however, brings this deformation back into a specific form: the situation in which we find ourselves acquires a recognizable shape, reveals its "how" and "why," and displays its guiding principles of construction and intelligibility. It is in this manner that the configuration reveals the presence of the "cinematographic" even where it seemed to be absent.

"Almost" thus means that what is essential is present, despite its apparent alteration.

Practices of Recognition

But how can we make a cinematic configuration emerge from such ambiguous situations? How can we restructure such oftentimes vague elements into an arrangement that leads us to say "this is cinema"? This question brings us to the mechanisms of *recognition*. To recognize

something or someone means two things. First, it means to associate, even with difficulty, what we have before us with something that we have already encountered: such is the case when Ulysses's dog Argo recognizes him. It is thus a case of identifying a series of traits and seeing their correspondence with a reality that is in some way known or familiar. But recognition also means accepting the existence and legitimacy of something: such is the case when a government recognizes a new territorial entity or state. Here, we carry out a different sort of operation: we accept a reality, and we give it a certain status. Recognition is thus both of these things: it is an "agnition," thanks to which something is identified, verified, and discerned; and it is a "ratification," thanks to which something is validated, receives approval, and is constituted as such. I would add that both of these operations revolve around having an "idea of" what something is: in the first case, it is a matter of an idea that is recalled in order to carry out a correct identification, while in the second, the idea is constructed a posteriori, as the result of an acceptance. I would likewise add that neither of these operations is confined to the cognitive dimension: rather, they imply a concrete way of relating to what is recognized, and therefore a whole set of practices to be carried out.

Now let us return to relocated cinema. The distinction between an experience of cinema-beyond-cinema and a back-to-the-cinema experience lies in the way in which we recognize the situation. The situation presents itself as wholly ambiguous, a bit like the images that depict a duck and a rabbit at the same time. But just as with those images, recognition carries out a disambiguation: what we see is one thing or the other.[39] Of course, in such an ambiguous situation, we can also suspend recognition for a while, take things as they are, free of any pressure, or endlessly switch from one interpretation to another. The incertitude here remains alive. And yet, as a matter of fact, in the midst of this incertitude, we see either a "cinematic" or "non-cinematic" configuration of elements emerge. As large and persistent as a certain "grey zone" might be, we are pushed towards a solution. "It's cinema, in spite of everything"; or on

the contrary, "it is, unfortunately, no longer cinema—but it is television, computer, portable telephone, and so on."

This is not only a decision made on a mental level: there are strong contextual elements that direct its outcome. There is, for example, the pressure of the market, which considers cinema "premium" content, or the desire to continue being spectators, even under difficult conditions: these help us lean towards a "cinematic" choice. But there is also the presence of technological devices, constantly being introduced, that push us in opposite directions. In any case, at a certain point we "read" the situation in one way or another, and we act accordingly.

I have mentioned how a recognition implies an "idea of." It is an "idea," indeed, that on one hand allows us to identify what we find before us, and on the other one that we obtain at the moment we accept a given reality. From where do we derive the "idea of cinema" that allows us to recognize our experience? First of all, there is a "social image" of cinema that circulates in both specialized and non-specialized discourses and thus serves as a reference point. Theories of cinema function largely in this sense.[40] We also extract an "idea of cinema" from our habits. Every time we go to the movies, we experience the same cardinal elements and engage in the same behaviors: this consolidated experience orients us. There is also our memory as spectators. [41] We remember what cinema was, and we use our idea of it in order to test the experience we are currently having. Memory of cinema is a question of generation; it could dissolve in the near future. Nevertheless, while fragile, memory is still in play. Additionally, the work of the imagination comes into play: in front of an unforeseen situation—for instance a screen, the nature of which we don't immediately grasp, displaying images in motion—we hypothesize that it has something to do with cinema, and we try to interpret it in this key. In this case, we act on the basis of a conjecture. Regardless of the way in which we deduce this idea, it provides a fundamental means of orientation:[42] it helps us to understand whether we are dealing with a cinematic experience or not. Furthermore, it functions as a constitutive tool: it allows us to interpret our experience as cinematic, and thus makes it what it is.[43]

Nevertheless, it does not constitute a single, fixed model. The "idea of cinema" began to spring up in the very moment that cinema appeared; it has floated to the surface as cinema has advanced along its own path of development; it has readjusted and redefined itself according to the paths the cinema has embarked upon; it has become an individual and a collective patrimony; it has materialized to the point of becoming a reality in itself; and today it confronts new situations, showing their possible continuity—or possible variation—in respect to their precedents. But it also resurfaces in unexpected situations, taking as its starting point the differences that these put into place. The "idea of cinema" should be taken as plural.

An "idea of cinema" is eventually also an essential component of experience. Thanks to the emergence of an idea, we reconsider what we are experiencing, and we understand what sort of thing it is. The idea tells us that we are experiencing something, and what it is that we are experiencing; it allows our experience to reflexively acquire selfconsciousness. Every experience, in order to really be one, must align astonishment and knowledge. It is an experience not only because it surprises us and takes hold of us, but also because it makes us understand that it is an experience and a particular type of experience. Of course, this circuit is often interrupted, and we often experience things while unconscious of experiencing them. We are often like the soldiers that Walter Benjamin wrote about, who returned mute from the front, incapable of communicating what they had seen, victims of a shock that made them lose the meaning of their existence. [44] Inexperience is always waiting in ambush, even and especially in more intense situations. The presence of an idea triggers this situation; it reunites a sensory richness with a path of re-elaboration, an Erlebnis with an Erfahrung.

An Idea of Cinema

Let's see how an *idea of cinema* works in borderline situations, as those that are born of relocation often are. What happens when it is measured against an *almost* that wants to seem like a *nearly completely*, even though it tends to be a *not at all*?

Here I will examine a series of social discourses that, although they are not part of the domain of criticism and theory, seek like the early film theories to understand the key elements of the cinema experience.

The blog allwomenstalk.com features a list of the best places to watch a film, in order of preference. In first place is "in bed," followed in second place by "at the theater," and then "at the drive-in," "in the train," "in the car," "in the arms of someone you love," and "in the park." These rankings might seem surprising at first, but if we read the reasoning behind them, we see an idea of cinema emerging that is not too far from the traditional one: in bed one can relax and concentrate on a film, even with another person. "Your bed is a really great place to watch movies. There's nothing like curling up and watching a good flick. You can curl up with your BFF, your partner, or even with a beloved pet. There's nothing wrong with cuddling up with yourself to watch your favorite movie, either. You're sure to be comfortable, and that will make you enjoy the movie even more." [45] I must add that in bed spectators rejoin the dreamer that film theories have always considered they are. [46]

The question of place also turns up in a <u>short article</u> in *Charleston City Paper*, an alternative weekly published in Charleston, South Carolina: "If you can't watch movies in Bill Murray's private home theater, the best place to watch one is on a lawn chair under the stars in Marion Square, sipping beer and eating tasty food from local vendors."[47] For the *Charleston City Paper*, then, cinema is above all a ritual and an atmosphere: from this perspective, not only fully equipped home theaters like Bill Murray's, but also a public park like Marion Square, can be seen as an ideal place for a projection.

There are numerous observations to be made concerning the home viewing of films. One ad suggests: "The best home theater set up may indeed include top quality components that could bring forth the entire movie theater experience without needing to drive out of your house towards the movie theater.... This contemporary invention will allow you the relaxation and feel actual cinemas deliver." [48] In this case, cinema is therefore a way of viewing that is both intense and relaxed: it doesn't matter—or matters less—where it takes place.

The same line of reasoning appears in a long article published on the website www.apartmenttherapy.com (the name says it all). [49] The article gives advice on making home viewing as pleasurable as possible. It provides suggestions about the correct distance from the screen, how to ensure sound and image quality, choosing the right film, making "double bill" programs, scheduling an intermission, and lowering the lights. Clearly, these rules aim to reproduce the conditions of the movie theater. Once again, then, we see an idea emerge that takes account of the novelty of the new situation, but still connects it with tradition.

There are situations where such connections are more difficult to make. Such is the case, for example, with film viewing on mobile devices like the tablet or smartphone. The traditional cinematic experience called for a static spectator, rather than a mobile one: how should we then think about this new condition? Another online comment offers a solution. A film has always been a form of company for the spectator, and watching one on a mobile device is legitimized if it serves this aim: "From emergency cases to encountering the most boring times while traveling or waiting in line, show reels and movies I actually placed in my mobile phone sometimes become my best buddy, colleague, or companion on the road or in a meeting." [50] Of course, if one is concerned with viewing quality, a big screen would be a better choice. [51] There are thus multiple ways to bring continuity to the experience of cinema, depending on the characteristics that one wishes to preserve.

Other situations are even more difficult to interpret. The online film forum mubi.com has hosted a debate over the course of two years about watching films on airplanes.[52] Some of the responses are quite revealing. One user writes, "I find the concept of watching movies on planes to be really interesting, because it's the place where you watch films that you wouldn't pick for yourself. This means that you watch some of the worst movies you've seen, but you also have a chance to watch something unexpectedly good." On an airplane, we don't choose the film, and this is in many senses an element that distinguishes it from a movie theater; even so, this condition allows us to widen our range of experiences. Of course, viewing conditions in an airplane may seem unfavorable, but there is always a remedy. Another user says: "I can't see the films on those tiny airplane screens so I load a few on my iPad and watch away. It makes those coastto-coast flights go a lot faster." This is not only a matter of increasing the screen size, but also of reproducing the quality and the concentration characteristic of traditional viewing. Furthermore, the iPad is promoted as the perfect cinema screen: "An iPad is a beautiful thing. The gorgeous Retina display and long battery life make the iPad a great tool for watching movies."[53]

The recognition of cinema in new situations becomes easier when intermediate steps exist between the new and the old. Still on the topic of watching films on airplanes, in the forum on mubi.com someone recalls the use of film projectors on flights in the 1960s: "I miss 16mm projectors on planes. I'm getting old." Another responds, "I too remember real film being shown in planes; so wonderfully complicated and yet it worked (the 6000-ft reels I used for my features were, as I recall, designed for in-flight use, running horizontally in a compartment above the ceiling.)" In other cases, this intermediate step is recreated after the fact, in order to make the new situation more cinematic. Various groups of spectators organize collective viewings, in which each individual watches the film at home, but all at the same time, exchanging observations over Twitter. One participant, after a shared viewing of *Jurassic Park*, observed, "It makes

me think back to that far-away afternoon of September 1993, when with a few friends and a pair of plastic dinosaurs, I entered into the little parish cinema to enjoy the most anticipated film of my young life, fluttering excitedly around the theater as though under the influence of fairy dust. A bit like Thursday night." [54] The idea of being part of a public helps to experience cinema as it was, even if one is now in fact alone.

Such an operation can also be extended to its limits. In responding to <u>mubi.</u> com's survey, one user recalls, "My best transportation/movie experience was hurtling along on a bus in Egypt where the DVD screen was showing an absolutely dismal-quality copy of a Jean-Claude Van Damme martial arts epic. Dubbed in Arabic. Now, that you don't get every day . . . (a fact for which I am grateful)." Here the idea of cinema is displaced, moving from a good-quality screening, in a good environment and with good company, to one characterized by surprise, strangeness, and provocation. And yet, if on the one hand there is a true redefinition of what a cinematic experience is (we might add: in a globalized and multicultural world), on the other there is a reemergence of the characterizations of the filmic experience offered by early theorists. Their insistence on sensory excitement, or on the sense of the uncanny inherent in every film, pointed in this direction. The user who describes his Egyptian experience is not so far from Blaise Cendrars and his attitude towards cinema in the 1910s. The only difference is that the former, thanks to this attitude, finds something cinematic in an improbable situation.

Further examples could certainly be provided, but the mechanism at work is by this point quite clear. In these borderline situations, we evoke a certain idea of cinema that comes from habit and memory, but also from imagination. We do not forget the actual conditions in which we find ourselves; instead, these conditions push us to further analyze the situation. Even within things that appear anomalous, we find traits that are familiar, either because they remind us of a previous history, or because they recur with increasing frequency. It is these familiar traits that allow

cinema to reemerge even beyond its canonical contexts. In short, we carry out a recognition: we identify elements and define a situation.

Philippe Dubois, introducing a rich and controversial volume, refers to this process. For him, cinema is above all "an imaginary of the image, deep, powerful, solid, and persistent, that enters deeply into our minds and our thoughts, to the point of imposing itself upon other forms. It is an imaginary of the image that serves as the basis upon which we conceive of our relationship to all other types of modern images" (13-14). It is this capacity of an idea to impose itself upon many situations that leads Dubois to see cinema as an already-diffuse presence.

What Dubois perhaps omits to mention, however, is the complexity of this operation. To say, "oui, c'est du cinéma"—as he invites us to do,[55] even in situations the most foreign to the canonical—is never a self-evident act.

Cinema in Spite of It All

Let us return to our examples. To recognize the presence of something cinematic in borderline situations implies the acceptance of an imperfection. Relocated cinema is not 100% cinema. But it is precisely what is missing that proves valuable: it not only leads us to questioning, but also offers us the possibility of bringing to light a configuration that, despite its difference, continues to be cinematographic. In other words, it is thanks to the differences that we discover an identity. It is thus not a resemblance, however vague or clear, that allows us recognition, but rather the dissimilar and the deformed. "Yes, it is cinema," because in some sense, it is not. In this light, we can also understand why many scholars consider relocated cinema nothing less than a form of "degraded" vision, as Raymond Bellour calls it (14): when one looks for the identical, the simple return to a previous model, what is different can only be an obstacle. Cinema can only reemerge, though, if one begins from imperfection, and makes a virtue of it.

Secondly, recognizing the presence of something cinematic even in odd

situations entails a tendentious reading. I repeat: to recognize is not simply to delineate similarities, but rather to see the identical beneath the differences, and to declare it to be identical. In this sense, recognition is a highly creative act. We must know how to—and want to—see what is happening in front of us. "Yes, it is cinema," only because we know and want to see it as such. Following this logic, it may be useful to distinguish between an essentially retrospective gesture, which brings to light the presence of precedents in the new, and a projective gesture, which constructs an identity after the fact, adapting it to the object before us. In the first case, we find ourselves within a tradition, while in the second we reconstruct a tradition from our recognition. Relocation moves in the second direction, thereby stimulating imagination more than memory or habit, although it is hardly odd to find scholars who limit themselves to the first path. In the same volume from which Dubois's preface is drawn, Eric De Kuyper and Emile Poppe deny that a spectator in a gallery or a museum can be considered as such: for them it is the apparent that prevails.[56]

Thirdly, the recognition of something cinematic brings along with it the fact that we know how to recuperate elements that were lost in the shadows. The idea of cinema has changed over the years, and an excavation into the past can help us to understand what parts of it have been lost. In a well-known text, Miriam Hansen points out how contemporary cinema, even though it seems to violate many of the rules established by Hollywood, in fact reactivates characteristics typical of its beginnings. [57] "Post-cinema" is not the end of a model, but rather the return of its original characteristics. And more. The borderline situations that we find today also illuminate the paths that were intuited, but never really taken. As an example, it suffices to consider Moholy-Nagy's dream of a cinema that would be projected not on a flat screen, but on a concave hemisphere, [58] and compare it with what we see happening today in installations. Post-cinema is also the realization of possibilities left unexplored. This is why Anne Friedberg reminds us not only to delve deeper into the genealogy

of cinema, but also to discover alternative genealogies.[59] The idea of cinema must be ready to enrich itself with new characteristics.

So—a confrontation with imperfection, a penetrating reading, and an opening to the possible. To recognize the presence of cinema in new situations is a complex and risky task, but it is only through doing so that we can see the profound authenticity of this presence.

Authenticity, Origins

Walter Benjamin can perhaps come to our aid here. In the "Epistemocritical prologue" of his The Origin of German Tragic Drama, [60] he seeks to figure out how one can define a genre that is characterized by many very different works. For him, what is essential is to consider the Trauerspiel in terms of an idea, that is to say, as something that unifies a field of works in a much more effective way than the conception of a prototype followed by copies or an archetype that emerges through a series of iterations. In this context, authenticity is no longer conceived of as the direct correspondence to a canon, nor as the clear permanence of a series of traits. Something is authentic not in itself, because it corresponds exactly to a model, or because it comes to us intact from the past, but rather because we come to consider it as such, taking account of its history, the conditions in which it reappears, and the destiny towards which it is directed. "The authenticity—the hallmark of origin in phenomena—is the object of discovery, a discovery which is connected in a unique way with the process of recognition. And the act of discovery can reveal it in the most singular and eccentric of phenomena, in both the weakest and clumsiest experiments and in the overripe fruits of a period of decadence" (46). We are called to a recognition that also confronts that which is seemingly unrecognizable—that literally constitutes an identity from the differences.

Benjamin further clarifies this fact, speaking precisely of the origin and the original. The origin is not a starting point that justifies what will happen

later, but rather a "vortex" created around a constant becoming. [61] In this continuous passage, the central element of a phenomenon never makes itself visible as such: "That which is original is never revealed in the naked and manifest existence of the factual. . . . On the one hand it needs to be recognized as a process of restoration and re-establishment, but on the other hand, and precisely because of this, as something imperfect and incomplete" (46). When we carry out a recognition, our point of reference is something that is incomplete; we attempt to reconstitute it, but every reconstitution revolves around this incompleteness.

Benjamin adds: "There takes place in every original phenomenon a determination of the form in which an idea will constantly confront the historical world, until it is revealed fulfilled, in the totality of its history" (45). We can in all cases form an idea of an object or a phenomenon, but we can only do so by following along the entire historical journey of this object or phenomenon; we will know what is faithful to it or not only at the end of the journey. This means that we must take into account a temporal development, a "before" and an "after." Benjamin again: "Origin is not, therefore, discovered by the examination of the actual findings, but it is related to their history and their subsequent development" (46). We have a journey of the object or the phenomenon that unfolds earlier in the process, towards a pre-history, and subsequently, towards a post-history. This brings about a reconsideration of defining traits: "This dialectic shows singularity and repetition to be conditioned by one another in all essentials" (46). In the journey of an object or phenomenon, what appears original and authentic and what appears derived or secondary are mutually bound together, and always appear together.

It is by taking into account this picture—which is a matter of not a fact, but a recognition, not a single point of the story but its entire journey, not an object but an idea that supports it—that we can easily say that the relocated experience speaks, at the same time, the language of authenticity and that of deformation. A relocated experience *is* its model, but in its

becoming, in its being stretched between a pre-history and a post-history, between what has been and what will be (or also between what could have been and what could be). This is why it is at once so faithful and so treacherous, to the point of containing forms of experience that seem literally at the limits, or even further—forms of experience that seem to deny their own model. But in this way, and only in this way, is it a *cinema* experience.

(Tacita Dean's *Film* thus acquires its exemplarity. It is not in fact an homage to a dying media through its restoration, but rather the assertion of how difficult, if not impossible, it is to bring a medium back to life without transforming it. What we have before us is indeed an installation—with a single bench, a vertical screen, and some of the artist's images. This installation is not cinema, but obliges us to think of cinema's history, full of searching and experimentation, and of its future, dominated by the presence of the digital. In this sense, more than a failed imitation of cinema, *Film* is the mise-en-scene of its inevitable deformation—of its inevitable becoming other in order to remain itself. In the Tate, we find the risk of cinema's non-being. But it is the very difficulty of recognition, a recognition that operates through its opposite, that makes the installation interesting. It is in not easily finding the cinema at the Tate that we understand perfectly what cinema means.)

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Notes

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- [1] The exhibition was held from October 11, 2011 to March 11, 2012, and was part of the Unilever Series. It was accompanied by the catalog *Film: Tacita Dean*, edited by Nicholas Cullinan, in which a series of critics, artists, theoreticians, and filmmakers comment upon the importance of the film and of the analog image in the digital age.
- [2] See < http://mas-studio.tumblr.com/post/9049039925/folly-for-a-flyover-by-assemble>.
- [3] See < http://www.whattoseeinparis.com/cinema-parks-paris/>.
- [4] See http://cairobserver.com/post/12731480069/cinema-tahrir-returns>.
- [5] See the persuasive analysis by Caldwell, "Welcome to the Viral Future of Cinema (Television)."
- [6] The increasing velocity in the film distribution has been brilliantly analyzed, especially for the first decade of the 21st century, by Ackland.
- [7] For example, see the video "A Day Made of Glass," which illustrates

a series of screens imagined by Corning: http://www.youtube.com/watch_popup?v=6Cf7IL_eZ38&vq=medium; or the video "Productivity Future Vision", released by Microsoft Labs: http://www.microsoft.com/en-us/showcase/details.aspx?uuid=59099ab6-239c-42af-847a-a6705dddf48b; or the presentation of Samsung's screen/window: http://www.youtube.com/watch?v =mTVPVobDrms>.

[8] This question appears in the title of Hagener's essay, "Where is Cinema (Today)?" A re-reading of film theory in terms of a topology, instead of an ontology, is proposed by Hediger.

[9] "Experience" here refers not only to an exposure to images (and sounds) that engages our senses, but also to an awareness and to the practices that are consequent to such an exposure. We "experience" things when we encounter them, and we "have experience" because we have encountered things. On the experience of cinema, see the two diverging approaches of Sobchack's *The Address of the Eye* and Hansen's *Cinema and Experience*. See also Harbord; Casetti, "Filmic Experience." A concise but effective consideration of what it means for a film historian to focus on the experience of cinema is in Allen.

[10] On the distinction between *Apparat* and *Medium* in Benjamin, see the comprehensive and persuasive analysis by Somaini, "«Loggetto attualmente più importante dell'estetica». Benjamin, il cinema come *Apparat*, e il «*Medium* della percezione»."

[11] Parallel, and opposed to Epstein, see also the praise of the camera eye in Vertov.

[12] See Giovannetti; the same expression is used by Orvieto. In France, L'Herbier, in "Hermes et Silence" (originally printed in *Le Temps* in 1918 and later expanded in *Intelligence du cinématographe*), defines cinema as "a machine that imprints the life" ("machine à imprimer la vie"): see "Hermes and Silence," which translates the phrase as "machine-which-transmits-life" (147). Vuillermoz rephrases L'Herbier, saying that cinema is "the machine with which to imprint dreams" ["machine à imprimer les rêves"] (157). On the mechanical dimension in arts, see also this passage by Epstein:

Here the machine aesthetic—which modified music by introducing freedom of modulation, painting by introducing descriptive geometry, and all the art forms, as well as all of life, by introducing velocity, another light, other intellects—has created its masterpiece. The click of a shutter produces *photogénie* which was previously unknown. ("Senses" 244)

[13] Cf. Serner: "This frightful lust in watching horror, fighting and death . . . is what hurries to the morgue and to the scene of the crime, to every chase and every brawl . . . And it is what yanks the people in the movie theatre as possessed" (18).

[14] The first commentators on cinema, just like the first theorists, were fascinated not only by cinema's capacity to reproduce reality—a capacity it shares with photography—but also and above all by its reproduction of the living world, of life. Two famous reports that followed the first Lumière projection at the Café des Capucines convey this fascination. La Poste writes, "It is life itself, it is movement captured in action," and "When these devices are delivered to the public, when all can photograph those who are dear to them no longer in immobile form but in movement, action, and familiar gestures, with a word on the tip of their tongue, death will cease to be absolute" (*La Poste*, 30 Dec. 1895; rpt. in Banda and Moure 41). We find the same ideas in an article from *Le radical*, published the same day: "The spoken word has already been captured and reproduced; now so is life. One will, for example, be able to see one's family members move about again, long after they have passed away" (Le radical, 30 Dec. 1895; rpt. in Banda and Moure 40). This theme is taken up by other commentators and scholars; see in particular Fossa, who in the name of the reproduction of life imagines that cinema needs to connect itself with the telegraph and the phonograph ("Orizzonti cinematografici avvenire").

[15] The French expression is "la sensation saissante du mouvement réel et de la vie."

[16] On the topic, see Gunning's texts "An Aesthetic of Astonishment," "Re-Newing Old Technologies," and "Uncanny Reflections, Modern

Illusions."

- [17] Recently, two books, both of them praising the permanence of cinema also in a post-medium condition, highlight the relevance of this "encounter" with reality: Andrew, *What Cinema is!*, and Aumont, *Que reste-t-il du cinéma?*
- [18] See Freeburg's *The Art of Photoplay Making*, especially Chapter 6, "The Appeal of Imagination."
- [19] See Eisenstein, "The Cinematographic Principle and the Ideogram."
- [20] See also "Le cinéma, art populaire."
- [21] Faure claims that humankind has always needed "a collective spectacle... able to unite all classes, all ages, and, as a rule, the two sexes, in a unanimous communion exalting the rhythmic power that defines, in each of them, the moral order" (5).
- [22] Freeburg focuses on the capacity of film to transform a crowd into a public, able to articulate a deliberate expression: "This deliberate expression is called public opinion" (8).
- [23] Luciani, in his *L'antiteatro*, writes:

The telephone, automobile, airplane and radio have so altered the limits of time and space within which civilizations have developed, that today man has ended up acquiring not so much a quickness of understanding unknown to the ancients, as a kind of ubiquity. Film seems the artistic reflection of this new condition of life, both material and spiritual. (76)

[24] The idea that cinema brings us back to a primitive condition and offers us an "originary" experience is largely present in early debates. An example is provided by Canudo: "[cinema] is bringing us with all our acquired psychological complexity back to the great, true, primordial, synthetic language, visual language, prior even to the confining literalness of sound" ("Reflections" 296). On the relevance of "primitive" in film theory and in art theory during the '20s and '30s, see Somaini's *Ejženstejn*. [25] Arnheim writes: "An essential condition of a good work of art is indeed that the special attributes of the medium employed should be

clearly and cleanly laid bare" (44).

[26] An excellent reconstruction of those years appears in Hansen, *Cinema and Experience*.

[27] Among the many contributions, see for instance Feldmann.

[28] On Pirandello and his "cinematic vision," see Moses.

[29] It should be noted that in these same years cinema is considered a medium capable of transporting emotions. L'Herbier writes, "the cinematograph seeks nothing other than to distribute human emotions, just as ephemeral as they are on the ephemeral film, but stretched out horizontally over the vaster expanse of the world." According L'Herbier, this distribution is what opposes cinema to art: if the former spreads emotions that last only a few moments, also because on an ephemeral medium, art does the opposite, concentrating emotions in a work which tries to be perennial. See L'Herbier "Esprit." The question, however, is whether the emotions raised by a film as such find means that let them to go beyond the darkened room.

[30] Singer has shown the availability of dozens of projectors intended for amateur use in the home and elsewhere just two years after the appearance of Edison's Kinetoscope. See especially Singer 42-45. On the long permanence of non-theatrical venues, after the movie theatre became the standard mode of exhibition, see Waller.

[31] See Klinger, who strongly advocates for a larger consideration of film experience.

[32] Research on the migration of cinema—and on the dissolution of its borders—has exploded recently. In the large bibliography, I want to mention at least Koch, Rothöhler, and Pantenburg's *Screen Dynamics*, and "Screen Attachments: New Practices of Viewing Moving Images," a special issue of the e-journal *Screening the Past*, edited by Fowler and Voci. An extended and persuasive picture of cinema in the age of digital and interaction is provided by Tryon, in his books *Reinventing Cinema* and *On-Demand Culture*. The large industrial landscape in which such a migration takes place is masterly explored by Caldwell in *Production Culture*; see also Everett and Caldwell, eds. A worldwide picture of

the new Hollywood is McDonald and Wasko, eds., *The Contemporary Hollywood Film Industry*; see in particular the analyses by Schatz (on the "conglomerate" Hollywood), Wasko (on finance and production), Drake (distribution and marketing), and Ackland (theatrical exhibition).

[33] The concept of convergence can indeed be taken in this sense; see Jenkins.

[34] See Deleuze and Guattari, Anti-Oedipus: Capitalism and Schizophrenia; see also A Thousand Plateaus: Capitalism and Schizophrenia.

[35] Deleuze and Guattari make extensive reference to the dynamic of drives: in the processes of de- and re-territorialization, elements behave as libidinal charges, which can be bound or freed, and can configure systems that are either more compact or more labile. Such a reference reminds us that a medium may also be pushed into movement by a desire, and it is in relation to this desire that it either remains nomadic or allows itself to be trapped in one place.

[36] See, for example, the analysis of the mode of seeing developed by mobile media in different contexts in Levine, Waite, and Bowman. In a more sociological vein, see Bury and Li. Some data (mostly from online reports), and amusing descriptions of media users as film spectators, can also be found in Dixon. It is possible to retrieve quantitative figures in the surveys by Nielsen.

[37] A qualitative audience study on the re-enjoyment of films as films in a domestic environment is Dinsmore-Tuli.

[38] Carbone has written some important pages on the relationship between form and deformation. My insistence that the form of an experience emerges from a situation, rather than being applied from the outside, as well as the connection that I propose between the "form of the cinematic experience" and the "idea of cinema," owes much to Carbone's book.

[39] Turvey proposes applying Wittgenstein's concept of "seeing-as" to the recognition of filmic images. I am trying here to extend Turvey's claim, applying the concept not only to filmic images, but also to the spectator's

situation, as well as noting that in the case of "seeing-as," differently than in that of "seeing," we also keep in mind the possibility of switching from one figure to the other.

[40] I strongly insisted on this quality of theory in my "Theory, Post-theory, Neo-theories.

[41] On the role of memory in our experience of cinema, see, among others, Kuhn.

[42] Balász understood this quality quite well, writing that theory, which is expected to bring us such an idea, "is the road map for those who roam among the arts, showing them pathways and opportunities" (3).

[43] On the "idea of cinema" as a key element, see Albera and Tortajada. The need and effectiveness of an "idea of cinema" has recently been displayed by Andrew. How an "idea of cinema" is extracted by imperfect situations is debated by Rancière in the "Preface" to his *The Film Fables*. Naturally, the "idea of cinema" takes us back to the "myth of cinema" discussed by Bazin.

[44] This image appears in the essay "Erfahrung und Armut," 219.

[45] See "7 Great Places to Watch Movies" at < http://movies.allwomenstalk.com/great-places-to-watch-movies>.

[46] Consider Romains (1911): "They sleep; their eyes no longer see. They are no longer conscious of their bodies. Instead, there are only passing images, a gliding and rustling of dreams" (53).

[47] See Curran, "Best Place to Watch Movies."

[48] See < http://moremoneystreams.com/2011/12/12/film-like-home-theater-projectors-for-enjoyment-within-your-grasp/>.

[49] "10 Tips for Better Movie Watching at Home," at http://www.apartmenttherapy.com/10-tips-for-better-movie-watching-at-home-178616>. See also "The key rules of watching a movie at home properly" at http://www.denofgeek.us/movies/18885/the-key-rules-of-watching-a-movie-at-home-properly>.

[50] "Watching Movies on Handheld Devices: Mobility Vs. Audio-Visual Clarity," at http://movies.yahoo.com/news/watching-movies-handheld-devices-mobility-vs-audio-visual-20110128-083000-714.html.

The Relocation of Cinema

- [51] From the same source: "However, on a professional level, there is a major concern on the size of a typical phone's screen when showing a potential client some videos. It's just too small to make the visuals and even the sound coming from a very small speaker, well appreciated."
- [52] < http://mubi.com/topics/can-you-watch-a-movie-on-a-plane>. [Offline].
- [53] < http://www.wikihow.com/Get-and-Watch-Free-Movies-on-iPad>.
- [54] < http://www.i400calci.com/2013/03/400tv-jurassic-park/>. In this case, the collective viewing was organized by the Italian online journal *I* 400 calci. Rivista di cinema da combattimento.
- [55] See the volume by this title edited by Dubois, Monteiro, and Bordina.
- [56] See their "À la recherche du spectateur."
- [57] See Hansen's "Early Cinema, Late Cinema."
- [58] Moholy-Nagy called the experiment "simultaneous or poly-cinema" (41).
- [59] See Friedberg, "The End of Cinema: Multimedia and Technological Change."
- [60] A useful reading of the "Prologue" can be found in Carbone.
- [61] On this issue, see Carbone 104.



5.2 Early/Post-Cinema: The Short Form, 1900/2000

BY RUTH MAYER

In the early days of film, before the cinema emerged fully as a venue and apparatus, all films were short. And now that critics proclaim the beginning of a post-cinematic age, short films seem to be pushing back again from the margins into the center of filmic expression. A "fetish for brevity" (Dawson 206) determines the content provided on digital platforms and social networks by media conglomerates and studios as well as non-professional users, intersecting with an inverse trend toward serialization and increasing epicality and complexity of digital narration (see Mittell: Buckland). Then as now, the short form indicates constraints enforced by the respective media apparatuses: early film (1880-1906) had to make use of short formats of storytelling due to technical limitations; today's privileging of brevity derives from what Barbara Klinger calls the "hardware aesthetic" dominant in the early days of the Internet, which turned the shortcomings of bandwidth and access into narrative challenges (196). But as Max Dawson points out, these early problems were quickly eliminated:

Digital shorts were no longer short because technology dictated they must be. Rather, this brevity was transformed into an aesthetic signature that cemented their place alongside the 140-character Twitter tweet, the Flash microgame, and the viral video in what *Wired* in 2007 called the "new world of one-minute media." (210)

After technical constraints had been largely overcome, the exigencies of digital attention management and audience solicitation perpetuated the cult of brevity, generating what Dawson terms an "aesthetic of efficiency."

Even though the premises of filmmaking and film reception in the preand post-cinematic ages are markedly different, there are significant correspondences and recursions. The cinema of attractions, writes Tom Gunning, never really disappeared but rather went "underground." And already in 1986, quite some time before cinematic production became digital, Gunning saw evidence of a revival of the modes of early filmmaking in "what might be called the Spielberg-Lucas-Coppola cinema of effects" (Gunning 64, 70; see also Hansen "Early Cinema"; Manovich). In her reassessment of Gunning's theories in 2006, Wanda Strauven refers to *The* Matrix as a "reloaded form of cinema of attractions" in its privileging of spectacular effects over narrative plausibility and psychological consistency (11; see also Bukatman). At around the same time, Henry Jenkins muses about the analogies between YouTube and the pre-cinematic vaudeville aesthetic, remarking on several correspondences, among them the "modular" and effect-oriented character of the performances depicted, their "push to conciseness" ("YouTube"; see also Rizzo; Dawson). Since then, references to the digital rebooting of cinematic modes of attractions have become too frequent to record.

In what follows I, too, will be concerned with the reverberations of these two phases of filmmaking and film experience, but I will not focus primarily on the "attractions" of early and contemporary film. Rather, I am interested in the ways in which films both at the outset of the cinema's formation and in its current late (or terminal) stage make use of (and redefine) narration—a feature of pre- and post-cinematic film aesthetics which, very much in keeping with Gunning's reading of early film, tends

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to get short shrift particularly in readings that take a comparative approach to both eras. It is true that, in contrast to the classical Hollywood cinema, the films of the early and the late phase seem to be irretrievably caught up in the exploration of the technically and medially possible. But they do tell stories, too, and to assume that these stories do not matter is to ignore much of the appeal emanating from the films then and now (see Musser). I argue that the storytelling of the early and late cinema responds to a set of very similar epistemological conditions reigning in the early 1900s and 2000s. In both contexts, stories are told to compensate for anxieties of alienation especially prominent at the outset of the mass medial age and again at the moment of its digital dissolution. And it is the shortness of these stories that suit them particularly to the task of contingency management.

Short narratives are faced with specific formal constraints. The limitations of the short form obviously take a toll on the complexity of narrative, at least when seen in contrast to the classical Hollywood cinema or the complex TV series. To approach the current predilection for the short, concise, clipped, and contracted in filmic narration by way of a detour into early film may thus also serve to highlight alternative modes of complexity—and eventually contribute to a reassessment of the concept of narrative from the vantage point of past and present practice. My attempt at tracing the post-cinematic moment around 2000 back to a corresponding constellation around 1900 relies upon the methodology of media archeology, approaching the history of film as a series of breaks, shifts, spillages, and eruptions rather than a smooth continuity. Reviewed in close conjunction with the aesthetics of the digital short, early film may thus produce, as Vivian Sobchack writes with respect to media archeological epistemologies, "a 'presence effect' that is capable of overturning the premises (and comprehension) of established media hierarchies and media histories" (324; see also Huhtamo and Parikka).

Focusing on the short form of current and early filmic narration means to attend to the media regimes of both eras, but it also requires an engagement

with larger cultural debates around efficiency, complexity, contraction, and concentration at the turn of the twentieth and the twenty-first centuries. In the first place, I am interested in the ways in which films try to compensate for their temporal and technical limitations, particularly by way of referencing larger narrative archives and latching on to other, earlier or parallel narratives and modes of storytelling. What Rita Felski writes about the significance of genre for "literary knowledge" can easily extend to describe the workings of a transmedial archive of storytelling: "knowledge and genre are inescapably intertwined, if only because all forms of knowing-whether poetic or political, exquisitely lyrical or numbingly matter-of-fact—rely on an array of formal resources, stylistic conventions, and conceptual schemata" (89). In the early days of film, the generation of narrative knowledge was accomplished to a large extent through the cross-medial referencing of literature. Literary texts were routinely raided by films in order to widen their narrative and social reach (Staiger; Musser). This indexing of an audience's prior cultural knowledge and narrative memory is particularly appealing in view of the limitations of the short form: early films did not need to tell the whole story, they could assume their audiences to be familiar with the plot lines of *Hamlet*, Alice in Wonderland, Uncle Tom's Cabin, and "Rip van Winkle," to name just a few of the stories adapted to film at the time, and could thus both engage in storytelling and explore narrative modes (and narrative implications) that deviated from the techniques and readings established in literature (see Staiger).

In the present era, the practice of medial cross-referencing has become so forceful and pervasive that it has been made out as a dominant cultural and technical logic: the logic of medial convergence (Jenkins *Convergence*). The short films of our time do not reference one committing key medium such as literature, but draw upon and tap into a whole range of media and media knowledge, disclosing a narrative web with a wide array of associative interfaces and docking sites. One obvious example of a contemporary strategy for achieving complexity and scope by way of

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reference would be the Marvel One-Shots, a number of direct-to-video short films produced by Marvel Studios to introduce alternative glimpses into the storyworlds developed in the Marvel Cinematic Universe the series of films unfolding around the Marvel superheroes since 2008. The One-Shots present self-contained stories of 4 to 14 minutes in length, exploring aspects of the larger narratives that allow for ironic refractions or disclose nuanced revisions and may in turn serve as points of departure for other storylines. The short films are directly related to and inscribed in a larger narrative network but in contrast to the actionand effect-driven core narratives in their monumental appeal and claims (see Felix Brinker's contribution in this book) they zoom in rather than reaching out in grandiose gestures. In doing so, they do not necessarily establish psychological depth, but they offer alternative reference points for affective engagement—either by way of generating comic relief when pursuing a minor character's future fate (All Hail the King [2014]) or by breaking with the feature films' overpowering cause-and-effect routines by presenting disconnected events without larger narrative significance (A Funny Thing That Happened on the Way to Thor's Hammer [2011]).

These shorts are self-contained in that they do not have any bearing on the story-logic and narrative unfolding of the films to which they signal. But obviously, they derive their significance from the larger context in which they were produced and in which they nest. They can serve both as access points to, and as rest stops within, the large and ramified terrain of serial narration. In a similar fashion, early films feed from nineteenth-century story knowledge (literary and oral), even though their relationship to this substrate is not one of simultaneity and correspondence (or convergence) but rather of supersession: they set out to reproduce and rework their material into something more contiguous to the sensibilities and needs of twentieth-century modernity. In both eras, the narrative reconfiguration performed by short films is inextricably conjoined with their exploration of medial possibilities and their efforts to chart and manage media environments that are growing exponentially at the respective moment in

time. Both the early 1900s and the early 2000s witness a hyper-increase in the emergence and proliferation of new media technologies that need to be tested, appropriated, and culturally framed. The short form, suggesting a tentative and provisional mode of engagement, lends itself well to such projects of medial exploration and implementation.

This also means that short films need to be seen as integral parts of a larger discursive concern with brevity. In particular, two topical terms seem to inform these discourses then and now: contingency and acceleration. Both have been made out as formative elements of modernist subjectivities and then again as constitutive factors of the digital age (Makropolous; Rosa Beschleunigung; Rosa Beschleunigung und Entfremdung), and I will bring them to bear on the short filmic form around 1900 and 2000. Both the experience of contingency and the experience of acceleration arise from the encounter with the technical innovations informing modernity and the digital age, but both also enter into feedback loops with these technologies—especially with the technologies of representation: "[T]he epistemology of contingency which took shape in the nineteenth century was crucial to the emergence and development of the cinema as a central representational form of the twentieth century," writes Mary Ann Doane (19), who then goes on to locate the cinema in a much larger context of institutions and techniques aiming at the mastering or at least the charting of contingency—at what I will call contingency management the workings of which she tracks to our time, "in the form of digital technologies" (20).

The short form seems exemplarily suited to give shape and scope to the experiential frames of both eras, thus going beyond mere representation or superstructural depiction, entering "the very heart of social production, circulation, and distribution," as Steven Shaviro writes about the workings of what he terms post-cinematic media (8-9). Shaviro makes reference to an aesthetic and epistemology of flow, which is indeed specific to the "computing-and-information-technology infrastructure of contemporary

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neoliberal finance" (8-9). But media's proactive capacity, their propensity to act as "machines for generating affect" (8-9) is conspicuous already at the outset of the filmic project, as we shall see. Early film is as much about heightened *affect* as it is about spectacular *effects*—this too, it has in common with large parts of the post-cinematic scene of production sensibility. More than the feature films of the classical Hollywood period, pre- and post-cinematic films are concerned with what I will describe as an affective management of the forces of contingency and acceleration. They aim at capturing (in the sense of seizing and apprehending) the pervasive sense of transformation through technicization that characterizes modernity as well as the digital age and that impacts substantially on the respective conceptualizations of subjectivity and agency. And they work to turn the short form into a mode of the possible rather than a limitation.

1. Contingency, Acceleration, Possibility

Around the end of the nineteenth century, in the course of processes closely connected to the formation of a mass culture of consumption and entertainment, contingency emerges as *the* quintessential modern condition (Luhmann; Doane; Esposito; Holzinger; Makropoulos). At the same time, the parameters of acceleration and speed enter the modern experience as elementary conditions of processing knowledge and generating experience, contributing to a tight interlacing of the awareness of contingency with a sense of alienation. This enmeshment paradoxically effects a sense of endless possibilities without any real choice:

it seems that the phenomena of extensive acceleration and flexibilization, which produce the impression of perfect contingency, hyper-optionality, and an unlimited openness of the future, do not allow for "real" transformations any longer. The system of modern society is increasingly closing itself off and history is coming to an end that takes the form of "polar inertia" (Paul Virilio). (Rosa *Beschleunigung und Entfremdung*; my translation)

Hartmut Rosa attributes these effects to the era of "late modernity" that is not clearly dated but extends into the twenty-first century. While the condition may indeed be a phenomenon pertaining to the entirety of the modern experience, stretching from the 1880s to the present time, the modes of responding to this condition—whether in the guise of political or cultural theory, social management, or artistic and cultural processing—evolved unevenly and in fractured form over the course of the last century. As sociologist Michael Makropolous points out, the most substantial cultural accomplishment at the outset of that century may be a reconceptualization of contingency: contingency was increasingly seen in terms of an array of options rather than exclusively in terms of alienation and anomie. Even if they do not point the way to a deep-seated change, the "endless possibilities" disclosed by the condition of contingency can map out modalities of the future (rather than merely generating a sense of paralysis). This speculative and futuristic potential of modernity is actualized through narrative.

The history of contingency formation and contingency management is complexly entangled in reflections on the conservation, transmission, and communication of information—and in this context modes and formats of narration play a pivotal role. One pressing concern of modernity that manifests in the very emergence of "print capitalism" in the eighteenth and nineteenth centuries (Anderson), but that becomes particularly urgent at the outset of the twentieth century, is the narrative production, storage, and mediation of scientific and cultural knowledge. The relevance of short forms in modernity hinges closely on the tendencies toward acceleration in knowledge formation, on the emergence of a global public sphere and global markets, and on the unfolding of new media technologies and channels of communication addressing mass and multiple audiences. Small narrative forms gain exemplary significance in this context. Martin Dillmann claims that modernity and modernism brought about an unprecedented valorization of the small form as a "modernist genre of contingency" in the face of a crisis of knowledge

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and certainty (Dillmann 165, my translation; see also Gruber). This valorization extends far beyond modernist literature, and it correlates the small and the short in ever more intricate ways. The modern media of communication and entertainment—the telegraph, the camera, the telephone, the radio—not only bring about a contraction of time and space, but also a contraction of form: more than ever before conciseness in form equals speed in transmission. Both the sense of urgency in an information society and the predominant regime of distraction enforced by the entertainment industry call for short, fast, condensed packages of information and data.

In our century, finally, information, opinions, facts, and insights are increasingly launched by means of micro-narrative formats such as tweets, micro-blogs, status updates, text messages, or micromovies. Brevity serves to compress and polarize, zooming in, bracketing off, and sensationally heightening effects. In addition, short forms function as the modular elements of larger serial figurations: they can function as launching pads for collaborative efforts towards meaning-making and collective memory (as in wiki files or the workings of digital storytelling by means of authenticating sound bites or film clips), or serve as means of academic reorientation and storage (as in abstracts, synopses, or annotations), which in turn allow for or demand further processing. In all of these cases, short formats operate pointedly as modes of the possible and as formats of contingency management, while simultaneously contributing to the production of contingency and the enforcement of acceleration.

2. Pre-Cinema

When seen against the backdrop of contemporary discursive negotiations, the shortness of early film appears not only as a technical predicament that needs to be overcome; instead, it can be seen as an advantage, and certainly it presents itself as an integral part of the medium's modernity (Hansen *Babel* 29). To illustrate the productive

power of the short form, I will focus on the genre of the early fairy tale film (or féerie), as a popular and prolific mode of filmic meaningmaking on both sides of the Atlantic (Zipes; Moen), before turning to the short filmic form in the digital age. The fairy tale film is particularly suited to my purpose because it demonstrates succinctly that technical attraction and narration, showing and telling, evolve side by side in the pre-Hollywood film, as two dynamics that both address the real in diverse but contiguous manners; it demonstrates, in other words, that "both the possibility of illusion and the ability of shock . . . are ambiguously predicated on the referential potential of the image," as Shane Denson writes about the intricate enmeshment of divergent pulls of fascination and focus inscribed in the early cinematic experience (Postnaturalism 64). The filmic enactment of popular tales, just like filmic "adaptations" of literature in general, relies upon audiences' cultural knowledge and their narrative and visual memory, capitalizing on seminal scenes (as constituted in print and by means of melodramatic stage renditions) and an iconic repertory of illustrations (Frazer; Staiger; Musser; Verstraten). But trick effects do not just superimpose a layer of spectacular "attractions" onto the stories; they affect what is being narrated, adjusting the "timeless" and "fantastic" material to the purposes of modernity and gearing it for future use.

Compared to the Hollywood standard of narration, films like William K. Dickson's *Rip van Winkle* (1896), George Méliès's *Barbe bleue* (1901), Cecil Hepworth's and Percy Stow's *Alice in Wonderland* (1903), Edwin S. Porter's *Jack and the Beanstalk* (1902), or Segundo de Chómon's *La belle au bois dormant* (1908) seem crude in their narrative unfolding by means of scenic tableaux. In addition, they appear strangely unfocused in their attention management: the abundance of detail in each shot seems to impede sympathetic identification, narrative orientation, or suspense formation. Time and again, the short films compensate for their brevity by making the most of their screen space, arranging scenes simultaneously next to each other rather than unfolding them

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consecutively. Thus in Méliès's take on Charles Perrault's "La Barbe Bleue" (1697) (accessed through Jacques Offenbach's popular operetta of 1866) we are confronted with a series of panoramas that unfold in complicated layers, separated by dissolves. When the film traces Bluebeard's presentation of his castle to his young wife, the couple is inserted into a densely packed fantasy space replete with complicated mechanisms of interaction and segmented by staircases, railings, and beams that partition the screen into several levels of action. The setting is stylized and markedly unrealistic in its theatricality.



Figure 1 – Busy Screen: BARBE BLEUE (1901, Georges Méliès). Frame grab.

The couple enters and leaves a scene of unceasing action, which breaks into slapstick chaos after the protagonists' exit. At the climax of the story, before the woman enters the forbidden chamber, an impish figure jumps from the pages of a book on display in the castle, mocking and cheering her fateful decision.



Figure 2 – The old medium: BARBE BLEUE (1901). Frame grab.

He later re-appears, when she faces her dead predecessors, and now it is apparent that he is invisible to her. The imp also rejoices over what could be regarded as a materialization of the heroine's nightmare: huge keys dancing over her head after her discovery that she cannot wipe the blood from the key she was not supposed to use.

Each of the film's scenes is packed with action that does not really propel the narrative. Noël Burch identifies this mode of composition in early cinema with a spirit of "decentering," which demanded

a topographical reading by the spectator, a reading that could gather signs from all corners of the screen in their quasi-simultaneity, often without very clear or distinctive indices immediately appearing to hierarchize them, to bring to the fore "what counts," to relegate to the background "what doesn't count." (154)

Yet, this visual decentering is not only about contingency, it is also about contingency management: the film systematically rehearses modalities of meaning-making, and it does so by negotiating the familiar and the new. Ironically, it is precisely the trick elements—the formal elements that are most closely associated with the self-reflexive aesthetics of a sensational cinema of attractions—which provide narrative guidance here. The imp that is jump-cut into the film, appearing in a cloud of smoke, propelled from the book that presumably contains the story that we are seeing unfold on the screen while at the same time pointing to an older media technology of narration, is invisible to the protagonist but hypervisible in his shock-appearance to the audience. This figure acts out exaggerated responses to and resonances of the diegetic action for the audience, creating a sense of suspense, urgency, and providing a focus to the narrative. It thus fulfils a task similar to the "lecturer" in the vaudeville theater or nickelodeon who routinely provided oral commentary to films in order to "highlight what viewers saw" (Gaudreault).

The world of the fairy tale film is a fantasy space—at a remove from the modern scene as it is captured in the actualities of the early screen, yet by no means altogether disconnected. The film's mise-en-scene presents an "intricate bricolage," as Richard Abel has noted, "eclectically combin[ing] Renaissance and Second Empire architectural details, Belle Epoque fashions in women's clothing, and, for publicity purposes, a giant bottle of Mercier champagne" (Abel 70). The conditions of modernity are playfully acknowledged and suspended as the familiar story is submerged in and retrieved from an array of side actions, inviting the viewer to review interactions and correspondences, lineups and reciprocities: actions, accidents, and actants. The imp's response to the heroine's predicament may very well map an implied viewer's response: the film does not engage in sympathetic identification with any of its characters but rather inveigles the audience to enjoy the thrill of fulfilled expectations and actualized fantasies.

The authors of Eine Theorie der Medienumbrüche 1900/2000 ("A theory of media breaks 1900/2000"; Glaubitz, Groscurth et al.) see as one strong correspondence between the filmic imagination of early film and its digital replicant the "mediatization of subjectivities" that first comes to the fore in the alignment of discourses of psychology, physiology, electricity, and computing and that is synthesized on celluloid in the materialization and externalization (or "screening") of mental activities: dreams, thoughts, visions, or ideas, often through trick effects. In an extension and refraction of this operative principle, 21st-century digital media fashion mediatized subjectivities into "medial actants" as they invoke and track man-machine-substitutions in what Denson calls the anthropotechnical interface (Postnaturalism). When in Méliès's Barbe bleue or—to call to mind one of numerous further examples—in Edwin S. Porter's Jack and the Beanstalk the protagonists' fears or dreams are "screened," the audience gets to see what the actor (or actant) diegetically cannot face—her or his unconscious. But what in the classical phase will be used to bring about intense moments of subjective psychological identification (as in, for instance, the visualization of the unconscious performed by Alfred Hitchcock with the help of Salvador Dalí in Spellbound [1945]) serves in the early phase as a mode of disengagement and as a means of displaying and narratively managing contingency (foreshadowing similar functionalizations in our days, as we shall see). To call such scenes "subjective inserts," as Elizabeth Ezra does (39), is thus problematical, since they might represent subjectivities, but they operate by means of a marked objectification. When the eight huge keys (or the seven white corpses and one fairy) are superimposed on the shot of Bluebird's wife tossing and turning in her bed, this is not pulling us into her consciousness but rather turning her consciousness into a stage—or better: screen. Indeed, the mind becomes a screen here, displaying what cannot be seen otherwise.

Our viewing position is modeled by the imp that rejoices at the spectacle of representing the unrepresentable.



Figure 3 – The mind becomes a screen. BARBE BLEUE (1901). Frame grab.

Time and again, early film's trick cinematography uses tableaux or scenic arrangement almost paradoxically to capture the fleeting, the ephemeral, the chaotic, the contingent, and to stall the rush of acceleration. In that manner, the representation of the timeless and fantastic is employed to generate a panorama of options that can be watched, weighed, and enjoyed from a distance. In the course of this operation, the shortness of the filmic form is both accentuated and suspended, as the film operates for one by means of selection of but a few scenes from the original story, but on the other hand enlarges the chosen scenes and scenarios into intricate tableaux of almost painterly quality, accentuating the aspects of framing, composition, and lighting. The film's suspense-driven narrative momentum is thus time and again arrested to present panoramic compositions that prompt to be explored and surveyed, projecting possibilities and options for re-readings of the familiar and narrative reorientation in the pervasive field of cultural knowledge.

3. Post-Cinema

"[T]he technical capacity of audiovisual media to generate somatic-sensory experiences of extreme physical presence and bodily proximity (now called 'special effects' rather than 'realism') raises formidable challenges to both 'narrative' and 'representation," writes Thomas Elsaesser ("Freud" 102); and indeed when "narrative" and "representation" are defined along the lines of the nineteenth-century novel or the feature film of the classical Hollywood phase, the challenges may seem insurmountable. But there is more to narrative than psychological realism, and there is certainly more to narration than subjectivizing point of view and focalization (see Elsaesser "Tales"). Once we pare down the concept to its most basic principles—instituting one or more layers of mediation between a representing agency and the represented, and interlinking isolated "incidents, actions, episodes" into some sort of "plot" (Brooks 5)—it may very well serve as a means of understanding how films engage with audiences, before and after the classical era.

Obviously, one of the characteristics of the post-cinematic media regime consists in the field's sprawl-the heterogeneity and multiplicity of what "film" means today. To engage with the short form could mean to look at professionally produced YouTube clips or Vimeo family videos, independent short films circulating among international festivals, television outtakes, clips, or teasers, webisodes and micromovies, and many other formats characterized by what Max Dawson identifies as the "aesthetic of efficiency": "streamlined exposition, discontinuous montage and ellipsis, and decontextualized narrative or visual spectacle" (206). I will start my analysis with examples stemming from a segment of this market of brevity known as "micromovies": films geared toward consumption on mobile phones and other small screens—and I will further narrow the scope by focusing on mobile phone-produced films. In doing so, I will not only be concerned with shortness, but with a whole range of further markers of "the small": tiny screens, basic cinematography, limited technical possibilities, modest production costs, and a low threshold of

access and distribution. As Caridad Botella Lorenzo points out, these films are "mobile" not only with regard to their production context but also in view of their consumption, which certainly does not require the setting of a movie theater, although micromovies have become regular contestants at film festivals and are thus also featured in cinematic venues. My final example will extrapolate from these findings to a "viral" short film circulating in social networks in 2014. Although part of a professional campaign and not a true micromovie, the video was produced on a small budget aiming for maximum impact in the realm of social media, and thus is also geared toward small screen reception, taking into account a wide variety of viewing practices and a quick turnaround in cycles of watching and sharing.

Micromovies are deeply informed by media history, as Erkki Huhtamo argues by pointing out the analogies between one-shot films with minimal editing and the media technology of the flipbook. Obviously, these low-key productions signal back to the beginning of the cinematic era, but many of them also explicitly engage with even older institutions and formats of representation and narration: reactivating the aesthetic of the vaudeville act, and even older conventions of composition and staging—the theatrical tableaux, the museum diorama, the panoramic photograph, or the painted portrait and still life. The mobile phonemade stop-motion film Dot, produced by Aardman Animations in 2011 for Nokia, directly references a technique and aesthetic of filmmaking first popularized by early films. The 97-second film, shot by means of a portable microscope attached to the phone's camera, entered the Guinness Book of World Records as "the world's smallest stop motion character animation" (Ewalt 2010); the "making of" video accompanying its release drew at least as much attention as the film itself. The story is simple and fairy-tale inspired: A 9 mm-sized protagonist in the guise of a tiny plastic doll braves the dangers of an unraveling world and objects such as coins, needles, and safety pins coming alive. She is finally rescued by a bee, a flower, and a pair of

tiny knitting needles. The micromovie's fascination plays out entirely on the level of size and effects, its microscopic perspective epitomizes the materiality of the world it depicts, the palpability of fabric and fiber, the texture and composition of surfaces.



Figure 4 – Putting it right: DOT (2011). Frame grab.

The film's narrative is charmingly simple and old-fashioned, while it employs a panorama of collisions and clashes, maneuvers and interventions, chain reactions and material transformations that unfold exclusively on the level of attraction, inviting its audience to focus on the technical rather than narrative level of presentation. This film is obviously not about identification, suspense, or sympathetic alignment, but exhibits an obsessive attention to the transformative powers of the object world that becomes the film's most important actant, rendering the central character—if this is what we want to call the tiny doll—an integral part of its environment. The world on display is literally unraveling, only to be knitted back together into a colorful blanket at the end of the film. As in

early cinema, distance (both visual and emotional) makes for contingency management.

The film's real narrative is located at a remove from its plot—it is a narrative of the powers of technology in the modern world. The advertising campaign that featured the film was titled "It's not Technology, it's what you do with it," thus pointing to the possibilities of continuous reinscription, rereading, reconceptualization, and recycling in contemporary media ecology. No press release or article on the film fails to mention that the microscope attached to the camera was developed by a Berkeley professor of bioengineering in order to help "diagnose fatal diseases in remote areas of third world countries" (stopmotionpro.com) and that thus the original purpose of the technology at hand was to improve health care conditions in the developing world. The micromovie's narrative playfully reiterates the reassuring message that the world can be put right one step at a time, moving from the microscopic to the monumental by using buttons, needles, coins, and mobile phone cameras.

The same aura of material feasibility or craftsmanship infuses another mobile phone-produced film that is otherwise situated at the extreme other end of the micromovie universe: *La perle* by Marguerite Lantz (2007). This art film does not draw attention to its technical ingenuity but exhibits a theatrical—or perhaps more appropriately: pictorial—simplicity of miseon-scene and cinematography. *La perle* depicts a young girl's gradual transformation into Jan Vermeer's *The Girl with a Pearl Earring* (1665). The micromovie seems pointedly non-narrative, consisting of a long shot of about four minutes, showing its protagonist in the process of putting on make-up and costume modeled on the portrait. Yet "the poetics of still lives is not necessarily opposed to storytelling," as Rita Felski points out (102). In *La perle*, it is precisely through the filmic mode that narrative enters the enactment. After all, the film's portrait is far from "still." The girl uses the mobile phone as a camera and as a mirror, checking the progress of her performance on its screen as she goes along. Since the actor focuses

on the screen and not the camera, however, she never glances directly at the viewer, except at the very end of her transformation, for a few brief and flickering moments. The pixelated graininess of the image emulates Vermeer's textured brushstroke; color, tonality, and style of the film and the famous painting are similar and, of course, strikingly different at the same time (Roger Odin, qtd. in Lorenzo). The performance is shot against a dark background, the camera immobile throughout, but we do get an idea of a larger, invisible space of action: the background sounds indicate a public space—it could be the clangorous hall of a museum or gallery. At one point, a cell phone can be heard ringing. And while the girl's transformation is finally accomplished, it is never complete: the girl keeps moving, fiddling with her garment, checking her appearance, restlessly moving her eyes and blinking, until she finally gets up and leaves the frame of the shot before the painting has had a chance to fully materialize.

Like early narrative films, this micromovie taps into a larger archive of cultural knowledge, although at first glance the relation seems less mediated in La perle: where a film like Barbe bleue signals to a larger narrative by indexing iconic scenes, picking up bits and pieces of the familiar material and improvising on it, as it were, the referencing of La perle seems more faithful and all-comprising, actually replicating the painting on screen. But then, the screened image never goes still (neither with respect to movement nor to sound), and the effect of simulation is alternately generated and undermined. Moreover, to filmically reenact The Girl with the Pearl Earring in 2007 is also to call up the popular memory of the 1999 New York Times bestseller of the same title by Tracy Chevalier and its 2003 film adaptation starring Colin Firth and Scarlett Johansson. Novel and feature film provide a background story to the painting, rich in romance and period detail, while the micromovie both acknowledges and defers these narrative associations by enacting (almost) nothing but the image, and still inserting it pointedly into a discordant medial frame conveyed by the aural and visual superimpositions and layering. Developing the image over the course of several minutes, the

film stretches time, but simultaneously contracts and condenses it by forcing the artistic masterpiece onto the small mobile screen and by systematically eliding the epic love story told around the painting, while calling it up through its very mediality of adaptation. Working with a rich cultural repertoire of multiply mediated image and story knowledge, which is evoked and disturbed by way of montage, framing, perspective, processing, and sound, the short film generates what Denson calls "metabolic images" ("Crazy Cameras") (rather than one "image" as the reference to the painting might suggest), producing an effect of an almost imperceptible decentering of subject position, mixing the hyperrealistic with the oddly unnatural, and eventually defamiliarizing the classical painting but also the very medium of film, which seems odd in this particular mode of operation: at the same time in the thrall of things and markedly removed.



Figure 5 – Almost the same but not quite: LA PERLE (Marguerite Lantz, 2007). Frame grab.

La perle's static one-shot structure, its borrowings from older representational frames such as the theater stage and the painting, and its indirect gesturing to pre-cinematic conventions of "showing and telling" call to mind the aesthetic of early film, while it refrains from a direct acknowledgment of this analogy as in the Aardman animation. In closing, I would like to turn to one last example of a digital short—drawing on the operational mode of social campaigning this time. Like the Aardman animation, this film is geared toward momentarily arresting the flow of social media perusal, although in fact it feeds into this flow by means of its extremely segmented and short format of narration. The film was shot as a campaign video for the charity Save the Children, responding to the humanitarian catastrophe of the Syrian Civil War in early 2014. Save the Children enlisted the London agency Don't Panic to produce a 90-second film which was launched in March 2014, and received 21 million views on YouTube within five days. The short does share some functions with the classical TV commercial, but formally and technically it is clearly modeled on a YouTube aesthetic of the digital age, adopting the popular format of the "one-second-a-day" video to depict the life of a girl in London over the course of a year, from a glimpse at a birthday party in the safe circle of her family to the final shot of her next birthday in a refugee camp.

Obviously, the film's effectiveness consists in the way in which it pulls the distant action in Syria into the lives of its target audiences in Europe or the United States. Its narrative relies upon the omnipresence of the formats of the family video on the one hand and the war documentary on the other, filmic modes of representing everyday occurrences which are so familiar that they seem medially transparent, at least as long as they are not edited into second-long disjointed bits and pieces. In many respects the film returns to the early aesthetic of the tableaux in filmic narration, but it contracts the panoramic shots in a manner that replaces the aura of the painting or stage with the appeal of the snapshot. On its plot level, the film depicts order deteriorating into chaos, dramatizing the process by



Figure 6 – One second a day: Save the Children Campaign Video, 2014. Frame grab.



Figure 7 – One second a day: Save the Children Campaign Video, 2014. Frame grab.

means of fast cuts and marked breaks. On the level of narrative logic, aesthetic, and affective appeal, however, the film engages no less in contingency management than all the other examples considered here: it creates coherence and linearity, allows for a pointed and poignant viewer position, and manages to introduce a clear focus into what could come across as a random assemblage of images by means of its framing and arrangement of scenes, its rhythmic editing, and its use of a reverberating light and color scheme. Working by way of oral and visual resonances and repercussions, the film provides an almost uncanny sense of closure; its powerful appeal lies precisely in the sense of reciprocity or resonance communicated on the level of images—pulling England closer to Syria, peace closer to war, and ultimately suggesting a world that operates by means of a global grid of structured actions and images (the media images on screen or in print that structure the action's backdrop, the images of family bliss or suffering that make the narrative immediately understandable, the arrangements of shots that call upon each other and create a micro-level of familiarity within the video). The video thus attests to the transcultural efficiency of a media image archive charting what is presented as the "human condition." But at the same time it gives evidence of the legacy of early film and its techniques of enlisting shortness for the purposes of contingency management and narrative condensation and deceleration.

The digital shorts I selected are extremely diverse, but all three draw upon representational patterns and technical means that gesture back to the aesthetic of early film. Their narrative repertoire, of course, no longer feeds primarily from the archives of literature, but has become much more variegated: among other things, digital shorts draw on the rich tradition established by early film itself. Then as now, short films rely heavily on the effect of surprising twists and turns, resorting to technical tricks and transmedial signals to bring their stories across. But they do tell stories, and their storytelling is not only an ancillary endeavor, tacked onto the demonstration of medial possibilities: it constitutes what I think

is their core. As different as these films are, they all engage in contingency management by exposing the malleability of time and space. The logics of contraction, condensation, and expansion play an enormously important role in this context. Narration in the digital short is put to use fashioning subject and viewing positions that do not work primarily by means of identification or sympathetic alignment but rather rely upon the connectives of recognition or resonance: presenting the familiar in a new guise, lending coherence to the discordant, and rearranging knowledge by disclosing repercussions and analogies. Now as at the beginnings of the filmic project, the short form may signal marginality—taking the guise of a footnote, an afterthought, an adaptation or variation—but it can just as well (and simultaneously) communicate a sense of closure: the last word on a subject, a final insight, a simple truth. Whether these developments are the last throes of a system that has run its course or whether they point to the beginning of a new era of audiovisual narration is still unclear. We shall see.

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5.3 Post-Cinematic Atavism

BY RICHARD GRUSIN

In June 2002, for a plenary lecture in Montreal at the biennial Domitor conference on early cinema, I took the occasion of the much-hyped digital screening of Star Wars: Episode II–Attack of the Clones (George Lucas, 2002) to argue that in entering the 21st century we found ourselves in the "late age of early cinema," the more than century-long historical coupling of cinema with the sociotechnical apparatus of publicly projected celluloid film ("Remediation"). Two years later, in a lecture at a conference in Exeter on Multimedia Histories, I developed this argument in terms of what I called a "cinema of interactions," arguing that cinema in the age of digital remediation could no longer be identified with its theatrical projection but must be understood in terms of its distribution across a network of other digitally-mediated formats like DVDs, websites, games, and so forth—an early call for something like what now goes under the name of "platform studies" ("DVDs"). In his recent book on "post-cinematic affect" Steven Shaviro has picked up on this argument in elaborating his own extremely powerful reading of the emergence of a post-cinematic aesthetic (70). I want to return the favor here to take up what I would characterize as a kind of "postcinematic atavism" that has been emerging in the early 21st century as a counterpart to the aesthetic of post-cinematic affectivity that Shaviro so persuasively details.

Sometimes considered under the name of "slow cinema" or "the new silent cinema" (or, as Selmin Kara puts it, "primordigital cinema"), postcinematic atavism is not limited to art-house or independent films. Indeed three of the nominees for Best Picture at the 2012 Academy Awards—*Hugo* (Martin Scorsese, 2011), The Tree of Life (Terrence Malick, 2011), and the winning film The Artist (Michel Hazanavicius, 2011)—participated in this renewed attention to earlier cinematic moments and aesthetics. Each of these films, as well as Lars von Trier's 2011 Melancholia, which I will address in detail in this essay, makes stylistic, aesthetic, and cinematic choices that exhibit or display a kind of atavism—a reversion to or reemergence of an earlier cinematic moment through the anachronistic expression in the present of prior, even outmoded cinematic traits that otherwise appear to have become extinct in the proliferation of hypermediated, digital, post-cinematic technical and aesthetic formats.[1] As such these films mark an increasing recognition in Hollywood of a fundamental shift: the ultimate extinction or disappearance of the platform of celluloid film and a consequent fear of the potential decentering of the film industry from the US across the globe as new digital film technologies allow for the inexpensive production and distribution of feature films, exemplified perhaps most dramatically in the success of Nigeria's Nollywood.

It is not accidental, therefore, that both *The Artist* and *Hugo* take as their subjects the passing of earlier aesthetic-technical formations in the history of cinema. Indeed both films remediate outmoded cinematic forms through the use of contemporary digital cinematic media technologies, seeking both to preserve and to mark the disappearance of these earlier cinematic apparatuses. Despite sharing the project of remediation, which Jay Bolter and I defined in our book of the same name, these two films express their post-cinematic atavism in distinctly different ways. In *The Artist*, for example, Michel Hazanavicius chooses to present a story of the film industry's transition from silent film to sound in the medium of silent film—an unconventional atavistic choice that was not necessary to tell this story but which aimed to produce a cinematic experience akin to

that of film audiences of the first third of the 20th century. Hazanavicius could just as easily have chosen to present the film's silent cinematic sequences without sound while using sound in presenting the off-screen scenes. Indeed in a 21st-century film this would have been a more realistic or accurate (although less atavistic) presentation of the world of silent cinema in which films were silent but private and public embodied space was not. But doing so would not have called attention to *The Artist's* self-conscious remediation of silent cinema. (See Figure 1, below).



Figure 1 – Frame grab from THE ARTIST (Michel Hazanavicius, 2011)

Shot in 35mm but edited and most often projected digitally, *The Artist* seeks to capture the look and feel of silent cinema to remind us of its strategy of remediation (see Fig. 1). Not only did Hazanavicius shoot the film in 35mm rather than digital, but he used the classic Academy Ratio of 1.37:1 rather than the widescreen format more commonly used in contemporary cinema. The film's aim to faithfully remediate the silent era is thus signaled from the beginning. The opening credits sequence begins in the style of early silent cinema; the soundtrack only begins as the silent-era credits give way to contemporary credits. But it is only during *The Artist's* opening sequence that we learn that there will be no spoken dialogue in the film. Hazanavicius's first shot, which shows a (fictional) 1927 silent "George Valentine film," *Long Live Free Georgia*, being screened in a theater, unifies our screen and the screen in the fictional theater, filling the screen of the 2011 projection. After this initial sequence the film cuts to a shot of the audience in the theater and the orchestra playing the music we're hearing. This is an interesting opening which makes this music simultaneously diegetic and non-diegetic—diegetic to *The Artist* but extra-diegetic to *Long* Live Free Georgia, underscoring the fact that diegetic sound only came into existence after the introduction of talkies. It is only after we see the end of Long Live Free Georgia that we realize for certain that The Artist will be silent; as the music for Long Live Free Georgia ends, we see intertitles and hear non-diegetic music for *The Artist*, itself a silent film but *sans* orchestra.

The film's narrative problematic—the replacement of the silent cinema regime as a result of the new technological developments that lead to the talkies—stages the process of remediation as reform that the film itself would challenge, or at least resist. When George Valentine (Jean Dujardin) is on the decline as a silent film star and Peppy Miller (Bérénice Bejo) is a rising talkie star, Hazanavicius has Peppy rehearse the avant-garde logic of new media and remediation as reform rather than the atavistic logic of the film, as she tells an interviewer: "Out with the old. In with the new. Make way for the young." While *The Artist*'s atavistic remediation of silent cinema would, at least for the duration of the film, temporarily bring back the

cinematic aesthetic of silent film, its narrative resolution suggests another way in which the silent aesthetic persists in contemporary cinema, as the persistence of what Tom Gunning has called the "aesthetic of astonishment" at work in the "cinema of attractions" ("Astonishment"). What ultimately solves the problem of the end of George's career (as a metonymy for the end of the silent era) is Peppy's idea for George to perform with her in a song and dance number, which Gunning has argued is one of several ways in which the early cinema of attractions has gone "underground" and remains as a crucial element of film, even in our post-cinematic digital era ("Attraction" 64). Indeed, after the successful dance scene with Peppy and George, *The Artist* finally finds its voice, comes into sound. The film achieves this through an atavistic embrace of the spectacle, the attraction, the aesthetic of astonishment, all of which eschew the naturalistic, realistic narrative style that the introduction of sound and continuity editing is said to provide. In this sense, then, *The Artist* remains an atavistic remediation to the end.

Like *The Artist*, Martin Scorsese's film *Hugo* remediates an earlier moment of cinema, Georges Méliès's cinema of illusions, in the spirit of postcinematic atavism. Unlike Hazanavicius, who expressed his film's atavism by remediating the style of silent cinema and shooting on 35mm, Scorsese makes explicit nods to Méliès's illusionary style through the deployment of the most recent media technologies in directing *Hugo*, his first 3D film and his first film shot in digital. Scorsese's choice to abandon celluloid film for a movie celebrating the earliest moments of cinema (and detailing the near loss of that historical Méliès moment) makes Hugo speak precisely to the question of our current post-cinematic moment and the possible loss of other elements of cinematic history in the face of the new post-cinematic affective style. Hugo makes the case (in digital 3D) for the continued relevance of the earliest moments of cinema's history at precisely the time that the late age of early cinema is coming to an end. More specifically, Hugo, like The Artist, makes a cinematic claim for the non-indexical, nonrealist origins of cinema. Contra, among others, André Bazin or Stanley

Cavell, Scorsese sees the hypermediacy of magic and illusion, rather than the transparent immediacy of photographic indexicality, as constituting the true character of film (Bolter and Grusin). Scorsese (see Figure 2) lovingly presents us with a variety of early 20th-century media of representation, communication, and transportation, from the opening shot of the mechanism of the train station's clock to the multimediated notebook that is at the heart of the film's narrative crisis to the railroad itself.



Figure 2 – Frame grab from HUGO (Martin Scorsese, 2011)

The argument for cinematic illusionism is underscored by the brilliant casting in the film (as Inspector Gustave Dasté) of Sacha Baron Cohen, whose own cinematic and televisual career is based not on the indexical reporting or reproduction of the real but rather on using non-indexical techniques and the cinema's claims to indexicality for the purposes of

illusion or deceit.

While both *Hugo* and *The Artist* deploy the techniques of hypermediacy and remediation to manifest the post-cinematic atavism of the first decades of 21st-century cinema, both films remain indebted to an affectivity and an aesthetic rooted in the late age of early celluloid film. The same is not the case for Lars von Trier's extraordinarily moving film Melancholia, whose atavism is not explicitly concerned with the end of the early cinematic era of celluloid film, but rather with the end of the world. Where Hugo and The Artist both made their remediation explicit, calling attention to their hypermediacy, Melancholia is more immersive, not in the sense of late 20th-century cyberspace or virtual reality but in an affective sense similar to what Shaviro details as post-cinematic affect. The film's title, which names the planet that is on a collision course with the Earth, has been widely taken to refer as well to the emotional state of Kirsten Dunst's character Justine. In his very fine 2012 essay, "Melancholia or, The Romantic Anti-Sublime," Shaviro invokes (but does not entirely embrace) the idea that the impending collision of Melancholia with Earth (presented both in the film's opening and in the second half of the film) is an "inflated 'objective correlative" of Justine's "psychological state." What I want to suggest, instead, is that if there is an objective correlative in Melancholia it is the apparatus of cinema itself, and that the film's atavistic tendencies (to borrow the title of Dana Seitler's excellent book on atavism and modernity) also concern the disappearance of the historical era of celluloid film, a loss addressed in the late 20th century by the formation of the Dogme 95 group of which von Trier was a founding member. Insofar as the psychological condition of melancholia is usually historically oriented, connected with or brought on by some prior loss, it makes sense to take the film's title to refer more broadly to von Trier's melancholia for the loss of cinema, the end of the late age of what Gunning described as the "cinema of attractions" and its historical emergence within a photographic, celluloid-based apparatus—including its creation, production, distribution, and exhibition. Thus von Trier's melancholia is not only for the world that is ending in the film but also

for the end of a certain techno-historical material formation, emerging in early cinema and its aesthetic of astonishment, though persisting as an ongoing potentiality in cinema of any era, arguably even a post-cinematic one like our own.

Although von Trier contends in an interview that *Melancholia* is "perilously close to the aesthetic of American mainstream films" (qtd. in Leigh), this does not seem apparent to a casual moviegoer in any obvious way. The film's post-cinematic atavism is marked by a slow-motion style and hyper-melodramatic non-diegetic music that runs counter to the current mainstream cinematic style of quick cuts and sampled music. *Melancholia*'s cinematic atavism begins, I would contend, from its opening remediation of the cinematic "overture," a feature that has its origins in the early sound era and which reached its peak in the 1960s. The almost hallucinatory, dream-like musical sequence at the film's opening concludes with an affective premediation of the film's end, an image of the two planets coming together, vaguely reminiscent of the famous shot of the rocket crashing into the moon in Méliès's *Le Voyage dans la lune/A Trip to the Moon* (1902) (see Figures 3 and 4).



Figure 3 – Frame grab from MELANCHOLIA (Lars von Trier, 2011)



Figure 4 – Frame grab from LE VOYAGE DANS LA LUNE (Georges Méliès, 1902)

Although clearly set in the present or very near future, the film's stylistic atavism is evident in the mise-en-scène of the wedding reception which takes up the film's first half, with the white bridal gown (atavistic in itself), as well as the dress clothes and upper-class furnishings, and the ritualistic formality of the speeches and toasts. Not incidentally, the only digital medium present in the film's first half is a video screen displaying an advertising photograph for which Justine is expected to provide a tag line. Remarkably, despite the film's contemporary setting, not a single guest is texting, talking, or checking email on their mobile phones. Justine's own atavistic tendencies are evident as well in the widely remarked scene where she takes down the art books displaying constructivist images by Kazimir Malevich and replaces them with more representational images by Brueghel, Caravaggio, and Millais.

The film's most dramatic and explicit atavistic references to early cinema, however, come at the end where the collision of the two planets premediated in the overture alludes to two mythic episodes from the history of early silent cinema in which the diegetic action on the screen is aimed at the audience. The first, often seen as the inaugural moment of theatrical motion picture projection, involves an early film by the Lumière brothers, L'arrivée d'un train en gare de La Ciotat (1896), which was reported to have sent audiences screaming from the theater in fear that the train would run into them. The second instance, alluded to by the ultimate collision of Melancholia with Earth that ends the film, with Melancholia coming ever closer to both the film's audience and its main characters, is the famous final shot of The Great Train Robbery (Edwin S. Porter, 1903) where the outlaw points his gun right at the audience (see Figures 5 and 6). Although neither of these moments visually resembles the final images of Melancholia, they do resemble one another affectively in their threateningly direct cinematic address to the audience.



Figure 5 – Frame grab from L'ARRIVÉE D'UN TRAIN EN GARE DE LA CIOTAT (Lumière Brothers, 1896)



Figure 6 – Frame grab from THE GREAT TRAIN ROBBERY (Edwin S. Porter, 1903)

Despite the end of the world depicted at the end of the film, however, *Melancholia* is not conventionally apocalyptic. Or rather it is apocalyptic precisely to the degree that the apocalyptic ending of its cinematic narrative is not unique or extraordinary but rather exemplary of the kinds of narrato-technical endings to which all films are subject, the quotidian apocalypse at the end of the production and screening of every film. More specifically there is in all films a temporal movement or arc from the first frame to the last, whether in the technical event of screening and projection of a material artifact that has a certain limited duration, or in

the cinematic narrative which also has a corresponding temporal limit as often set out, for example, in pedagogical diagrams about cinematic narrative (see Figures 7 and 8).

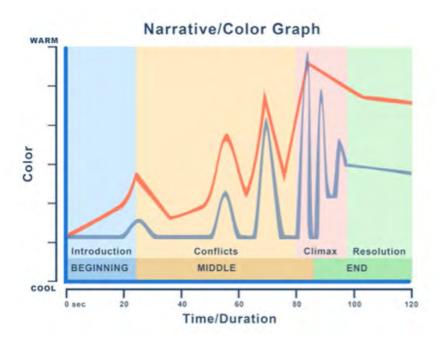


Figure 7 – Narrative color graph: collated low resolution screenshots of two media studies narratology diagrams. Image created by Shari Fleming for a pedagogical website owned by □Rocky Mountain College of Art. Web. http://onlinemedia.rmcad.edu/AN1110/html/Week-5 Presentation%205.3%20.html>.

It is customary of course for these two temporal trajectories to end at the same time (or more exactly at almost the same time, as the customary screening of credits after the film's narration ends belies the identity of these two apocalyptic temporalities). This coincidence of narrative and cinematic termination in *Melancholia* seems far more dramatic and powerful than in most Hollywood films, however, insofar as the collision

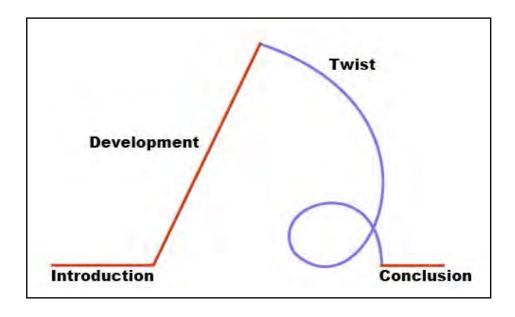


Figure 8 – Narrative twist graph; image used at the website "Using Narrative Structures". http://narrativestructures.wisc.edu/home/kishotenketsu.

of narrative and technical durations coincides with the collision of the two planets and the eradication not only of the diegetic world on the screen but of the cinematic image itself—as von Trier makes the screen go black for several seconds before the credits begin.

Not only is this collision premediated more quietly in the film's overture but it is schematized more explicitly in Part II of the film in the diagram that Claire sees online and fails to print when the power is shut off by the impending approach of the planet Melancholia. This image of the earth's orbit intersecting the erratic movement of Melancholia is another atavistic moment, deploying a kind of graphic diagram that one can readily find in a pre-digital age, entitled (also atavistically) the "Dance of Death" between Earth and Melancholia (see Figure 9).

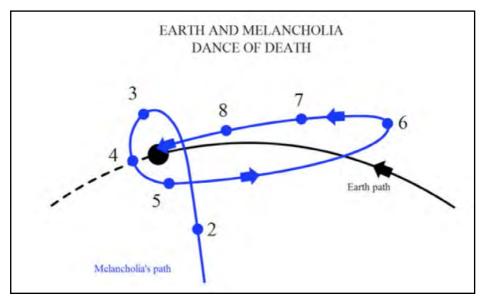


Figure 9 – Frame grab from MELANCHOLIA (Lars von Trier, 2011)

Pairing these two kinds of collision we can see that the Earth's regular orbit functions like the regular mechanical operation of the cinematic apparatus, with its linear arc, while the irregular orbit of the planet Melancholia stands in for the operation of the cinematic narrative of the film *Melancholia*. Understood in this way we can now recognize that when the planet crashes into earth at film's end, the apocalypse of the cinematic narrative is also colliding with the apocalypse of the cinematic apparatus, thus intensifying the affective impact from the film's end, an intensification marked by von Trier in the extended moment of darkness and then silence before the credits begin. In other words, the diagrammatic dance of death not only depicts the eventual collision of the Earth's trajectory with that of the planet Melancholia, but also depicts the collision or co-incidence of the trajectory of the film's diegesis with its cinematic presentation, the apocalyptic collision that has been the condition of cinema from its inception.

However, the diagram of the Dance of Death is not where von Trier chooses to end *Melancholia* but rather in the "magic cave" created for Leo and Claire by Aunt Steelbreaker (Leo's pet name for Justine). Apparently something that Justine has materterally promised to build for Leo for years, the magic cave as it finally materializes takes the form of a teepee-frame made of branches, which Justine, Claire, and Leo occupy as the planet Melancholia makes its final approach towards the Earth and to the cinematic audience in the theater, in a shot that can't help but call to mind Spielberg's *E.T. the Extra-Terrestrial* (1982) (see Figures 10 and 11).

Shaviro's detailed account of the affective and cinematic unfolding of the film's final scene in relation to the "beautiful semblance" of Romanticist aesthetics is powerful and on point. But, in claiming that "In the final moments of Melancholia, everything is staked on a fantasy of primitivism when this fantasy is no longer able to operate," he at one and the same time fails to see and lets us see how this "fantasy of primitivism" is another way to understand the film's post-cinematic atavism. It is true, as Shaviro contends, that the "sense of comfort and protection" offered by the teepee "is entirely illusory" and that "the magic cave cannot actually avert the end of the world." It is equally true that the magic cave cannot avert the end of the film—nor can any cinematic narrative device or turn. Indeed it is in its very failure to forestall the apocalypse built in to the temporal structure of the cinematic apparatus that the magic cave comes to stand, in the end, for cinema itself, in particular for von Trier's post-cinematic atavism. Not only does the magic cave allude to the magical cinema of Méliès, but the very phrase recalls the pre-cinematic medium of the magic lantern, [2] whose technology is, I would suggest (see Figures 12 and 13), vaguely invoked in the scene in Part I when Claire's husband John leads his guests in sending aloft paper lantern-style hot-air balloons covered with hand-written well-wishing messages for the newly married couple, which Justine then tracks with John's powerful telescope.



Figure 10 – Frame grab from MELANCHOLIA (Lars von Trier, 2011)



Figure 11 – Frame grab from E.T. THE EXTRA-TERRESTRIAL (Steven Spielberg, 1982)





Figures 12 and 13 – Frame grabs from MELANCHOLIA (Lars von Trier, 2011)

But magic lantern shows, while precursors to theatrical cinematic projections, do not operate with the same apocalyptic temporality as does the mechanical apparatus of cinematic projection, which is in part why the film does not end with this episode of the magic of flight but rather with the episode of the creation and inhabitation of the magic cave. Shaviro does come close to accounting for the film's atavism (without invoking the term) in his reading of the teepee scene at the end of the film and its longing for the primitivism of childhood: "The Child figures

a fantasmatic future, just as the teepee figures a fantasmatic past. I think that both of these figures have such a poignant effect upon me-and upon so many other viewers of Melancholia—precisely because they are presented to us at the point of their abolition." His account of the affective power of the child and the teepee points to what I have been calling the film's post-cinematic atavism, the return or reemergence of past cinematic traits that are now endangered by or in jeopardy from cinema's increased digitalization. Like the child and the teepee, then, cinema itself (particularly early photographic, theatrically projected cinema) is also presented to us at the point of its abolition. But in seeing the teepee as figuring a "fantasmatic past," Shaviro misses, I would contend, the way in which the teepee figures the fantasmatic present of the cinematic experience itself. For just as the magic cave cannot avert the apocalyptic end of the world figured in the approach of the planet Melancholia, so the film Melancholia (or any other film) cannot avert the apocalyptic end of its diegetic world built in to the apparatus of cinematic creation and projection in the technical medium of celluloid film. Although we know when we enter the theater that the world being projected on the screen will end when the film does, that doesn't prevent us, like Justine, Claire, and Leo, from entering the world of the film nonetheless. Thus it would not be going too far, I would argue, to say that the apocalypse that *Melancholia* is most concerned both to avoid and to preserve is the apocalypse of cinema itself.

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Notes

This essay was previously published in **SEQUENCE**: Serial Studies in *Media, Film and Music*, 1.3, 2014 and is reprinted here with permission. [1] See Dana Seitler's Atavistic Tendencies. Seitler sees atavism as marking the temporality of modernism, as a form of temporal modernity. Shaviro argues that "von Trier himself is very much of a modernist, and thereby an adherent of all the values that he criticizes in Melancholia" ("Melancholia"). For Shaviro, though, von Trier's modernism in Melancholia differs from that of his some of his earlier films: "Above all, von Trier's own modernism is expressed in his continual attempts to create shock and scandal. Melancholia is the only of his films not to display what Taubin calls his 'compulsive épater les bourgeois streak'" (citing Amy Taubin). Shaviro continues: "It often feels to me as if von Trier were stuck in the phase of adolescent boyhood. Or else, perhaps, he is caught in the grip of a compulsion to repeat the primal scene of early-20th-century modernism's confrontations with outraged audiences." My point would be that Melancholia, too, is modernist in its atavism, even if it avoids some of the stylistic traits of his earlier films.

[2] Some good examples may be viewed online at San Diego State University's online exhibit of their Peabody Magic Lantern Collection here: http://library.sdsu.edu/exhibits/2009/07/lanterns/index.shtml>.



5.4 Ride into the Danger Zone: TOP GUN (1986) and the Emergence of the Post-Cinematic

BY MICHAEL LOREN SIEGEL

Introduction

The work of British-born filmmaker Tony Scott has undergone a major critical revision in the last few years. While Scott's tragic suicide in 2012 certainly drew renewed vigor to this reassessment, it was well underway long before his death. Already by the mid-2000s, Scott's brash, unapologetically superficial, and yet undeniably visionary films had been appropriated by auteurists and film theorists alike to support a wide range of arguments.[1] Regardless of what we may think of the idea of using auteurism and theory to "rescue" directors who were for decades considered little more than action hacks—an especially meaningful question in the digital age, given the extent to which auteur theory's acceptance has increased in direct proportion to the growth of online, theoretically informed film criticism—it would be difficult to deny the visual, aural, narrative, thematic, and energetic consistency of Scott's films, from his first effort, The Hunger (1983), all the way through to his last, Unstoppable (2011). The extreme scale and artistic ambition of his films, the intensity of their aesthetic and affective engagement with

the present (a present defined, as they constantly remind us, by machines, mass media, masculinity, and militarization), and, indeed, the consistency of their audiovisual design and affect (their bristling, painterly flatness, the exaggerated sense of perpetual transformation and becoming that is conveyed by their soundtracks and montage, the hyperbolic and damaged masculinity of their protagonists)—all of this would have eventually provoked the kind of critical reassessment we are seeing today, even without the new mythos produced around Scott upon his death.

Indeed, Scott's films—especially his late films, beginning with Man on Fire (2004)—have been among the most useful (and are certainly among the most pertinent) for the study and theorization of what Steven Shaviro has called "post-cinema." Scott's films, for several reasons, are an excellent terrain upon which to build a theory of what becomes of cinema as an art form, as a generator of effects and affects, "when it is no longer a cultural dominant, when its core technologies of production and reception have become obsolete, or have been subsumed within radically different forces and powers" (Shaviro, "What"). Technologically, economically, socio-culturally, and aesthetically, Scott's films are indelibly stamped as "cinematic." They are pure, almost Platonic distillations of late Hollywood spectacle, affect, and intensity. But at the same time, because they are so powerfully involved in and imbricated with the techno-media realities of their contemporary moments, Scott's films are also particularly attuned to emergent social forces and powers. Hence their interest for theorizing post-cinema, where the very name of the game is to grasp, in and through cinema and (usually) popular moving-image culture, the becoming-something-else of everyday experience in an era of digitization and neoliberal economic relations.

Indeed, digital technologies and neoliberalism, Shaviro notes, "have given birth to radically new ways of manufacturing and articulating lived experience" (*Post-Cinematic* 2). Scott's films, I want to suggest, indicate, analyze, and participate in the production of this new form of lived experience. The concept of the post-cinematic is valuable precisely to the extent that it counters the elegiac tone surrounding the "death of cinema"

and helps us trace, instead, the new and vital ways in which cinema can be uniquely expressive (that is, both symptomatic and productive) of new forms of experience despite, and also, crucially, *because of*, its culturally residual status in the twenty-first century. If the endgame of the concept of the post-cinematic is "to develop an account of *what it feels like* to live in the early twenty-first century" (Shaviro, *Post-Cinematic* 2), then Tony Scott's films, made between 1983 and 2012, a period of time practically isomorphic with the rise of both neoliberalism and the digital, are remarkably rich critical sites.

Although there is a marked avoidance of precise periodization in Shaviro's post-cinema argument, it is clear that the emergence of the post-cinematic as the dominant affect, "structure of feeling," and epistemic foundation of everyday life took place across this same time period (the early 1980s through today). Thus Scott's career spans the transition from the cinematic to the post-cinematic, a transition in which he was a central figure for a number of reasons. Two of the most overlooked of these are the ways in which a) his films focus on the relationship between humans and machines, especially machines with screens (a relationship increasingly defined—in both reality and in Scott's films—as a simultaneously mental, sensorimotor, and embodied relation of extension, immersion, assemblage, or interface), and b) these films seem to want both to represent and to render a major transformation in the nature of the screen itself as an aesthetic, technological, and architectural object or artifact. Tony Scott's films, in short, use formal, stylistic, and narrative elements specific to cinema to both reflect upon and help produce a major reconfiguration in the parameters and possibilities of the screen as the terrain upon which media take on consumable form for an end-user (or spectator, to draw upon an older lexicon). Scott's films reconceptualize the screen, positioning it no longer simply as a coherent, self-same, and empty plane that reflects projected images and worlds back at an illusorily unified spectator who, in turn, is psychically projected into the diegesis via identification structures (which would be something like the "cinematic" mode in its most classical form), but rather as a heterogeneous and modular zone of action and event that interfaces with a user now also reconceived as multiple, mobile, and physically, perceptually, and cognitively adhered to, affixed to, or fused with the screen itself. These films, in other words, produce something that emulates a digital screen experience *avant la lettre*. Scott's films, then, "cinematic" as they may be, gesture towards post-cinematic forms of both spectatorship and screen.

This is most obvious in the late films, reaching a climax in 2005's *Domino*, a film that uses analog filmmaking technology to produce a screen-subject interface that resembles that of portable, digital screens on smart phones and tablets, which were soon to dominate the social landscape. But what I am calling Scott's reconfiguration of the screen/spectator relation begins quite early in his career, as early, in fact, as the mid-1980s. One of my motives in making this particular argument is to add a crucial dynamic to the growing discourse surrounding the concept of the post-cinematic: namely, the role of the screen as an ever-transforming object that is at one and the same time an interface with an ever-transforming subject.

But another motive is to begin to historicize the concept of the postcinematic, to begin to conceptualize its emergence, which I am situating (following Lev Manovich) around 1985 or 1986, the moment of the first "domestication" or rendering everyday of digital technologies (Manovich, Software 13). In this vein, I will focus this chapter on one film that—for reasons, I think, of the film's overt and seemingly non-reflexive ideological resonances with Reagan-era U.S. militarism—has not been sacralized or critically revisited in the same way that many of Scott's other films have. That film is Top Gun (1986). As I will demonstrate, Top Gun gives us a unique and privileged glimpse into the emergence of post-cinema amidst significant shifts in the techno-social terrain of the mid-1980s.[2] In many ways and on many levels (style, narrative, mode of address, technique), Top Gun concerns itself if not directly with the rise of the digital per se, then certainly with the shifting nature of self and subjectivity in relation to a transforming techno-media sphere, translating these concerns into a unique approach to screen space and mode of address. Once we historicize

the film alongside the emergent everydayness of digital culture in the 1980s (1985 and 1986 were watershed years for the development, marketing, experience, and rhetoric of contemporary media technology, especially digital media technology), it becomes clear that this film, in addition to whatever else it might be, is explicitly *about* the point of contact between the human sensorium and the techno-media sphere, as well as the powerfully transformative mental, affective, bodily, erotic, and epistemic effects that this encounter has.

Furthermore, *Top Gun* stages this encounter in multiple ways. The first and most obvious is diegetically: the film's story world is that of elite Naval pilots learning to master high-tech fighter jets, all of which are equipped with and monitored by various screens, most notably the pilots' missile lock screens, which are always seen in point-of-view. The second, less obvious way, is via mode of address. Using the same radical approach to film style and screen space that would later authorize critics to canonize Scott as an auteur, Scott here presents a new—for the time—spectatorial experience defined by a form of immersion that, I will argue, emulates the human-machine assemblage produced and promised by digital interfaces.[3]

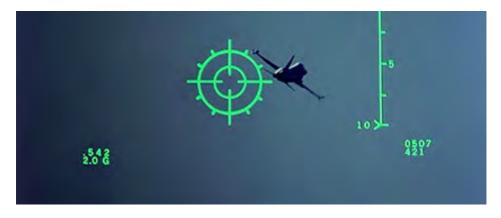


Figure 1 – An enemy MiG about to be missile locked. (Frame Grab from TOP GUN)



Figure 2 – An enemy MiG about to be missile locked. (Frame Grab from TOP GUN)

Top Gun thematizes this mode of address, in turn, positing the space between the spectator and the screen as a kind of "danger zone," one in which the experience of being a spectator is, like that of being a character in the film, a high-stakes game of "staying cool" (that is, retaining the safe distance and security of classically Oedipalized cinematic identification and voyeuristic visual pleasure) vs. "getting burned" (submitting to total, Thanotic immersion in an image that seems to want to burn right through the screen, directly addressing the body and obliterating the distance and distinction between viewing subject and viewed object). In a very real sense, in Top Gun, the spectator is to the film screen as the elite pilots are to their F-14s and MiGs: not just buckled in but burned in, not just interpellated but intercalated, not just a pole in a dyad whose "third term" is distance, but part of an assemblage defined by contact, closeness, and erotic coupling. Top Gun, in this sense, must be seen as a kind of limit film, just as it is thematically and stylistically obsessed with limits: it selfconsciously pushes many of the tropes of 1980s action cinema (one of the central ideological sites of early neoliberalism and a cinema that was highly influential in the shift towards post-cinematic forms of affect and cinematic enunciation) to their extremes while at the same time flirting

with the boundaries of the cinematic as a techno-media regime defined by a certain configuration of the screen itself (fixed, flat, singular), of screen space, of spectatorship, and of affect.

My use of Top Gun to map out something like the beginnings of a trajectory towards the dominance of post-cinema has one other important stake: namely the proposition that post-cinema is not to be confused with digital filmmaking per se. Rather, I wish to use the concept of post-cinema to help pin down a certain set of shifts that show up in sites that are traditionally thought of as "cinematic" (screen space, film style, and narrative) but that indicate transformations on a deeper and broader cultural level as the digital takes over as a dominant epistemic logic. Since Top Gun was produced and released during a transitional moment, the film is, as we would expect, defined by a tension between cinematic and post-cinematic modes. The questions around postcinema that it raises are therefore—obviously—not about the ontology of digital cinema, but rather about the impact of the digital precisely as a mode of consciousness or structure of feeling on the possibilities of cinema, regardless of its technological base. What happens to cinema, Top Gun asks, not when cinema becomes digital but when experience itself begins to become *post-cinematic*?[4]

Technophilia/Technophobia: Historicizing Top Gun

The most common critical interpretations of *Top Gun* are based on ideological, and specifically psychosexual readings. *Top Gun* is customarily seen as the near-perfect incarnation of Reagan-era ideologies surrounding masculinity, virility, and paternalistic nationalism, as well as one of the paradigmatic examples of the "high-concept" action film pioneered by the team of Jerry Bruckheimer, Don Simpson, and Tony Scott. [5] *Top Gun* was, indeed, deeply imbricated with 1980s American imperialist ideologies, so much so in fact that, as Stephen Prince and others have noted, it had a powerful effect not only on subsequent action films, but also on the overall aesthetics and address of military

recruitment itself, introducing a sense of the erotic to the image of the military:

The U.S. Navy admitted that it regarded [*Top Gun*] as a recruiting ad, and the movie's structure employs the montage editing, minimal dialogue, and pervasive use of rock music to establish mood and theme that have become staples of MTV and that producers Jerry Bruckheimer and Don Simpson had perfected in their earlier work. Much of the film's strategy in this regard is to use these cinematic elements to eroticize the planes and weaponry and the bodies of the students and teachers at the "Top Gun" school. (Prince 71)

Top Gun, in other words, worked to naturalize, to render palatable (and even sexy) the Cold War logic of everyday militarization and the new geographies of the 1980s: in *Top Gun*, "we can see clearly how the imagery and rhetoric, the very forms and objects, of real-world consumer culture and leisure pursuits were fused with the psychological and emotional dynamics of the Cold War" (Prince 70).

It would be foolish to deny that *Top Gun* is, at least in part, defined by a highly problematic, masculinist, militarist Cold War ideology. [6] However, this ideology does not completely define the film. *Top Gun* (and, indeed, the "high concept" film in general) can also be critically situated within the adjacent and broader history of media and technology, along with the new senses of time, space, speed, scale, subjectivity, and embodiment that they both indicate and help bring into existence. Whatever else *Top Gun* is—a feature-length, Oedipal airborne music video about the restoration of the Reaganite patria, the first of many sexy, "golden hour," "Miller time," Navy recruitment ads, one of the most easily "queerable" texts in Hollywood history, etc.—it is also explicitly about the interface between the human and technologically advanced machinery.

One of the key elements of the film in terms of style, production, and mode of address is its technophilia: as Prince notes, it quite conspicuously and shamelessly posits high-tech weapons technologies as objects of erotic spectacle and audiovisual (cinephiliac) pleasure, as well as vehicles of "intense," invigorating bodily experience. The erotics of the film incorporate not only Maverick's (Tom Cruise) affair with his teacher Charlie (Kelly McGillis) and the much discussed slow-motion, sweat- and oil-soaked, half-naked bodies of the "Top Gun" pilots as they shower and play beach volleyball, but also the sexy lines of the F-14s themselves—their gleaming, silver, phallic bodies and vermilion, deep gold after-burners rendered painterly and with "feminine" softness through the use of long lenses, color filters, and smoke effects against the backdrop of rich, pastel sunsets and azure skies.



Figure 3 – F-14 against pastel sky (frame grab from TOP GUN)

This connection between embodied sexuality and the erotics of war machines is also cued by scripting and dialogue, as for example, when Maverick refers to a singles bar as a "target rich environment" and another "Top Gun" pilot talks about the "hard-on" that the sight of the enemy MiGs gives him.



Figure 4 – F-14 rendered phallic (frame grab from TOP GUN)

Not surprisingly, given this eroticization of technology, the film also features a healthy dose of technophobia as well. Maverick's entire story, in fact, hinges on a kind of mental dissolution and bodily breakdown in relation to technology that is carefully encoded by the film as a form of sexual impotence, mainly through the use of heavy breathing, foreboding music, and nervous sweat. The overall picture that the film paints is of a human male body whose worth (or worthlessness) is measured by its ability (or inability) to properly and successfully couple with advanced technology, a form of technology which, furthermore, provides its users with their only frame of reference and set of metaphors for understanding themselves and their erotic drives.

This complex and multi-faceted depiction of the human vis-à-vis technology is symptomatic of the intense transformations taking place in the role, reach, rhetoric, and realities of technology, media, and popular culture during the mid-1980s, a set of transformations that was also intimately connected to the rapid ascent of neoliberalism as a form of both political technology and geography. As I mentioned above, the period surrounding *Top Gun*'s production and release (1985-86) was, according

to Lev Manovich, "the moment when domestication of computers and software starts, eventually leading to their current ubiquity" (13). In addition to heaps of anecdotal accounts from artists and cultural producers regarding their first sighting, in the mid-1980s, of a digital media device, this techno-social moment also featured the following geopolitical, popcultural, and media-technological developments:

In geopolitics and space technology:

- 1) The coincidence of Reagan's second inauguration, after a reelection campaign that revolutionized the use of mass media and cinematic affect, with the ascension of Mikhail Gorbachev to General Secretary of the Communist Party of the Soviet Union—together two of the initial steps on the short but tortuous path towards the dismantling of the entire Communist Bloc and the creation of a global neoliberal political economic sphere. [7]
- 2) The establishment of the Schengen Area, hence the official institution of a Europe without national border controls.
- 3) The discovery of the first ozone hole, and with it the confirmation of environmentalists' worst fears around the scale of technological modernity's environmental destruction.
- 4) President Reagan's first public mention of the word "AIDS," and hence the beginnings of the global understanding of AIDS—which had previously been experienced as an unspoken "threat" that only affected gay men—as a public health crisis.
- 5) The Challenger disaster, which complicated one of the Reagan administration's key political narratives, that of human progress-through-technology.
- 6) The Chernobyl disaster and the launching of the Mir space station.

In popular media culture and media technology:

1) The recording and release of the charity single/music video "We Are the World" for famine relief in Africa by a supergroup of several of the biggest stars of the American recording industry of the 1980s,

- a project that helped solidify the notion that "progress" under neoliberalism was to be equated with episodic acts of philanthropy and charity, rather than with real structural change.
- 2) The introduction by Minolta of the Maxxum 7000, the first camera featuring the combination of a single-lens reflex system, auto-focus, and automatic frame advance, and hence a major step towards the everyday domestication and automation of photographic technology, a process that would eventually result in the vast proliferation of digital image-making devices.
- 3) The release of both the Nintendo Entertainment System (and the highly influential, enormously popular *Super Mario Bros.*) and Commodore's Amiga Home Computer (the first multimedia personal computer with advanced graphics, sound, and video, as well as an early example of GUI-centric computing). Two versions of *Top Gun* the video game—both of which adapt the point-of-view of the film's jet fighter pilots into proto-first-person shooters—were released for Nintendo, IBM PC, Commodore, and Atari in 1986.



Figure 5 – TOP GUN on Nintendo.

- 4) The release of Dire Straits' *Brothers in Arms*, the first album to sell over a million copies on compact disc.
- 5) The founding of Pixar Studios and Microsoft's initial public offering, two brands that have been definitional for digital culture.
- 6) The production and widespread dissemination of the first IBM PC virus, (c)Brain, and with it the growth of the notion of a shared, digital ecology.
- 7) The publication of Howard Rheingold's book *Tools for Thought: The History and Future of Mind-Expanding Technology*, Lev Manovich's "all-time favorite book," the key insight of which was "that computers and software are not just 'technology' but rather the new *medium* in which we can think and imagine differently" (Manovich 13).
- 8) The release of Jeff Stein's highly influential music video for The Cars' "You Might Think," one of the first videos to use computer graphics and compositing systematically and extensively, the winner of "Best Music Video" at MTV's first annual music awards and, according to Manovich, an enormous influence in the design world (280).[8]

This period, in other words, witnessed some of the most important developments in: a) the history of technology in general, especially media technology and in particular its growing fusion with everyday experience (and everyday fantasies of technology) via home image production and consumption and new, interactive, digital and software-based media platforms and brand names; b) the development, thanks in part to these technological shifts and to the public spectacle of environmental, technological, and corporeal (self-)destruction, of our contemporary understanding (always also a misunderstanding) of global ecology and spatiality; and c) the increasingly global consolidation of neoliberalism as a political technology reliant upon media, spectacle, and machinic technology, along with the media spectacle of machinic technology. What we see brought together in this period, in other words, is the triumph of

neoliberalism, the emergence of an entirely new techno-media regime, and the beginnings of a new mode of feeling, experiencing, and understanding the world related to this new techno-media regime. [9] What we see, in other words, are the very first inklings of *digital neoliberalism*, or what we are in this volume calling the "post-cinematic." All of this, I am arguing, is reflected in *Top Gun*'s own symptomatic relationship to technology, and the film indicates this emergence and these transformations (just as we would expect it to do) sometimes directly and sometimes obliquely.

The Further on the Edge, The Hotter the Intensity

On almost every conceivable level, *Top Gun* is a film that is obsessed with edges, boundaries, limits, and the transformative, erotic, and destructive intensities and energies associated with living amidst and transgressing them. The boundary that gets the most attention is that between the human and the technological. This obsession, I would like to suggest, is the chief way in which the film figures the media technological shifts of its surrounding period along with the new human-digital interfaces and assemblages that these shifts produced.

The film wastes no time introducing these themes. As the credits roll, we see shots of an F-14 being prepared for takeoff. In their slow-motion, long-lensed, high contrast, color-filtered eroticization of (war) machines and the fetishistic loving care and sexual attention given to them by humans, these images seem stolen from a Kenneth Anger film on methamphetamines.

And just as we see in Anger's cinema, *Top Gun*'s musical choices rhetorically double the film's depiction of technology and the human-machine interface as sites of both danger and desire. While these initial images and credits roll, the music on the soundtrack is Harold Faltermeyer's Wagner-meets-Santana, erotic synth-rock "*Top Gun* Anthem": its familiarly raunchy, anthemic, electric guitar climax is heard both at the film's narrative climax and in quieter, tamer versions each time the film touches upon Maverick's



Figure 6 – Long-lensed, high-contrast, color-filtered, eroticization of war machines (frame grab from TOP GUN).

relationship with his dead father. Once the F-14s afterburners fire and Tony Scott's directorial credit hits the screen, however, the music abruptly shifts to Kenny Loggins's hit song "Danger Zone," the lyrics of which draw explicit connections between transformation and becoming, sexual intensity and orgasm, technologies of speed and destruction, and the idea of penetrating boundaries as a form of interfacing or coupling:

Revvin' up your engine Listen to her howlin' roar. Metal under tension Beggin' you to touch and go.

Highway to the Danger Zone. Ride into the Danger Zone.

Headin' into twilight, Spreadin' out her wings tonight. She got you jumpin' off the deck And shovin' into overdrive. . . . They never say hello to you
Until you get it on the red line overload.
You'll never know what you can do
Until you get it up as high as you can go.

Out along the edge Is always where I burn to be. The further on the edge The hotter the intensity. (Loggins)

This concept of the boundary between the human and the technological as a kind of "danger zone" and the (rather Thanotic) affective matrix of these opening images and sounds do, indeed, define the rest of the film on several levels. Top Gun's setting, for example, is a Naval fighter pilot training school, a social environment defined by male competition and the demand that students abandon their familial structures and effectively exceed themselves (and even, if only in small doses, the structures of the institution itself) in order to achieve an impossible level of excellence. The most common conversation overheard in the "Top Gun" school is about who is "the best of the best"—a superlative, aspirational label that is nonetheless, time and again, posited as attainable, objectively verifiable, and dependent upon specific psychosexual and proprioceptual variables within the pilots themselves. *Top* Gun's characters regularly push themselves to and beyond their physical, cognitive, and psychosexual/affective limits in order to achieve this "best of the best" label. The key limit that they must transcend is that between themselves and their jets: in several ways (gestural acting, dialogue, sound and editing, and, as we will see, spatial compression in the image), the film indicates that the very "best" pilots (both students and instructors) are those who are able to couple (erotically) with their machines while not losing themselves in the "danger zone" of this coupling. The "best" pilots, in other words, are those who are able to fuse with their jets in mind, body, and spirit while still maintaining their "proper" position of masculine self-control and (sexual) dominance over their (eroticized) machines.

Ultimately, however, the question of who is "the best of the best"—who is "on top"—will come down to the heavily psychologized relationships of individual characters to their own limits as erotic beings: hence the competition between Maverick, who "flies by the seat of his pants" and constantly ignores his superiors' orders because of his severe (Oedipal) issues with authority, and Iceman (Val Kilmer), who follows orders with precision and—boringly—"flies ice cold, no mistakes." While Iceman wins the official nomination of "the best of the best" at a ceremony near the end of the film, the film's own audiovisual discourse and narrative arc make it abundantly clear that Maverick, the one who lives on the edge and draws energy from the "danger zone"—that is, who allows the erotic encounter with the F-14 to at times subsume and obliterate him—is actually "the best of the best." In a real-world battle (not to mention in the closely aligned terrain of the bedroom) when actual (or metaphorical) death is on the line, Iceman is clearly in an inferior position. He is a wingman, his famous, final attempt to gain "top" status—"you are dangerous, but you can be my wingman anytime"—confidently and flirtatiously rebuffed by Maverick's "bullshit, you can be mine." It is worth noting, furthermore, that geographic boundaries and their penetration are absolutely central to the film's narrative as well: it is precisely an unknown enemy Other's "violation of air space" which initiates the narrative, thus putting all of these issues surrounding the eroticization of machines, speed, and limits into play in the first place.

I am clearly pushing a queer reading of *Top Gun* here (one that is increasingly common in more contemporary reception of the film), and this is partially to counter more "closed" ideological readings (by far the most common), which tend to see the film as conveying a dominant, masculinist-militaristic-misogynistic/paternalistic, Reagan-era ideology purely and directly, without slippage of meaning or desire.[10] But it is also partially because the queer perspective allows us to see the particular erotics of this film in a new light, especially in terms of limits, desire, transgression, and technology. While, as I will demonstrate, the film

implicitly posits a rather standard erotically transgressive, "death drive" theory of queer male sexuality (one that seems cut to the measure of the work of theorists like Leo Bersani and Lee Edelman), it also couples this erotics with the exploration of other kinds of limits. Indeed, I will also argue that *Top Gun* unseats traditional cinematic subjectivity (a subjectivity customarily encoded and understood as fixed and rigidly heteronormative/masculine) by being a "limit film" at the level of form, style, and mode of address as well. By this I mean that, using as narrative motivation the fact that the film represents (explicitly) the "limit" experiences of helming a supersonic fighter jet and (implicitly) feeling the heat of one's attraction to another of the same sex, *Top Gun* pushes many of the parameters of mainstream cinematic vision and narrative construction beyond *their* limits as well, ultimately addressing a new type of spectator for a new type of media-technological sphere.

Style, Space, and Spectatorship

Top Gun is defined by two conflicting visual styles. One of these is relatively classical and uses depth of field, shot/reverse-shot, eye-line matching, and coherent narrative-spatial construction to produce what psychoanalytic film theory would have called a "sutured" space. This is a space of well-oriented action for both the characters and the spectator, one that effectively renders the classical spectatorial pleasures of sensory-motor engagement and visual mastery. This style is used in most of the film's more traditionally melodramatic, conversational sequences (of which there are many). The overall signification of this spatio-stylistic mode is "cinema" itself as a techno-representational regime. [11]

The other cinematic register, which is mobilized the rest of the time and is—importantly—the style with which the film begins and ends, is defined by the kind of delirious excesses that Tony Scott would be celebrated for later in his career. In all of the flight sequences as well as the film's single actual sex scene (which plays like a thirteen-year-old boy's fantasy of sexual intensity), extremely long telephoto lenses, color glass

filters, smoke and colored light, graphic montage, slow motion, silhouette lighting, an amped up, pop-rock soundtrack, and other stylistic effects work together to produce an overpowering sense of closeness, flatness, and spatial compression.



Figure 7 – Sex scene (frame grab from TOP GUN)

Given the nature of the film's narrative material, this makes sense: *Top Gun* is an action film, but the agents of action are not, for the most part, the bodies of the star protagonists (which would demand a three-dimensional, dramatic, classically "cinematic" space), but rather the film's iconic F-14 and MiG fighter jets, machines whose engagement with time, space, and speed is entirely unassimilable to the human perceptual and proprioceptual apparatuses (except for those of the film's superhuman heroes—a crucial aspect of *Top Gun*'s success as a form of military recruitment). Instead of presenting an illusory, anthropomorphized space of action that the viewer's eye can plot and observe at a cool distance and that the characters' bodies can properly traverse, much of the film is presented within a space that is cut to the spatio-temporal realities of the fighter jets themselves. Time and again, we see shots of F-14s and MiGs flattened against the sky like cutouts, and even more often, in what are

without question the film's most repeated and recognizable icons, shots of pilots compressed into their cockpits in long lens, frontal close-ups.



Figure 8 – MiGs as cut-outs against sky (frame grab from TOP GUN)



Figure 9 – Maverick compressed into cockpit in long lens, frontal close up (frame grab from TOP GUN)

The film in this way creates a kind of flat technospace that foregrounds speed and intensity and invokes explosive possibility, one which the jets, appropriately, traverse using spontaneous and continually varying forms of motion.

The film then proceeds to insert the (superhuman, eroticized) bodies of the pilots into this space. *Top Gun*, in other words, functions like an erotic fantasy of what it might feel like to occupy what Deleuze and Guattari call "smooth space": a non-formal, heterogeneous space that cannot be mapped or rendered visually, but can only be diagrammed (i.e., rendered experientially). "Smooth space" is "a space of affects, more than one of properties" (479). *Top Gun*, in other words, mobilizes a material-pictorial space rather than a Cartesian-dramatic one to convey to the viewer, via a haptic experience of the cinematic apparatus itself, a version of "smooth space." All image elements are compressed as far as possible into the foreground to the point that the image seems almost to adhere to the screen itself, or to be burned into it. [12] In this way, the spatial experience of the pilots that the film renders *on* screen (one of spontaneous vectors, "lines of flight," becoming, and immediacy) is rendered *as* screen for an (erotically) adhered viewer.

Steven Shaviro makes a similar argument about Kathryn Bigelow's *Blue Steel*, a film that strikes me as quite similar to *Top Gun* on many levels:

Bigelow's painterly compositions . . . are disorientingly tense and unstable, always potentially explosive, and filled with suggestions of movement. Her nightmarishly lighted cityscapes are not beautiful, illusory tableaux displayed before the camera's gaze, but danger zones within which the camera itself is forced to move. . . . Bigelow both disrupts and heightens spectatorial pleasures, by consuming distance in a frenzy of calculated excess. Her images aren't static or decorative, because she isn't concerned with the dynamics of nostalgia, memory, and loss. Blue Steel is not an

ironic or contemplative film: it is too kinetically agitated, and puts us too perturbingly in contact with appearances. (Shaviro, *Cinematic* 4, my emphasis)

The relationships of distance and closeness or contact that Shaviro is referring to here are, of course, those between the viewer and the filmed object theorized by apparatus theory in the 1970s. There are two distances on which classical identification and voyeuristic pleasure are said to depend: that between the film camera and the objects it films, on the one hand; and that, on the other, between the viewer and the screen. "To fill in this distance," Christian Metz points out, "would threaten to overwhelm the subject . . . mobilizing the senses of contact and putting an end to the scopic arrangement" (60). The kind of Thanotic obliteration of the cinematic spectator that Metz seems to want to warn against is precisely what is most on offer in Top Gun. In the place of safe, voyeuristic distance, Top Gun produces a sense of radical proximity or contact between spectator, screen, and filmed object. Its cinematic images, as Deleuze would claim for all cinematic images, are not fundamentally representations but rather events: the experience of this film is, indeed, one of sensation before it is one of signification. In Top Gun, to borrow again from Shaviro's reading of Blue Steel, "Sensation is disengaged from the transcendental conditions that are supposed to ground and organize it, as from the referential coordinates that allow us to locate and preserve it. Sheer appearance precedes any possible act of recognition" (Cinematic 12).

Just as its narrative is structured around an extensive exploration of psychosexual and geographic boundaries, in other words, *Top Gun* also uses style to explore the zone of encounter between viewer and screen, framing this encounter as well as a "danger zone" fraught with desire and possibility. The film does this in several ways. In both script and visual design, for example, *Top Gun* regularly mobilizes temperature metaphors as a way of describing varying forms of human, and especially masculine, behavior in relation to technology. From the first scene of the film proper,

that of Cougar's (John Stockwell) nervous breakdown when engaged with the enemy MiGs, the pressure that the "Top Gun" pilots, technicians, and personnel experience is figured visually and verbally as a form of heat.



Figure 10 – Cougar's breakdown (frame grab from TOP GUN)

When in contact with this pressure and heat, some men can, as the dialogue tells us, "stay cool" (in other words, in a position of mastery over the machine and its radical energies and possibilities) and some, like Cougar and at points Maverick, cannot. They instead "get burned" by it: consumed, absorbed, and disintegrated. One of the chief visual signifiers that the film uses to indicate "getting burned"—i.e. the (hysterical) disintegration of the male body and psyche in the face of technology's power—is a very classical one: sweat. Scott beads sweat on his male characters at several points throughout the film, most notably on aircraft carrier personnel during battle scenes, on Cougar and Maverick during their breakdowns, and on Maverick, Iceman, and Slider (Rick Rossovich) during the famous beach volleyball scene. In addition to the "hot" (and, in a genre stereotypically coded as hetero-male, non-normative) spectatorial desire of looking at men that sweat supports in the latter scene, sweat is also an index of stress or danger in *Top Gun*, and of the specter of failure, ego disintegration,

impotence, and bodily breakdown—in short, of "losing one's cool"—in the face of technology.

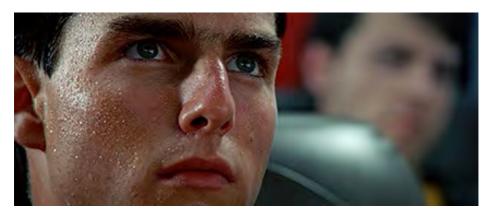


Figure 11 – Maverick sweating in briefing (frame grab from TOP GUN)



Figure 12 – Maverick sweating in cockpit (frame grab from TOP GUN)

But sweat functions as more than just a signifier. As we know from Linda Williams and others, bodily fluids can be used by films to provoke an experience of corporeal sensation for the viewer as much as one of

signification (see Linda Williams's important "Film Bodies: Gender, Genre, and Excess"). Such is the case with sweat here. Sweat does not just "tell us" that the characters are experiencing stress, disintegration, and impotence; rather, it becomes another way in which the film effects a more embodied, more physical experience of the screen for the spectator. Just as the tearjerking moments of the "feminine" genre of melodrama are often attached to stylistic figures like elaborate camera movements, musical crescendos, and highly expressive colors (which this film also features), sweat here is often accompanied by specific stylistic figures like minor-key, up-rhythm synthesized music, claustrophobic, oppressively geometric framing, and intense spatial compression in the image in the form of telephoto or inward zoom shots.[13] These all connect the narrative aspect of sweat with the visual register of flatness that, I have been arguing, is used to bring the image into closer contact with the surface of the screen and, by extension, with the spectator.

Concluding Thoughts

There is a link in *Top Gun*, therefore, between sexual desire and ego dissolution, bodily breakdown in relation to technology, spatial compression and flatness in the image, and a more embodied, embedded form of spectatorial address.



Figure 13 – Maverick compressed in cockpit before penultimate flight (frame grab from TOP GUN)

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This matrix of textual effects allows us to see the (retrospectively, very obvious) queerness of the film as working in tandem with other aspects of its "limit" status. Just as the film counters the "hard body" masculinist films of its era precisely by reconfiguring and exaggerating them (that is, by explicitly externalizing the "hardness" of these male bodies into mediatic war machines that we and the film's pilots are challenged and compelled to erotically couple with), it is also through this combination that the film effects a reconfiguration of the cinema screen itself. All of these compressed, foreshortened images that collapse pilots into their jets, actors into their screens, and spectators into their film function as indicators—as emblems—of the emergent human-technological assemblages and neoliberal geographies of the mid-1980s (and the emergent erotics associated with them).[14] In a recent reading of Boarding Gate (2008), Shaviro suggests that Olivier Assayas's thriller works to "diagram' the space of globalized capital, by entering into, and forging a path through, its complex web of exchanges, displacements, and transfers"—that is, through a relation of radical proximity much like what we see in a different guise in Top Gun (Post-Cinematic 36). As with Top Gun, the space that Boarding Gate explores is "non-Euclidean, and not cut to human measure".

The space of transnational capital is at the same time extremely abstract, and yet suffocatingly close and intimate. On the one hand, it is so abstract as to be entirely invisible, inaudible, and intangible. . . . We cannot actually "see" or "feel" the virtual "space of flows" (Castells) within which we are immersed. For this space is a relational one, largely composed of, and largely shaped by, the arcane financial instruments, and other transfers of "information," that circulate through it. . . . But Assayas seeks "to render visible these invisible forces" themselves (Deleuze). If this can be accomplished, it is thanks to the other side of the Antimony that I have been describing. For at the same time that the space of global capital is abstract, it is also overwhelmingly proximate, and hyperbolically present. It is a "tactile space" (Deleuze), or

an "audile-tactile" one (McLuhan)—in contrast to the more familiar visual space of Cartesian coordinates and Renaissance perspective. Visual space is empty, extended, and homogeneous: a mere container for objects located at fixed points within it. But audile-tactile electronic space "is constituted of resonant levels, dynamic relationships, and kinetic pressure" (McLuhan), and constructed out of "intercalated elements, intervals, and articulations of superposition" (Deleuze and Guattari). . . . In order to explore this space of flows, to accurately render both its abstraction and its tactility, and thereby to cleave to the Real of global capital, Assayas is obliged to abandon Bazinian realism. . . . In such a world, it is only by putting his faith in the image that Assayas can express his faith in reality. (Shaviro, *Post-Cinematic* 38)

Top Gun also—two decades before Boarding Gate—suggests a spatial antinomy between a (decreasingly adequate) visual space and a tactile/ haptic one. It presents its Cartesian, visual, "cinematic" space almost in a mode of nostalgia: the scenes that do use traditional devices in the "Bazinian realism" mode (shot/reverse-shot, depth) tend to be filled with older technological objects (jukeboxes, motorcycles, classic cars) while the scenes that mobilize the stylistic mode I have been associating with the post-cinematic (speed, flatness, iconic pictorialism, rapid-fire montage) focus on contemporary forms of military technology (fighter jets, radar and missile lock screens, aircraft carriers). There is a clear ideological configuration behind this antinomy. Indeed, the Reagan era was largely defined by two contradictory political narratives that correspond to these two styles: one defined by nostalgia for a 1950s America where, before Civil Rights, gay rights, and feminism, "everyone had their place"; the other by an ideology of human progress through technology. As with so much else in this film, this ideological positioning exists side-by-side with an exploration of new forms of limits and boundaries that emerged alongside new media-technological, geopolitical, and social configurations. Via the post-cinematic mode, Top Gun, I am suggesting, also works like Boarding

Gate to "diagram' the space of globalized capital, by entering into, and forging a path through, its complex web of exchanges, displacements, and transfers," a "web" becoming increasingly defined—with remarkable rapidity and force, and precisely in the mid-1980s—as The Web, that is, the network of digital nodes and devices in which we are all embedded today.

Technology, in *Top Gun*, is always putting characters and spectators alike into a position in which "our egos are writing checks that our bodies can't cash," to paraphrase Maverick's instructor, Jester (Michael Ironside). Made at the cusp of the advent of this global, electronic "space of flows"—a space enabled by and expressed in digital military, financial, and entertainment technologies that were still emergent in the mid-1980s-Top Gun is a harbinger of a new techno-social sensibility. It uses cinematic devices to render an experience of radical proximity. It frames the point of contact between human and technology, subject and screen as an erotically immersive "danger zone." Like Maverick, the viewer of *Top Gun* rides into the danger zone, arriving at a point of direct, unmediated contact with the image itself, a point where one's sense of ego security is dissolved in favor of more radical fears and pleasures that are fundamentally embodied ones. Top Gun, in other words, comments on its surrounding, emergent technologies of digital interface and neoliberal spatiality—indeed, on the emergent dominance of the interface itself as form and affect—positing them as interactive, techno-sensorimotor hybrids that make information and experience available precisely by (erotically) coupling with the human body.[15]

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Spy Game (2001)

Man on Fire (2004)

Domino (2005)

Déjà Vu (2006)

The Taking of Pelham 123 (2009)

Unstoppable (2010)

Notes

[1] Much of the recent critical discourse surrounding Scott is neatly summarized in a collection of short essays edited by Daniel Kasman on the website mubi.com https://mubi.com/notebook/posts/tony-scott-a-moving-target>.

[2] My use of the term "emergence" is intended to invoke Raymond Williams's distinction between dominant, residual, and emergent cultural practices. Emergent practices are those that are being developed, usually unconsciously, out of a new set of social interactions (including

technological developments). Emergent practices always begin as marginal or minority ones. Some—like what I am in this essay calling digital neoliberalism or the post-cinematic—themselves eventually become dominant.

[3] Here I am drawing upon both Tiziana Terranova's concept of network culture as a "heterogeneous assemblage" and Mark B. N. Hansen's work surrounding the embodied nature of digital interfaces.

[4] In deploying the term "cinema" here, I am drawing in part upon Jonathan Beller's work on the "cinematic mode of production." In his book of the same name, Beller suggests that cinema is an inevitable outgrowth of a certain organization of capital of which it is also the key operational element. "Cinema" is, for Beller, not just a medium but a fullfledged mode of production that maintains capitalism precisely by, on the one hand, distilling the commodity form into an image and, on the other, managing and monetizing vision and attention themselves. "Cinema" in this arrangement becomes isomorphic with the social and with experience itself, and not only perception and attention, but also memory, thought, and knowledge-indeed, subjectivity and consciousness themselvesare the very instruments through which this is accomplished. Cinema in this argument becomes something like what Foucault would call an episteme, and major historical shifts in media technology such as new media emergence can therefore potentially be seen as having epistemic significance.

[5] See, for example, the recent "movie of the week" roundtable discussion on *Top Gun* on the film criticism website *The Dissolve* (Murray et al.).

[6] Although the scholarly literature on *Top Gun* is surprisingly scarce, there are some important ideological, "Reaganite" readings of the film in addition to Prince's. For one of the most explicit, see Douglas Kellner's passage, "*Top Gun*: Reaganite Wet Dream," from his *Media Culture: Cultural Studies, Identity and Politics Between the Modern and Postmodern*. For ideological readings that focus on gender and masculinity in the action film, see above all Susan Jeffords and Yvonne Tasker.

- [7] See Brian Massumi's work on Reagan and affect in *Parables for the Virtual*.
- [8] Also worth noting in this context is the film's phenomenal success on the home video market. According to Sheldon Hall and Steve Neale, Paramount sold 2.5 million video copies, grossing an additional \$40 million on top of the film's domestic theatrical haul of \$79.4 million (and this on a \$17.5 million production and publicity budget).
- [9] In addition to the other aspects of Manovich's argument that I have discussed, it is worth noting in passing that he sees 1985 as the end of what he calls "the first period of media computerization." This period, which began in 1963, was largely "theoretical": "During this period, the conceptual principles and the key algorithms necessary for detailed simulation of physical media were developed, before the sufficiently cheap hardware was available." The second period, which he implies begins after 1985, accelerated into the early 90s and finally culminated in the explosion of media software in the late 90s, when "PC hardware [became] advanced enough to run simulations of most media at a sufficient fidelity that was comparable with the professional standards already in place" (332).
- [10] Top Gun is, at this point and perhaps also at the time of its release, a cult film for gay men due not only to its display of attractive male bodies in (and out) of uniform, but also to what Benshoff and Griffin describe as its "incessant, beefcake, suggestive word play and intense homosocial bonding" (10). Queer readings of the films are, in fact, legion and too abundant to cite here (my Facebook research query about this to scholars working on queer media actually prompted one friend to ask, "Wait, there's a straight reading of Top Gun?"). It is worth noting, however, that perhaps the most well-known and popular queer reading of the film comes from an unexpected source—Quentin Tarantino, or more accurately (although perhaps we are splitting hairs here) his character Sid in Rory Kelly's 1994 indie rom-com, Sleep With Me. Sid (Tarantino), while giving a pep talk to his screenwriter friend, Duane (Todd Field), claims that Top Gun is "one of the greatest fucking scripts ever written in the history of Hollywood" because it is "about a man's struggle with his

own homosexuality," and not just, as Duane says, "about a bunch of guys waving their dicks around." Tania Modleski's brief (and, obviously, more nuanced) 2007 pedagogical reflection, "Misogynist Films: Teaching *Top Gun*," is an important counterpoint to the Kelly/Sid/Tarantino paradigm, which the Internet has tended to uncritically embrace. Modleski refuses the label "homosexual" for the film, preferring instead to discuss the ways that its intense homosocial and homoerotic desire leads it to "equate women with the enemy to be conquered, and silence female voices that have attempted to speak authoritatively about war" (102). Many thanks to Julia Leyda, one of the editors of this volume, for helping me see (across a series of wonderful email exchanges) the connection between the film's interests in media, technology, and early post-cinematic aesthetics on the one hand, and its plays on masculinity and sexuality on the other.

[11] Here I am once again drawing on Beller's expanded definition of cinema.

[12] It seems relevant here to mention the fact the Tony Scott was trained as a painter before moving onto advertising and cinema. This "painterliness" forms an integral part of the critical reassessment I've been discussing.

[13] It is worth noting in passing here that the film also does not shy away from melodrama, especially surrounding Goose's death, Maverick's love affair with Charlie, and his relationship with his substitute father, Viper (Tom Skerritt). When it does indulge in the melodramatic, it's often, again, in the visual register of painterly flatness and spatial compression.

[14] By using the term "emblem," I wish to invoke Kristen Whissel's recent work on digital special effects, in which she argues that spectacular effects often function as emblems that give immediate, distilled, and stunning expression to a film's key themes.

[15] My phrasing here, in particular the notion of the "interactive, technosensorimotor hybrids" derives from Tim Lenoir's introduction to Mark B. N. Hansen's *New Philosophy for a New Media* (23).



5.5 Life in Those Shadows! Kara Walker's Post-Cinematic Silhouettes

BY ALESSANDRA RAENGO [1]

Kara Walker's installations have garnered international attention since the early 1990s for deploying an archaic representational form of portraiture—the cutout silhouette. They have been the target of considerable controversy[2] for the perceived obscenity of her imagery and the alleged revival of deep-seated racial stereotypes.[3] Controversy that, I contend, is only partly a response to her iconography and more to her medium of choice: life-size black cut-paper figures glued onto the gallery walls. Walker creates forms that maximize what the viewer brings to them. They seemingly prod their way into existence from a state of individual and collective slumber. Thus, Walker occasions a most uncomfortable drift in the history of pre- to post-cinematic representations: the question of where her figures come from is just as disturbing as the question of what they show, [4] and the slippage between the two, I argue, addresses recurring ontological questions within the history and theory of film—namely those regarding the "substance" of cinematic shadows and the dialectic between presence and absence within the imaginary signifier—while recasting them as inseparable from the racialization of the visual.

This chapter argues that Kara Walker is a visual theorist from whom Film Studies has much to learn. [5] First, the way in which her silhouettes explosively mingle the indexical and the iconic orders of signification intervenes in our understanding of two of the most influential paradigms for the cinematic image: the shadow and the mirror. Secondly, despite and possibly because of—its stillness, her work provides an extended and uncompromising version of the cinematic screen as the meeting point of projection and reflection. Third, it shows how the phenomenology of the film surface supports itself on the phenomenology of the racialized body and thus how "photographic" visuality is never fully innocent of processes of racialization.[6] What shocks about Walker's work—besides its visualization of a deep complicity in the social relations of slavery; and its portrayal of multiple violations of the body across race, gender and age—is the fact that we recognize these figures all too well: at first iconographically, and secondly because they inhabit several representational modes, spaces, and traditions at once.

Her installations are arranged in continuous scenes that reproduce the 360-degree space of pre-cinematic spectacles such as the panorama and the diorama and confront the spectator unflinchingly with figures endowed with a sense of absolute presence (Figure 1). From a distance, they expound the composed elegance of historical tableaux of plantation life in the antebellum South. Upon closer scrutiny, they reveal not only decisive racial characterizations, but also a commingling of bodies in erotic, sadistic, and masochistic acts (Figure 2). These bodies defecate, suck, and ejaculate. They are ecstatic and grotesque, always extending beyond their own boundaries and those of decency. It is this violent collision of the silhouettes' pristine and abstract forms with the carnality evoked by these bodies' behaviors and their compulsive penetrations that manifests the double legacy of her figures: bourgeois portraiture, on the one hand, and the racially overdetermined silhouette of the social sciences, on the other.



Figure 1 — Kara Walker: Slavery! Slavery! Presenting a GRAND and LIFELIKE Panoramic Journey into Picturesque Southern Slavery or "Life at 'Ol' Virginny's Hole' (sketches from Plantation Life)" See the Peculiar Institution as never before! All cut from black paper by the able hand of Kara Elizabeth Walker, an Emancipated Negress and leader in her Cause, 1997. Cut paper on wall. Installation dimensions variable; approx. 144 x 1,020 inches (365.76 x 2,590.8 cm). Artwork ©Kara Walker, courtesy of Sikkema Jenkins & Co., New York.

Tellingly, one of the most pressing questions among interpreters of Walker's work has been how to describe the ontological status of her figures and therefore how to cope with their ambiguous indexicality. This indexicality, as her work makes abundantly clear, extends from a temporal and existential order of signification (i.e. index as the present sign of a past state of affairs; index as the "having-been-there" of the object) to a spatial one, which involves both presence and contiguity. Simply put: what are we looking at? Silhouettes or shadows? We know they are cut paper, but why then do they feel attached to some-body? As I will show, in Walker's work indexicality entails a spatial theory of relations of identity



Figure 2 – Kara Walker: Detail of: The End of Uncle Tom and the Grand Allegorical Tableau of Eva in Heaven, 1995 Cut paper on wall. Installation dimensions variable; approx. 156 x 420 inches (396.2 x 1066.8 cm). ©Kara Walker, courtesy of Sikkema Jenkins & Co., New York.

and difference. Hence, more than a semiotic question, it is also a question of *self* and *other*, which is further complicated by tensions existing along other axes as well: the temporal, the existential, the mimetic. Are her figures dead or alive? Fixed or mobile? Are they inventions or citations? Copies or originals? Reflections or projections? A preliminary answer to these questions, I suggest, lies in her chosen medium.

Featured in the mythical origin story of the figurative arts, the first silhouette was produced by a woman—the Maid of Corinth, in Pliny the Elder's account—in an attempt to preserve the likeness of her departing lover by drawing the outline of his cast shadow.[7] The silhouette is a reified version of the shadow, hence a representational form that registers the transition from an indexical to an iconic order, from a metonymical to a metaphorical function. In fact, while the shadow is a fleeting indexical sign, because it requires the presence of the body that produces it, the silhouette is its human-made, durable reproduction and as such survives the body's departure. In the silhouette the body has fully vacated the sign—dissolved in the abstract iconicity of its contour—and has left behind a blackness, which is held as the trace of its past presence and current absence. What Derrida calls the "work of mourning" thus lies at the origin of this representational form. In fact, as much as the Corinthian Maid's fixation brings the image of her lover to life in a material reproduction of his likeness, it also already mourns its model's death. The silhouette and the cinema share this originary loss and deferral; they are both—as Derrida puts it—"spectralizing technologies"; they are both phantomachias: a play of ghosts; memories of something that has never had the form of presence (qtd. in Schwartz 14).

Just like the cinematic "ghost," Walker's silhouettes, as Ann Wagner argues, speak an economic language of substitution and erasure insofar as each figure enlists the viewer's complicity in investing the black hole of the body's departure with the sense of *metaphysical presence*

of a portrait (94). Within the bourgeois context of portraiture, in other words, the blackness of the silhouette was not racially coded, but rather functioned *fetishistically*—that is, as Homi Bhabha has influentially argued, also *stereotypically*—because the sign of a bodily absence was transfigured into a mark of personhood through sentimental memory and nostalgia.[8] The blackness of the silhouette functioned as both a signifier of *emptiness*, insofar as it indexes the absence of the body, and of *fullness*, projected by the lover's desire to see that same blackness as a trace, a *present* sign of a past presence: the desire to transform a *hole* into the possibility of *wholeness*.

However, there is another side to the blackness of the silhouette. What 18th-century philosopher and physiognomist Johann Caspar Lavater called the silhouette's "modesty" and its "weakness," that is, its lack of texture and detail, made it the most suitable form of representation for physiognomic analysis. It provided an abstract map of the body onto which it was possible to seemingly "read," but in reality, project, an imagined relationship between its inside and its outside, its outward characteristics and its interior essence. The veracity of the silhouette for Lavater relied on its indexicality, while its legibility was provided by its iconicity: the silhouette, he wrote, is "the emptiest but simultaneously ... the truest and most faithful image that one can give of a person . . because it is an immediate imprint of nature" (qtd. in Lyon 262).[9] Within the paradigm of the social sciences, furthermore, the blackness of the silhouette comes to indicate the writing of nature in two ways: one that provides the body with a shadow, from which the silhouette is then derived, and the other that signals race with its epidermal signifier, the blackness of the skin. As meeting point between mimesis and contiguity, the blackness of the silhouette becomes a racially overdetermined index: on the one hand, a mimicry of the chromatic attributes of certain bodies' skin and, on the other, the signifier of the Other of the body its indirect presence under the form of the shadow.[10] This double ontology accounts for the silhouette's overdetermination in relation to

the *substance* it indexes as well: it is simultaneously *carnal* because the silhouette is used to map those bodies that do not have access to the disembodied notion of personhood underlying bourgeois subjectivity and *categorical* in its function as a criterion of classification of a subject's position within the Great Chain of Being.[11] The silhouette seen within the framework of the social sciences, in other words, is phenomenologically "thick": it is burdened with the "spectral" presence of the white male normative body, while being filled with the carnality of the racial Other.

A key to appreciating how the substance of Walker's figures activates the paradigm of the social sciences as well as that of bourgeois portraiture is contained in an *Untitled* paper cutout where on the left hand side we can see the profile of a European man and on the right hand side a female "primitive" seemingly standing back to back with him yet with no space separating them (Figure 3).[12] Walker shows the bourgeois portrait as materially inseparable and visually indistinguishable from the shadow archive of race science. The silhouette of the social sciences exists in a relationship of contiguity with bourgeois portraiture—indeed as its condition of possibility—as the literal version of what Allan Sekula has *metaphorically* described as the shadow archive of bourgeois photography, i.e. the police records and the eugenicist's files. But while Sekula's "shadow" indicates a hidden counterpart, an adversary and yet complementary—enabling—position, Walker's archive evokes that and more. In her work the shadow is what sticks to the body as its inalienable Other. In this sense she provides a visual counterpart to Bhabha's claim that, within the colonial framework, the representative figure of the Manichean delirium of black and white is the Enlightenment man tethered to the shadow of the colonized man.[13] At the same time, she shows how both traditions of the silhouette meet in the same blackness: the white normative body is always haunted by the remnants of the Other's flesh, precisely because its abstraction is made possible by racial overembodiment.



Figure 3 – Kara Walker: Untitled, 1995. Cut paper on paper. 38×24.25 inches $(96.5 \times 61.6 \text{ cm})$. ©Kara Walker, courtesy of Sikkema Jenkins & Co., New York.

Throughout her entire oeuvre, Walker's work emphasizes the shadow's inalienable contiguity to the body to which it belongs. Each of her figures, in other words, scandalously reveals its own archival position within the history of visuality, hence behaving not only as a visual object but also as a scene of constant reversibility between an indexical and an iconic order of signification as well as a theater of desire suspended between a fullness and a lack. It is in this sense that she recapitulates, by combining them, the two foundational paradigms for the ontology of the image within the visual arts: the shadow and the mirror. On the one hand, she invokes the Plinian tradition which understands images indexically—in contiguity with the real, as its cast shadows—and on the other hand, the Platonic tradition conceiving of images iconically, as purely apparent beings, linked to the real by their mirror-like resemblance. As Stoichita summarizes in his Brief History of the Shadow: "If, in the Plinian tradition, the image (shadow, painting, statue) is the other of the same, then in Plato the image (shadow, reflection, painting, statue) is the same in a copy state, the same is a state of double" (27).

What are Walker's figures, then? Are they shadows or reflections? Are they Others or Doubles? And whose Other? Whose double? Their ambiguous indexical status (was/is a body there? and exactly where?) suggests how Walker's work relentlessly pursues a status of both/and, which is also an *in-betweenness*, effectively engaging the cinema screen in an expanded and unflinching manner, as the meeting/arresting point between projection and reflection. This extension, and the way in which, in Walker's silhouettes, we necessarily see ourselves seeing, constitute Walker's second contribution to our understanding of the history of the cinema.

Her scenes, in fact, *extend* the cinematic screen by freezing it. Narrative temporality unfolds horizontally, within a fully comprehensive and unbroken space, frozen in a perpetually unfolding and continuous image. This layout, shared not only with pre-cinematic devices such as

the panorama and diorama, but with landscape and historical painting as well, [14] presents itself as an alternative archive, a different indexing of history as a layered contemporaneity. Her purpose is to figure slavery not as a historical occurrence, but rather as, in Bill Brown's words, a historical ontology. [15] "Too active to seem moribund, and too recognizable to be dismissed as safely part of the past," Ann Wagner contends, Walker's silhouettes "cross-breed past with present" (95). They function metahistorically, as haunting incarnations of racial templates. Not only do her figures act in the present—indexing a past that refuses to pass—but they also confront us directly, thus extending the cinematic screen durationally as well: they are uncompromisingly present and unapologetically in our presence.

There is no denying that we come to Walker's combination of precinematic viewing positions with a pre-photographic engagement with the relationship between the index and the icon, from the vantage point of a history of the photographic base of cinema that is reaching its conclusion. Walker's metahistorical analysis—the use of archaic forms within a postcinematic moment-offers provocative insights into the question of presence (not only the presence of the image, or the presence of the world in the image, but also our presence to the image) very much debated in the digital turn, particularly in relation to the survival or death of the index. Walker's work intervenes in this conversation by asserting that part of the affective investment in indexicality is due to how it secures the observer's location *vis-a-vis* the object of the gaze.[16] In order to expose the affective ontology of the index as a spatial theory of representation she creates images before which the viewer cannot claim to know his or her location. Images such as the *Untitled* gouache of Figure 4 (below) are unanchored because they exist on both sides of an implied photographic surface. Here the diegetic source of light is located behind the bodies. The figures on the left side of the image are white because rendered as cutouts, a void, within the thick darkness of the night. On the right side, however, the moonlight is partly blocked and partly filtering through the holes of

this charred, lynched body, making clear that the corpse is present as a mass and positioned directly before the viewer. In this case, the silhouette effect is produced by overexposure, by how the body blocks the light thus placing us, at least for this half of the image, in an uncomfortable proximity with it. In this respect, I believe, Walker further qualifies what Barthes and Bazin value as photography's ability to put us in the presence of something as a question of *location*.



Figure 4 – Kara Walker: Untitled, 1998, Gouache on paper, 58 x 101 inches (147.3 x 256.5 cm). ©Kara Walker, courtesy of Sikkema Jenkins & Co., New York.

The ambiguity and reversibility of Walker's figures and her experiments with both sides of the photographic surface establish a dialogue also with scholarship that highlights the permeability of the early cinema screen and its connection with other phenomenological discourses on the body *as* screen. In *Atomic Light*, for instance, Lippit argues that early cinema is but one of the three phenomenologies of the inside coming together in 1895, alongside X-ray photography and psychoanalysis. In distinctive and yet

interconnected ways all three "figured" new and phantasmatic surfaces, producing images of three-dimensional flatness simultaneously cast and projected onto a screen.[17] Freud described both the ego and the body as surfaces upon which we are projected, and conceived of psychoanalysis as a search for depth beyond the surface of things. In the meantime, both the X-ray and the cinema introduced a mode of radical photography marked by a profound superficiality: X-ray photography flattens the inside and outside of the body into one common screen/ surface turning the vantage point of the spectator-subject inside out, while the cinematic screen provides an impossible order of deep space, dramatized by a plethora of images in movement across the screen, such as arriving trains or receding subways. Cinema, according to Lippit, is a series of planes, which expand and contract in what Deleuze described as a metaphysical surface. As he further argues, the profound superficiality of these phenomenologies is possible because in psychoanalysis, X-ray photography, and the cinema, the skin and the screen are conflated onto each other: the skin acts as a surface of projection while the screen functions as a metonymy of skin. Both are permeable and transversable.

The black screen of early cinema is one of the sites of thematization of this permeability. [18] The black screen, Trond Lundemo maintains, is a technique that suspends the indexical basis of the photographic image in order to introduce an alternative to optical models of vision. Its function might be to conceal montage, or to elicit astonishment, or to open onto an abyss of deep space behind the surface of the image, or to punctuate a narrative change. Further, the blackness of the screen is a space of suspension and possible reversals. As Stephen Best points out in his analysis of *What Happens in the Tunnel* (Edwin S. Porter, 1903), it might also function as a scene of *exchange*. In this three-minute film set on a train car just a few years after the *Plessy v. Ferguson* decision that legalized segregation in the American South, a white woman traveling with her black maid is the target of a white

man's sexual advances. Suddenly, the train enters a tunnel, the screen fades to black and, as the screen image reappears *on the other side* of the tunnel, the man finds himself kissing the maid instead, who, taking advantage of the filmic and profilmic darkness, has exchanged places with her mistress. This black screen is thus a scene of multiple exchanges: between the two women, who have traded places in the train, between potential sexual partners (the joke of the film is that the man is shocked to discover he has kissed the maid instead of the white woman), between screen blackness and a void (the tunnel), between screen blackness and the maid's epidermal blackness, between temporal and spatial ellipsis and a few seconds of cinematic emptiness. It thus signals a locus of reversibility bearing racial implications because of how the screen blackness is equated to the blackness of the substituted diegetic body. [19]

Like the black screen of early cinema, Walker's figures act as portals towards a phantasmatic indexical source—the body that supposedly produced them—but also towards their "insides." We slide in and out through these bodies, aware that while their blackness is a present sign of the body's absence, it is also the sign of an overdetermined carnality. Like X-ray photographs, their blackness provides a view of the body simultaneously from the inside and out—from the space it has vacated and from its phenotype. Hence the sense of obscenity her installations provoke, which, I would like to suggest, does not so much derive from the actions that these figures are engaged in, but from the viewer's realization of inhabiting a wholly and inescapably racialized space. The flatness of Walker's figures is highly unstable, hard to pin to the gallery wall, precisely because they expand the cinema screen toward its inside, towards its impossible depth. "Casting their own shadows into an incalculable mise-en-abyme behind them," argues Darby English in a similar vein, "these figures can seem to either threaten further advance into viewers' space or retreat from their very points of appearance" ("This" 156).

The cinematic screen Walker evokes thus expands in two directions: toward its depth as well as outward, in a way that invades the space of the viewer. This effect is amplified and multiplied in her installations combining paper cutouts with projected light, where the viewers' bodies are directly implicated by their own shadows cast onto the work (Figure 5, below). These installations heighten the theater of gazes—viewers looking at the work and looking at each other looking—by engineering a way to project onto the work a trace, however fleeting, of those very looks. That trace, the viewer's cast shadow onto the gallery wall, once again calls into question the "substance" of her figures by equalizing it with the viewer's.



Figure 5 – Kara Walker: Darkytown Rebellion, 2001. Cut paper & projection on wall. Installation dimensions variable; approx. 180 x 396 inches (457.2 x 1005.8 cm), on wall. (Photo: Dave Sweeney). Artwork ©Kara Walker, courtesy of Sikkema Jenkins & Co., New York.



Figure 6 – Kara Walker: Still from: Testimony: Narrative of a Negress Burdened by Good Intentions, 2004 16mm film transferred to digital video (B&W, silent). 8:49 min. Artwork ©Kara Walker, courtesy of Sikkema Jenkins & Co., New York.

This sense of double movement is further heightened in Walker's stopmotion puppetry videos that she sometimes mounts alongside "still" installations (Figure 6, above). Here the question of presence carries other connotations: not only the foregrounding of the artist's presence by letting her hand appear within the frame while maneuvering her cutouts within a deep space, but also its relationship to cinematic movement and duration. Here the viewer is confronted with the fact that the moving image is obtained by a succession of discrete durational wholes so that, as Jennifer Barker puts it, animation offers "a lingering look at an *extended* arrest of movement" (136). Furthermore, the puppets are so flat, so flimsy, and their movements so awkward that they appear as shadows severed from their bodies, running amok—possibly, as Robert Storr suggests, to further underline their status as product of a hysterical white imagination spooked by its own shadow, "by the shadow it conjured out of the presence in its midst of what it mistook for its God-given antithesis" (65). Lest we forget these shadows' displaced connections to living bodies, in a by now expected twist, these ghostlike creatures reclaim their carnality and ejaculate towards the viewer and against the screen. The thickness and liveliness of the flesh that Walker's figures initially appeared to have had fully abstracted here return as bodily fluid traveling through space, connecting, once again, not only the space of the work with the space of the viewer, but the (wet) skin with the (wet) screen.

The fact that, throughout Walker's work, blackness is the meeting point between the screen and the skin suggests that the structural asymmetry between the inside and outside of the body in the last instance reflects the structural asymmetry of race. [20] As we debate the question of presence in the digital image, the survival or death of the index, and other ways to determine whether the digital severs the Barthesian umbilical cord and is fully—and for some people, hopelessly—simulacral, Kara Walker inhabits this post-cinematic moment by demanding that we remember the epistemology of the visual surface that still informs its phenomenology. Background and foreground, positive and negative, mass and space, inside and outside, fullness and void, presence and absence: the relationship between these poles still depends on the interaction between blackness and whiteness, as conditions of legibility of images as such. But unequal ones. Blackness, in fact, is always susceptible of being a signifier of depth as well as of surface—the surface of some-body. By highlighting the phenotype as a screen of projection and reflection, Walker identifies the epidermality of race as a hermeneutic of the surface that predates and supports those developed in the late 19th century. If, as Storr asks, "in the Eurocentric tradition blackness has historically been the shadow that whiteness casts, what is the shadow of blackness? ... —A black hole at the

core of Western culture?" (65). Ultimately the black body—black inside and out—emerges as the visual object *par excellence*, where the shadow meets its substance: the black body as the *sign* of the visible, the visible turned into a *sign*.

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Notes

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[1] Even though it refers to Noel Burch's work on early cinema, *Life to Those Shadows*, the title of this essay intends to locate Walker's work within contemporary scholarship that addresses the relevance of the "photographic" as a critical/historical paradigm. An excellent overview of this position is offered in Beckman and Ma, especially Raymond Bellour's essay "Concerning the Photographic." His characterization of contemporary installation art addressing the relationship between photography and cinema as revealing multiple *image-states* is particularly descriptive of the "life" that animates Kara Walker's silhouettes, i.e. the very "wildly fluctuating, moving discontinuity" of mental images, situated "between photography's somewhat too-complete fixity and cinema's often too-calm illusion of movement" (Bellour 270). Part of the perceived "obscenity" of Walker's work, I argue in the remainder of the chapter, comes from having brought to life images that had been safely confined to the landscape of the mind.

[2] The controversy was initiated by Betye Saar and Howardena Pindell who, on the occasion of Walker's receipt of the McArthur Foundation "Genius Grant" at age 27, accused her of producing images hurtful to the black community and called for a boycott of her work. It is summarized in Shaw and Pindell. The main publications on Walker's work are Reid-Pharr et al., Vergne et al., and Berry et al.

[3] Stereotypes are indeed crucial to Walker's work, but in the sense Homi Bhabha understands them: as scenes of desire, rather than inadequate, offensive, or misleading representations. The stereotype, argues Bhabha, is not the object of desire, but its setting; it is not an ascription of a priori identities, but rather their production ("Other"). More to the point, it operates like a fetish: it is a scene of subject formation. It responds to multiple desires that are also mobilized by Walker's installations: to make *present*, to make *visible*, to make *knowable*, and to *fixate*.

[4] John P. Bowles, for instance, argues:

The debate surrounding her art demonstrates the difficulty we have with work that implicates viewers in the perpetuation of whiteness's claim to privilege. Walker creates quasi-cinematic scenes in which perpetrators are the victims of their own fantasies. . . . Her figures are apparitions who resemble the normative white subject but who are instead difference itself made manifest. They represent, on some level, who white viewers fear they might be. . . . They seem credible but are fantasy, and they are too horrible to be real. (39).

[5] Discussion of controversial work such as Walker's necessarily raises ethical questions: the charge of obscenity, in fact, expresses moral concerns with the propriety, efficacy, and ownership of a certain racial imagery, which are made all the more acute by the extraordinary success she has had with white collectors. The impossibility to determine the proper affective response to her work (pain, pleasure, shock, outrage, and so on), in fact, importantly foregrounds how such affects carry different ethical repercussions along racial lines. Even though extremely important, these issues are beyond the scope of this paper, which instead addresses what this controversy has often distracted scholars from: that Walker's work offers a theory of the visual in which race is not simply a specific content but rather a foundational epistemology.

[6] I draw here on a broad and transhistorical notion of the photographic as an operative model constructed around stillness and movement on the one hand, and indexicality and iconicity on the other, as espoused, among others, by Susan Sontag in *On Photography* and *Regarding the Pain of Others;* Krauss; Bellour; and Doane. Two fundamental texts on the relationship between race and the photographic are Smith, and Fusco and Wallis.

[7] For an account of this myth, see Stoichita. This myth has been influentially evoked in relation to the "desire" of images by Mitchell.

[8] On the isomorphism between fetish and stereotype see Bhabha, "Other."

[9] The transition between the indexical and the iconic function, as Stoichita points out, required that the shadow assume the symbolic form of the profile. This, he claims, "was in fact the only message that the myth of origins of art was understood to convey, because it maintained that only in the profile of the outlined shadow could mimesis *and* index (likeness *and* physical connection) coexist" (11). This is important because Lavater's hermeneutic project, as Lyon indicates, hinged on the confusion between an indexical and iconic paradigm of the visual.

[10] Another crucial transition between an indexical to an iconic order of signification occurs here: because black is the sign of the silhouette's likeness to the body it indexes, it becomes the "face" of the index as well. Black becomes *the* signifier of likeness, of resemblance as a visual regime: not just an iconic sign, but the signifier of the iconic. Robinson has been instrumental to my thinking in this respect.

[11] For a discussion of Walker's critical engagement with the paradigm of the social sciences, see Reinhardt. For the categorical notion of the index, see Mirzoeff.

[12] "Primitive" is one of the terms Walker uses to evoke a female persona, which she sometimes adopts for herself, to underscore the expectations of patronage, modeled after Josephine Baker's exotic *sauvage*.

[13] The self-representation of the colonial man, argues Bhabha, depends upon a staged division between body and soul that underlies the artifice of identity. The native occupies the carnal pole while the Westerner occupies the spiritual one. The tethered shadow of the colonized man offers "the 'Otherness' of the Self inscribed in the perverse palimpsest of colonial identity" (Bhabha, "Remembering" 186).

[14] Darby English specifically addresses the relationship to landscape painting.

[15] See also Shaw for an expanded discussion of Brown's description of Walker's work as a "rememory of slavery."

[16] In David Rodowick's terms, Walker's silhouettes extend the ontological perplexity of photography along the temporal axis (i.e. that things absent in time can be present in space) to the spatial axis. Her

figures double the paradox of temporal perception of photography with the paradox of spatial recognition of optical illusions such as the duckrabbit figure: how can they both be *there* in the same space?

[17] Furthermore, cinema, X-ray photography, and psychoanalysis transformed the structure of visual perception from phenomenal to phantasmatic, from perceived to imagined visuality, from visual to avisual, and in so doing, constituted another shadow archive to be placed alongside the one identified by Sekula: the avisual archive of a new phantasmatic visuality. "What constitutes, defines, determines the *thereness* of the X-ray?" asks Lippit, "[w]hat is *there* in the X-ray, depth or surface, inside or out? What is *there* to be seen? A *thereness*, perhaps, that is avisual: a secret surface between the inside and out." (52). I thank Jennifer M. Barker for introducing me to Lippit's work.

[18] See Auerbach, especially the reference to Marey's practice of dressing people in black to emphasize the recording of movement. See also Doane's *Emergence*.

[19] For Best, this exchange abides by the logic of the counterfactual as a form of legal argumentation and historical causation that produces a mirror-like imaginary inverted equivalent of the actual world. The duckrabbit of Walker's silhouettes can be said to invoke similar stakes. See also Gaines.

[20] Shawn Michelle Smith develops some of these insights in relation to W.E.B. DuBois's notion of double-consciousness and especially the Veil, understood as theories of visuality. DuBois described double-consciousness as the awareness of being seen through the eyes of another and the Veil as a coat of opacity that shrouds the black subject into invisibility but also as two-sided screen: as it makes the Black opaque, it also affords her the possibility to look back while remaining unseen.



6.1 The Art of Morphogenesis: Cinema in and beyond the Capitalocene

BY ADRIAN IVAKHIV

The era of cinema, some have argued, is ending. As the photo-realist recording of reality, the capture of reflected light on photochemical film, cinema is already a thing of the past. Defined as the production of moving images, however—as animation and transformation, the continual generation of new forms from material that may be "real," indexical and mimetic, *or* that may be entirely composed and composited, reproductions without an original—cinema is still very much alive. In this latter sense, cinema is about morphogenesis: the generation of new forms from old ones, reproduced, reassembled, recomposed, and reimagined.

This chapter follows two lines of inquiry. The first asks what the future of such a "morphogenetic cinema" might be in light of cinema's dependence on two forms of light: the sunlight that once served as the *prima materia* for the cinematographically reproduced world—and that could serve as a more direct powering of cinematic technology; and the stored and compounded reserves of sunlight that constitute fossil fuels and their

photochemical derivatives. Is there a cinematic art that acknowledges this relationship between light, image, matter, and form, and that might point toward a "post-carbon" cinematic materiality, a materiality beyond the era of petrochemicals, or what some have called the Capitalocene? If so, where among the slippery, morphing images of digital media can such an art be found? If, as Steven Shaviro and others have suggested, slippery, morphing images are the norm for a hyper-capitalist global condition, what are the options for a cinema that both participates in and critiques this condition—that is immanent to it, yet transcendent of it?

The second line of inquiry concerns itself with digital production more generally. If digitality is about the generation of new forms from old, what happens with the old, and what are the material implications of the proliferation of new forms? As digital cinema adds to the growing archive of images and sounds, it contributes to the shift toward cloud technologies, with their reorganization—and mystification—of the materiality of information. What are the implications, for cinema, society, and ecology, of the digitality of the cloud? How might a new attentiveness to cinematic materiality contribute to the reclaiming of a digital commons?

Into the Digital

Until recently, film theory had been premised on the assumption that the live-action cinematographic "recording of reality" was the essence, or at least the default option, of cinema. Film required a photographic process—the mechanical recording of images through the registration of reflected light onto a photosensitive chemical surface. The digital revolution has thrown this assumption into question to the point that some now maintain the opposite: that animation, or the graphic manipulation of images, is now the default option of cinematic media, and that the mimetic representation of reality is at best the exception that proves the new rule. Some have claimed that mimetic representation is in its death throes and that the era of cinema—moving images captured on film emulsion and projected onto two-dimensional, rectangular screens

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in front of large audiences—is over. Others argue that it is merely film that is coming to its end; cinema, the *kinematic* or moving arts, will continue in new forms.

This debate over the continuity or discontinuity of the digital present from the celluloid past is far from over. Cinema may no longer be wedded to photorealist indexicality, but such indexicality—and the perceptual realism and "depictive credibility" it affords—remain viable options that continue to underlie audiences' reception of cinema (Rodowick 27). As Lev Manovich has argued, cinema's stamp remains imprinted on emergent media forms. "A hundred years after cinema's birth," he writes, "cinematic ways of seeing the world, of structuring time, of narrating a story, of linking one experience to the next, have become the basic means by which computer users access and interact with all cultural data" (*Language* 78-79). Cinematic codes that have come to shape online interfaces, computer games, virtual worlds, and other media forms include single-point linear perspective, the conventions of the mobile camera and the rectangular window-like framing of represented reality, cinematographic and editing conventions, and much else (Manovich, *Language* 86).

The argument about cinematographic indexicality, drawing as it does on a principle taken from the semiotics of Charles S. Peirce, deserves further consideration. A cinematic image, whatever else it may be, bears some relationship to a profilmic world, a world to which it refers by virtue of its having been connected to it through the capture of light onto photochemical emulsion. In Manovich's words, "cinema is the art of the index; it is an attempt to make art out of a footprint," which is the footprint of the reality that was stamped onto the photographic medium in its transformation into a projectible film ("What is Digital Cinema?" 174). As Niels Niessen argues, however, an index, for Peirce, is more than a mere relation to a profilmic referent. It is that relationship as it is perceived by a viewer—a sign, in Peirce's terms, to an interpretant, by which Peirce means that it is a sign actively being interpreted within a meaning-making event. The

relationship between an image and its profilmic referent is thus never fully given in the image itself. It is always mediated by other elements, such as the screened or printed representation, the sound accompanying it, the context in which it is appearing, and the spectator's prior knowledge and expectations about the process by which the image has come to be what it is. Most or all of these variables remain in place in digital cinema, even if the expectations themselves are changing (Niessen 317).

With changing expectations come novel possibilities. D.N. Rodowick argues that with its basis in numerical manipulation and data synthesis, sampling, and sequencing, the digital image "is more and more responsive to our imaginative intentions, and less and less anchored to the prior existence of things and people." Cinema, he predicts, "will increasingly become the art of synthesizing imaginary worlds, numerical worlds in which the sight of physical reality becomes increasingly scarce" (86-87). Cinematic space and time are altered in the process, as is our involvement with that space and time. Roderick Coover notes that "what works in streaming and in new media are short works; they are works accompanied by text; they are works from different people contributing to a common space; they are fragmented; they are multiply linked" (244). Digital video eliminates the intensive productive labor involved in filmmaking in favor of a light and spontaneous *caméra*–stylo, a "camera-pen" that can capture reality effortlessly anywhere. Yet digital video paradoxically also provides the possibility of total control of the image. It brings us, at the same time, much closer to reality and much further away from it than cinema ever could.

Francesco Casetti's criteria for the cinematic are worth considering here. The cinema, for Casetti, is a circulation or "vacillation" between "the image-artifice" and the "image-imprint," between "having a grasp on the world, having too much of it, and not having any left at all" (107). It is, in his analysis, an ever-inventive negotiation and synthesis between a series of five forces and counterforces, which happen to be among the

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great contradictory "demands of modernity": the oppositions between fragment and totality, subjectivity and objectivity, human and machine, excitement and order, and immersion and detachment:

The world offers itself only in fragments but the desire for totality continues to press. Reality is always filtered by someone's perception, but this does not exonerate us from distinguishing between perceptions and facts. The machine offers us a gaze that is extraordinarily sharp, but humans want to continue to feel in some way a part of it. Sensory excitement makes us feel alive and present, but we also must not lose control of our surroundings or ourselves. Spectator and performance are, by now, one and the same, but it is often necessary to establish distance. (173)

Cinema, Casetti claims, was the eye of the 20th century. Today, it no longer effects the same mediations, which have been entrusted to other media: to television, the Internet, the cellphone, the palm-held device, and others, with the result that the emblem of our more "liquid" age has become "the slippery morphing image" (188).

The Slippery Morphing Image

So how do we move into this world of slippery morphing images? And is their slipperiness a guarantee of their deceptiveness, or could it—as I would like to suggest—bring us *closer* to a reality that is *also* slippery and morphing? To investigate these questions, we need to understand how this cinematic world is part of a larger set of shifting determinations.

In *Post-Cinematic Affect*, Steven Shaviro takes up the quasi-Jamesonian task of mapping how this slippery morphing image reflects and heralds a changing geopolitical condition, as well the opportunities it presents for resistance to that condition. Shaviro describes the contemporary condition as a world of neoliberal, networked, and hyperflexible capitalism, a "world of crises and convulsions" that is "ruthlessly organized" around the relentless and singular logic of commodification and capital accumulation (131). In this world of "modulation, digitization, financialization, and

media transduction" (132), we have shifted from disciplinary forms of governmentality, in which individuals were molded into subjects according to relatively fixed parameters spanning a series of disciplinary and organizational spaces, to a flexible society of ongoing, never-resting and never-sated *modulation*, where continuous recombination is a basic necessity for keeping up with the twists and turns of ever-unfolding hypercapitalism. There is, in other words, nothing solid left beneath our feet: just as the global financial system sloshes around like a drunken gambler on a storm-tossed ship, so do jobs, careers, personal and collective identities, corporate and national marketing strategies, and values all shift and mutate to keep up with the flow of a fluid and elusive reality.

One set of aesthetic possibilities for dealing with this condition is that which Shaviro and others, following Benjamin Noys, call "accelerationism," or the extreme use of the new capacities of digital technologies to squeeze out new possibilities for liberation. Shaviro seeks to identify the "aesthetic poignancy of post cinematic media" (133), media that assume that "the only way out is the way through" (135)—through a world without transcendence, and through an exacerbation or radicalization of capitalism "to the point of collapse," in Noys's terms (qtd. in Shaviro, Post-Cinematic Affect 136). In films like Olivier Assayas's Boarding Gate (2007), Richard Kelly's Southland Tales (2006), Mark Neveldine and Brian Taylor's Gamer (2009), and the Grace Jones/Nick Hooker music video "Corporate Cannibal" (2008), Shaviro finds an aesthetically productive and useful exploration of "the contours of the prison we find ourselves in" (137).

"Corporate Cannibal" provides a good entry point into Shaviro's argument. In it, Grace Jones plays herself as endless modulator of her own image, an image that "swells and contracts, bends and fractures, twists, warps and contorts and flows from one shape to another" (11), all the while projecting a certain style, a certain "singularity" of "Grace Jones" as celebrity icon (12), a "long string of Jones's reinventions of herself"

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(13). Jones is the transgressive posthuman (20); unlike Madonna, who "puts on and takes off personas as if they were clothes" (23), Jones cannot retreat into the anonymity of the unmarked (because white) artist. Jones, a black woman, is already marked to start with and is therefore playing "for keeps" (24), devouring "whatever she encounters, converting it into more image, more electronic signal," and "track[ing] and embrac[ing] the transmutations of capital" (30) as she goes. Jones in this sense represents "the chronic condition of our hypermodernity" (31), a hypermodernity that we, or most of us, cannot escape.

Shaviro points out that in this video there is no longer a reliable relation between figure and ground, or between stillness and movement, a preexisting "structure of space" within which things happen (15). If this figure-ground relationship can be taken as an instance of the subjectobject duality, a duality that has been an unquestioned foundation within popular cinematic and artistic practice (and modern thought in general), then Jones's video dissolves this boundary into a continual modulation of both subjectivity—Jones's, but by extension also the viewer's—and objectivity, or the cannibalistic corporate world that Jones alternately invokes, dominates, and is dominated by. The "corporate cannibal" is both addressed by and played by Grace Jones, who "takes on" the role in both senses of the word—as a form of mimicry, an act, and as a semithreatening response, an "I know you're out there and I know your game" to the corporate cannibals who seemingly populate the world. But this act is as much an expression of the reality of a cannibalistic capitalism as is that capitalism itself. There is no remainder here; all is consumed in the representation itself.

If, as Jonathan Beller argues in *The Cinematic Mode of Production*, cinema and capitalism are historically and technologically bound up with each other, the twists and turns of the latter would find their counterpart in the former. But reducing one to the other risks missing the alternative possibilities offered by cultural tools for reworking the world. This raises

the question of whether the "slippery morphing image" is just the latest variation of the kinetic image, or is it something new and different altogether? "Cinema" and "kinesis" share roots in the same Greek words for movement (kinēin, to move; kinēma, kinesis, movement; kinētikos, moving), which suggests that the cinematic is and always will be the moving. It will always be inherent to a world of image-affect-reality, a world that is in motion and that moves those who partake of and constitute it. The *morphing* image, on the other hand—from the Greek root *morphē*, form, shape—is an image that takes shape and brings form, then takes shape again and brings new form. "Movement," in our conventional way of thinking it, suggests that there is something that moves, that goes from point A to point B but remains unchanged in its essence. In contrast, "morphing," or form-taking, more clearly indicates the immanence of image as movement. It is not an image that moves, that goes from point A to point B, but an image that is itself movement. Something takes form and that form is what it is; its new form is what it has become.

Cinematic worlds have always been worlds that take form—worlds that geomorph (becoming landscapes), biomorph (becoming lively lifescapes), and anthropomorph (becoming socioscapes). That is to say that they take the form of active becomings, or "anthropomorphings" (which would be canomorphings, for dogs, or avimorphings, for birds), against the background of a givenness that has "geomorphed" in the sense that the "geo" constitutes the background and Ur-ground, for us bipeds, against which we typically move. And there is always a dynamic and indiscernible middle-ground between these two—a "biomorphic" space of play, which recedes as the agential and non-agential worlds are defined, but that reasserts itself moment to moment.[1]

The kinetic and the cinematic are in this sense essentially morphic, form-taking, and shape-shifting. Cinema is a form of morphogenesis, a form of becoming. If this was less evident fifty years ago, it is becoming more evident today—as it was at the beginning of cinema. Manovich argues

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that as live-action footage, in digital cinema, is digitized into pixels, it becomes just another source for digital images, another graphic, "raw material for further compositing, animating and morphing" (*Language* 301). At the same time, editing and special effects become collapsed into the same category of "image processing." Manovich argues that live-action, narrative cinema will one day come to be seen as merely an episode, "an isolated accident in the history of visual representation" (308). Such a history will have brought the moving image back full circle from its earliest forms as animated drawing or painting, through its heyday as live-action narrative representation, to its newly rediscovered form as animated image-interface. "*Born from animation*," he emphasizes, "cinema pushed animation to its periphery, only in the end to become one particular case of animation" (302, emphasis in original). Animation and morphogenesis, in this view, have always been with us; now we have the tools to creatively extend them into new forms of worlding.

If the hyper-capitalist condition shows a preference for the "slippery morphing image," then Manovich's argument suggests that this may not be entirely reducible to the history of capitalism. One might envision ways of working with that image to undercut its teleological drive (as Shaviro's examples may do, to varying degrees), but also ways of working against that image, refusing its imperatives, or cutting against them in creative ways. [2]

Cinematic Humanity's Outer Circumference

It is not accidental that one of Shaviro's case studies is a music video. This form packs in, often with utmost intensity, the animate mobility of the audiovisual image: the affective spectacle of a particular set of motions, speeds, sounds, glimpses, gazes, sensations, feelings; the cutting together of one thing into another, sutured by rhythm and song, to create some sense of a narrative arc, or at least of movement or tension between the kinds of structuring oppositions that make narrative possible; and the semiotic openness by which what would normally stand on its own—a song or

musical piece—becomes overlaid by and adjoined to other things entirely. One might argue that music videos reduce the interpretive openness of a piece of music by locking it into a series of visual and narrative reference points. But every such reduction is also a transformation that creates new possibilities for interpretation. The images of a music video, propelled by its music, are intended to stay with viewers, and because most music videos are under five minutes in length, those images are carefully chosen, with little digression from their basic sense. Their external reference points may be focused, more than anything else, on the production of the artist's persona, such that the viewer might be expected to say something like "This is the best thing she's done yet!"—where she may be Lady Gaga, Grace Jones, or Beyoncé. But this artist's persona is always implicated in broader cultural relations, within which fan responses find their meanings and chart their affective paths through the world. At their most effective, music videos elicit a deeply affective charge, a frisson or wave intended to carry a viewer somewhere, both over the satisfactory burst of duration that constitutes the video itself and well beyond it afterward.

Much the same could be said of any video that goes viral on the Internet. This is the same whether they are "found" or "spontaneous" videos—random shots of life that happened to be caught on camera—or carefully planned and orchestrated works of budding video auteurs. In the first category, one finds, for instance, the video shot by a Chinese security camera showing a two-year-old girl being hit and run over by a truck, followed by several passersby ignoring her—a video that elicited a round of anguished soul-searching, blame seeking, and recriminations among Chinese citizens ("China"). The clip itself was short, no longer than the original reels of the Lumières, and just as silent, but it became a live and mobile moment, a moving episode, an event that captured and transmitted an intensity of feeling for its viewers. Also in this category one might include the images from the undersea "Spillcam" that brought the Deepwater Horizon (BP) oil spill seeping eerily into thousands of viewers' bedrooms, or the many YouTube videos of the massed movement

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of starling murmurations (as the formations are called), or of cute or bizarre animal encounters—brief cinematic outtakes from a transhuman world that delights viewers irrespective of any extinction crisis we might collectively be responsible for.[3]

Taken collectively, cinema in the digital age presents a universe whose outer circumference is always expanding. That circumference is not bounded; it is open, with new works being added like thoughts and exhalations of a cinematic humanity. And within that circumference, the dots that connect it are no longer singular, bounded units so much as they are fluid bursts—more like bacteria that share genetic information across boundaries, or rhizomes that connect with others in ever-widening webs, than like sedentary organisms that take root and bear fruit in a single plot of soil. The very shape of films, and of the film-viewing experience, is no longer what it used to be. Today it is no more likely that one will watch a two-hour film straight through than it is that one will watch and re-watch favorite clips, seek them out on YouTube, stop watching part-way through to change the channel or eject the disk and come back to it midstream some time later.

And films today are part of a rapidly diversifying landscape of moving images, a landscape in which the basic reference points of movie watching have been blurred and dissembled. DVDs and Internet resources provide multiple entry points for viewing a single film—which, with its "director's cuts," alternative versions, and various add-ons, isn't as singular as films used to be (see Brereton). What television did when it created a constant stream of filmic presentations has been multiplied to a point of no return. Cable television provides a staged running commentary about the world and key events of the day, and the growing availability of international programming among satellite and cable providers allows for a sampling of multiple takes on these events. YouTube and its siblings provide an ever-expanding archive of cinematic material uploaded, downloaded, reedited, cross-referenced, spoofed, and endlessly commented upon. The

one-to-many model of theatrical movie releases is being replaced by a many-to-many model of distributed computing and file sharing. And the growth of interactive media, from multiuser video games to increasingly lifelike virtual worlds, has opened up the viewing experience to radical reorganization in the midst of its very flow.

In his imprecisely titled essay "Twenty-Five Reasons Why It's All Over," Wheeler Winston Dixon provides twenty-four reasons why the cinema "as we knew it" is dead; then, for his twenty-fifth point, he concludes, "And yet, despite all this, the cinema will live forever" (365). "The classics of the past," he writes, "will continue to haunt us, informing our collective consciousness of mid-to-late 20th-century culture" (365-66). "Film 'as we know it' has always been dying and is always being reborn. What we are witnessing now is neither more nor less than the dawn of a new grammar, a new technological delivery and production system, with a new series of plots, tropes, iconic conventions, and stars." The cinema, however, "will always continue to build on, and carry forward, the past" (366).

This is what Alfred North Whitehead argued about all forms of experience. In Whitehead's process metaphysics, all things are always becoming, building on and carrying forward the past into new registers, new dimensions, new vectors of transmission on which future worlds are borne. [4] In the remainder of this chapter, I consider two ways in which this movement of old into new—this morphogenesis—proceeds today: the rapid increase in *digital materiality*, and the *reflexive* materialization of cinema.

From the Archive to the Cloud

Consider the following six trajectories.

1. More and more people are being born today, and more and more of them live out a full life. About one in ten people who have ever lived are alive today. (The estimates range from 6.5% to over 12% depending on the weight given to various demographic factors.)

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With birth rates exceeding death rates, that percentage is increasing (see Good, "Crunching"; Curtin).

- 2. More and more of these people are growing up with recording technologies-image and sound recording tools that preserve something of the present for the future. It is estimated that 2.5 billion people in the world today have digital cameras. This year alone people will upload over 70 billion photos to Facebook, which already includes some 250 billion, more than 15,000 times larger than the Library of Congress. Every two minutes we snap as many photos as the whole of humanity took in the 1800s; and one in ten photos we have were taken in the past twelve months (see Smith; Good, "How Many"). YouTube and its siblings provide an ever-expanding archive of cinematic material uploaded, downloaded, re-edited, crossreferenced, spoofed, and endlessly commented upon. While some of the images added to our archive are added by individuals for their individual and collective consumption and narrative construction, others are added by state or private efforts to monitor, surveil, manage, predict, market, and prognosticate. Access to and preservation and safekeeping of these are issues that call for security measures—which often means more copies in more (if less accessible) places.
- 3. As images recording the present are preserved, they become past. At the same time, what's past becomes archived and opened up to the present. Film reels, photographic imagery, and other productions are being added to the archive of what is digitally viewable, storable, sharable, and remixable. Technologies of retrieval—from digitization software and sampling technologies to historical, archaeological, detective, and forensics tools of various kinds—enable an ever deeper digging into and unlocking of the past. The "datability" of the past—of the the earth as fossil repository and echo chamber—adds to the archive of images, sounds, signs, and documents that can be dredged up and set into motion. With image and sound

technologies, the past is now divisible into the era of reproducible images and the era that preceded it: BP (Before the Photograph) and AP (Anno Photografico, the Year of Our Lord Photograph). One day we may count backwards to the year 1825, which will be the new Year Zero, when the first permanent photograph was produced by Joseph Nicéphore Niépce in Chalon-sur-Saône, France. Sound technologies came later, and touch and smell reproduction remain in their infancy. But even these demarcations in time are malleable. Recreations of the past, stillings of moments intended for preservation as teaching tools, sacred objects, memory emblems, political symbols, personal mementos—these have been with us at least since the cave walls were painted at Lascaux and Chauvet.

- 4. Interactive media, from Google Glass to multiuser video games to increasingly lifelike virtual worlds, render data space more immersive, more embodied, and at the same time more fluid. Even if many of the audio and visual recordings on YouTube and Vimeo are moments found in the "real world"—found objects in a discoverable reality—the default mode of cinema, as stated earlier, is no longer the mimetic representation and photo-indexical recording of reality. Rather, it is once again, as it was in its beginning, a matter of animation, the graphic manipulation of images. The growing archive of images and sounds becomes a database available for manipulation for a multitude of purposes—aesthetic, economic, political, or religious.
- 5. Then there is the storage of all of that. Every piece of data is material, and every object that stores, reads, produces, reproduces, manages, recombines, and even deletes data is also material. These entities are premised on an infrastructure by which materials like copper, lead, silver, tin, chromium, barium, silicon, mercury, beryllium, arsenic, and a variety of petrochemicals and otherwise hazardous compounds, are mined, smelted, refined, manufactured, transported,

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and disposed of, by oil rig, airplane, land and sea cable, human hand and lung, and so on—with handling and exposure extended all along the way (see Taffel; Byster and Smith; Electronics Take-Back Coalition). E-waste has been the fastest growing waste stream for some years now (Byster and Smith 210). Digital storage capacity overtook analog storage capacity in 2002, and within five years of that date, 94% of storage was already digital. Humanity today stores some 300 exabytes of information—that is, 300 followed by 18 zeroes (see Mearin). Data disks, however, degrade and must be replaced; and with the emergence of new formats, there is a need for format conversion and migration, which means new storage replacing old storage. But old formats do not go away; they remain as relic and waste, a material ghost whose materiality never dissipates.

6. Finally, there is the cloud. Cloud computing is the frontier of the personal computing industry and, in a certain sense, marks the end—the end of the personal and the triumph of the nodal. By definition, the Internet is a distributed system: it links billions of devices into a network of networks that share data, images, and documents across the world. The infrastructure it requires is immense. In theory, cloud computing replaces local storage and software with storage and management of files in distant data centers or "server farms." In practice, it often supplements the former with the latter as a means of adding security to data files, which instead of being saved in one place—say, on a home computer or hard drive—may be saved in several places to ensure ready access by home computer, smart phone, tablet, and an array of wireless devices. Cloud computing contributes to the perception that digital media "dematerialize" our relations with the earth, but any image or data requires materiality for its existence. As Maxwell and Miller put it, "The metaphor of a natural, ephemeral cloud belies the dirty reality of coal-fired energy that feeds most data centers around the world."

Debates over the sustainability of cloud computing revolve around the possibility of its shifting from fossil fuels to renewable energy sources, and toward a smart-grid syle accounting of how much data one is using, through what operations, and so on. To date, data centers' energy usage pales in comparison with transportation technologies (about 2% to about 25%), which shows, as Google's Urs Hölzle has argued, that it takes less energy to ship electrons than atoms. But even as data storage moves to the cloud, 15% of global residential energy is spent on powering domestic digital technology. Even so, a smart-grid style accounting of the cloud would limit its "rematerialization" to the arithmetical and statistical. Inherent in the expanding archive of digital information, images, texts, audio and video recordings, is a slipperiness where data objects cannot be pinned down. They are not exactly here, where I am accessing them, nor there, on a server somewhere in Wyoming or Illinois or Australia; they are in-between, mobile, in the rush of semiosis. As the amount of data each of us produces increases, and as more of it gets stored in multiple data servers, available upon request in the ever more ubiquitous datasphere, so does the need for data security measures that also require secure storage and accessibility.

Cinema, from the Cloud to the Commons

As the archive of images and sounds continues to grow, and as it "dematerializes"—that is, as it is globalized into a "cloud" that is fuzzy in its spatial parameters, but is as thoroughly material as anything—boundaries distinguishing the personal from the public are deterritorialized into a multitude of spaces, traces, databanks, strata, and flows. Access to these spaces and databanks—and, more importantly, the capacity for management and manipulation of the data they hold—becomes the prize among a competing array of local and global players. With this de- and re-territorialization, the struggle to re-establish a democratic "commons" takes on new forms.

Ultimately, such struggle is part and parcel of every de/territorialization the planet has seen. Cinema itself bears witness to this long history. As Nadia

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Bozak amply delineates in *The Cinematic Footprint: Lights, Camera, Natural Resources*, cinema is and has always been a thoroughly ecological process. It has always depended on a powerful combination of at least two forms of solar energy: the capture of reflected solar light, and the indirect products of that energy that have been stored and compounded over millennia in the form of fossil fuels. [5] As Henri Bergson might have put it, cinema is a form of captured, organized, and released light–heat–energy–movement. In this, it takes what is common to all of us—all living substances—and reorganizes it in the crafting of meaningful worlds. To make cinema is to craft worlds from worlds, and in doing so, to bear an obligation to the light, heat, and energy used in their making.

All life on this planet is the product of one or another permutation of the interaction between energy (light and heat) originating from the sun and the surface of the Earth that it strikes. Everything we know is an evolved permutation of that endlessly differentiating process. Cinema is a product of a certain political ecology: it arose alongside the industrialization of material production—an unleashing of productive capacities that had been stored on or beneath the surface of this planet for millennia. The digitalization of cinema is not of a matter of *post*-industrialization, but merely of the digital, post-Fordist globalization of that same political ecology. It is the latest phase of the development of the bio-socio-technical apparatus that has undergirded industrialization. Cinematic technologies are part and parcel of a world that has become faster, more mobile and fluid, and more diversely integrated—economically, politically, and culturally—even as its tensions have become intensified and globalized.

There are films that direct their gaze, at least in passing, at some of the many permutations of this relationship between energy (light/heat) and the surface of the earth (and/or of film). These include the celebratory light experiments of avant-gardists like Stan Brakhage; documentary meditations on time, space, energy, and light, such as Peter Mettler's *Picture of Light* (1994) and *The End of Time* (2012), or Werner Herzog's

Wild Blue Yonder (2005) and Lessons of Darkness (1992); the found-footage and "secondhand" films of Chris Baldwin (Tribulation 99, 1991), Agnes Varda (The Gleaners and I, 2000), and others; and epic narratives, such as Terrence Malick's The Tree of Life (2011), that juxtapose the evolution of life itself with individual struggles. Malick's film reduces neither the nonhuman to the human nor the reverse. With its ceaseless camera movement and narrative and visual digressiveness, it seemingly follows the lines of flight inherent in movement itself—in a ray of sunlight, in the movement of hands and feet, emotional responsiveness and affective flow.

Then there are those films that explicitly document the global political ecologies of extraction, production, consumption, and disposal in their many cross-dependencies and connective relays. Films about the global ecology of waste make visible what is at the two ends of the industrial chains that have built the era that geologists have christened the "Anthropocene" (see Kara, this volume). That term is problematic insofar as it suggests that the Anthropos is a unified planetary force, when in fact such a unity is neither given nor pre-destined, but built from the ground up through social bonds, mechanical parts, combustive agents, relations forged between metal and fuel, ship and wind, crown and capital, cross and skin, image and spectacle. The cloud technologies enabling digitalization are no different in principle from carbon capitalism itself, a system in which systemic interdependencies are obfuscated in favor of the spectacle of the modern subject, state, or humanity itself. If carbon capitalism was built, in part, through the production of images and spectacles—pictures and motion pictures—its underside was always the effluent, the residue, and the places and people scarred by extraction and disposal.

Jennifer Baichwal's *Manufactured Landscapes* (2006), for instance, renders visible the dependency of the image-maker—here it is landscape photographer Ed Burtynsky—on the landscapes of production and consumption he highlights in his large-format industrial landscape shots.

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By extension, they do the same with the filmmaker, Baichwal, whose task is in part to contextualize Burtynsky's work within time, space, and social relations. Candida Brady's *Trashed* (2012), and Lucy Walker's *Waste Land* (2010)—about artist Vic Muniz's project of reclaiming for art both the waste and the pickers of waste in one of the world's largest waste dumps outside Rio de Janeiro—both document the terminal end of the production cycle in its material and social aspects. The latter include those who scrape out a living amidst the toxic debris the rest of us leave behind. Films like *Crude* (Joe Berlinger, 2009), *GasLand* (Josh Fox, 2010), *Flow: For Love of Water* (Irena Salina, 2008), *Petropolis* (Peter Mettler, 2009), *Big Men* (Rachel Boynton, 2012), and digital experiments like the interactive documentary *Offshore* (Brenda Longfellow, 2014) and the "documentary game" *Fort McMoney* (David Dufresne, 2013) document a range of relations between fossil fuel industrialism, toxicity, and the deteriorating conditions for human life in our time.

But some things are not so easily visualized. The evidence of climate change is largely statistical. Toxins are typically invisible and inaudible; they rely on expert accounts for their very knowability. To deal with this unrepresentability of the ecological crisis, eco-documentaries, as well as their fictionalized analogues, are at their best when they depict multiple temporalities and spatial scales—from the microscopic and local to the transnational and macrocosmic—and when they mix or juxtapose different narrative and vocal registers: explanatory, investigative, melodramatic, testimonial, activist, ironic, abstract, lyrical, and so on. [6] Finally, for a cinema that is not only attempting to address material dimensions of human-ecological relations, but also to reflect on its own nature as cinema—as captured, organized, and released light-heat-energymovement—the challenge is to engage with the materiality, sociality, and perceptuality of the medium itself. This means engaging with the ground from which cinema is constructed (the literal geomorphism, or material ecology, of cinema), the figures of agency in its own representation of itself and its world (the anthropomorphism, or social ecology), and the

dynamic relationality (or biomorphism) that mediates the two while rendering both of them unstable and elusive.

In an age of databases and archives, of clouds and slippery morphing images, a film made a quarter-century ago is as good an instance as any of the kind of hyper-reflexive material cinema that might serve as a measure of where we are in the history of the image. Peter Greenaway's Prospero's Books (1991) presciently depicted a world of morphic interfaces and hyperlinks, while commenting on the entirety of the "age of the world picture," as Heidegger came to call it, from its beginnings in Elizabethan England's reach across the Atlantic to cinema's subsumption into the world of the digital database. An attempted deconstruction of the Cartesian hegemony of vision, the film is a hyper-reflexive celebration of both textuality and materiality, an excessive tribute to excess that highlights the materiality of images and image-making. As I have argued in an extended reading of it (in Ecologies of the Moving Image 134-40), Prospero's Books is ultimately about the studio set in which the "age of the world picture" was performatively enacted: the "organic machine" where bodies, mechanical parts, and living organisms were choreographed to produce the images that have captivated us and that unravel in that very choreography. Its Prospero might be a Promethean figure standing in for the Anthropos who is at the center of the Anthroposcene, the exiled figure of Man the manipulator, the craftsman, the magician, the creator in concert with his creation, yet destined to stand apart and alienated from that creation. But his Prometheanism is gentle, humorous, and ultimately overtaken by the narrative and imagistic creativity he himself unleashes.[7]

As environmental historian Jason W. Moore has forcefully argued, the Anthropocene is more usefully figured as the Capitalocene, a capitalist "world-ecology" that others have called the "Homogenocene" for its homogenizing of biological differences. To understand how cinema might make its way into a post-carbon, post-Capitalocene world, we

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need to remember that cinematic communication is communication, and that, as Charles S. Peirce and the field he posthumously founded—biosemiotics—have insisted, communication is not anything peculiar to the Anthropos. We live in a communicative universe, a universe of relations always in process, as A.N. Whitehead would have it, between subjects-in-the-making and objects-given-to-that-making.[8]

For a subject to be made, there must be semiosis. The universe is brimming with the making of meaning; it is a biosemiotic cosmos. And among the meanings that are made for creatures like us are meanings of worldness, in which possibilities for future worlds are entertained, thought and felt, played and worked with, responded to and realized. Cinema is the making of worlds and the taking on of those worlds, in limited ways but in ways that allow us to change the shared worlds we create together. As we seek for the contours of a post-carbon cinema, cinema's creative possibilities remain interminably open.

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Notes

- [1] This is the process-relational language I develop in my book *Ecologies* of the Moving Image. This chapter includes modified segments of that book's concluding section.
- [2] For instance, "slow cinema," like the slow food movement, may constitute one way of refusing the insatiable imperatives of capitalist modulation. As its critics point out, it may be a way that appeals primarily to a bourgeois-bohemian connoisseurial class of cinephiles, an aesthetic for those with the time and ability to luxuriate in the pleasures of art films. But slowness offers its own powers of morphing, especially when used judiciously in combination with other narrative and aesthetic modes.
- [3] There are innumerable examples of these clips, but see for example the video "Unbelievable Starlings" by YouTube user "Matt."
- [4] Whitehead's philosophy is finding a renaissance among scholars interested in these animate, experiential dimensions of social life. See, e.g., Shaviro, *Without Criteria*; Gasill and Nocek; Ivakhiv, "Beatnik Brothers?" [5] This is a point Bozak drives home repeatedly and evocatively. For instance,

the sun provides the light which inscribes the latent image upon the properly sensitized support surface, but it is also the source of the fuel that energizes the prime movers involved in producing, distributing, and then viewing the final product; this could include any number of projector motors, electrical generators, or lighting gear as well as any plugged-in components—monitors, laptops, DVD players, modems—used along the way. The sun is

The Art of Morphogenesis

so intractably entrenched in industrial culture that narrating the entirety of its trajectory up to this moment is succinctly and easily accomplished by simply evoking the medium of film; opening a camera's aperture and randomly trapping and thus fossilizing a fragment of light is all that is necessary in order to gain a purchase on what has become the Anthropocene epoch. (30)

- [6] Karl Schoonover incisively discusses some of these variables in "Documentaries without Documents? Ecocinema and the Toxic." Bozak's *The Cinematic Footprint* is also required reading on this topic.
- [7] Greenaway's three-part *Tulse Luper Suitcases* project (2003-4) is an even more ambitious attempt to engage with issues of representation, narrative, and energy, in this case the history of uranium and nuclear energy.
- [8] On biosemiotics, see Romanini and Fernandez; Hoffmeyer.



6.2 Anthropocenema: Cinema in the Age of Mass Extinctions

BY SELMIN KARA

Alfonso Cuarón's sci-fi thriller *Gravity* (2013) introduced to the big screen a quintessentially 21st-century villain: space debris. The spectacle of high-velocity 3D detritus raging past terror-struck, puny-looking astronauts stranded in space turned the Earth's orbit into not only a site of horror but also a wasteland of hyperobjects, [1] with discarded electronics and satellite parts threatening everything that lies in the path of their ballistic whirl (see Figure 1). While the film made no environmental commentary on the long-term effect of space debris on communication systems or the broader ecological problem of long-lasting waste materials, it nevertheless projected a harrowing vision of technological breakdown, which found a thrilling articulation in the projectile aesthetics of stereoscopic cinema.

In the same year, techno-industrial waste made another center-stage appearance in South Korean filmmaker Bong Joon-ho's international sci-fi film *Snowpiercer* (2013), this time as an anarchic agent of revolution. *Snowpiercer* depicts the class struggles among the survivors of an accidental ice age triggered by a human experiment aimed at counteracting global warming, but which left the remnants of humanity confined to the claustrophobic space of a train ceaselessly circling the globe. The cruelty

of the technofixes put in effect in order to maintain the carefully bioengineered mini-ecosystem on board the train eventually lead to a revolt. The revolutionary cause calls for extreme measures, thus prompting one of the main characters to fashion a bomb out of the highly addictive and also highly combustible drug Kronol, which is made of industrial waste. The bomb annihilates (almost) everyone aboard the train—which is to say: nearly all of humanity.



Figure 1 – Space debris as 21st-century villain in GRAVITY (2013)

What seems to be common to the imaginations of hyper-scale waste—or "waste fantasies" (Lynch)—in these two films is a contemporary aesthetic reminiscent of accelerationism, which as a critical strategy in the realm of art refers to the attempted intensification and creative destruction of the conditions of global neoliberal capitalism by stretching it to (and ideally beyond) its limits. But if there are any accelerationist undertones in *Gravity* and *Snowpiercer*, they do not serve a clearly critical agenda, thus recalling the manner in which Steven Shaviro frames the accelerationist aesthetics of films like Mark Neveldine and Brian Taylor's *Gamer* or Alex Cox's *I'm a Juvenile Delinquent, Jail Me!* ("Accelerationist"). Shaviro argues that accelerationist art today works best when it does not claim

a political efficacy, since "[i]ntensifying the horrors of contemporary capitalism does not lead them to explode; but it does offer us a kind of satisfaction and relief, by telling us that we have finally hit bottom, finally realized the worst." The depictions of acceleration in Gravity and Snowpiercer (the audiovisual intensification provided by the dizzying orbits of space debris and a high-speed train, both leading to spectacles of destruction) are pleasurable precisely in this non-cathartic manner. They stretch environmental threats to their limits, yet their final acts offer no closure or definite salvation for the characters or for humanity. Instead of focusing on the films' accelerationist tendencies in this chapter, however, I would like to locate in them an alternative or concomitant aesthetic—an aesthetic of disposal, perhaps—one that sees in waste not just a new cinematic object but an event, consequently marking a shift in post-cinema towards new formulations of time and space brought about by the becoming-cinematic of the Anthropocene imaginary.

The concept of the Anthropocene has steadily gained traction over the past decade. It refers to the idea that human activities since the Industrial Revolution have led the Earth into a new geological epoch, in which humankind has played a decisive role in radically reshaping the world's ecosystems, the biosphere, and even the geological record itself. The term was first coined (and largely forgotten) in the 1980s, only to be resurrected in 2000 by a group of scientists that included Paul Crutzen, Nobel laureate in atmospheric chemistry and Vice Chair of IGBP (International Geosphere-Biosphere Programme). With the efforts of global-change research programs like IGBP and IHDP (the International Human Dimensions Programme on Global Environmental Change), the concept was quickly adopted in scientific literature as well as in the humanities, giving researchers and scholars a common platform to discuss issues like global warming, environmental change, the acidification of the oceans, and the accelerating pace of anthropogenic (human-caused) mass extinctions.

The proliferation of films with ecological disaster and extinction narratives in recent years suggests that the Anthropocene might also signal a new epoch in the ecology and temporality of cinema. Through the aid of new technologies and CGI, films increasingly stretch the boundaries of cinematic time and space across deep pasts, vast futures, and previously unmappable topographies in order to project visions of humanity under constant threat by factors of its own making—including those "hyperobjects" which now outscale and will long outlast us. The imaginations of waste in *Gravity* and *Snowpiercer* are distinctive in this regard, in that they take up one of the most paradigmatic and troubling products of anthropogenic activity, and recycle its effects to make us consider cinema's own threatened status in an age in which the traditional forms and technologies that we associate with film have become disposable or at least easily replaceable by emerging media.

The Right of Disposal

In *Gravity*, the portrayal of massively distributed space waste offers little philosophical or ecological insight into the extent of human influence on Earth and outer space. Instead, Mission Control explains it as the side effect of the Russians' intentionally shooting down one of their own satellites, which has apparently "gone bad." This prompts Lieutenant Matt Kowalski, played by George Clooney, to immediately affirm the situation as the Russians' "right of disposal," suggesting that he understands discarding defunct devices in the orbital region as a standard procedure. What is not so clear in the brief exchange between Mission Control and Kowalski is the appropriate response to the effects of space disposals: whether or not there are also standard procedures put in place for waste management.

The film's science advisor Kevin Grazier acknowledges that the space debris chain-reaction story was based on the so-called Kessler Syndrome (O'Callaghan), a scenario proposed by NASA scientist

Donald J. Kessler in 1978, stipulating that expired satellites and other space junk are bound to accumulate over time until cascading or chain collisions are inevitable.[2] Kessler himself appeared in the 2012 documentary Space Junk 3D, which sought to raise awareness about the growing problem of space debris. In contrast with the IMAX documentary, however, Gravity never questions the alleged inevitability of the scenario or its implications for the future, including the potential to render satellite connections, GPS systems, weather forecasts, and space exploration impossible for several generations. What prevails is a disaster film aesthetic that objectifies debris as side effect and spectacle. Computer-generated shards of techno-military hubris expand and collide in a perfect storm, making the film as much about the affect that the hyperrealism of this digital onslaught projects onto the bodies of the characters and the film's viewers (this affect itself perhaps a massively distributed hyperobject) as it is about the somewhat melancholic survival story in the backdrop of the minimal narrative. However, an afterthought—or an after-affect—lingers once the protagonist manages to find her way back to the Earth, and the cloud of debris is left to drift aimlessly in the geostationary orbit offscreen and away from the sight and psyche of the spectator. Instead of offering a clear resolution, Cuarón's peculiar ending to the film hints at a contamination of consciousness with hyper-waste's drifting yet haunting presence, granting a cinematic resonance to environmental scholar Myra Hird's statement, "Waste doesn't really go away—it flows over time and through space" (105).

Gravity's presumably triumphant final sequence shows the protagonist, astronaut Dr. Ryan Stone (played by Sandra Bullock), re-entering the atmosphere and finding the Earth in an edenic, almost primordial state. After freeing herself from the Shenzou escape pod that is submerged in the lake, she swims to the shallow edge and pulls herself up onto red rocks and mud (see Figure 2).



Figure 2 – Emerging from the "primordial soup"

After a couple of trials, she succeeds in standing upright, which symbolizes her regained will to survive and evokes the primal scene of evolution. As the director describes in an interview:

She's in these murky waters almost like an amniotic fluid or a primordial soup. In which you see amphibians swimming. She crawls out of the water, not unlike early creatures in evolution. And then she goes on all fours. And after going on all fours she's a bit curved until she is completely erect. It was the evolution of life in one, quick shot. (Woerner)[3]

This reference to evolution and primordial times is significant in that the resolution of the narrative seems to involve an imaginary rewinding of civilization, rather than a more predictable ending in which Dr. Ryan Stone reaffirms or reclaims the life she left back home. Her survival is represented through a retreat, metaphorically, to the image of an almost nonhuman world, in which numerous factors that might lead the viewer

to hold onto the anxiety of technological breakdown have been erased, including the traces of humanity itself. While such an ending encourages a survival-of-the-fittest Darwinian interpretation, it also associates the threat of technological breakdown with the threat posed more generally by "the human imprint" (Steffen et al. 842). Consequently, waste constitutes the exemplary abject object, easily and intentionally discarded from the narrative, but eliminable from the psyche only through a complete reboot of humanity.

Yet the final sequence also speaks to the liminal spatio-temporality of waste. In *Waste: A Philosophy of Things*, William Viney states that waste is always a product of time: "Since the advent of waste occurs in and through time, it provides us with an event that marks, measures, and transforms duration" (33). What Viney describes here is the duration involved in the process of decaying matter: when things get disposed, they slowly degenerate. However, Viney also addresses waste in the form of tools that no longer function and get discarded (invoking Heidegger's analysis of the broken hammer), arguing that the failure of equipment discloses our existential relation with space, time, and being-in-the-world: "The advent of waste puts objects at a threshold by which pre-existing structures of meaning are called forth to expose their fragility." (37) The chain reaction triggered by discarded electronics in *Gravity* points to a similar breach of threshold, existential crisis, or spatio-temporal disorientation.

While space debris is presented as the side effect of programmatic disposal, the astronauts and the spectator find themselves displaced amidst a chaotic whirl and grand-scale disintegration of matter, the beginning and end points of which cannot be clearly discerned. The closest reference point, the space junk's foreseeable destination, is perhaps the farthest from human grasp and imagination; the waste that leaves the filmic frame is set to travel indefinitely in the vast stretches of cosmic space and time (thus giving offscreen space a cosmic spatio-temporality that defies easy representation).

However, it is equally difficult to imagine the point of origin of the satellite debris' waste-event. The dysfunctional and discarded materials of the Russian satellite only constitute waste within the broader trajectory of space technologies' planned obsolescence that preconditions their disposal. The emergence of international organizations like the Inter-Agency Space Debris Coordination Committee (IADC), the establishment of standard procedures for mitigating orbital debris, and the demarcation of zones known as the graveyard or junk orbit underscore the fact that space waste is now a well-recognized and highly regulated phenomenon. With regard to the Kessler scenario, one can even trace the waste-event back to the 20th-century industrializationcum-militarization of space that led to the unsustainable proliferation of satellites in the first place. Lastly, though, waste in the larger context is inextricable from global neoliberal capitalism, which is predicated on "continual cycles of novelty and obsolescence" (Gabrys vii), further blurring the causal relations behind the satellite's breakdown, procedural disposal, and the ensuing side effects in the film. What the final sequence of *Gravity* seems to suggest, through a return to the trope of evolution, is that the temporality of waste might even be linked more basically to the emergence and evolution of humans on Earth, therefore measuring it at a geological scale. Here, waste ceases to be merely an object and emerges as a threshold event that informs the conception of time and space in cinema (especially in relation to their geological reconfiguration). [4]

In this sense, *Gravity*'s tropes belong decisively to the Anthropocene imaginary of the 21st century. Growing ecological threats like global warming have made us increasingly aware of the accelerating rate of extinctions and the instability of our biosphere, now seemingly on an inevitable collision course with civilization. To echo Timothy Morton and Bruno Latour, our future self-annihilation is no longer viewed as hypothetical, and its invocation is not merely apocalyptic sensationalism; what used to be regarded as fictional end-of-the-world scenarios have

become fact-based speculations on the foreseeable consequences of the Anthropocene. A common response to this quandary, on the part of scientists and scholars, has been the attempt to imagine a time before or after the Anthropocene, a time in which humans could or would have evolved differently, although the effort often turns into a thought experiment that imagines a time without humans (Colebrook). *Gravity*'s response to the threat of space debris by going back to "the primordial soup" or a time before civilization can be viewed in this light too. The debris chain reaction that sets in motion *Gravity*'s survival narrative is symptomatic of the broader threat that human activities pose to life on Earth as well as in outer space. The film's ending only reinforces the thrust of this anthropocenematic imaginary; it tries to undo the terror experienced by the characters and the film's viewers by going back to a romanticized image of pre-human times and ecologies.

Mitigating the Anthropocene: Primordigital Cinema

The concept of Anthropocenema, which I propose as a neologism to think about cinema in the age of the Anthropocene, builds upon the idea of "primordigital cinema," a framework that Richard Grusin and I suggested in 2012 to account for the atavistic tendency in 21st-century film to return to pre-human temporalities and pre-digital aesthetics. Focusing on a cluster of films including *The Tree of Life* (2011) and *Beasts* of the Southern Wild (2012), my own research within this framework attributed the tendency to an emerging speculative aesthetic in postcinema. More specifically, by looking at these two films' blending of analog and digital filmmaking to stretch cinema's temporal imagination over primordial and post-extinction realities, I have argued that such films suggest a different type of atavism (Kara), one that locates in the tropes of primordiality (the origin of all origins) and extinction (the ultimate obsolescence) articulations of our contemporary anxieties regarding the finitude of human life on Earth. These articulations resonate with the speculative realist movement in philosophy, as well as with the changing notions of cinematic realism in the digital era.

Initially proposed by four theorists (Ray Brassier, Quentin Meillassoux, Iain Hamilton Grant, and Graham Harman) at a conference in 2007, speculative realism (or SR) was born in the midst of global ecological crisis as well as scientific advances in fields like neuroscience and physics that challenged continental philosophy's traditional commitments to an anthropocentric approach to reality. What the SR movement under anthropocentricism—or "correlationism" Meillassoux's widely adopted formulation—was the way philosophy retreated into a "quarantine mentality" in the contemporary era, isolating theories of human access to reality and engaging only with epistemic questions concerning subject-object relations at the expense of broader theories of reality (which might also broach questions of object-object relations) (Harman 18). As an alternative, the four SR theorists called for a (re)turn to object-oriented and realist (as opposed to transcendentalist) forms of philosophy, including metaphysical positions that took objects or matter as their basis, and sought to rethink the world in relation to the cosmos described by scientific thought (Bryant; Srnicek; and Harman).

More specifically, Meillassoux and Brassier called for a radicalization of philosophy such that one of its central tasks becomes a speculative approach to realities falling outside the perceptual and epistemological reach of humanity. This meant confronting the "irremediable realism"[5] of a universe that not only exists in-itself but, potentially, without humans. As Eugene Thacker, whose work is loosely associated with that of the speculative realists, suggests:

While we can never experience the world-in-itself, we seem to be almost fatalistically drawn to it, perhaps as a limit that defines who we are as human beings. Let us call this spectral and speculative world *the world-without-us*. (5)

In this respect, primordiality and extinction emerged as natural entry points to speculative thought, since the realities of these two

temporalities predate and supersede humanity. [6] Significantly, we see a similarly speculative engagement with and renewed interest in these two temporalities in post-cinema. A brief analysis of the evocations of extinction and evolution in films like *The Tree of Life* and *Beasts of the Southern Wild* might be useful here in underscoring the persistence of these tropes in *Gravity* and *Snowpiercer*.

At first glance, *The Tree of Life* and *Beasts of the Southern Wild* evoke a nostalgic/atavistic return to photographic realism's humanistic vision: they are both shot predominantly on analog film and feature masterful cinematography of a type that appears almost obsolete in the age of CGI. Yet, both films also feature digitally composited sequences that point to a non-indexical, speculative realism by referencing evolutionary biology and cosmic origins at crucial plot points. The films' particular blend of "realisms"—photographic/indexical and speculative/algorithmic—creates an object-oriented aesthetic that responds to contemporary anxieties about the finitude of human life on earth while resisting the privileging of anthropocentric approaches.

In a twenty-minute montage sequence, Terrence Malick's period piece on a family's emotional struggle with the death of their son takes a detour to depict the creation of the universe and primordial forms of life on earth leading up to the dinosaurs. The sequence opens with the grieving mother's voiceover, pleading to God. "Lord, why?" she asks, "Where were you?" There seems to be a (troublingly gendered) nature vs. grace tension between the characters in the film, in which the mother, with her connection to God, represents the way of grace. She is nurturing, compassionate, and spiritual, unlike her second son Jack and her husband, who represent nature's more merciless, competitive, and volatile forces. Her voiceover is coupled with footage of "lumia compositions" (a name given these images by light artist Thomas Wilfred, whose work features experimental light effects) recalling the third verse of the Book of Genesis, "Let there be Light" (see Figure 3).



Figure 3 – Cosmic "lumia compositions" in THE TREE OF LIFE (2011)

However, instead of continuing the religious symbolism, the sequence suddenly takes on a scientific look with digitally enhanced images of nebulas, Hubble photographs, volcanoes, and early life forms, culminating with the arrival of CGI dinosaurs (see Figure 4). The sequence, then, answers the mother's question from the perspective of evolutionary biology, suggesting that death is an inextricable part of nature. However, this is an answer only in the dialogical sense; instead of dismissing the spiritual, the incorporation of scientific imagery helps bracket the question of death's purpose between the two human-centered epistemologies that are operative here: eschatology and thanatology. When interpreted as such, the sequence is an elaborative re-articulation of the film's title: it simultaneously alludes to both the biblical tree of life, provided as an explanation for the origins of humanity in the Book of Genesis, and to Darwin's treatise on *The Origins* of Species. The tension between the eschatological and thanatological explanations for the necessity of death is never resolved in the film. Malick's 2007 screenplay hints that the montage sequence's final images—featuring a dinosaur showing compassion to another wounded dinosaur—represent

the first signs of maternal love and care among animals, which indicates a return to the theological "way of grace" and the POV of the mother at the end (a suggestion that is once again troubling in terms of its essentialist approach to gender and evolution).



Figure 4 - CGI dinosaurs as mediators of eschatology and thanatology

This circular or back-and-forth movement suggests the possibility of a third framework, which might provide an explanation for death: the cosmological. Here, I use the term cosmology not in a sense antithetical to eschatology and thanatology, since these knowledge systems have their own (subject-oriented) cosmologies too, but to suggest a non-correlationist, object-oriented framework that incorporates scientific and metaphysical explanations in order to articulate cosmic relations.

In his discussion of Lars von Trier's *Melancholia* (2011), Steven Shaviro speaks of recent films that connect events of cosmic significance—such as the end of the world, extinction, or cosmic catastrophe—with personal

experience as "cosmological drama" ("Melancholia"). He ties the interest in cosmological perspectives directly to post-cinematic affect, which he defines in terms of the "structures of feeling" (in Raymond Williams's term) that have emerged with global capitalism and the artistic/cultural responses to it. *Melancholia*'s cosmological drama foregrounds the apathy surrounding Western white bourgeois privilege, for example, representing a structure of feeling that Lars von Trier's work often crystallizes, in which all alternative political options and the future itself appear exhausted in and by capitalism (or capitalism-induced depression).

The Tree of Life is also a cosmological drama in that it connects the familial experience of human loss and mourning with supra-human cosmic realities (such as the big bang and the extinction of species). Although Shaviro himself has mentioned The Tree of Life's affective import to be much less noteworthy than Melancholia (via his blog and Twitter), the film nevertheless speaks to contemporary (ontological) anxieties related to our knowledge about the possibility of extinction, which brings death and finitude back to the surface of consciousness. These anxieties might be understood as a form of shared affect too, if not as a structure of feeling. (As a filmmaker who often includes references to philosophy in his films, Malick seems better at engaging with ontological questions than with political ones). In other words, it might be less reductive to argue that Malick's film is a cosmological drama only insofar as cosmology is understood as a speculative approach. It would seem that through cosmology, The Tree of Life intensifies, rather than resolves, the tension between the competing knowledge systems (eschatology and thanatology) that provide an explanation for death.

Whereas this cosmological perspective is focused through images of computer-generated dinosaurs in *Tree of Life*, Benh Zeitlin's *Beasts of the Southern Wild*, dealing with a little girl's battle for survival amidst rising waters in the Louisiana bayou and her father's impending death, turns its gaze towards another extinct species: the aurochs (see Figure 5).



Figure 5 – Bearing witness to extinction in BEASTS OF THE SOUTHERN WILD (2012)

More specifically, the protagonist Hushpuppy (played by Quvenzhané Wallis) establishes a connection between her personal grief and the imagined struggles of a species going extinct in order to cope with the rapidly deteriorating social reality around her. Although the affective logic of the film is different from that of The Tree of Life, since Hushpuppy's grief not only concerns the past (and the absence of her mother) but is also anticipatory (hers is a proleptic elegy in the sense that she mourns the death of her father and the demise of her community due to climate change before these events have actually happened or fully taken effect), both films reflect a common cosmological or primordigital aesthetic. They do so by featuring characters that try to come to terms with death and human loss by imagining a world in which humanity either hasn't emerged yet or is threatened by extinction. This primordigital aesthetic, which combines analog and digital realisms to represent realities that belong to non-human as well as pre/post-cinematic temporalities, effectively makes cinema witness to realities without a witness—and is thus

suggestive of something akin to the cinematic equivalent of a speculative realist sensibility. Ultimately, the two films establish a parallelism between extinct prehistoric creatures and mournful human characters, pointing to a shift in post-cinema's approach to our existential temporality.

Mourning, Melancholia, and Damsels in Existential Distress

Cuarón's reference to evolution at the end of *Gravity* is quite poignant in this context. In a certain sense, the melancholic narrative that anchors the film's 3D spectacle bears a striking resemblance to that of *The Tree of* Life. Much like The Tree of Life's mother figure Mrs. O'Brien, Gravity's Ryan Stone is a mother mourning the death of her child and struggling with personal loss—of purpose, faith,[7] and meaning, qualifying the film as another example of cosmological drama without an overt political edge. Stone's loss gets mapped onto the cosmic battle against (what seems on the surface to be) the onslaught of space debris in a minimal gravity environment, [8] resulting eventually in her return to a consoling vision of evolution. Since space is a topography every bit as nonhuman as that of the primordial Earth, the film's setting has a sobering and destabilizing effect; it makes human life seem fragile and of relative significance thus bringing Cuarón's vision close to Malick's.[9] However, instead of returning to the universe's origin, Cuarón embeds the drama of human loss and survival within the broad ecology and slow temporality of evolution that led to the emergence of modern humans (associated, in a quick leap, with the anthropogenic pollution of space), thus pointing more directly to an Anthropocene imaginary marked by geological as well as cosmological time. One can find a relapse to anthropocentricism in this particular choice; yet, what it foregrounds is species-thinking (with evolution reconfiguring humans as only one species among many), therefore having a similar leveling impact on our understanding of humanity's imprint on Earth.

Stepping back now to look synoptically at the diverse examples considered so far, what we see is three common traits: a new type of post-cinematic

aesthetic realism that draws from speculative and realist ontologies; a rising interest in the tropes of extinction, primordiality, and epochal temporalities that have their own ecologies; and, significantly, a shifting of the narrative point of view to female characters. This shift towards female-centered narratives is worthy of further attention here as the evocations of speculative, realist, or object-oriented visions in cinema seem to increasingly rely on women to reflect and anchor contemporary responses to post-gender or species-based articulations of humanity. In doing so, they simultaneously resurrect and reinforce essentialist gender stereotypes and provide a murky terrain, a ground on which a digitally empowered feminism struggles to find a footing (to use the final scene of *Gravity* as a metaphor). The uncertainty of these attempts seems to stem from post-cinema's own confusion about the role of gender in imaginations of the Anthropocene.

Femininity in post-cinema is often essentialized and pathologized, especially with regard to the association of women with motherhood, nurturing, caretaking, and grace's way, as well as with frailty, depression, and hysteric subjectivity—as in Melancholia and Gravity. Melancholia's sister protagonists show signs of chronic depression and severe psychosomatic effects; Gravity's Dr. Stone's debilitating grief-induced depression is coupled with panic attack-like reactions to the satellite debris; The Tree of Life's Mrs. O'Brien is mostly a pre-feminist era maternal archetype, shot from behind with the breeze wafting the skirt of her iconic period wear; and Beasts of the Southern Wild is populated with a series of nurturing and maternal female characters, including the women Hushpuppy encounters on a floating brothel. From this vantage point, the films appear to project highly regressive and troubling models of femininity, especially in relation to contemporary approaches in feminism, which have since the 1990s shifted their attention from discussions of gender to broader questions about agency and the relationality of bodies and matter.[10] Here, relationality is the key word, since it resists lingering on the binary or exclusive constructions

of gender when talking about bodies, focusing instead on affect as something impersonal that runs through both organic and inorganic bodies and matter, highlighting aspects of experience often ignored in frameworks such as speculative realism and object-oriented-ontology (Bennett; Sheldon). Directors such as Alfonso Cuarón and Lars von Trier occasionally gesture in interviews towards a feminist or at least post-masculinist sensitivity by commenting on how female characters allow them to move away from "macho heroism" (Hill), providing the opportunity to focus on affect rather than masculinist techno-capitalism's ability to save the day in times of societal, economic, and ecological crises. The resulting affect-oriented narratives foregrounding mourning, melancholia, and intentional (yet ambivalently articulated) diversion from male heroics also resonate with certain contemporary models of feminist ethics, such as "post-masculinist rationality," a type of minimal ethics that acknowledges the uncertainties of things we cannot control instead of masculinist bravery (Zylinska 15), or an "ethic of vulnerability," which involves a recognition of the agencies of nature and of nonhuman actors to affect us (Hird).

However, such ethical stances in these films get problematically mapped onto women's bodies or are attributed exclusively to female characters instead of portraying in them a possibility for all. The result of producing narratives in such a gendered matrix is that women in these films appear as new versions of their old stereotyped selves, as damsels in existential distress, or the archetypal "mother as matter," suggesting a return to the traditional configuration of human-nature relationships through the figure of the mother. For example, the hysteric vulnerability that Cuarón imputes to Sandra Bullock's character provokes deeply ambivalent reactions: it is both troubling in terms of her portrayal as a familiar damsel in distress figure (now in space), and refreshing as a disavowal of an aggressive environmental politics that responds to ecological threats with destructive technofixes (often associated with masculinity and colonial attitudes).

Melancholia can be contextualized within an aesthetics of vulnerability too, as both the film's critique of apathetic white bourgeois culture and the two female characters' eventual conscious resignation to the impending extinction of humanity (as opposed to a futile attempt to fight against it) bear witness to a distinctive passivity and disavowal of masculinist responses. This disavowal is rendered explicit by Claire's husband's suicide prior to the planetary collision, whereby the narrative shuts off the bourgeois male subjectivity's desire to save the day. As Lars von Trier states, "when the earth is ready to crumble between our fingers, whatever we do in the way of heroic conquests or petty family squabbles doesn't matter" (Carlsen). Interestingly, the filmmaker suggests that the affect of melancholia, as a form of vulnerability, can become a powerful tool vis-à-vis absolute crisis: "depressives and melancholics act more calmly in violent situations, while 'ordinary, happy' people are more apt to panic. Melancholics are ready for it. They already know everything is going to hell" (Carlsen). In the final scene of the film, Claire and Justine build a "magic cave" (a makeshift shelter made out of sticks) on a hilltop and calmly await the planetary collision along with Claire's young son, turning their vulnerability into a form of poetic stillness-in-the-storm. On the one hand, their retreat to a symbolic cave in the final act can be interpreted as another psychic return to the pre-Anthropocene (a kind of paleolithic imaginary reminiscent of the geological temporality of the primordial). However, the critical potential of the scene lies in its suggestion of the possibility to imagine an alternative politics of life in the Anthropocene, albeit one that requires significant interpretive effort by the spectator, since the retreat can also be viewed as a regression to a traditional scene of domesticity with the emphasis on familial bonding. Once again, it is not clear whether the story is simply following a "postfeminist script of retreatism" (Tasker and Negra 269), according to which many contemporary films with female protagonists involve a fantasy of returning to domestic roles, or whether it might point to "transcorporeality"—a form of embodiment in "which the human is always intermeshed with the more-than-human world" (Alaimo 2)—thus transgressing formulaic gender inscriptions.

What can be said about a cinema of Anthropocene womanhood, then, is that it allows room, perhaps mostly unintentionally, for subversive interpretations. Brad Evans and Julian Reid argue that in the age of the Anthropocene, the modern figure for political embodiment, Leviathan, has been displaced by Antigone: a mourning female who embodies the vulnerability and existential terror of our times. In addition to the classical text of Antigone, Evans and Reid suggest Peter Sloterdijk's atmospheric politics as an influential text for an ecologically sensitive political model of vulnerability. Like Hird, Sloterdijk claims that acting precariously or vulnerably can be a powerful political choice and a responsible form of "weathering" existence (Evans and Reid 124). While not everyone would agree The Tree of Life's Mrs. O'Brien, Beasts of the Southern Wild's Hushpuppy, Gravity's Ryan Stone, and Melancholia's Claire and Justine could serve as strong models for a politically charged vulnerability in post-cinema (each of them can be critiqued for their formulaic attributes), their mourning and melancholia envelop us and inadvertently deliver to our psyches a 21st-century version of Antigone's dread, which itself holds promise in these precarious times.

Cinema Knows It

The extinction discourses permeating these film narratives reflect our contemporary anxieties. The proliferation of films that foray into tropes of deep space and time (both pre- and post-Anthropocene) points to the fact that we can now speak of an Anthropocenema proper, which is as much a product of new filmic technologies of post-cinema as it is a portrayal of the catastrophic impacts of human geo-engineering. In his analysis of films including *The Edge of Tomorrow* (2014) and *Only Lovers Left Alive* (2013), McKenzie Wark alludes to the emergence of the form, referring to films with narratives about humanity "confronting limits of its own making" and adds:

Cinema knows it. One of the things cinema is there for is to find some kind of *objective correlative* for feelings that can't be

acknowledged. Maybe cinema is not about desire at all, or even anxiety. Maybe it is about seduction, of turning us aside from unacknowledged feelings, and slipping us into worlds of objects and relations that displace those feelings onto something else. Thus: perhaps all cinema is now about the Anthropocene. It's all about a sense that this is not a *Never Ending Story*. (Wark)

In this formulation, a cinema of the Anthropocene is understood as a cinema for the Anthropocene; rather than focusing on the causes of our ecological demise, which often go unmentioned, Anthropocenema brings us face to face with the effects of the so-called Epoch of Man, including the possibility of a total ecosystemic collapse or human self-annihilation. In this context, Wark interprets *Gravity* as a film "for" the Anthropocene, as a sort of flight simulator for the Anthropocene that imagines how we might survive it. Dr. Ryan finds a way out of disaster through her return to earth and rebirth on the shore. Here, Wark's take differs from mine in that he does not find a lingering after-effect in the hyperwaste's haunting offscreen drift or a self-effacing ambiguity in the final evolution sequence. Perhaps one can read Christopher Nolan's Interstellar (2014) in this fashion too. On the one hand, it serves almost too literally as a flight simulator for the Anthropocene; Matthew McConaughey's character, NASA pilot Cooper, achieves a masculinist victory over the threat of extinction by successfully exploring exo-planets and securing the survival of humanity. Yet, the haunting image of the species-threatening dust-winds (reminiscent of the iconic Dust Bowl) back on Earth and the deserted planet in the end leave a lingering after-thought that denies total catharsis. But if Wark and I differ on these points, such variation only strengthens the argument that cinema is now producing rich narratives in, of, and for our contemporary geological epoch.

With a somewhat different inflection, Mohammad Salemy sees in the cinema of the Anthropocene a deviation or liberation from 20th-century cinema's complicity with terminal capitalism:

The 20th century witnessed how human-centered cinema followed and caught up with our older ambition for rapid and accelerated industrialization. Thus the resurrection of cinema and its digital and networked offspring from death must involve saving them from their humanistic essence. Like nature, they need to be rescued from the domain of man and freed from his short-circuited feedback loop that ties every film—if not every piece of media, its beginning, and its end, to humans.

Salemy's framework is striking in that it also acknowledges cinema's anxieties over its own possible extinction. A cinema of the Anthropocene has to "resurrect" cinema from a death caused by terminal capitalism and the rapid shifts in technology that impose upon it increasingly accelerated cycles of obsolescence. If cinema was once what relocated the old arts, "leading them out of a bottleneck in which they would otherwise risk extinction" (Casetti), it is now being pushed to the periphery of cultural production or itself relocated by emerging media and networks, risking obsolescence. The waste fantasies in films like Gravity are poignant in this context, as the becoming-waste of a no longer needed satellite—the no longer relevant technology reconfigured as waste, as something other than itself—is a powerful metaphor for the possible future that awaits cinema, thus conjoining ecological and self-reflexive implications. Of course, cinema has always been concerned about its becoming-defunct status vis-a-vis emerging media, as Paul Young demonstrates in his book on "media fantasy films," The Cinema Dreams Its Rivals. In response to an earlier version of this chapter presented at a conference, Stephen Rust brought up Young's work and insightfully suggested that if we are to establish a link between waste and post-cinema, then "we might consider that cinema has always been postcinema in its imagination—or, perhaps better . . . that cinema has always been a cinema of waste" (Rust).

Additionally, scholars like Nick Mirzoeff and Janet Walker theorize the aesthetics and representations of the Anthropocene. Mirzoeff looks at

the ways in which "the Anthropocene-aesthetic-capitalist complex of modern visuality" has become "deeply embedded in our very sensorium and modern ways of seeing" (213), while Walker takes a media-ecological approach to the cinematic contemplations of petrocultures in films like *Dirty Energy* and *Beasts of the Southern Wild*, focusing on the deep waters and wetlands destroyed by oil spillage.[11] The distinct frameworks mentioned above point to the fact that even in its emergent state, Anthropocenema gives us a great deal to think about in terms of the diverse narrative, aesthetic, and political directions it might take in the near future.

At this point, a word of caution might be in order. Although one is tempted to move quickly among various films depicting tropes of primordiality, extinction, or ecological/cosmic realities beyond the human frame, there is a danger in conflating the distinct speculative, accelerationist, and anthropocenematic undertones in them. In an effort to move away from anthropocentric thinking, speculative ontologies often shift their attention to nonhuman temporalities, but such a focus does not always square easily with a critical interest in the impact of the social on ecology, for example (though some speculative thinkers, such as Ian Bogost and Timothy Morton, are more ecologically concerned than others). Accepting the idea that humankind has become the most powerfully destructive geological agent in the contemporary world, akin to the glacial cycles or systems of volcanism in previous epochs, ironically requires putting the human subject back at the center of thought (even if it is viewed as deeply entangled with a universe of objects); such a reorientation sits uncomfortably, at best, with the speculative movement's priorities (such as foregrounding object-object relations).[12] Similarly, certain Anthropocene-oriented or accelerationist films might be anthropo-centric in ways that do not diminish their potential for forging new relations between bodies, matter, and politics. Therefore, it is important to resist quick labeling and to use these interpretive frameworks as entry points into a more nuanced understanding of post-cinema.

Afterthought: An Aesthetic of Disposal and Drift

As I pointed out at the beginning of this chapter, the techno-industrial waste that terrorizes the astronauts and viewers in *Gravity* makes another noteworthy appearance in Bong Joon-ho's much-anticipated CGI spectacle *Snowpiercer* (2013). Here, techno-industrial waste occupies an ambiguous role: it is both a kind of "opiate of the masses," lulling the accidental-iceage generation born on the train into docility, and at the same time, the explosive agent of revolution that eventually destroys the very system that produced it (see Figure 6).



Figure 6 – Industrial waste as opiate and revolutionary force in SNOWPIERCER (2013)

Loosely based on the French graphic novel *Le Transperceinage*, the film's mise-en-scène is evocative of techno-industrialism: humanity, or what's left of it, is tethered to a high-speed train that races ceaselessly around the globe on a circular track, powered by a perpetual-motion engine. The train functions like a carefully bio-engineered miniature ecosystem, the population of which is divided into distinct hierarchical categories, reminiscent of both

social Darwinism and Marxist class structures. The upper classes, it would seem, have no intention of trying to find a solution to the technoscience-induced ice age; instead, they merely impose further technofixes to prevent imbalances in the train's ecosystem, recalling contemporary capitalism's stopgap responses to global ecological problems. The lower classes, who reside in the tail section of the train, rise up against the oppressive regime, but their attempt to co-opt it eventually fails; the male protagonist Curtis's heroic idea of taking over the train turns out to have been anticipated all along—programmed, in fact, by the system itself, which regards the deaths occasioned by periodic revolts as an effective means of population control.

What is interesting, in this representation of a failed revolution, is the film's foregrounding of cyclicality; the narrative starts with a bleak (somewhat Dickensian) sight of humanity in the aftermath of an accident that very nearly brought about the species' extinction, only to have it go through a crueler decimation in the end. Bong states in an interview that the male protagonist's central journey "from the dark tail section to the light front section is yet another cycle" in the looping narrative of the film; "when the end and the front are linked, it establishes yet another frustration for the character" (Anders), as he is asked to take over the operation of the train, with its stifling political matrix left intact. In this context, cyclicality points to a parallelism between the mechanism of the train and the crisis logic behind neoliberal capitalism: crisis is not antithetical to the system; rather, it emerges as its modus operandi.

It is not surprising then that the techno-industrial waste has a recurring appearance as well. At the outset, everything on the train seems to be regulated through a delicate system of recycling; nothing goes to waste and everything is produced according to necessity. Yet, this only proves to be a façade; the procedures for waste management include the targeted disposal of people of the underclass, who have no access to food or amenities, while the front section classes are portrayed enjoying the excesses of the system, complete with drug-enhanced rave parties (Figures 7 and 8).



Figure 7 – Industrial waste as intoxicant of choice among the privileged classes



Figure 8 – Rave parties at the end of the world

The waste-derived drug pacifies the youth in the front sections (resonating with the contemporary fascination and intoxication of consumer capitalism, which manufactures species-threatening waste on a planetary scale), but it also helps kickstart the revolt in the tail section and ultimately leads to the destruction of the train at the end of the film. Waste is therefore a liminal object and a world-historical event, with the name Kronol evocative of *chronos*, time or duration. Its lingering or long-lasting presence, much like the satellite waste in *Gravity*, causes a spatiotemporal disorientation, a hallucinogenic effect that blurs the distinction between what is disposed of and what endures. The becoming-cinematic of waste is the becoming-cinematic of the Anthropocene's temporality; accordingly, and appropriately, the aesthetic of disposal involved in waste's cinematic representations leaves the viewer feeling profoundly adrift.

In the final act of the film, the narrative point of view shifts suddenly to a 17-year-old Kronol-addicted Korean girl, Yona, who decides to blow up the train using Kronol as a bomb, to bring about humanity's second near extinction—leaving her and a 5-year-old boy as the only survivors. Only thus, apparently, is it possible to escape the ineluctable trajectory of the system (the system of the train, of capitalism and social oppression, or of techno-industrial destruction and environmental desolation). The last scene of the film shows the female survivor Yona, standing in front of a burning train, buried in ice and snow, and looking pensively at a polar bear glancing back at her, immediately recognizable as the inevitable victim of the 21st century's already underway mass extinctions (Figures 9-11).

As in several of the films discussed in this chapter, human confrontation with extinct species (whether already extinct, soon-to-go, or about-to-come-back-to-life) is not uncommon in Anthropocenema. However, *Snowpiercer* hints at a possible reversal in the dynamics of the scenario, which evokes cosmic stakes but often focuses attention or affective energy on the human as the species that must act, or mourn, or walk away.

Anthropocenema



Figure 9 – Yona looking at extinction



Figure 10 – Facing extinction?



Figure 11 – Whose is the face of extinction?

In Yona's calm exchange of glances with the polar bear, that is, it is possible to detect the instant recognition of humanity's imminent extinction and the other species' survival, thus reversing the roles implied, presumably, in contemporary environmentalists' use of the polar bear as the poster child for global warming. The scene suggests an acknowledgement that evolution might continue without humans. Once the ice melts, the world and life might start anew, setting itself a course of its own. Or, alternately, the survivors of the train explosion (both notably nonwhite and marginalized in the Western context in terms of gender, race, and age) might manage to reboot humanity with an entirely different kind of civilization. As Dana Luciano suggests, the inhuman humanism of the Anthropocene cannot be attributed to all humans: "The contradiction that some have seen in the name of the proposed epoch—that the 'Anthropocene' was not brought about by all members of the species it names—is precisely the problem it is now up to us to solve." Perhaps cinema can speak to the histories of power that have suppressed humanisms that are still worthy of salvaging.

Or, perhaps, the next leap for Anthropocenema will be to stretch its already expanded temporal and spatial boundaries even further, and to project visions of this world entirely-without-humans.

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Notes

- [1] In Timothy Morton's formulation, *hyperobjects* refer to "things that are massively distributed in time and space relative to humans" (1), including things of the cosmic and natural order, such as black holes, the biosphere, or a vast oil field, as well as of social origin, such as the long-lasting materials used in human products, like plastic and Styrofoam, that outscale and outlast us, eventually turning into species-threatening waste.
 [2] In 2009, the syndrome reportedly made its debut when two satellites crashed over the Siberian Tundra, arguably turning Kessler's theory into a reality (Schwartz).
- [3] The script of the film also describes the scene in similar words: "She drags herself from the water, like the first amphibious life form crawling out of the primordial soup onto land."
- [4] It is worth mentioning here that evolution and waste elimination are first and foremost biological processes, related to life. However, by staging the narrative within the vast spatiotemporal reach of cosmic space and technological progress, the film establishes a link among not only biological but also industrial and geological processes—recalling the material relations articulated in the concept of the Anthropocene.
- [5] Meillassoux argues that when science makes hypothetical statements about the nature or origins of the universe, philosophers need to take these not just as assumptions without a referent or verifiable object but as a form of reality: "either this statement has a realist sense, and *only* a

realist sense, or it has no sense at all" (17).

- [6] Meillassoux's *After Finitude* inaugurated the movement by setting primordiality, or "ancestrality," as he puts it, as the benchmark for our understanding of the role of humanity or philosophy in the world, and Ray Brasier's *Nihil Unbound* argued that one could not think about the question of origins without speculating about the broader trajectory of matter, namely, the trope of extinction.
- [7] Cuarón, like Malick, does not shy away from incorporating theology into his science-driven narratives, making ample references to religious metaphors and archetypal themes like rebirth.
- [8] Notably, the geostationary satellite orbit zone does not lack gravity altogether.
- [9] The two films also share the same DP, Emmanuel Lubezki, who used to be noted for being one of the living masters of analog cinematography and its humanist aesthetic realism, yet seems to have now become the go-to figure for projects that blend analog photographic realism with cosmic-scale digital spectacle. For more on Cuarón and Lubezki, see Bruce Isaacs's contribution to this volume.
- [10] One can think here of the various iterations of ecofeminism as well as feminist new materialisms and object-oriented, post-humanist, or non-humanist feminisms that have gained popularity in recent years (see Sheldon; Barrett and Bolt; Coole and Frost; Bennett; Alaimo and Hekman; Barad).
- [11] At the 2015 Society for Cinema and Media Studies Conference in Montreal, Walker presented her research on this topic, alongside a version of the present chapter, as part of a panel titled "Cinema in/of the Anthropocene."
- [12] Though perhaps the speculative cosmology of Alfred North Whitehead, which Steven Shaviro has recently put into dialogue with speculative realism and object-oriented ontology in particular, can better accommodate both sides of the equation. See Shaviro, *Universe*.



6.3 Algorithmic Sensibility: Reflections on the Post-Perceptual Image

BY MARK B. N. HANSEN

Let me begin my exploration of the post-perceptual image with a hypothetical question: What if Gilles Deleuze had constructed his philosophy of cinema on the basis of Charles Sanders Peirce's phaneroscopic semiotics, and not Henri Bergson's ontology of pure perception? What, more specifically, would change in Deleuze's philosophy of the movement-image if he had thought the image through Peirce's understanding of signs, and not Bergson's anomalous concept of the image?

I propose this perhaps curious trajectory of exploration not out of mere academic or scholastic interest, though I would add that there is much to be learned about Deleuze's philosophy from such a comparison. Rather, I propose it because I believe that the continued relevance of, indeed necessity for, a philosophy of the movement-image in our world today hangs upon a certain coupling of the analysis of the image with a certain phenomenology, specifically with a *logical* or *objective* phenomenology that—following Peirce's governing insight—decouples appearance from

any avatar of the subject, consciousness included. With the advent of digital imaging procedures, the image has attained a certain autonomy from synthetic operations that necessarily involve human forms of perception and sensation; in a world where images self-propagate, at the level of the pixel, following purely machinic protocols, what is needed is a theory of the movement-image that detaches the intensity of the image's content from the activity of its being perceived. It is precisely such a theory that I plan to sketch in this article, by way of a critical consideration of Deleuze's complex conceptualization of the cinematic image. As shall become evident, I believe that today's digital images mark a certain break with the legacy of cinema. What is at stake in this break is nothing more nor less than the possibility for the presentation of worldly intensity—the pure quality or Firstness (following Peirce's conceptualization) of what is the case (the "phaneron")—independently of any act of perception by any being, human ones included.[1]

Deleuze and Phenomenology

Some of Deleuze's commentators have insisted on the phenomenological basis of his project. For example, in her 2015 book, Anne Dymek states that: "It is evident that the Deleuzian cinema project consists fundamentally in a phenomenology of the image. The titles, Movement-Image and Time-Image, already clearly witness the Deleuzian belief in a possibility and necessity of a phenomenological conception of the (filmic) image" (24).[2] Such a remark seems to fly in the face of Deleuze's own differentiation of Bergson from Husserl, a differentiation that effectively positions Bergson in the role of anti-phenomenologist. For Deleuze, that is, while phenomenology is always a consciousness of something, for Bergson consciousness is something. Phenomenological intentionality renders consciousness a representational faculty, one that necessarily refers to an object other than itself, whereas Bergson's account of consciousness as pure perception makes it both presentational and material: as what Bergson calls a "center of indetermination," it is a concrete selection of the matter (images) constituting reality.

While Deleuze's own purported aspiration to a Peircean phenomenology is, in my opinion, debatable,[3] I want to argue that a Peircean phenomenology provides a better basis for a philosophy of cinema—and, more to the point, for a philosophy of the post-cinematic image—than Deleuze's Bergsonist ontology. In particular, I will claim that Bergson's ontology, despite its own pretentions to monism, ends by separating the human mind from the flux of matter and, as a result, cannot avoid installing human thought as the activity of representing a reality outside of it. Because Peirce is committed to reality, or more precisely, to the reality of the "phaneron," as that which is apparent independently of what we think of it, he puts something very different on the table. Specifically, he decouples the operation of representation from any necessary connection to human thought or mind, making it, instead, a semiotic operation that, far from being separate from reality, in fact belongs to it. Thinking Deleuze with Peirce would thus involve a break from Deleuze's Bergsonism in favor of an embrace of phaneroscopic phenomenology with its fundamental postulate that appearing—the appearing of the phaneron or what is apparent—need not be an appearing to a human mind, need not be the prerogative of human thought.

Guattari and Material Intensity

Such a shift from Bergson to Peirce is imperative, as I have already announced and as I shall argue below in the second half of this chapter, for understanding the operationality of contemporary imaging. For now, let me focus on Deleuze's philosophy of the movement-image by recalling some facts about his *Cinema* volumes and their relation to his broader philosophical project—facts that will hopefully prove helpful as we pursue the thought experiment of thinking Deleuze with Peirce. *Cinema 1: The Movement-Image* was published in 1983 and its companion volume, *Cinema 2: the Time-Image*, two years later in 1985. These books constitute Deleuze's first intellectual investment following the great collaboration with Félix Guattari that yielded *Anti-Oedipus* in 1972 and *A Thousand Plateaus* in 1980. I want to single out two significant, and interrelated

implications of this situation. First, the ongoing influence of Guattari on Deleuze, an influence that (as we shall see) finds concrete expression in Deleuze's confession to the students in his 1982 seminar that rather than the cinema itself, of which he had spoken so much, what he "had had in his mind" was "a classification of images and signs" ("Classification," qtd. in Dymek 23). And second, the deep resonance of Deleuze's cinema project with the overriding aim of *Capitalism and Schizophrenia* to construct an evolutionary cosmology rooted in the expression of the "plane of consistency."

These two implications converge to the extent that it is Guattari's reading of Louis Hjelmslev's glossematics that stands behind and informs the conceptualization of the plane of consistency. Guattari turns to Hjelmslev as an alternative to Saussure: as is well-known, and in contrast to the binarism of Saussurean linguistics, glossematics works with a three-part account of sign function: an amorphous thought element named "purport"; a structure of expression named "form"; and the product of purport and form named "substance." It is the amorphous thought element of purport that appeals to Guattari for it seems to touch on what is material about the sign prior to the operation of form. As Gary Genosko points out, however, Guattari must submit Hjelmslev's "purport" to a critical modification (Genosko), for where Hjelmslev ties purport to form by conceiving it as "substance for a new form" and by linking its possibility for existence to its "being substance for one form or another," Guattari suggests that purport can be considered independently of form (Hjelmslev, qtd. in Dawkins 156). For Guattari, that is, while matter may be abstract, it is nonetheless real, and since it is real, it need not presuppose form for its expression. With Roger Dawkins, we could say that "the sign teases out of matter what is already real, yet abstract" (156).

For this reason, the plane of consistency as developed in *A Thousand Plateaus* can be understood to be a *generalization* of Guattari's attempt to locate a material element in glossematics that escapes from all pre-

existing form: like this material element, the plane of consistency operates beneath formalized contents and comprises the materiality on which any and all stratification arises. Deleuze and Guattari describe it as a kind of cosmic dance: "The most disparate of things . . . move upon [the plane of consistency]: a semiotic fragment rubs shoulders with a chemical interaction, an electron crashes into a language, a black hole captures a genetic message, a crystallization produces a passion" (Thousand, qtd. in Dawkins 157). Whatever generalization is involved in the passage from Guattari's critical appropriation of Hjelmslev to the conceptualization of the plane of consistency is per force a transformative one. For not only does it vastly broaden the scope of materiality's abstract dance prior to any formalization, but it also recasts this materiality in a fundamental way, transforming it from something closely bound up with language into something co-substantial with the movement of life as such. The "purport" at stake here is the material element, not just of thought, but of all of life, of which thought is but one mode of expression.

When Deleuze explicitly models the Bergsonist plane of movementimages, as expressed in cinema, on the plane of consistency-literally describing it as a plane of consistency—he makes a big conceptual leap. For not only does he move from the materiality of life itself to the in some sense more restricted domain of movement-images, but in so doing he cashes out a highly differentiated and heterogeneous, if still abstract, materiality in favor of a resolutely abstract and formally homogeneous modeling of matter as the flux of images. Beyond simply carrying over the fruits of his collaboration with Guattari—and specifically the generalized understanding of the priority of the material element over form—from one domain to another, Deleuze was in actuality trading in a Hjelmslev-, and, I would add, Peirce-inspired semiotics for a distinct ontology of images. That these two conceptual bases diverge in some important ways is not in question; what we must ask is whether they are in the end compatible with one another. This question of compatibility is, ultimately, the question of the coherence of Deleuze's philosophy of

cinema, and it is also the key, as we shall see below, to the potential to expand Deleuze's philosophical approach to the image in a way that can confront the image in its contemporary form.

Deleuze's Peirce

To begin to address this question, let me turn to Deleuze's deployment of Peirce. Most of the commentators who have discussed Deleuze's use of Peircean semiotics concur that it is a piecemeal one, or what I would prefer to think of as an instrumental one. Rather than taking genuine philosophical inspiration from Peirce's phaneroscopic semiotics—as he does in the case of his readings of Bergson, Nietzsche, Spinoza, Hume, Leibniz—Deleuze appears to discover in Peirce's typology of signs nothing more nor less than a scaffold for a typology of images that can be applied to his Bergsonist account of the movement-image. The fact that Deleuze consulted only a single volume of selected writings of Peirce on signs edited by Gérard Deledalle, and that he remained unaware of Peirce's contributions to phenomenology (which Peirce called phaneroscopy), serves only to make the instrumentalist nature of his deployment of Peirce more evident.

Expanding on this line of thought, let me propose that Deleuze's recourse to Peirce serves to suture the "big leap" that, as we saw above, is at stake in his characterization of the flux of movement-images constituting cinema as a plane of consistency. Recourse to Peirce's typology of signs, that is, allows Deleuze to inject difference into an ontology—Bergson's account of the movement-image in Chapter 1 of *Matter and Memory*—that is, by itself, abstract and largely undifferentiated. What results is a certain mélange of Peirce and Bergson that produces bastard offspring on several grounds. First, Deleuze's conflation of Peircean sign types with images as such cuts against Peirce's own differentiation of signs and images, or rather, his specification of three kinds of images (icon, index, symbol) as object signs. Second, and more consequentially, Deleuze reduces Peirce's phaneroscopic categories—Firstness, Secondness,

Thirdness—to three, or ultimately four, kinds of image: the affection-image, the perception-image, the action-image, and the mental- or relation-image. In so doing, Deleuze reduces what are in Peirce *categories of reality*, ultimate categories from which Peirce is able to bootstrap the very inauguration of his philosophy, to variant forms of the Bergsonist movement-image.

Deleuze's bastard mixing of Bergson and Peirce, and the bastard offspring it produces, are not in themselves a problem; indeed, Deleuze himself openly acknowledges that his semiotics of cinema does not coincide with Peirce's, and Deleuze's philosophy, as we all know so well, is everywhere characterized by the kind of transformative appropriation we see at issue here. Where this mixing does become a problem is in the incompatibility between the Bergsonist ontology of Deleuze's cinema project, and specifically of the flux of movement-images *as plane of consistency*, and *the ontological implications of* the semiotic phaneroscopy that Deleuze seeks to appropriate instrumentally.

Bergson and Cinema

Before elaborating further on the nature and consequences of this incompatibility, let me refresh our memories concerning Deleuze's claim about Bergson and the cinema. You will recall that Bergson himself famously attacked the cinema in Chapter 4 of *Creative Evolution* for being an exemplar of the reduction of duration to spatiality. For Bergson, the "cinematographical mechanism of thought," like other forms of instrumental measurement, could not capture duration and could not enter the intuitive domain of inner life, or as Bergson put it: "rests placed beside rests will never be equivalent to a movement" (340). Here we can see that what Bergson objected to in particular was the discretization that he felt was constitutive of the mechanism of cinema: no sequence of discrete images can ever produce a duration, and whatever movement is involved had to be imposed mechanically and from the outside by the film projector.

In his commentary on Bergson's denunciation of the cinema, Deleuze first notes the limited validity of Bergson's critique: insofar as it applies to the "primitive state of the cinema," which would certainly be that of the cinema circa 1907, Bergson would seem to be right. For in this primitive state, "the image is in movement rather than being movement-image." It was, Deleuze concludes, "at this primitive state that the Bergsonian critique was directed" (Cinema 1 24). However, once the cinema refined its techniques for producing the illusion of mobility-techniques that include the moving camera, montage, the emancipation of viewpoint, and even the shift from 16 to 24 exposures per second—Bergson's indictment could no longer hold, and indeed a deeper, nonintentional and certainly unrecognized affinity between Bergson's movement-image and cinema could be discerned. Thus the "cuttings" that Bergson denounced—once reframed within the montage aesthetic of post-primitive cinema—become strikingly equivalent to the "mobile sections" of reality that Bergson described in Matter and Memory. Deleuze can accordingly conclude by emphasizing Bergson's prescience in spite of himself: "Even in his critique of the cinema Bergson was in agreement with it, to a far greater degree than he thought Bergson is startlingly ahead of his time [with his conception of] the universe as cinema in itself, as metacinema" (Cinema 158-59).

In appropriating Bergson's conception of duration and movement-image as the ontological basis for his philosophy of cinema, Deleuze takes on board Bergson's fundamental distinction between intelligence and intuition. This distinction appears concretely in Deleuze's distinction between "natural perception," characteristic of practical human experience, and the form of artificial perception that cinema affords. In cinema, Deleuze clarifies, it is a question of "attaining a pure perception, as it is in things or in matter" (84); in this sense, cinema embodies "that very movement-image of the first chapter of *Matter and Memory*" (3) and has the important philosophical task of *discovering* "the movement-image, *beyond* the conditions of natural perception" (*Cinema 1* 2, emphasis added). As these

passages make clear, Deleuze's distinction between natural and artificial perception coincides with Bergson's distinction between representation and pure perception. For both philosophers, the properly philosophical question is how to move from representation, which, as Bergson's critique of spatializing reason makes clear, denatures the flux of inner life, to a mode of perception capable of coinciding with that flux. For Deleuze, cinema is at once a vehicle or technique to accomplish this shift of perceptual modality and a concrete opportunity to theorize about it. We will see below that this division of two kinds of perception—natural and artificial—is wholly untenable in the context of Peirce's phaneroscopic semiotics. Representation for Peirce, far from being an inferior mode of access to reality, is the only mode of access to it; everything is given in signs, including our own "intuitive" knowledge of our inner life and its duration. Moreover, since representation is natural for Peirce, and since representation is not different in kind from perception, his philosophy has no room for any artificial mode of perception. This distinction will prove decisive when we come to assess the value of Peirce's philosophy for a philosophy of the contemporary image. For the moment, however, let us stick with the Bergsonist foundation of Deleuze's cinema project in order to pinpoint precisely where it hampers his own aim to position cinema as a plane of immanence radically divorced from any anthropocentric point of view.

In her recent study of Deleuze and semiotics, semiotician Anne Dymek identifies the Bergsonist foundation of Deleuze's cinema project as its fatal flaw. According to Dymek, Bergson's central distinction between representation (artificial perception) and pure perception or the pure image-movement dooms his project to failure, in the sense that it harbors an irrepressible dualism that is fundamentally at odds with Bergson's aspirations to monism. Dymek's reading begins by recognizing a shared investment on the part of both Bergson and Peirce in an *a-representative image*; such an image lies at the basis of perception for both philosophers. Where Bergson and Peirce begin to differ is in their respective accounts

of what happens when this basal a-representative image becomes the object of a practical or pragmatic point of view—when, as Dymek puts it, "perception is irrevocably transformed into conscious and representative perception" (31). The two philosophers accord starkly different significance to this "quasi immediate, omnipresent and especially non-controllable" transformation (31): for Bergson, it is the operation of human memory that introduces representation into the process of perception; for Peirce, by contrast, it is a logical structure of semiosis—and the necessary mediation of the a-representative image by signs—that does so. This stark difference between Bergson and Peirce is crucial for our appreciation of the different ontological scopes of their respective approaches to the a-representative image: for Bergson, the transformation by human memory denatures the image by making it something relative to the practical demands of life; for Peirce, by contrast, this transformation is nothing more nor less than a part of the natural process whereby the world makes itself known through semiosis. More simply put, what for Bergson is a negative and restricting betrayal of the image is for Peirce part of the natural process of reality with no necessary connection to narrowly human modes of memory or cognition.

concerning the question distinction of access a-representational image ultimately yields a stark polarization between the respective ontologies of Bergson and Peirce. Bergson's denunciation of representation, despite his own characterization of it, cannot in the end avoid instituting a dualist structure. On this structure, the brain operates according to different laws than the universe of images, and representation must be opposed to a reality that lies beneath or outside of it. The result is, as Dymek explains, the introduction of a fissure or separation of representation from the pure image: in contrast to Peirce, who "conceives representation not only as a natural process but also as the condition for all knowledge," Bergson "unequivocally abandons his initial anti-dualist approach and falls into a skeptical dualism. This is because, in Bergson, representation, belonging as it does to the human sphere, only *refers* to the pure image that belongs to the sphere of reality, rather than mixing in with it. This meta- or degenerate level of human cognitive perception clearly marks an epistemological dualism in Bergson" (44). Insofar as it takes root in a Bergsonist semiotic of the image inspired by *Matter and Memory*, Deleuze's cinema project cannot but run smack into this "conceptual impasse" (Dymek 44); notwithstanding his own intention to conceptualize cinema as a plane of immanence, Deleuze's project simply cannot avoid inheriting this epistemological dualism. It is this inheritance that ultimately accounts for the above announced incoherence of Deleuze's bastard mixing of Bergson and Peirce.

Peirce and the Cinematic Image

To grasp why Deleuze's Bergsonist ontology contradicts the ontological implications of phaneroscopic semiotics, and to prepare for a properly Peircean account of the objective image, let us delve further into some specifics of Deleuze's deployment of Peirce. At the heart of Deleuze's appropriation of Peirce is a fundamental miscomprehension and/or reduction of the ontological dimension of Peirce's phaneroscopic semiotics. Itself the direct result of Deleuze's fidelity to Bergson and his ensuing inheritance of Bergson's fall into epistemological dualism, this miscomprehension/reduction comes into play in Deleuze's analysis of the crisis of the action-image that yields the transition from the movementimage to the time-image.

Let us recall Deleuze's instrumentalist deployment of Peirce's semiotics as an account of three or perhaps four fundamental types of images: the affection-image, the perception-image, the action-image, and the mental- (or relation-) image. At the same time as it manifests his desire to find a conceptual bridge between the image and the sign capable of differentiating his Bergsonist ontology of images, Deleuze's instrumentalist deployment of Peirce's semiotics comes with an acknowledgement that his classification of images "does not coincide" with Peirce's "grand classification" of signs (Deleuze, qtd. in Dymek 65), "even at the level of the

particular images he [Deleuze] picks out" (Dymek 65). Indeed, we can see more clearly now than before, that Deleuze's typology of images involves something other than a correspondence with Peirce's typology of signs, for it equates image types—and the concept of the image itself—with the phaneroscopic categories themselves. This equation, which is responsible for the reduction of ontology to epistemology in Deleuze's appropriation of Peirce, informs and indeed *facilitates* Deleuze's understanding of the crisis of the action-image as a crisis of Thirdness, along with his portrayal of the *The Time-Image*'s break with the semiotics of *The Movement-Image* as being due to the intrinsic insufficiency of Peircean semiotics. What the crisis of the action-image, and the resulting shift to the time-image, makes clear is that, in Deleuze's words, "we could no longer consider the thirdness of Peirce as a limit of the system of images and of signs" (*Cinema 2 33*).

Now this reading of Thirdness as a limit is not only a fundamental misunderstanding of Peirce's phaneroscopic synechism (synechism being Peirce's term to designate his philosophy as one of continuity), but it manifests the massive reduction Deleuze performs when he assimilates Peirce's phaneroscopic categories (Firstness, Secondness, Thirdness) which are, we must emphasize, the fundamental categories of reality, the "real constituents of the universe"—to mere sign types (Peirce, Collected Papers 5.82, qtd. in Dymek 73). For Peirce, these categories, and Thirdness in particular, cannot be reduced to or equated with a type of sign, such that it might be judged insufficient to describe the inventory of time-images characteristic of post-war cinema; rather, Thirdness is both the core of semiosis for Peirce and the ontological relation that allows his philosophy to include all more complex relations. In his so-called "reduction thesis," Peirce proves that all relations involving more than three terms can be mathematically reduced to a triadic relation, and that triads cannot, in turn, be reduced to monadic or dyadic relations (Burch 1991). Triadicity or Thirdness, then, furnishes the conceptual basis for thinking the continuity of the universe and the connectedness of things in it. Far from being a limit, then, Thirdness would seem to be the *exact opposite of a limit*: it never reaches a culmination but instead arises on the basis of and as the expression of the ongoing continuity of the universe.

Deleuze's Error

What, we must ask, motivates Deleuze to contend that we can no longer consider Thirdness as the limit of the system of images and of signs? Deleuze's claim, it would seem, involves a two-part reduction of Peirce's category of Thirdness and of his phaneroscopic semiotics more generally: first, Deleuze equates Peirce's phaneroscopic category of Thirdness with a specific type of sign-image, "the mental- (or relation-) image"; and second, he indicts that sign-image for its incapacity to grasp the relational complexity of the post-war cinema of the time-image. What motivates this reductive account of Thirdness, together with the idea that Thirdness marks a limit in Peirce's system, is Deleuze's fundamental miscomprehension of Thirdness's role as the source for representation. For as a general form of relationality—the very operation that generates representation as the irreducible element of any access to reality— Thirdness cannot be reduced to one kind of sign. It is, instead, the mode in and through which reality appears as such, which is to say, as semiosis. In contrast to Deleuze's reductive view of it, representation for Peirce cannot be a product of the human mind (though it may certainly characterize the operation of human thought); indeed, it can only result from the operation of Thirdness, understood as a fundamental category of reality, and as such, must be held to be fully real. Like Thirdness, whose product it is, representation belongs to reality and not just to the realm of thought; with its capacity to generate representation, Thirdness is nothing more nor less than the vehicle by which reality expresses itself.

Because Deleuze simply fails to comprehend the role of such an "objective" account of the "natural" origin of representation in Peirce's phaneroscopic semiotics, he can only see Peirce's categories as dogmatic presuppositions that, far from providing the basis for a presuppositionless construction of

the real, are themselves in need of deduction. In his critical engagement with Peirce in *Cinema 2*, Deleuze accordingly accuses Peirce of "claim[ing] the three types of images [by which he means, the three phaneroscopic categories] as a fact, instead of deducing them" (31). Let me reiterate why this is such a catastrophic reduction of Peirce's philosophy. Simply put, it evacuates the core commitment to realism that lies at the heart of all of Peirce's diverse philosophical contributions, and with it the radicality of Peirce's project, namely, to derive the basic categories of reality solely on the basis of "experience, in the sense of whatever we find to have been forced upon our minds" (Peirce, Carnegie Application Statement, Ms. L 75, qtd. in Rosensohn 37). In the words of one commentator, this radical beginning serves to differentiate Peirce from his noteworthy predecessors, Aristotle and especially Kant, as well as from his contemporary, Husserl: "Peirce's derivation of the basic categories, by going 'back to the things themselves,' involves no presuppositions, no prejudgments about 'things' in the external world (whether *noumena* or 'unknown causes' originary of sensation), or transcendental egos 'doing' the thinking. . . . " (Rosensohn 30).

Beyond the misreading just described, what results from Deleuze's failure to comprehend the ontological scope of Peirce's project is the above mentioned relapse back into epistemological dualism. Lacking a vehicle for the "natural" origin of representation—which is to say, a proper understanding of the role of Thirdness—Deleuze is compelled to deduce it himself, and to deduce it moreover on the basis of the philsophical resources available to him, namely, his Bergsonist ontology of the movementimage. In a development that reinforces Deleuze's erroneous accusation regarding the limit of Peirce's thought, this imperative results in Deleuze's postulation of a fourth category—Zeroness—that would lie beneath the three Peircean categories and, in particular, would come before Firstness. "If the movement-image is already perception," he writes in *Cinema 2*, "the perception-image will be perception of perception, and perception will have two poles, depending on whether it is identified with movement or with its interval. . . . The perception-image will thus be like a degree zero in

the deduction which is carried out as a function of the movement-image: there will be a 'zeroness' before Peirce's firstness" (31-32).

With this identification of the perception-image ("perception of perception") as Zeroness, Deleuze effectively bolsters the Bergsonist dualism between the a-representative image and representation and situates it at the heart of his account of time-image cinema. On this account, the cinema can find expression in image categories—whether the three or four of the movement-image (perception-image, affection-image, actionimage, relation-image) or the six categories of the time-image (in addition to these four, the pulsion-image and the reflexion-image)—only because of the mediation of one of these image categories, namely the perceptionimage or Zeroness. Put another way, the special images of Deleuze's cinema only come to be representations of the a-representative image because the perception-image acts as a rule for their deduction. As Dymek puts it in her analysis of Deleuze's account of the perception-image, the latter is "perception of perception" only "insofar as the human mind has already begun to relate itself to itself. It is a stage that is still perceptual, but also already a bit cognitive, capable of connecting the two worlds of objective perception (movement-image) and subjective perception (the special image [i.e., the image categories of Deleuze's cinema])" (Dymek 75).

If Dymek is right here, we can see clearly and unequivocally that Deleuze's proffered deduction of the image-categories finds its source in human perception of the a-representative movement-image. Just as the human brain, for Bergson, must operate according to different laws than those governing the universe of images (despite being an image among images and despite the fact that it receives or selects objective images), so too must the special image categories of the cinema operate according to different laws than those governing the movement-image (again despite being variations of the movement-image and despite the fact that they are the products of perception of perception, of perception of the movement-image).

Can we not then bring our discussion of Deleuze to a culmination by concluding that his fundamental misunderstanding of and failure to appreciate the ontological aspirations of Peirce's semiotic phaneroscopy compels him to conflate two distinct operations of Peirce's categories, on the one hand as ontological, and on the other, as epistemological or gnoseological? It is none other than Gérard Deledalle, the editor of the very edition of Peirce's writings that Deleuze consulted for his cinema project, who insists on such a distinction. For Deledalle, this distinction necessarily follows from an understanding of Peirce's phenomenology as *logical* and not *psychological*, as a *logic of the phaneron*, understood (in contrast to the phenomenon) simply as what is apparent, independently of its appearance to anyone or anything: "The ontological categories are logical," Deledalle writes, whereas

the gnoseological categories are psychological, just as the objects of physics, though non-psychological, are conscious when a physicist theorizes or experiments with them. Which explains the distinction between phaneron and phenomenon, not because they are two different things, but because there are two different approaches: one logical (phaneron), the other psychological (phenomenon). . . . as thought gnoseologically [the categories] are conscious and then Third, as ontological they are real, that is to say, according to Peirce's definition of reality, either a possibility, or a fact, or a law. A logician as a human being deals, like a physicist, with objects completely different from the consciousness he may have of them. But he *cannot* think them without "instances," or "occurrences," or, to use the Peircean neologism, *replicas* of which he is aware and of which he has "in his mind" an image or icon. . . . (72)

Bearing this distinction in mind, we can now understand precisely why Deleuze's development of Peirce goes astray. Because he has no appreciation for the primary, ontological operation of Peirce's categories, Deleuze can only view them as gnoseological, as modes in which the movement-image

expresses itself *to us* and can be known *by us*. Moreover, because he can see in Thirdness nothing more nor less than one category of image, and one moreover incapable of grasping the multiplication of images constitutive of the cinema of the time-image, Deleuze is unable to appreciate how Thirdness constitutes the mode by which reality can be expressed in signs, and can thus become available to human cognition. Motivated, as it were, by these blindnesses, Deleuze is ultimately compelled to offer a deduction of the image categories—one capable of generating new categories *ad infinitum*—on the basis of perception of the movement-image, which is to say, the "perception of perception" that only human minds can introduce.

From Perception to Perceptual Judgment

On Peirce's account, the equivalent of Deleuze's perception-image is the perceptual judgment, which is a relation of Thirdness. Taking stock of the fundamental differences between these two concepts—Deleuze's perception-image and Peirce's perceptual judgment-will turn our attention back to the rationale for thinking Deleuze with Peirce: namely, to answer to certain transformations of the image since the time of Deleuze's writing. For both Deleuze and Peirce, the perception-image or perceptual judgment is in a certain sense mid-way between reality or the a-representative image (Deleuze's movement-image, Peirce's Firstness) and human cognition of it, since it serves to transform what is fundamentally inaccessible and without relationality whatsoever into something that can be experienced by human minds. From there, however, the similarity begins to break apart. For unlike Deleuze's perception-image, which is a "perception of perception" that renders the a-representative movementimage cognizable by humans, Peirce's perceptual judgment is a semiotic relation of Thirdness between a percept, which is a Second, and some qualities, i.e. instances of Firstness that it captures. Perceptual judgments, to say it another way, are generated from the relation of a sign-element, what Peirce calls "qualities of feeling," with an indexical object or percept, the actualization of these qualities via the sensations they provoke. In this scheme, qualities are Firsts—aspects of the phaneron—while the sensory

actualizations of these qualities as percepts are Seconds, that is, elements of actuality. The perceptual judgments or interpretants generated by the relation of qualities and their sensory actualizations are Thirds in the sense that they establish a lawlike relationship between sign-element and object, qualities and percept.

The crucial point here is that the perceptual judgment is not an act of human mind, but a semiotic relation that expresses an objective connection between an unknowable reality, Firstness, and an object, or percept, that places them into a dyadic relation with one another. If the perceptual judgment is the sign relation through which human minds experience reality as something knowable, that is not because these latter create the perceptual judgment, as they do the perception-image; rather, it is because they experience the perceptual judgment as a "replica," which is to say, they "host" the objective perceptual judgment as their inner mental content or thought. In this respect, the relation between the human mind thinking the perceptual judgment and the perceptual judgment itself is not different in kind from the relation, introduced by Deledalle in the above citation, between the physicist having a consciousness of his object of study and that object in itself. In both cases, the object—whether perceptual judgment or physical phenomenon—is what it is, independently of whether and how it is conceived by human consciousness.

Indeed, this independence of the perceptual judgment from any subsequent consciousness that may be had of it is precisely what accounts for the fact that we are able to perceive it at all. It is, in other words, only because Peirce's categories are *in* the things constituting reality, and are not products of our perceptual/cognitive activity, that they can be perceived, and indeed, can be perceived as what they are independently from what we think of them. This independence of the perceptual judgment from any subsequent human thinking of it institutes what I would be tempted to call a feed-forward structure of perception (Hansen). As an objective

semiotic relation of Thirdness, the perceptual judgment operates—and can only operate—to catalyze a *future* perception on the part of an individual mind, whether human or otherwise. Peirce captures this perfectly: "In a perceptual judgment," he writes, "the mind [i.e., the world mind, MH] professes to tell the mind's future self [i.e., a specific consciousness of world mind, MH] what the character of the present percept is" (*Collected Papers* 5.544, qtd. in Dymek 29).

Now this operation of the perceptual judgment as a hypothesis about the world (as opposed to a hypothesis about human cognition) serves to render perception an abductive activity, an activity that proceeds by guesswork on the basis of a certain familiarity with reality but without direct access to it. Abduction is a three-part process in which, first, a hypothesis or possible explanation is made concerning specific facts in an observation; second, predictions are deduced that would hold if that hypothesis were true, and third, the probable truth of the hypothesis is evaluated by induction. As a result, in abduction, as Peirce puts it, the reasoner has "the thought that the inferred conclusion is true because in an analogous case an analogous conclusion would be true" (Collected Papers 5.130, qtd. in Tiercelin 398). To say that perceptual judgments are forms of abduction simply means that they operate in a similar manner to the three-stage process just explicated: perceptual judgments constitute "the starting-point or first premiss of all critical and controlled thinking" (Collected Papers 5.181, qtd. in Turrisi 479) and, as such, are in effect hypotheses or possible explanations of the "character" of a percept.

Every particular perceptual judgment, moreover, includes, with its singular subject, a general element in its predicate, which permits the deduction of a universal proposition. For this reason, as Patricia Turrisi explains, "the distinction between an abductive inference and a perceptual judgment is *not* absolutely definite; an 'abductive inference shades into [its first premise, which is a] perceptual judgment.' And a perceptual judgment shades into an abductive inference." Or, more succinctly put, "a perceptual judgment,

the first premiss of an abduction, is, on its own, an 'extreme' instance of an abduction, an origination of a new idea." In contrast to the three-staged abductive inference, a perceptual judgment *qua* extreme instance of abduction is "not susceptible of either a correction or a refutation on the basis of the principles of logic. Each such abductive judgment, of what one perceives, is a plausible but fallible (neither deductively necessary nor inductively probable) hypothesis, a synthetic 'act of *insight*' into a really operative and perceptually apprehensible 'general element' in nature' (Turrisi 480).

Post-Perceptual Images

Stated in the terms of this at least partial identity between perceptual judgment and abduction, the question that post-cinematic images raise is this: can the Firstness of the image made available or indeed produced by digital media, a Firstness which following Peirce's understanding constitutes a perceptual hypothesis about an unknowable, directly inaccessible reality, lead to new kinds of perception? Moreover, given the fact that all perceptual judgments "constitute a hypothesis concerning the reality of one or more qualities," i.e., concerning the reality of Firstness, can the perceptual judgments catalyzed by post-cinematic images be said to differ in kind from properly cinematic images, including the time-image, in the sense that, far from constituting perception-images, they yield perceptual judgments about a realm of reality that cannot, strictly speaking, be perceived?

Let me begin to answer these difficult questions by explicating Peirce's category of Firstness, and what I judge to be its special affinity with digital imaging processes. Firstness is the pure quality of a thing that is separate from its existence. The domain of Firstness is thus the purely possible, "the immediate as it is in its immediacy," "the present in its direct positive presentness." Instances of Firstness, to cite one of Peirce's enumerations, include "the color of magenta, the odor of attar, the sound of a railway whistle, the taste of quinine, the quality of the emotion upon

contemplating a fine mathematical demonstration, the quality of feeling of love, etc." (*Collected Papers* 1.301). In his account in *Eco Media*, Sean Cubitt puts his finger on what, for me, is certainly the most important characteristic of Firstness: its independence in relation to the object to which, at the level of existence or Secondness, it will be coupled: Firstness, Cubitt underscores, "names the perception of a phenomenon before its source is separated out as an object ('secondness') and named ('thirdness')" (49).

Because—following Peirce's generalized semiotics—a phenomenon can only be known when it is presented as an object to another mind (interpretant), this autonomy of Firstness effectively coincides with its unknowability, its opacity to any intentional grasping. As such, it would seem to render it outside or beyond the realm of what can be experienced phenomenologically, even if this is understood broadly, without any overly restrictive correlation with consciousness. This extrusion from the domain of phenomenality will prove to be precisely what makes Firstness so interesting and so promising for revitalizing phenomenology.

Recent efforts to link Peirce's categories to cinematic and media images pursue a fundamentally different project than Deleuze's. Where Deleuze sought to apply Peirce's categories to generate a basic typology of images, as we have seen, critics like Adrian Ivakhiv and Cubitt locate the categories in the complex relationality linking spectator and image. For Ivakhiv, Firstness "would be the image itself. Secondness would be the impact of that image on the viewer—for instance, the way it arouses me, elicits shivers down my spine, or reminds me of some specific previous event. Thirdness would be the mediation of that impact through an interpretation of the film" (54). For Cubitt, Peirce's categories designate, respectively, three technical elements of the digital image: pixel, cut, vector. On this account, Firstness, or the pixel, is a "directionless flux of pure movement" (*Cinema* 66), the immediate felt quality of the image

but in the absence of any actual feeling or feeler. In quite similar, if more general terms, Shane Denson characterizes the post-cinematic image as "affect without feeling," precisely because the "transformation at stake here pertains to a level of being that is . . . logically prior to perception, as it concerns the establishment of a new material basis upon which images are produced and made available [or, we might add, not made available] to perception."

The Post-Cinematic Image

I shall come back to this link of Firstness to a new material basis of the image, and specifically to the logic of the pixel, precisely because it introduces a technical equivalent of my above claim regarding the extrusion of Firstness from the domain of the phenomenal; the pixel is the operator, in our 21st-century media culture, of a fundamental transformation of the image that, I shall argue, begins to operate without being phenomenally apprehended. First, however, I want to invoke Steven Shaviro's recent discussions of the post-continuity style of contemporary filmmaking, which provide a useful context for appreciating the transformation at issue here. In post-continuity style, Shaviro claims, "a preoccupation with immediate effects trumps any concern for broader continuity—whether on the immediate shot-by-shot level, or on that of the overall narrative." Shaviro suggests that today's filmmakers and film viewers are simply not interested in continuity and, indeed—and more provocatively—that narrative continuity has never been important in itself but has functioned, in classical cinema no less than that of the avant-garde, as "one of the ways in which we are led into the spatiotemporal matrix" through which "we experience the film on multiple sensorial and affective levels." This positions him to suggest that what is at stake in post-continuity cinema is a fundamentally new articulation of space and time which "have become relativized or unhinged." In post-continuity films, "we enter into the spacetime of modern physics; or better, into the 'space of flows,' and the time of microintervals and speed-of-light transformations, that are characteristic of globalized, high-tech financial capital."

While Shaviro's focus on "immediate effects" would seem to resonate with the newly apparent prominence of Firstness in contemporary technical media and media culture, his primary concern with cinema as an aesthetic form—and his guiding mission to develop a "critical aesthetics" of contemporary culture—restrict the value of his analysis for this purpose. Here we can begin to discern a disjunction between Denson's interest in theorizing a "post-cinematic image" and Shaviro's interest in articulating a "post-continuity cinema": in the latter, the aesthetic operation and expressive function of cinema remain unchanged and unchallenged by the technical transformations of the image and of the processes of image production that are central to Denson's account.

What Denson sees in the images characteristic of post-continuity style filmmaking—one paradigmatic example being the "hyperinformatic" transformation-images of Michael Bay's Transformers films—is something other and, I would suggest, something more than a focus on immediate visual effect. These images, he observes, "overload our capacities, giving us too much visual information, presented too fast for us to take in and process cognitively—information that is itself generated and embodied in informatic technologies operating at speeds well beyond our subjective grasp." And their visualization of technical transformation, Denson further specifies, operates through a mode of failure: specifically, their "failure to coalesce into coherent objects." This failure, Denson continues, "defines these images as metabolic 'spectacles beyond perspective'—as ostentatious displays that categorically deny us the distance from which we might regard them as perceptual objects. It is the processual flow and speed of algorithmic processing that is put on display here, and indeed put into effect as the images are played back on our computational devices." This last point will prove decisive once we turn to the technical infrastructure of contemporary digital images, for it underscores the generativity-initself of the image that correlates with its autonomy and its Firstness.

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This description perfectly captures how the extra-perceptual status of these transformation-images effectively wrenches them out of any cinematic function, whether in the service of continuity or of post-continuity. They constitute moments when the sensory perception constitutive of the experience of cinema—and of the spacetime matrix that, on Shaviro's account, it serves to express—is interrupted, or perhaps more precisely, gets supplemented by an extra-perceptual expression of Firstness. Focusing on these moments of Firstness requires us to step outside of the institutional frameworks of cinema studies—a move that, I would suggest, is in perfect accord with the broader changes in the cultural logic of images in our 21st-century media world. Contextualized in this way, the category of Firstness offers nothing more nor less than a means for liberating the image—the cinematic image included—from its overdetermination by the institution of cinema.

This is a point made—as it were, by negation—by film scholar Martin Lefebvre, who in an evaluation of Peirce's contribution to cinema studies, underscores the lack of interest autonomous images hold for the film theorist:

one of the effects of a film, one of its qualities, is to permit us to see and identify a vast set of photographed objects. It is evident that, considered in itself, each of the perceptive hypotheses [understood following Peirce's expanded semiotic notion of perception] directed to these objects—the majority of which are nonconscious—offer very little interest for cinema studies. . . . In effect, cinema studies valorizes hypotheses—ultimately conscious and controllable ones—that aim to determine (that is to say, to render less vague) the symbolic dimension of a film, in order to perceive there an argument capable of "attracting" towards it or of associating the largest number of perceptions (of "individual," non-associated qualities) in the form of

interpretants. More simply: cinema studies valorizes hypotheses capable of *explaining* or *unifying* the largest number of qualities of a film. (175)

Taking up the position proffered by Lefebvre, I want to suggest that the liberation of the pure image or image-as-Firstness from its cinematic overdetermination opens up an asubjectal field of experience where images operate precisely as "perceptive hypotheses" in the Peircean sense discussed above. (It is important to remember that perceptive hypotheses are, for Peirce, in no way equivalent to perceptions, and need not involve perception at all: their name notwithstanding, they are hypotheses concerning Firstness.) As Lefebvre explains, "every perceptive judgment (including those that issue from the sensory perception of existent things) constitutes a hypothesis concerning the reality of one or more qualities, a hypothesis concerning the fact that they are not a projection of our consciousness into the world" (163). These qualities are precisely Firsts: considered from the logical (not psychological) point of view, they are "possibles" that need not be actualized—which is to say, that need not be perceived by a perceiver—to be real.

Datamoshing and the Non-Perceptual Image

Returning now to the technical transformation of the image at issue in our culture today, let me focus on one recent aesthetico-technical procedure that will serve to highlight the pixel-centric logic of digital images as images of Firstness, and of the technique of digital compression that informs them. This procedure is datamoshing, the process of bending one digital image by submitting it to the instructions for the on-the-fly rendering of another. Datamoshing takes advantage of what is in essence a glitch in digitally compressed images, namely the fact that most frames of compressed video are simple repetitions of a previous frame with instructions concerning only what changes in the image. These compressed frames are called "P-frames" (past frames or predictive frames) and they contain a vector map of the pixels that change in the image; they are

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literally blueprints for re-rendering the image with certain modifications. In contrast to these P-frames are "I-frames" (image frames) that are noncompressed images composed of all the pixel information that makes up the image. I-frames introduce new images and P-frames operate on them in order to generate modifications of a given image. Datamoshing is a technique for manipulating this process by bending an I-frame using the vector instructions, or P-frames, of a different image. What results is a situation in which one image (one I-frame) specifies the content of the pixels and another specifies their movement from one frame to the next. Most of the few critics who have discussed datamoshing focus on its aesthetic properties. With a nod to the predictive algorithms that inform the vector maps of P-frames, Tom Levin has dubbed it a "predictive aesthetics of the absent image." And Brown and Kutty speak of datamoshing as "colors becoming in time," a new type of aesthetic "order" that "challenges and allows our conceptions of 'beauty' to evolve" (173). It is undeniable that datamoshing does hold aesthetic interest, as a piece of video art like Takeshi Murata's Monster Movie certainly demonstrates (see Figures 1 and 2), and it is also the case that it has a relation to aesthetics more generally understood as aisthesis, the production of the sensible materiality of experience.

But to my mind, any analysis that does not consider the radical transformation to which datamoshing submits the image fails to grasp the "onto-technico-aesthetic" significance of digitally compressed images, which as Levin astutely notes, have more than eclipsed traditional cinematic images in their dissemination and ubiquity. *These* are the images that are informing our everyday experience and are producing the sensible materiality of space and time, and it behooves us to make good on their potential to broker a new cultural logic of *post*-cinematic continuity that operates at the level of the pixel and not of the shot or sequence of shots. I want to suggest that the pixel-based logic of digitally compressed images displaces the operation of continuity to a more "elemental" level than that of inter-image relations (continuity or post-continuity in cinema).



Figure 1 – Frame grab from Takeshi Murata's MONSTER MOVIE (2005)

In digital compression, as procedures like datamoshing reveal, we can no longer speak of a relationship *between* images, but rather of an ongoing modulation of the image itself that is effectuated by contaminating the image with instructions for its own continuous self-modification, and crucially, that operates through continuous transformation at the level of the pixel. Compression images are, as Levin states, "catalogues of pure differentiality," for what they index is nothing more nor less than the self-difference of the image itself in all its potentiality. Compression images introduce a processual logic at the level of pixel, the qualitative thisness or Firstness of the image, that differs categorically from cinematic continuity and televisual flow.

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Figure 1 – Frame grab from Takeshi Murata's MONSTER MOVIE (2005)

The Pixel and Firstness

This shift to the pixel as the operator of continuity correlates with the Peircean category of Firstness for the following, specific reason: just as Firstness constitutes the pure quality, or better the field of pure qualitative difference, prior to the separating out of an object of perception, so too does the pixelated field of the image constitute a qualitative continuum that possesses a certain autonomy in relation to perception. We can discern this, as it were negatively, via the aesthetico-perceptual effects of datamoshing: namely, the genesis of blurring that precisely marks the incapacity of perception (Secondness) to grasp the transformations that are occurring at the level of pure quality or Firstness. [4] The blurring of datamoshed images exemplifies how the pixel, or better transformations

at the level the pixel, constitute something that cannot be experienced directly, but that nonetheless does inform experience precisely as the qualitative element that gives rise to perceptual hypotheses. In these images, blurring itself constitutes a "perceptual hypothesis" about a domain of quality that cannot appear as such to human perceivers.

Like Firstness *per se*, and indeed as instances of Firstness, the continuous transformations of the image at the level of the pixel cannot be directly perceived, but they can become the basis for perceptual hypotheses capable of bringing them to expression, albeit in the form of the general, as Thirdness. This, as I see it, is the crux of Peirce's potential contribution to contemporary media theory, for as Roger Dawkins astutely notes:

Peirce's appeal to direct experience suggests not only that thought (as well as the sign and language) is a product of experience but also that the nature of this experience is to articulate what is given *but not known*. In other words, the nature of thought is to articulate what is real, present and observable, but abstract. . . . For Peirce, all thought and formalised expression is based on the interpretation of an existing stimulation. Yet this stimulation is *never known*, it is only given, meaning simply that what we know is based only on what we get. In so far as it is abstract, we can call this stimulation a material intensity only. (160, emphasis added)

As images of Firstness, the blurred digital images of datamoshes like Murata's *Monster Movie* are nothing but that: non-perceptual images of material intensity that can only be known via their aesthetic effects.

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Notes

- [1] I develop the concept of "worldly intensity" (and the broader concept of "worldly sensibility") in *Feed-Forward: On the Future of Twenty-First Century Media*, especially Chapter 2.
- [2] All quotations from Dymek are my translation.
- [3] Indeed, as I see it, Dymek's characterization of Deleuze's project as a phenomenology of the image expresses more about her own position than it does about Deleuze's intentions. This can be seen from the sentence that follows the above, where she distinguishes a Peircean phenomenology from the standard phenomenology of consciousness invoked critically by Deleuze; Dymek's text continues thus: "a *Peircean semiotic* phenomenology of filmic images, *to which Deleuze aspires*, naturally implies a 'surplus' in relation to a phenomenology of images that is not Peircean" (24).

[4] I want to thank Nicolas Oxen for making clear to me the role played by blurring as an aesthico-perceptual effect (or symptom) of digital, and specifically datamoshed, images.



6.4 The Post-Cinematic Venue: Towards an Infrastructuralist Poetics

BY BILLY STEVENSON

One of the key questions confronting a post-cinematic media ecology is—what constitutes a post-cinematic venue? More specifically, how has the traditional cinematic venue been remediated and reimagined in the wake of the seismic shifts in film production, consumption, and distribution that have occurred over the last decade? Traditionally, attachment to the cinematic venue was a symptom of cinephilia, if not quite the tradition of cinephilia that has been re-examined in the light of Christian Keathley's groundbreaking monograph, *Cinephilia and History, or The Wind in The Trees*. Whereas Keathley posits a cinephilic history based on privileged moments in the film, moments that exceed their intended or nominal significance (20), there is an alternative cinephilic history that focuses more on the symbiosis and synergy between venue and screen, as well as the serendipities and pleasures of the venue as a spectacle in itself.

While it is neither the aim nor the ambit of this article to historicize these two different modes of cinephilia, it suffices to say that what might be described as venue-cinephilia tends to derive from Siegfried

Kracauer's observations on the symbiosis of urban space and cinematic spectacle, while Keathley's brand of cinephilia, which might be described as moment-cinephilia, tends to derive more from Walter Benjamin's reflections on cinema's discordant relationship with the even more discordant experience of everyday urban life. Writing in *Theory of Film*, Kracauer describes venue-cinephilia by observing:

Films make us undergo similar experiences a thousand times. They alienate our environment in exposing it. One ever-recurrent film scene runs as follows: Two or more people are conversing with each other. In the middle of their talk the camera, as if entirely indifferent to it, slowly pans through the room, inviting us to watch the faces of the listeners and various furniture pieces in a detached spirit . . . As the camera pans, curtains become eloquent and eyes tell a story of their own . . . How often do we not come across shots of street corners, buildings, and landscapes with which we were acquainted all our life; we naturally recognize them and yet it is as if they were virgin impressions emerging from the abyss of nearness. (55)

Part of what renders this description so powerful is that it fuses—or at least leaves open the possibility of fusing—the viewer's drift across the screen with their drift across the architecture of the theater. If this "film scene" is "ever-recurring," that isn't simply because it occurs in every film but because it describes a process that can be *enacted* in every film—namely, the eye's drift from an onscreen conversation to the "furniture" of the movie theater, the "faces of the listeners" in the audience, the "curtains" around the screens and, finally, all the eyes in the audience that "tell a story of their own." In describing how this process translates into urban attachment more generally, Anke Gleber notes that "the art of taking a walk introduces an aesthetics of movement that, more than any other artistic form, reveals an affinity with the long, extended tracking shots of a camera whose movement approaches and embraces the visual emanations of the exterior world" (152). However, if the tracking-shot is to procedurally

inculcate *flânerie*, rather than merely absorb it, then the viewer needs to create their own tracking-shots within the cinema theater itself. It is the very willingness of the individual eye to approximate a camera in this way, to drift away from the screen and across the reticulations and nuances of the theater, that signals Kracauer's movement from Benjaminian *flânerie* to something closer to the venue-cinephilia I am describing.

In elaborating his ideas about moment-cinephilia, Keathley introduces the "cinephiliac anecdote" (140)—"cinephiliac" following Paul Willemen (227)—as a new discursive and communicative tool. Cinephiliac anecdotes, Keathley argues, are the stories we tell, both to others and ourselves, about the cinematic moments that come back to haunt us again and again (130). For the most part, cinephiliac anecdotes are originary narratives, stories about when we first experienced these moments. Keathley argues that these narratives can reflect back upon wider historical and cinematic concerns if looked at in the right way. In the five exemplary anecdotes that he provides at the back of his book, he shows how this might be done, moving from some of his most precious experiences to more general theoretical concerns by way of an idiosyncratic combination of generalization and association. In doing so, he makes a claim for the cinephiliac anecdote as a new way of "doing" cinematic history, specifically as "points of entry, clues to another history flashing through the cracks of those histories we already know" (124). Rather than claiming that the cinephiliac anecdote offers a mere "alternative" history, Keathley suggests that it represents something like a materialist challenge to the very notion of history and historicism itself—an empirical "point of entry" that forces us to challenge and reconstitute the grand narratives and generalizations we've become accustomed to, instead of offering others in their place.

For such a materialist outlook, such a yearning to glimpse the roots of historical production, it is perhaps surprising that Keathley's anecdotes are themselves so minimally interested in the materiality of the film fragments they describe. No doubt, he gleans from his anecdotes certain

reflections or observations on technological, material history—one, for example, revolves around VHS production—but there is no sense that he is attached to the cinematic venue in the same way that he is attached to the cinephiliac moment, or that the two could possibly be part of the same attachment, with the exception of an anecdote he recounts about his first experience of *Bonnie and Clyde*:

My first viewing of Bonnie and Clyde was on the film's re-release in the early 1970s. I was probably about nine years old—much too young to be seeing it. I had been taken to the film—along with four older siblings, all in their early teens—by my college-aged brother, Tim, and his friend, Cathy Reed. I had heard all about the film's final massacre scene, and with the above-described shootout functioning as a preview, I was getting anxious. During the shootout, Cathy noticed my discomfort and offered to wait with me in the lobby until the film was over. Relieved, I accepted. It was for things like her extraordinary kindness and empathy that Cathy was a favorite of ours. We were always excited to see her driving down the street towards our house, and hers was an easy car to spot. The front license plate ironically sported her initials: CAR. This screening of Bonnie and Clyde was the last time any of us would ever see Cathy. Two weeks later, she was dead from meningitis. (158)

From the outset, this anecdote has a more sensuous attention to the screening space and conditions under which the film was viewed than any of the other four. There is a very specific, detailed awareness of who was in the audience on the night of the film, heightened by the fact that Keathley was much younger than the people with whom he saw the film, as well as the intended audience itself. This disparity was clearly a large part of his experience of the film, both in anticipation and actuality, and it seems to have created as much awe for the audience as for the film itself. It is this disparity, this fusion of anticipation and experience, that leads on to the paradox at the heart of this particular cinephiliac anecdote: the

cinephiliac moment, the moment of cinephile attachment, is not in fact attached to the moment and venue of the anecdote itself:

I did not see *Bonnie and Clyde* again for several years—until I was a teenager and could watch the film on video. When I did see it, it was the moment of Clyde being hit by the shotgun blast that provoked a *frisson* of involuntary recognition . . . But when I saw the film that second time, was I really *remembering* the moment of Clyde hit by the shotgun blast from the first screening when I was nine? It was about this point in the film that Cathy took me out to the lobby. Was that image of Clyde the final one I saw; was it the last memorable image I had from the film? The only mental image I can recall from after that moment is one of Cathy sitting on a bench in the theater lobby: long, straight brown hair, gold-rimmed aviator-style glasses, tan overcoat. (158)

It is precisely this uncertainty about whether the moment in question is attached to a moment in the film or a moment that took place in the space surrounding the film that signifies a transition from a cinephiliac moment to the kind of moment I am interested in here. In essence, Keathley's anecdote refers to a segment of the film that he never really occupied at the time, perhaps explaining why his free-floating attachment gradually gravitates towards one of the components of the cinematic venue that is least conducive to occupation: the lobby. As the anecdote is structured, the lobby exists as a middle term in a metonymic chain that includes the cars in the film (the backdrop to the scene Keathley couldn't bear to watch), the spaces through which Cathy escorted Keathley, Cathy's own car and, finally, the number plate that "sported her initials: CAR." Both lobbies and cars provide spaces of comfort and danger: the cinema lobby is turned outwards to the street but also inwards to the world of the film that Keathley has just managed to escape. At the same time, both spaces are, by their transitory nature, impersonal. Yet, just as Cathy managed to personalize the impersonal, transitory space of the lobby, so her car registration plate fuses the generic designation of "car" with her own

initials. The logic of the anecdote is that the lobby has become "LOBBY" in the same way that Cathy's car became "CAR."

Earlier in *The Wind in the Trees*, Keathley draws on Charles Sanders Peirce to argue that the cinephiliac moment can also be understood as the process by which the indexicality, rather than the iconicity or symbolism, of film is foregrounded (27). Here, the same process occurs, but the attachment is to a component of the theatrical infrastructure as much as the film itself. A chain of negotiations and perusals between the screen and the broader theatrical environment means that one component of that environment – the lobby - comes to have an indexical as well as a symbolic significance for Keathley. It is no longer merely the space between other spaces, or the representation of the transactions and negotiations required to enter a movie house; it has become imprinted with his initials in the same way that Cathy's number plate was imprinted with hers. Just as "that footprint that Robinson Crusoe found in the sand, and which has been stamped in the granite of fame, was an Index to him that some creature was on his island" (Peirce 252), so Keathley's anecdote functions as an elevation of Cathy herself, rather than a particular cinematic moment, to an indexical significance: "Every time I watch the moment of Clyde getting shot in the arm, I feel Cathy is still alive, just as this violence reminds me of her death" (149). As in Kracauer's writings on the cinematic lobby, Keathley's refuge becomes "the setting for those who neither seek nor find the one who is always sought" (Kracauer, "Hotel" 175), as if to corporealize and inhabit the cinephiliac moment's "space that does not refer beyond itself, the aesthetic condition corresponding to it constitut[ing] itself as its own limit" (177).

In that sense, Keathley's anecdote may start off in a cinephilic register, but quickly starts to tell a different kind of story, less focused on his privileged reaction to a moment in the film—since he never actually experienced that moment—than on a symbiosis between the film and the venue within which he (nearly) experienced it. It is my contention, in this

article, that these anecdotes are more and more common, more and more necessary, for navigating a post-cinematic ecology in which, as Steven Shaviro has argued, "all activity is under surveillance from video cameras and microphones and in return video screens and speakers, moving images and synthesized sounds, are dispersed pretty much everywhere" (Post-Cinematic 6). As the material bases of distribution and exhibition become increasingly imperceptible, or post-perceptual, there is an increasing search for anecdotes that are somehow capable of articulating those conditions of imperceptibility, if not the material bases themselves. In that sense, this new kind of anecdote is peculiarly attuned to what Timothy Morton describes as "dark ecology." Dark ecology is an environmentalist stance that embraces the "leakiness of the world" (Morton, Ecology 159), an "ecological sensibility" that Jane Bennett has described as "posit[ing] neither a smooth harmony of parts nor a diversity unified by a common spirit" (xi). Morton opposes dark ecology to what he describes as the ecocritical fantasies of immersion and atmosphere. For Morton, the ecocritical subject's drive to achieve immersion in nature draws on a tradition of reifying nature as ambience and atmosphere, or apprehending it, in Bruno Latour's words, as "composed of . . . smooth, risk-free stratified objects in successive gradations from the cosmos to microbes" (26). Such a view, according to Morton, reiterates the ontological distinction between ecocritical subject and ecological object, even as it purports to challenge or collapse it:

Ecomimesis aims to rupture the aesthetic distance, to break down the subject-object dualism, to convince us that we belong to this world. But the end result is to reinforce the aesthetic distance, the very dimension in which the subject-object dualism persists. Since de-distancing has been reified, distance returns even more strongly, in surround-sound, with panoramic intensity. (*Ecology* 135)

What this new form of anecdote strives for, then, is some language for addressing the "dark media ecology" of post-cinema—the situation that

results from what Shane Denson describes as the "discorrelation" of images through post-cinema's phenomenologically "irrational" cameras, a "leaky" ecological situation that precludes both the possibility of total immersion in the individual film as well as total abstraction of the individual film to so much ambience or atmosphere. Against the temptation to rapturous ecodiegetic immersion in the competing, mediating interfaces of this emergent ecology, such an anecdote might set out to map a media ecology without media, an ecology in which "there is not a single medium of interaction between things, but rather just as many media as there are objects" (Harman 95), in the same way that Morton's dark ecology represents ecology without nature, "nature" being precisely the fantasy that is glimpsed and felt at this moment of atmospheric immersion. Drawing on Morton, Levi R. Bryant uses the term "wilderness ontology" to refer to this moment at which our ecological perspective shifts from that of "a sovereign of nonhuman beings" to that of being "amongst nonhuman beings" ("Wilderness" 20). Bryant argues that this "amongstness' signifies something that has dark . . . dimensions" (20), specifically those of the "dark object"—"a thing that produces no difference beyond the mere difference of existing" ("Dark"). While our current media ecology may not quite have become a media wilderness, its drive towards relegating the act of mediation to a mere "metaphysical possibility" certainly aspires to transform the objects and sites of mediation into dark objects "that are so thoroughly withdrawn that they do not affect anything else at all" (Bryant, "Dark"), or at least objects that are so withdrawn that they cannot be perceived to affect anything else at all. Reflecting on this peculiar "opacity of digital culture," Lane DeNicola writes:

In contrast to dark matter, we are routinely able to observe dark culture, such as the forms I have explored here: the EULA, the codec, the API. Yet we have little in the way of an ordered understanding of its effects, its influence on how we construct meaning. What makes it "dark," invisible to routine scrutiny, is not simply that it demands highly specialized fluencies (legal or technical) or that it is cloaked by the constraints of sovereignty

(copyright and other aspects of the regulatory apparatus accorded the state) but its intrinsic *immateriality*, its *complexity*, and its *liminal status* in mediating people, the state, and the built world. Though dark culture is undeniably artificial—of human construction—and can profoundly shape the envelope of our daily experience and interaction, it typically creeps into the awareness of the vast majority of us only rarely or indirectly. As the manifold technologies we employ to connect with one another and to mediate our environments continue to proliferate, the proportion of culture that is "dark" will only increase. (276)

If a "dark" or post-perceptual media ecology is one in which the sites of mediation become imperceptible, then the transition from post-cinematic to what Denson describes as post-perceptual ecologies might be expected to turn on the absorption of the cinematic screen into dark media matter, accompanied perhaps by a "return of the culturally repressed" in which "the current becoming-skin of the [touch] screen may be traced back to the nineteenth century and to early optical toys such as the flip book, where physical contact and manipulation was a prerequisite of the visual experience" (Schneider 55). If, as Gilles Deleuze argues, the transition from pre-WWII to post-WWII cinema witnessed a slackening of sensory-motor integration, then what we are witnessing here is a slackening of atmosphere and ambience, a slackening of the possibilities for immersion, that depends precisely on the re-integration of visuality into a refurbished and rehabilitated sensorium (59). Morton construes ambience as a paradoxical ecological object, but it is an equally paradoxical cinematic object, insofar as its kinesthetic primacy only ramifies when subordinated to visuality. This is not to argue that atmospheric, ambient films no longer exist, but that atmosphere is frequently understood in terms of retrospection and pastiche. In an interview for one of the most self-consciously historicized films of the last few years, Nicolas Winding Refn's Drive, Ryan Gosling compares its highly stylized ambience with his upcoming remake of Michael Anderson's Logan's Run by grouping them as "films that are particularly well suited to this communal

atmosphere of a theater" (Cornet). Hence, too, Shaviro's characterization of "contemporary contemplative cinema"—cinema that, in effect, gives you nothing *but* ambience—as a nostalgic retreat from a "film industry whose production processes have been entirely upended by digitalization, and where film itself has increasingly been displaced by newer media, and refashioned to find its place within the landscape of those newer media" ("Slow").

A dark media ecology therefore severs immersion and atmospherics, media and mediation, instead focusing on the supreme "leakiness" of dark culture. In a discussion of the treatment of global warming and environmental catastrophe in Richard Kelly's Southland Tales, Shaviro elaborates this distinctively post-cinematic project in terms of "a leaking away of time—its asymptotic approach to an end it never fully attains" (Post-Cinematic 87). Similarly, in Connected, he identifies this leakiness of surplus value with what it means to live in a society that networks and subsists upon the vast proliferation of post-cinematic screens: "We have moved out of time and into space. Anything you want is yours for the asking . . . A surplus has leaked out of the exchange process" (249). From that perspective, the privileged moment of atmospheric immersion and attachment that distinguishes Keathley's cinephiliac anecdote is perhaps less pertinent at this point in time than an anecdote that instead evokes the surplus leak, the perceptual porosity, between post-cinema and cinematic infrastructure, between cinema and post-cinematic infrastructure-in short, between cinema (whatever we mean by that now) and infrastructure. As such, this new kind of anecdote might be expected to be itself an eminently leaky form. Whereas the cinephilic anecdote can be written or recounted in its entirety—or at least enjoys a kind of Romantic wholeness in the elegance with which it evokes what remains inchoate—this new anecdote instead demands the leakage of what will shortly be elaborated as "produsage," in an instance of the "affective labor" that Shaviro, following a concept advanced by Michael Hardt, identifies as "the quintessential mode of production" in a post-cinematic

media ecology (*Post-Cinematic* 97). Where the cinephiliac anecdote had a specific, privileged object, this new kind of anecdote is instead directed at what Morton describes as "hyperobjects," concepts or entities that are so massive, amorphous, or distributed that we can't disentangle ourselves from our participation in them (*Hyperobjects* 2). I would like to suggest that the post-cinematic venue is something of a hyperobject in this sense, and that anecdotes about our experiences of this venue will necessarily be incomplete, participatory, and collaborative in nature.

I would like now to briefly sketch out three major directions that future investigation into this post-cinematic venue might take. In doing so, I would also like to gesture towards this new, post-cinematic approach to telling anecdotes about films. Firstly, we might turn our focus towards individual films. At the most literal level, this might involve looking at films that have explicitly thematized changes in spectatorship technology over the last decade or so. Often, these tend to be horror films, such as the V/H/S franchise, but they also fall into a comic or elegiac mode, such as Michel Gondry's Be Kind Rewind. As Shane Denson has pointed out, serialized media are particularly effective for calibrating shifts in media attachment (see his comments in Denson et al., reprinted in this volume), so that a close study of extended series such as the Halloween and Nightmare on Elm Street franchises would be another useful mechanism for coming to terms with the present. Such a study might also help illuminate how suburbia, the foundational venue for all cinematic experience from the multiplex onward, might be reframed in the wake of post-cinematic media.

Along with films that explicitly thematize and analyze shifts in cinematic production, it may be instructive to consider films that are peculiarly prescient of their venue-lessness, films that are haunted by the fact that they can now be screened virtually anywhere. Films in this category, which include *The Canyons* and *The Bling Ring*, seem to set themselves the task of constituting themselves as their own venues, refusing to allow the

audience to indulge in the consoling fantasy that the spaces they depict are different in kind from the spaces in which they are distributed and screened. It is no coincidence that both of the aforementioned films are explicitly about Los Angeles, since it is likely that this effort to envisage what amounts to the myth of total cinema coming to pass—a world in which films can be made and viewed anywhere—is likely to be most sensitively calibrated in the city most inextricable from the film industry itself. One of my current projects is to construct a post-cinematic history of Los Angeles as it converges production and distribution, locations and venues, into what Axel Bruns has described as "produsage," a social and economic arrangement that "deconstructs larger overall tasks into a more granular set of problems, and therefore in the first place generates a series of individual, incomplete artefacts" (140).

In addition to this focus on actual films, or something resembling actual films, the second way to approach the post-cinematic venue is by way of venues themselves. Clearly, at some level, this partly involves venues as they are constituted or represented in films, especially in terms of the growing trend, in recent cinema, to both revisit the locations of earlier films and to foreground the process of location shooting itself, if only through the kind of extravagant, flamboyant revival of the establishing shot to be found in a film like Drive. To take just two examples of how indiscriminate and widespread this tendency is, both Michael Winterbottom's film The Trip to Italy and the Fox expansion of the Coen Brothers' Fargo into a tenepisode miniseries betray an inchoate yearning to return to the media ecology of an early cinematic era by way of the locations it has left behind. The Trip to Italy is especially elegiac, as Steve Coogan and Rob Brydon embark upon a pilgrimage to significant sites in the lives of Byron and Shelley, which gradually segues into a pilgrimage to significant sites in some of their favorite films. Just as you might feel you can't truly read a Romantic poem without visiting the location where it was written, or at least the location it was written about, so Coogan and Brydon have a kind of cinephiliac epiphany at visiting the locations of their favorite films, to

the point where it feels as if they are finally seeing those films for the first time. By contrast, *Fargo* adopts a slightly grimmer, more muted approach, returning to the infrastructure and architecture that formed the backdrop to the film, but with more of a sense of how much has changed in the interim—a change that drives the characters, atmosphere and suspense of what feels like a remediated narrative more than a straightforward adaptation, homage or continuation.

However, there is also space for investigation into actual venues and actual spaces in which people continue to watch and distribute these films in a collective fashion. To date, there has been no systematic history of multiplex attachment, let alone how this might have changed in the wake of post-cinematic media. Moving outside that model, there is ample room for architectural and cinematic analysis of the avant-garde, post-cinematic screening spaces that have been devised by such firms as Büro Ole Scheeren, who are responsible for Mirage City Cinema, CCTV TVCC, the Kinetic Experience Cinema, the Crystal Media Centre, the Los Angeles County Museum of Art and, perhaps most famously, the floating cinema at Nai Pi Lae lagoon on Kudu Island, in Thailand. In fact, Scheeren's own mission statement provides a veritable manifesto for a new post-cinematic venue, as well as an invitation to further description, analysis, and reflection:

A screen, nestled somewhere between the rocks. And the audience . . . floating . . . hovering above the sea, somewhere in the middle of this incredible space of the lagoon, focused on the moving images across the water: a sense of temporality, randomness, almost like driftwood. Or maybe something more architectural: modular pieces, loosely assembled, like a group of little islands that congregate to form an auditorium. ("Archipelago")

At the other end of the spectrum, the post-cinematic venue might also be understood to comprise all those provisional, makeshift screening arrangements that collapse cinema into the infrastructure surrounding it,

such as the recent rise of guerilla screenings in which films are projected more or less spontaneously onto components of urban infrastructure glimpsed in transit—bridge pillars and warehouses in particular—to create what Mitchell Schwarzer describes as "zoomscapes," vistas that "encourage us to imagine just what is beyond the frame, the parts of buildings that might come into view or remain unseen" (23). Interestingly, both these extremes—high-end boutique venues and improvisational indie venues—have done something to revive and globalize the drive-in theater, as well as its peculiar porosity between the screen and the world:

The drive-in movie theater may be a uniquely North American institution, but the icon of the wide-open American landscape recently experienced its most heroic revival in Thailand, leaping forth from its humble, grounded origins and into the clear blue waters of Nai Pi Lae lagoon on Kudu Island. (Chan)

Finally, there is a third option for investigating the post-cinematic venue, which is neither a study of films nor a study of venues per se so much as a mode of attachment that I am tentatively describing as infrastructuralism. If the cinematic venue has been dispersed or "relocated" pretty much everywhere (see Casetti, in this volume), to the point where the very idea of specifically cinematic infrastructure ramifies less and less, then venue-cinephilia might be expected to remediate itself by way of a quasicinematic attachment to infrastructure itself. One of the most powerful allegories of infrastructuralism in this respect is Steven Knight's 2013 film Locke, which revolves around a construction manager, John Locke, played by Tom Hardy, who spends an evening negotiating between his wife, his mistress, and his employers, who are furious after he guits his job on the eve of the biggest concrete pour in European history. The catch is that the entire film takes place in a car—Locke's car—as he communicates with every single character by phone. However, what is perhaps even more surprising is that the most dramatic moments are reserved for his conversations with his former employers, rather than his wife and mistress, and tend to build around incredulous reflections on just how momentous

and unprecedented this concrete pour is going to be. Meanwhile, the car itself feels more and more porous, as Locke's phone, GPS, and various vantage points start to merge into an undifferentiated assemblage of mobility, light, and sight that makes it impossible to believe that there ever was anything as concrete as concrete. Not only does this capture a peculiarly post-cinematic yearning for infrastructural reassurance, but it offers hard infrastructure specifically as an elegiac approximation for an analog world that is well and truly behind us.

If post-cinema represents something like total cinema, then Steven Knight's use of the car as a venue within which to stage this negotiation also suggests that post-cinema has somehow revived and remediated the phenomenological correlative between cinema and driving. Anne Friedberg describes this as "automobility"—a "combination of urban mobility and automotive visuality" that she identifies as peculiarly intertwined with the "virtual mobilities of cinematic and televisual spectatorship" in Los Angeles (184, emphasis in original). For Friedberg, automobility represents a post-cinematic or total-cinematic potentiality distributed across the Los Angeles cityscape, peculiarly accessible whenever windscreens and cinema screens collide or collaborate (186). Conversely, insofar as the Los Angeles cityscape has indeed come to fulfil that potentiality, then it is only by dispersing automobility to such an extent that it is no longer dependent on access either to a windscreen or a cinema screen. Instead, as in *Locke*, the windscreen and cinema screen have been bundled into a kind of free-floating perceptual apparatus, or perceptual vehicle. Infrastructuralism, as I understand it, often involves bearing witness to this species of automobility, and its failure to distinguish between cinematic and non-cinematic infrastructure, between the attachment that we might have to a highway in a film, and the attachment we might have to the same highway in real life (or an imagined film).[1]

As much as *Locke* might stand as a manifesto for infrastructuralist poetics, then, I hesitate to describe it as an infrastructuralist artifact in

itself, just because it is so recognizably a film, albeit a film with postcinematic proclivities. To find an actual instance of infrastructuralism, we need to look elsewhere, most immediately online, among the various fan forums and communities that have become such an object of study in recent years. Among these communities, there has been a recent trend towards revisiting the sites and locations of earlier films. In many cases, a fan community will actually constellate around a single location. This can be seen, for example, in the fan response to the 1997 slasher film I Know What You Did Last Summer. Like so many of the films in the 90s slasher revival, Summer uses a quite porous, vertiginous sense of space to approximate the killer's omniscient presence. One of the most dramatic moments comes when Julie James, played by Jennifer Love Hewitt, addresses this presence directly for the first time. Unlike *Scream* or Urban Legend, Summer doesn't have a great deal of communication, direct or indirect, between the killer and his victims: for the most part he just scrawls the famous catchphrase before taking them out one by one. It is quite a dramatic gesture, then, when Julie spins round and round, at a small intersection, and cries out to the killer to make himself known. A great deal of fandom has been generated by this moment—and devoted specifically to this location, which like so much of the film is set against a plush, hyperreal version of the Outer Banks of North Carolina.

This mode of fandom is particularly prominent on YouTube, and perhaps finds its fullest expression in a medley of videos by K&Jhorror, a pair of cinephiles who travel around the United States in search of horror film locations. As far as their tribute to *Summer* is concerned, K&Jhorror proceed more or less chronologically, seeking out the locations in the order in which we encounter them in the film, in a gesture they describe as "recreation" (KandJHorrordotcom). However, this isn't a recreation of the film scene in the conventional sense, since there's nothing in the way of narrative or dialogue, apart from a few casual references and quotations. Nor is it a recreation in the more obsessive sense of YouTube fandom, since there's very little interest in replicating the shots and sequences of

the original. Instead, K&Jhorror provide something closer to testimony, evidence (or insistence) that these locations, structures, and vistas still exist. At the same time, their digital cameras, which tend to be jerkily handheld or mounted on the dashboard, register how much has changed since these locations were last filmed. Where 90s slasher films generated horror from the sense of some new informational horizon just around the corner, perceptible only by way of the perennial killer's command of communicative nodes and networks, K&Jhorror return to these slasher locations as if to measure how much that horizon has receded, and how much of cinema it might have left, inadvertently, in its wake. Watching their fan films makes you realize the extent to which 90s slasher films were part of some great last gasp of the cinematic, an invocation of hypersaturated celluloid against an imminent post-cinematic world, as they set out to extract some quantum of the cinematic from sites where cinema once lingered or settled, in a kind of Romantic remediation, an appeal to the mnemonic, restorative properties of place.

However, as the combination of handheld and dashboard cameras might suggest, the dissociation of cinematic and post-cinematic apprehension that Julie was starting to experience at that fatal intersection doesn't tend to be reversed, or even halted, by these fan gestures. Instead, it is consummated—and it is in this sense only that K&Jhorror's fan films work as recreations, albeit recreations that are in a sense more complete than the original film, insofar as they continue its partial devolution into post-cinematic disorientation. In the original intersection scene, Julie is prompted to address the killer's presence by discovering a dead body covered in crabs in the trunk of her car. It is hard to see how the killer could have put the body there—it is one of the palpably implausible moments in the film—but even more difficult to see how the killer is able to remove the body and the crabs, and clean up the sand and the detritus, in the short time it takes Julie to run for help, immediately after she has called out to him. In narrative, cinematic, and spatio-temporal terms, it is frankly impossible. Yet that very impossibility is what makes it clear

that the killer has not only heard Julie but has responded to her claim to show himself in his true light. From this point on, we start to glimpse the killer more and more, but that is only because the true revelation has already occurred—the revelation of his profound automobility, his capacity to transform Julie's car into a perceptual tool that becomes more or less continuous with the mechanisms that drive our own incredulity and cinematic engagement. In other words, it is at this moment that the killer manages to constitute himself as both agent and venue of our gaze, an automobilizing venue-experience that exceeds the film.

This sense of testimony, of bearing witness to an infrastructural apprehension that is somehow cinematic, as well as the modulation of location scouting as a retrospective act, are explored further in the popular blog Scouting New York. Run by Nick Carr, a location scout working in New York, the blog's posts take the form of extended photographic essays, or montage sequences, that alternately retrace the locations of quintessential New York films and report on infrastructural peculiarities, eccentricities, and narratives encountered in the course of scouting. In Carr's eyes, "locations" themselves only exist somewhere between all the films that have been (or might have been) shot there and all the films that might someday be shot there (or imagined to be shot there). As a result, each space brims with a cinematic attachment and import that is nevertheless distinct from any one specific film—an attachment that I would like to suggest is both distinctively post-cinematic and distinctively infrastructuralist. Two posts are particularly useful in this respect. In the first, a record of the magisterial approach from the Bronx to Brooklyn via Jerome Avenue, Carr provides quite a simple, straightforward instance of the visual rhetoric of the site—a photo-essay structured according to the rhythms of driving and windshield viewing that sets out an infrastructural and topographical vista that should have been in a film, or might as well have been in a film, so cinematically does it unfold in front of us ("Where New York Begins"). The second is one of many instances in which Carr traces out the architecture and infrastructure of a movie theater buried in a subsequent structure—in this case a pharmacy—while obeying the same visual rhetoric of the first post, as if sketching out the successive shots in a projected film ("Hidden in a Rite Aid"). Taken in combination, these blog posts suggest an approach to urban infrastructure that is inextricably cinematic, albeit divorced from any actual experience of the cinematic, let alone any specific film, as well as inextricably bound up with driving, albeit divorced from the actual physical experience of driving. I would like to suggest that this gestures towards the technologies of Google Street View and Google Maps as new loci of infrastructuralist attachment, and to suggest that we turn our attention towards their intersection with what we still call film as a productive and provocative way to think about how the post-cinematic venue might be constituted.

I would also like to argue, more generally, that we need a new way of thinking about the stories we tell about film, and even the way we talk about film itself—something that is addressed by the variety of methodological approaches set out in this book, and by the book itself. At the moment, it often feels as if there is a pull back in the other direction, a yearning for the "cinematic" that collapses all too easily into a yearning for the "canonical," or at least goes some way towards explaining the resurgence of canonical preoccupations in millennial film criticism. But even these efforts to transform cinematic spectatorship from a hyperobject back into a mere object are already enthralled by this bewildering dispersal of cinematic experience, this new world order in which the very distinctions between "film" and "place" seem to be on the verge of collapsing. One of the most marked canonical gestures in the last fifteen years—or in the whole of film criticism, really—has been Paul Schrader's effort, in his capacities as director, writer, and academic, to come up with a definitive, even summative, film canon. Of course, the project failed, and of course Schrader reflected on it with his typical wit and astuteness. One part of his reflection, though, keeps coming back to haunt me—his explanation of what really committed him to the canonical project in the first place, what made him feel how urgently the "cinematic" itself needed to be

sedimented and canonized if it wasn't to disperse completely. It's an anecdote Schrader seems to have told so many times that, by the time he disclosed it to the press, it had become an anecdote about telling the anecdote, or about how often he found himself returning to it in lieu of his actual canonical project itself:

In March 2003, I was having dinner in London with Faber and Faber's editor of film books, Walter Donohue, and several others when the conversation turned to the current state of film criticism and lack of knowledge of film history in general. I remarked on a former assistant who, when told to look up Montgomery Clift, returned some minutes later asking, "Where is that?" I replied that I thought it was in the Hollywood Hills, and he returned to his search engine. (34)

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Notes

[1] It would be useful to consider this free-floating, jettisoned automobility as a way of thinking about post-cinematic music, or post-soundtrack music. In recent years, a strand of music has emerged that attempts to evoke the experience of post-cinematic, digital media by way of how absolutely it has engulfed what we might have once thought of as the privileged, hermetic space of the automobile. In this respect, the various projects of Johnny Jewel are particularly instructive, especially the way in which Chromatics' score for *Drive* gives way to Symmetry's *Themes For*

An Imaginary Film. John Maus and Ariel Pink's Haunted Graffiti take this project even further—drawing on the transitional and incidental music of 80s cinema in particular, they conjure up a world in which post-cinematic media hasn't merely incorporated the automobile, but has managed to incorporate every adjacent cinematic experience, every anticipation or recollection of a multiplex while driving through suburban streets on a cold dark night.



7.1 The Post-Cinematic in PARANORMAL ACTIVITY and PARANORMAL ACTIVITY 2

BY THERESE GRISHAM, JULIA LEYDA, NICHOLAS ROMBES, AND STEVEN SHAVIRO

Therese Grisham: I want to start at the most theoretical level, to find out where you position your thought with regard to the two films we are discussing, *Paranormal Activity* (Oren Peli, 2007) and *Paranormal Activity 2* (Tod Williams, 2010). It would be helpful if you gave a brief definition of the "post-cinematic," or an equivalent term you work with, and include some introductory remarks about these movies as post-cinematic.

Nick Rombes: Great to be here, and thanks for this opening question, Therese. My thinking about post-cinema has certainly been influenced by Steven's writing, especially in his *Film-Philosophy* essay, "Post-Cinematic Affect: On Grace Jones, *Boarding Gate*, and *Southland Tales*" and his book, *Post-Cinematic Affect*. Particularly right-on, I think, is Steven's phrase about how the expressive nature of post-cinematic media gives rise to "a kind of ambient, free-floating sensibility that permeates our society today" (*Post-Cinematic* 2). My own still-in-progress mapping

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of post-cinema would begin with this phenomenon: the totalitarian immersion of our everyday lives in the slipstream of the digital, cinematic imaginary, as captured so well in the *Paranormal* films which, at their most fundamental level, tackle the question of how to navigate the private spaces of this new media landscape.

I'd turn here to a concept used by some psychiatrists—*limbic resonance*—to describe how human beings seemingly "tune into" each other *via* neural attunement and mirror neurons. Post-cinema is living; as much as it generates affect in us, we generate affect in it. We feel, and it feels back. How cinema achieved this state of feeling remains clouded in mystery and needs to be theorized; to do so, we might turn to the disciplines of quantum physics and psychopathology, whose methods are (at their best) experimental in the best and most radical sense of the word.

In the *Paranormal* films, it's not the house or the characters who are haunted, but the cameras, whether they be moving and hand-held (as in the first film) or stationary and fixed (as in the second). On one level, I wonder if this deforms the reality-TV tropes that are so familiar.

Another characteristic of post-cinema relates to the avant-garde which, historically, played an important role in maintaining some critical distance between cinema and mass culture and cultivated a certain aura and mystique around "movies" in general. (Although, as Robert Ray has eloquently argued, avant-garde movements have typically been star-driven and have courted acceptance from the mainstream.) But is a cinematic avant-garde possible today? The *Paranormal* films are illustrative. Under slightly different historical circumstances, we could see them as avant-garde. Arguably, their experiments with form and constraint—especially *Paranormal 2*—are as rigorous as other contemporary films considered experimental or, at the least, challenging, such as *Ten* (Abbas Kiarostami, 2002; two mounted digital cameras), *Russian Ark* (Alexander Sokurov, 2002; one continuous 96-minute shot), or *Timecode* (Mike Figgis, 2000;

screen divided into four quadrants, each showing simultaneous action in real time with no cuts). The relationship between the avant-garde and capital is various and textured, but it should be remembered that the first *Paranormal* was independently produced and cost only around \$15,000 to make, and was directed by Oren Peli, a complete outsider to the film industry and someone who had never made a film before, not even a short one.

Post-cinema lacks diverse channels of publicity. Unlike the French New Wave or Italian Neo-Realism or the *Film Culture* movement, there is no one to claim that films like *The Blair Witch Project* or the *Paranormal* films are experimental, and therefore they are not. The folks who make these films—unlike Lars von Trier, or Stan Brakhage, or Maya Deren—are not also writers, critics, or provocateurs. The avant-garde has always depended on publicity to achieve and police its once-notorious place at the edges of the canon. In the post-cinema world, the proliferation of social media outlets has resulted in not more discourses across platforms, but less. Filmmakers are, by and large, publicists rather than agents of disaster. It's not that capital has thoroughly commodified cinema (this doesn't seem to be the case), but rather that post-cinema lacks the powerful metanarrative to swim upstream against the currents of unorthodox publicity. Where are the voices that proclaim the avant-garde post-cinema as the avant-garde post cinema?

Julia Leyda: I agree with Nick that Steve's previous work on the post-cinematic is a solid basis from which to begin a discussion of the two *Paranormal Activity* movies now in release. In particular, I just want to underscore what interests me the most in Steve's elaborations in the *Film-Philosophy* excerpt from Steve's book, "Post-Cinematic Affect: On Grace Jones, *Boarding Gate* and *Southland Tales*." Mainly, I like the attention he pays to the inter-connections among technology (specifically new digital modes of production), capital, and affect. He argues that post-cinematic media productions

generate subjectivity and ... play a crucial role in the valorization of capital. Just as the old Hollywood continuity editing system was an integral part of the Fordist mode of production, so the editing methods and formal devices of digital video and film belong directly to the computing-and-information-technology infrastructure of neoliberal finance. (3)

This rings especially true for me in these movies—maybe more so in the second one—because there is such a clear relation between the digital cinematography and editing and the way I feel myself corralled into certain perceptive modes. For example, the fixed security camera footage forces me to scan the frame continuously because I realize that the camera will not pick out action or details that I should focus on.

As you can see here, I don't usually manage to stay at a theoretical level for very long without recourse to exemplification—it's the only way I can make sense of theory, usually. But I also feel Steve's definition encourages a political reading that takes into account the way gender, race, and class are intricately interwoven into the movies, again especially PA2. Striking to me in this movie are the rapid and dangerous reversals of power relations across a few different axes. First, and most obviously, the suburban middleclass American house itself. Certainly the centuries-old tradition of the Gothic and the haunted house horror novel, and then film, lays the basis for this movie's portrayal of the defamiliarized domestic space turned into a site of terror (a nod to Therese's course on Home Noir as well). But more specifically, for this particular viewer, these movies brilliantly portray, in their low-budget verisimilitude, the twenty-first-century American real estate nightmare. Although I am American, I haven't lived in the US since 1998, so my own experience of McMansions and the kind of suburban lifestyle we see here is very mediated, but this movie felt to me like an articulation of the excess of that time and place—of personal living space, consumer products, cars, swimming pools, energy use, new-fangled financial instruments, and so on.

There is also the implication that a male ancestor in the past has made a Faustian bargain with a demon in exchange for material wealth. In that sense, I see the film in the vein of some of Romero's horror movies as well: not only the isolated home of *Night of the Living Dead* and the shopping mall of Dawn of the Dead, but also the rust belt desolation of suburban Pittsburgh in Martin. Like those and other body genre horror movies, the cause of the horror isn't tied to a particular locale like a ghost or poltergeist—it is based within the body itself. That it seems to always (so far) be a young female body might get explained more in the third film, due out in a few months. Another obvious flipping of power relations occurs between the family and their Latina maid, whom they condescendingly call a "nanny" at the beginning, implying she is exclusively a child care worker. But later, we see her cooking, doing laundry, and cleaning the house. The movie repeats the cliché that she is like one of the family until she is summarily dismissed, and then re-summoned when they realize they need her expertise. At that point, she has complete control over the family—fortunately for them, she seems genuinely to care for them and does not take this opportunity to wreak revenge on them, as oppressed people do in so many horror movies such as Drag Me To Hell (2009). As in the Tourneur/Lewton horror cycle and so many more, we see here a wealthy white male reject the atavistic knowledge of a female Other character, followed by his acceptance and reliance on her knowledge.

But to continue the framework of looking at power relations and their reversals, I see the technology itself in a tenuous power relationship with the homeowners, as they buy the security surveillance system and home video cameras but struggle for mastery over their operation, and seem later to depend on them for their survival. At a certain point in each film, the audience recognizes a form of digital dramatic irony: the cameras "know" and "see" more than the characters, and thereby we do as well. The omniscience of the security cameras, however, begins to resemble a form of mastery over the people—not so much that the cameras are haunted, I think, as that the cameras are superior, all-seeing witnesses

that cannot intervene, and force us also to witness helplessly. I feel an almost sadistic tone emanating from this kind of enforced and hobbled surveillance: security video as audience torture device. In this sense, the digital modes of production here appear to have influence over the kinds of affect the movie generates.

Steven Shaviro: My sense of the post-cinematic comes first of all from media theory. Cinema is generally regarded as the dominant medium, or aesthetic form, of the twentieth century. It evidently no longer has this position in the twenty-first. So I begin by asking, what is the role or position of cinema when it is no longer what Fredric Jameson calls a "cultural dominant," when it has been "surpassed" by digital and computer-based media? (I leave "surpassed" in quotation marks in order to guard against giving this term a teleological meaning, as if the displacement of one medium by another were always a question of logical progression, or of advancement towards an overall goal. While André Bazin's teleological "myth of total cinema" is certainly worth considering in this regard, there are many other factors in play as well; the situation is a complexly overdetermined one.)

Of course, if we are to be entirely strict about it, cinema was only dominant for the first half of the twentieth century; in the second half, it gave way to television. But for a long time, a kind of hierarchy was still in place: the "big screen" continued to dominate the "small screen" in terms of social meanings and cultural prestige—even if the latter generated more revenue, and was watched by a far greater number of people. Already in the 1950s, movies achieved a second life on television; it wasn't until much later that anyone had the idea of doing cinematic remakes of television shows. It's true that television news, or live broadcast, became important pretty much right away: think of Nixon's Checkers speech (1952), the Nixon-Kennedy debates (1960), and the coverage of the Kennedy assassination (1963). But it's only been in the last decade or two that television drama has been seen as deeper and more relevant than cinematic drama. (In the

1970s, the *Godfather* films and *Taxi Driver* were cultural landmarks; for the past decade, the similar landmarks are shows like *The Sopranos* and *The Wire*.)

The movies only gradually lost their dominant role, in the wake of a whole series of electronic, and later digital, innovations. Theorists like Anne Friedberg and Lev Manovich have written about many of these: they include the growth of massively multichannel cable television, the increasing use of the infrared remote, the development of VCRs, DVDs, and DVRs, the ubiquity of personal computers, with their facilities for capturing and editing images and sounds, the increasing popularity and sophistication of computer games, and the expansion of the Internet, allowing for all sorts of uploading and downloading, the rise of sites like Hulu and YouTube, and the availability of streaming video.

These developments of video (electronic) and digital technologies entirely disrupted both the movies and traditional broadcast television. They introduced an entirely new cultural dominant, or cultural-technological regime: one whose outlines aren't entirely clear to us as yet. We do know that the new digital technologies have made the production, editing, distribution, sampling, and remixing of audiovisual material easier and more widespread than it has ever been before; and we know that this material is now accessible in a wider range of contexts than ever before, in multiple locations and on screens ranging in size from the tiny (mobile phones) to the gigantic (IMAX). We also know that this new media environment is instrumental to, and deeply embedded within, a complex of social, economic, and political developments: globalization, financialization, post-Fordist just-in-time production and "flexible accumulation" (as David Harvey calls it), the precaritization of labor, and widespread micro-surveillance. (Many of these developments are not new, in that they are intrinsic to the logic of capitalism, and were outlined by Marx a century and a half ago; but we are experiencing them in new forms, and with new degrees of intensity.)

Such is the context in which I locate the post-cinematic. The particular question that I am trying to answer, within this much broader field, is the following: What happens to cinema when it is no longer a cultural dominant, when its core technologies of production and reception have become obsolete, or have been subsumed within radically different forces and powers? What is the role of cinema, if we have now gone beyond what Jonathan Beller calls "the cinematic mode of production"? What is the ontology of the digital, or post-cinematic, audiovisual image, and how does it relate to Bazin's ontology of the photographic image? How do particular movies, or audiovisual works, reinvent themselves, or discover new powers of expression, precisely in a time that is no longer cinematic or cinemacentric? As Marshall McLuhan long ago pointed out, when the media environment changes, so that we experience a different "ratio of the senses" than we did before, older media forms don't necessarily disappear; instead, they are repurposed. We still make and watch movies, just as we still broadcast on and listen to the radio, and still write and read novels; but we produce, broadcast, and write, just as we watch, listen, and read, in different ways than we did before.

I think that the two (so far) *Paranormal Activity* films are powerful in the ways that they exemplify these dilemmas, and suggest possible responses to them. They are made with recent (advanced, but low-cost) digital technologies, and they also incorporate these technologies into their narratives and explore the new formal possibilities that are afforded by these technologies. As horror films, they modulate the affect of fear through, and with direct attention to, these digital technologies and the larger social and economic relations within which such technologies are embedded. The *Paranormal Activity* films in fact work through the major tropes of twentieth-century horror. First, there is the disruption of space that comes when uncanny alien forces invade the home, manifesting in the very site of domesticity, privacy, and the bourgeois-patriarchal nuclear family. And second, there is the warping (the dilation and compression) of time that comes about through rhythms of dread, anticipation, and

urgency: the empty time when the characters or the audience are waiting for something to happen, or something to arrive, and the overfull time when they are so overwhelmed by an attack or an intrusion that it becomes impossible to perceive what is happening clearly and distinctly, or to separate the otherworldly intrusion from the viscerally heightened response (or inability to adequately respond). The *Paranormal Activity* films take up these modulations of space and time, but in novel ways, because their new technologies correspond to, or help to instantiate, new forms of spatiotemporal construction (one might think here of David Harvey's "space-time compression," or of Manuel Castells's "space of flows" and "timeless time").

TG: My second question relates to something Nick mentioned in his response, which is the difference between the post-cinematic in *PA* and *PA2* and reality TV. One criticism of these films I've read and heard frequently is that they are uninteresting precisely because they resemble TV shows involving the "paranormal," such as *Ghost Hunters* and others. Is this a valid criticism? Why, or why not?

NR: In some ways, I think the *Paranormal* films reflect deeper anxieties about reality TV and how it reflects the super-abundance of surveillance itself in American society. In response to the first question, Julia wrote about the "tenuous power relationship" between the homeowners and the camera/surveillance technology they install to keep themselves safe. I think this is a really useful way to frame what's happening in these films. We don't have much of a public conversation or debate in this country about surveillance and the corporatization of privacy, despite the fact that some fundamental notions about what it means to be a private citizen are undergoing profound transformations. Cinema has been one place where unarticulated cultural anxieties can be addressed in narrative form. I think for instance of the problems associated with the post-World War II "return to normalcy" and how film *noir* captured these tensions through the disruptive play of light and shadow.

Reality TV seems always to be about the fact of the camera, and it very often gestures toward but does not quite critique its own function as a transformer of private desire into public commodity. The Paranormal films—like Blair Witch—even further foreground the presence of the camera and quite effectively turn the camera into an agent of horror. The evil presence in these films is invisible precisely because there is no evil. The cameras themselves are agents of possession, literally: they possess those who happen into their gaze. Reality TV works to capture authentic moments of human emotion: fear, jealousy, anger, love. But at the root of all this is possession: human beings held in possession of another's gaze, the unblinking gaze of the camera. Our transactions both online and on the streets are now not only abundantly under surveillance, but mysteriously: we don't even know when we are being watched, tracked, documented. This truly is a horror of existential dimensions, and so what better medium than the cinematic horror genre to put into narrative form these fears, since we can't seem to address these concerns in the public sphere.

SS: I like both Julia's comment about "a form of digital dramatic irony: the cameras 'know' and 'see' more than the characters," and Nick's comment that "the cameras themselves are agents of possession, literally: they possess those who happen into their gaze." Both *Paranormal Activity* films play with the old horror-film trope that evil forces can only manifest themselves if you have in some manner invited them in, and that you only encourage and strengthen such forces when you question them and try to find out what they want. Presumably the demonic entity that "wants" to possess Katie, and does succeed in doing this at the end of both films, would be coming after her in any case; but it seems to be strengthened by the very technological apparatus installed in order to monitor its activity. In both films, too, the husband or boyfriend installs the surveillance equipment, thinking thereby to prove that the danger is nonexistent. This is a variation on the equally familiar horror-film trope of the controlling male authority figure: a narrow-minded rationalist, and disbeliever in the

supernatural, whose scorn for the woman's "irrational" fears only helps to precipitate the catastrophe. Technological rationality ironically conducts and channels the irrational force that it was supposed to guard against; an apparatus of maximal visibility works to accommodate the unseen, the invisible, that which literally cannot be seen. The demonic force is only visible in its effects (crashing furniture, slamming a door, setting a fire, dragging a body down the hall, etc.); it needs to incarnate itself in the woman's body (Katie) in order to act with full force.

I cannot help being reminded of Gilles Deleuze's formulations about forces and forms. In his book on Francis Bacon, Deleuze writes that art "is not a matter of reproducing or inventing forms, but of capturing forces. . . . The task of painting is defined as the attempt to render visible forces that are not themselves visible. Likewise, music attempts to render sonorous forces that are not themselves sonorous" (56). Every sensation is produced by forces, Deleuze says, but these forces cannot themselves be sensed.

Deleuze is writing about what he calls the "virtual"; but I think that his formulation works quite well, albeit inverted, for the horror genre. The evil, demonic intrusion is a force in itself impalpable, but which becomes sensible, graspable, and palpable in its effects. The force is striving, in Deleuze's terms, to "actualize" itself. The evil force comes from Outside: not from some other empirical place, but rather from what Deleuze calls "an outside which is further away than any external world and even any form of exteriority" (Foucault, 96). This Outside is what forces its intimacy upon us.

Deleuze is often read as celebrating the advent of forces from the Outside; but I think that this is an oversimplification. In any case, horror treats the event of this intrusion with a full-fledged affective ambivalence. The invasion from the Outside produces feelings of dread and anxiety. This is, of course, something that goes back to Freud's *uncanny* a century ago (and indeed, to Freud's German Romantic sources a century before that):

it's precisely the bourgeois home, the seat of interiority, the one haven we have from a heartless world, that becomes the site where the Outside manifests itself.

In the *Paranormal Activity* films, the violated home takes the form of that middle-class California tract housing that so many Americans purchased over the last decade or so (and that many of them subsequently lost after the financial collapse of 2008). There's something essentially anonymous about this sort of housing: it looks generic, even after you have striven to make it "yours." I read somewhere that Oren Peli used his own home as the set for the first movie; I do not find this surprising at all. I should emphasize that I am not expressing any sort of snobbish distaste for suburban living here. (I live in a city, and far from California, but my own home is equally generic; nearly all my furnishings come from either Costco or Ikea.) But the films emphasize a prevailing norm of interior design: it's the lifestyle that we all aspire to. Only the extremely poor (or those who have recently lost their homes to foreclosure) are deprived of it; and only the extremely rich can afford to have anything more idiosyncratic. And it's precisely within this generic blandness, our only simulacrum of interiority, that the force of the Outside manifests itself. This intrusion is both my only claim to singularity, and something that threatens to tear me away from all comfort and all hope.

Of course, what really distinguishes the *Paranormal Activity* movies from earlier horror films is not just the furnishings, but the technology. Everything is shot with hand-held video cameras, with the cameras built into laptops, or with surveillance cameras. Moreover, these technologies figure heavily within the films themselves. The result is a kind of collapsing of levels. In the modernist films of fifty years ago (whether of the French New Wave or of the more radically experimental avant-garde), the crucial move was to explicitly acknowledge that what we were seeing was a film, rather than reality itself. This made the film self-reflexive, and moved our observation of it to a meta-level. In contrast, there's nothing "meta" about

the *Paranormal Activity* films. The use of technologies that many people already have in their homes points up the fact that these technologies are not observing us from outside, but are themselves thoroughly woven into the texture of everyday life. There's no special level of self-reflexivity; everything happens on the same plane. This is part of what makes these films post-cinematic. The technology that records the uncanny activity is not in itself the least bit uncanny.

In this way, the *Paranormal Activity* films are quite different, not only from horror films of the 1970s and 1980s, but even from their most obvious predecessor, The Blair Witch Project (1999). That film was the first horror movie to use cheap and commonly-available video technology, presented centrally within the film as well as being used to produce it. But *Blair Witch* was still closer to more traditional cinema in its use of fragmentation, and in its reaching towards the sublime. In contrast, the Paranormal Activity films emphasize hyper-continuity rather than fragmentation: their footage, after all, is supposed to be that of surveillance cameras that are running all the time, or of home video cameras that are so cheap and easy to use that we whip them out at every opportunity, rather than reserving them for special occasions. Also, the intrusions recorded or produced by these cameras are not sublime, as was so often the case in older horror; rather, they tend to be banal. As Nick wrote in his earlier take on Paranormal Activity 2: "It is through the monotonous repetition of these familiar images [of surveillance cameras providing fixed views of various rooms] that the specter of disorder arises" ("Six Asides").

Although we have all been writing of "surveillance" videos, I think that this term is possibly a misnomer. In contrast to the classical type of surveillance described by Michel Foucault, here there isn't anyone watching the output of the cameras; there isn't even that uncertainty that Foucault describes as to whether somebody is watching or not. Instead, we should say that only the laptop computer is watching the footage that it compiles. The laptop is not a viewer, much less a surveillance officer. Rather, we should say that

it is precisely *no one*. This also means that we the audience, watching the film, ourselves are no one. There's no identification. Everything is radically depersonalized (which is what happens when everything is turned into mere "data"—which is what computers do). Therefore, I want to qualify Nick's statement that, in the films, "human beings [are] held in possession of another's gaze, the unblinking gaze of the camera." To my mind, the camera's "unblinking," that is, continuous activity is *not* anything that we might understand as being a possessive gaze—it is, rather, dispossessive. Similarly, when Julia says that "the omniscience of the security cameras . . . begins to resemble a form of mastery over the people" in the film, I want to qualify this as well. For me, the effect of the cameras is not to exert mastery, but rather to eliminate any form of mastery, to make it impossible and unthinkable.

In short, the Paranormal Activity films are not about surveillance, but rather about what the futurist Jamais Cascio calls sousveillance: "a recent neologism meaning 'watching from below'—in comparison to 'surveillance,' meaning 'watching from above." Cascio describes what he calls a "participatory Panopticon," reversing the model that Foucault described. Rather than being an intrusion of Big Brother, this new form of data collection is actualized by "the millions of cameras and recorders in the hands of millions of Little Brothers and Little Sisters." Cascio holds out a certain degree of utopian hope for this process: it has the potential to make data freely available to anyone, instead of its being monopolized by big corporations and the state security apparatus. And I must say that I vastly prefer Cascio's take to that of, say, Baudrillard, who obsessively denounced the "obscenity" and lack of privacy and secrecy in "postmodern" society. Baudrillard always comes across to me as the last of the old-style European intellectuals, horrified by the "vulgarity" of American popular culture. However, I think that the Paranormal Activity films offer us something quite different: a sense of horror that is proper to the world of sousveillance, a world that is infinitely "flat" (Thomas Friedman), and that is best characterized by a "flat ontology" (Manuel Delanda).

JL: I'm intrigued by Steve's point about there being no one watching, because the laptop or the cameras are digitizing the life of the subjects, thus turning something we might call reality into data and thus a kind of nothing. I also like his use of the term *sousveillance*, which certainly has a more optimistic premise than Baudrillard's or even Foucault's, in a sense. But that makes me wonder why I do feel the footage is somehow ominous, as if the camera stands for a sinister observer or viewer. This might come from my (over)familiarity with conventional horror movie cinematography, which we could term "stalker-cam" or "voyeur-cam," in which we see the characters from behind a tree or through the window, implying a hidden or distant secret observer who, in a horror movie, has malicious intent. Seeing the characters from a particular POV that we cannot attribute is disconcerting.

Maybe the absence of an embodied evil in the movie also adds to my tendency to invest the stationary video cameras (the camera on the tripod in *PA* and the security cameras in each room in *PA2*) with some sinister overtones. This reconnects with our earlier comments about the cameras, and reminds me of the familiar horror convention of de-familiarizing the home as haven and flipping it to make it a site of terror and the uncanny. Specifically, security cameras are ideally supposed to make us feel safer, yet these constant tape loops make us and the characters more anxious by revealing what Katie can never see firsthand: herself sleeping and what goes on while she sleeps. Not only does the camera have that "outside" view of the sleeping person, but so does the demon—the sleeper can never see herself from outside, yet the demon can inhabit her and then look out from inside her body, her consciousness.

The mobility and invisibility of the demon, its ability to move around the home and also to inhabit Katie's body, echoes the insidious mobility of finance capital, which ultimately caused so many couples like those in the movie to be foreclosed—possessed? Just as the demon demands payment of an ancestor's contract, the predatory mortgage allows an outsider to

take away the very home and hearth (as generic and characterless as it is). Therese suggested the term "undulating," and I think it fits here: the digitization, mobility, and decentering of financial systems and instruments make them harder to fight or resist. When we see evidence of the demon on Katie's body it takes the form of bite marks in a bruised, lacerated circle—it looks to me like a lamprey bite might look if lampreys bit humans. The lamprey is a sea creature who feeds by sucking on other fish, just as the demon depends on Katie's body to give it form, and, well, I don't have to explain the obvious metaphor with the mortgage industry or even finance capital more generally. But the blood-sucking metaphor wouldn't be as effective if it were a vampire; the movies use the demon as a more elusive, disembodied yet personalized evil entity. The fact that it can and will follow the sisters throughout their lives makes it more frightening than a ghost or poltergeist, and it means that moving away will not allow them to escape.

TG: I want to finish our discussion with three questions, one for each of you and what I find to be your interests. I direct my first question, which has several related parts, to you, Nick.

In "Six Asides on *Paranormal Activity 2*," published in *Filmmaker Magazine*, you are very much concerned with *PA2* as an "avant-garde" film, and you think of Tod Williams as an avant-garde auteur. You have even co-written "The Fixed Camera Manifesto," which you originally posted on your blog, in order to help create the conditions for considering auteurs who use a fixed camera—such as Andy Warhol in *Empire* (1964) and Bong Joon-Ho in *Influenza* (2004)—as avant-garde.

Why is it important to you to create this context? Is the avant-garde, which is usually applied to modernist films, still a viable category? I note that the conditions of production for *PA2* and *Empire*, for instance, are radically different. You consider *PA2* post-cinematic. What about the other avant-garde films on your list? Also, where does the first film,

Paranormal Activity, which was made using a hand-held camera, fit in your consideration of a current avant-garde?

NR: The cinematic avant-garde has always been highly self-aware, that is, aware of itself as a counter-narrative. However, two related late-modern developments have eroded the viability of the avant-garde. First, the speed by which marginal cultural productions move into the mainstream has destroyed the avant-garde's ability to remain avant-garde. In fact, there is no real distinction today between the pop/artistic mainstream and the pop/artistic marginal, but not because of the much-commented-on collapse of distinctions between high and low, but rather because the aura of the avant-garde evaporates once consensus builds around it, and that consensus builds more rapidly now—across the internet—than it did previously.

Second, many cultures have become "meta," enmeshed in images of their own being. Our digital technologies and mediums are not something to-be-looked-at, but something which, themselves, "look" back at us, recirculating our gazes in perfect loops with no generation loss. I think in a previous question I mentioned how the cameras in the *Paranormal* films were in fact haunted. They are haunted with our own images, staring back at us. We are now surveillors of ourselves. This intense, narcissistic self-reflection means that one of the signatory outposts of the cinematic avant-garde—a relentless survey of its own practices, which separated it in important ways from the "invisible" style of mainstream film—has now been so thoroughly colonized that it ceases to exist, unless it is called into existence.

As to why it's important to create an avant-garde context for films like *Paranormal 2*, I understand that this is, at its core, a conservative gesture, an effort to recuperate and restore a "tradition." In fact, the cinematic avant-garde has often looked to the past, as canonical figures like the Lumière brothers, Edison, Méliès, Muybridge and others have inspired

avant-garde movements as diverse as structural films and Warhol's screen tests. It is this conservative, nostalgic nature of the avant-garde that is its most radical contradiction, its most radical secret. Indeed, this recursive dimension allows the most "advanced" avant-garde films—such as Michael Snow's Wavelength (1967)—to refer back to the most "primitive" of cinema. Likewise, the fixed cameras with their single takes in Paranormal 2 rely on the Lumière films not only for their formal constraints (one shot, no edits) but also for the relationship they create between the subject and the camera. For, like the people in the Lumière films, the Rey family in Paranormal 2 know they are being filmed, and on two levels: as characters they know they are being taped by the surveillance cameras they themselves installed, and as actors they understand of course that they are being filmed for a movie called Paranormal 2.

More fundamentally, creating an avant-garde context for fixed-camera films like Paranormal 2 demands a different, more experimental way of writing about film. In a previous answer, Steve mentioned several critics he preferred to Jean Baudrillard, and yet Baudrillard's importance has much to do with the surprising, poetic, aphoristic style and structure of his writing, a writing which overpowers its own "content." This is also true of avant-garde film, where the "ideas" of a film are often secondary to technique. In writing, however, we still tend to think of an over-focus on technique as gimmicky, as if realism were in fact natural rather than a historically constructed aesthetic, or as if it were the best conduit to generate knowledge, a subject tackled with eloquence in Robert Ray's How Film Theory Got Lost and Other Mysteries in Cultural Studies. How might we generate, then, a different sort of knowledge about the questions Therese has asked? Well, we fail. We fail trying. Only in the security of failure can we proceed with confidence, that everything will not be all right, that the houses we dreamed were haunted really were haunted, that in order to justify this we made cameras, and in order to justify the cameras we turned them on ourselves, all to prove that the haunted spaces really were haunted, because history isn't real if it isn't haunted, except—

in a twist no one saw coming—it turned out the cameras themselves were haunted, stuffed with our own circuitry, creators and consumers of images, devouring images, a final and fatal Turing-decidable recursive language.

Here, then, is the most honest answer I could give to these questions, in the form of sixteen quotes which, taken together, offer the secret history to "Six Asides on *Paranormal Activity 2*" and "The Fixed Camera Manifesto."

- 1. "As for ideas, everyone has them. More than they need. What counts is the poetic singularity of the analysis. That alone can justify writing, not the wretched critical objectivity of ideas."
- 2. "My new poems are a strange sort of thing. I am submitting the book this week. The title is *Transformations* and the subtitle inside the book will read 'Transformations From the Brothers Grimm.'

 They are kind of a dark, dark laughter."
- 3. "I have the greatest respect for him [Jorgen Leth]. He's been part of the avant-garde since the '60s and he's still at it. But most of those who tried their hands at something in those days are all dried up today—they're afraid, they've become big-shots, they're in charge of everything everywhere—while Leth keeps on trying new things."
- 4. Booth: Yr Best Customer, he come in today?

Lincoln: Oh, yeah, he was there.

Booth: He shoot you?

Lincoln: He shot Honest Abe, yeah.

Booth: He talk to you?

Lincoln: In a whisper. Shoots on the left whispers on the right.

Booth: Whatd he say this time?

Lincoln: "Does thuh show stop when no ones watching or does

thuh show go on?"

Booth: He's getting deep.

Lincoln: Yeah.

- 5. "The camera's on a tripod. I sit alongside. You look at me, not at the camera. I use available light. Is there noise from the street? We don't care. This is primate filmmaking. The dawn of man."
- 6. "Both Burgin and Everett locate the non-narrative strategies that have developed out of the digital within the traditions of the avantgarde, within an aesthetic of the synchronic or even the achronic. Similarly, the digital 'freeze-frame' recalls the importance that reference to the single frame of film has had in the avant-garde tradition."
- 7. "the video you left for me was blank But I watched it anyway, mesmerized, until a back-draft in the chimney filled the room with ash, filled it with snow."
- 8. "Yeah, but a failure can be a figure, can signify. Maybe poetry can fail better than other art forms, because poems can point to what they can't contain—that desire for something beyond what's actual. That's part of what Benjamin is arguing about Baudelaire, I think—that he makes a lyric out of lyric's impossibility in modernity. Or you might say that even the failed attempt to write a successful poem makes us aware of having the faculties, however atrophied or underdeveloped, for such an undertaking in the first place, and so keeps us in touch with our formal capacities for imagining alterity even if we can't achieve it."
- 9. "Not even B finds it [U's voice] unpleasant, although for him that tone of voice has strange associations: it conjures up a silent black-and-white film in which, all of a sudden, the characters start shouting incomprehensibly at the top of their voices, while a red line appears in the middle of screen and begins to widen and spread."
- 10. "I turned around yet again. Two men who'd walked out of a café next to the tyre shop were looking at me. I realized that I was jerking back and forth like paused video images do on low-quality machines. It must have looked strange. I felt self-conscious, embarrassed."

- 11. "There's a late-night horror movie on TV, but no one is there to watch it."
- 12. "Protect your family and home using video surveillance. Peace of mind comes from knowing there are cameras strategically placed inside and outside your home."
- 13. "If doubt attaches to an indistinct element of the dream content, we may, following the hint, recognize in this element a direct offshoot of one of the outlawed dream thoughts. It is here just as it was after a great revolution in one of the republics of antiquity or of the Renaissance. The former noble and powerful ruling families are now banished; all high positions are filled by upstarts; in the city itself only the very poor and powerless citizens or the distant followers of the vanquished party are tolerated. Even they do not enjoy the full rights of citizenship. They are suspiciously watched."
- 14. "Due to their low cost and the ease with which they can be installed, standard monocular fixed cameras are widely used for security surveillance purposes. As the recorded location is static, it is easy for operators monitoring in real time to notice unusual situation. The fact that the cameras are static also makes isolating the subjects from the background a relatively simple task to implement in software and, generally speaking, one which can be performed with a high degree of accuracy. However, fixed camera systems have some major disadvantages: if the system is not well designed the monitored area may have large blind spots and the number of cameras required grows quite large as the area under surveillance increases."
- 15. "I shot the last four frames. I steadied the camera on the edge of the desk so that my shaking hands wouldn't ruin the exposure. Even so, I knew the images would be blurred. Like when you're outside shooting the moon without a tripod—no matter how hard you try to remain still, you move, and the moon moves, and the earth moves. And the camera captures everything."
- 16. "Target data can include other important factors for collateral

damage considerations. Poststrike HUMINT sources equipped with a cell phone, radio, or camera can provide an initial battle damage assessment in near real time."

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TG: Steve, you discuss "accelerationism" in your book. At the same time, you are at pains to distinguish accelerationist politics from aesthetics, in part because politics and aesthetics are incommensurable. Are they, however, related? If so, in what ways? Here, it would be interesting if you would discuss these two films with reference to your argument. What is the value of an accelerationist aesthetics of/in film for us as viewers? Also, I'd like to hear about the *Transformers* movies from you, which you touch on in your book, because they are clearly post-cinematic. What are the distinctions between films such as *Transformers 3* and the *PA* films in terms of the post-cinematic?

SS: I need to take a roundabout route in order to answer this question. This is because I think that the political significance of the *Paranormal Activity* movies resides more in their form, and in their use of new media technologies, than it does in their explicit content. So I want to start with the functioning of video cameras, and of the computers in which the output of these cameras is stored. In our discussion so far, Nick, Julia, and I have all pointed to the ways in which the video cameras themselves seem to work within the films as conductors, or facilitators, of demonic possession. This is a consequence of the way that the films dramatize their own technological means of production. The video cameras in the *PA* films amplify and concentrate the very forces whose effects they are supposedly only there to record. These devices are performative: they make things happen, in addition to recording whatever happens.

Nick links the uncanniness of seemingly mundane surveillance cameras to the ubiquity of surveillance as a taken-for-granted reality in our society today. Whatever we do, we are always acting *for* the cameras. Nick also suggests, in his previously published essay on *Paranormal Activity 2*, that

the affective power of the film comes to a large extent from its "creative restraint": its aesthetically productive use of carefully limited means. Nick compares this to the minimalist and structurally rigorous practices frequently encountered in avant-garde and experimental cinema. Thus, *Paranormal Activity 2* features footage from fixed surveillance cameras. The shots from these cameras are sequenced, over and over again, in the same order, moving cyclically from one view to the next. Also, long sequences of the film consist entirely of these fixed surveillance shots, one after another, without any dialogue. Nick argues that "the static surveillance shots are the ultimate expression of mise-en-scène, inviting viewers to scan the screen for information, for clues, for the slightest of movements. We become complicit in the visual interrogation of domestic space: the banality of hallways, kitchen cabinets, family room sofas, closet doors."

This is indeed true to my experience of *Paranormal Activity 2*. For instance, whenever the film returns to the nighttime output of the surveillance camera that overlooks the outdoor swimming pool, I find myself compulsively singling out the slow, undulating movement of the hose in the pool. I find it impossible to tell whether the hose is just moving randomly, or whether it is being propelled by a demonic force. The film establishes that, every morning, the hose has somehow emerged from the pool, which defies conventional explanation. And every morning, Daniel puts the hose back in the pool again. Nonetheless, the nighttime surveillance shots do not actually show the hose being pushed out of the water.

At another point in the film, something on the stove suddenly goes up in flames. This is shown entirely in another nighttime surveillance-camera long shot. The fire takes place in the distant background; there is no close-up to call attention to it. As a result, the first time that I watched the film, I didn't even catch the precise moment when the fire started; by the time I noticed it, it was already in progress. As Nick points out, this

sort of filmmaking forces a special mode of attention upon the viewer: one more common in avant-garde than in commercial cinema. Think, for instance, of the moments in Chantal Akerman's *Jeanne Dielman* when we suddenly notice a slight variation in Jeanne's otherwise monotonous household routine. Or think of the ways that we are forced to wait, and to notice oblique details, in some of the recent experimental work that Nick explicitly mentions (like Kiarostami's *Ten* or Sokurov's *Russian Ark*).

There is an important difference, however, between these examples of avant-garde film practice and that of the PA films. In Jeanne Dielman, the fixed camera functions as a formal rule of aesthetic construction, imposed a priori by the director. The same can be said for Sokurov's 99-minute continuous (although heavily composited) single take, or for Kiarostami's placement of the video camera on the dashboard of the car in which the entire film takes place. These are all surprising and innovative ways of using the given cinematic equipment. In Paranormal Activity 2, in contrast, Tod Williams's guiding formal principle can be entirely attributed to the intrinsic nature of the technology being used, and to its default mode of operation. To say this is not to deny that Williams has deliberately set up the film in this manner, "employ[ing] constraint as a creative force," as Nick says. But PA 2 still follows standard practices for the use of surveillance technology in a way that is not the case for Akerman, Sokurov, or Kiarostami. Surveillance cameras are generally set up in fixed locations; their image quality is not great. The cheaper, and more common, ones cannot pan or zoom. And it's common practice to view the output of surveillance cameras by repeatedly cycling through the multiple views in a fixed order.

In any case, I think that Nick's remarks on *PA 2*, culminating in his "Fixed-Camera Manifesto," only give us one side of the story. Julia's comments give us the other side. (My own reading, therefore, can be seen as an attempt to establish a sort of dialectic between Nick's position and Julia's.) Where Nick focuses on stasis and fixed space, Julia points instead

to mobility and nonlocality. Nick writes that "our shaky era demands a steady camera"; this suggests that the practices of "slow cinema," much discussed in the blogosphere in recent years, may be seen as forms of resistance to the extreme speed, the mania for flexibility, and the ADD-levels of twitchiness and discontinuity that increasingly characterize mainstream commercial culture.

Nonetheless, I give equal credibility to Julia's observations about the uncanny sense of displacement that arises, precisely, from unmoving and unblinking security cams. Julia notes that the surveillance camera feeds in the PA movies are "disconcerting," precisely because they offer us "a particular POV that we cannot attribute" to any character. The camera, like the demon, can see Katie "from outside," which is something that Katie herself is unable to do. Human beings (and animals) can only see from the inside; it is only as grounded in my own inside that I can discern the outsides of others. In contrast, the absolute 'outsideness' of the surveillance cameras, their refusal of any 'inside' perspective whatsoever, makes them spooky or demonic. The implication, in other words, is that the cameras' POV is not only distinct from any other subjective POV within the film, but is irreducible to any form of subjectivity whatsoever. These cameras' output does not conform to any conceivable phenomenology. Although each surveillance camera—whether on a tripod, as in the first film, or embedded in the walls, as in the second—literally has a fixed position within the house, the view extracted from these cameras is in effect a view from nowhere. It's a viewpoint that we cannot "identify" with. What links the POV (if we can still call it that) of the cameras to that of the demonic force is that both of them are "outside" and inhuman; the latter remains so even when it possesses Katie and looks out at us from "inside" her body.

Following this, Julia goes on to suggest that "the mobility and invisibility of the demon . . . echoes the insidious mobility of finance capital." And she links this mobility, in turn, to the real estate boom and bust of the past decade. There's a resonance between (property) foreclosure and

(demonic) possession: "just as the demon demands payment of an ancestor's contract, the predatory mortgage allows an outsider to take away the very home and hearth." What's most intimately mine (whether my subjectivity or my "home and hearth") is given over to the forces of the outside. All that is most solid (the "real" in "real estate," or the bedrock certainty of the Cartesian "I am") melts into air. Critics and audiences alike have long had a sense that cinematic imaging—or better, cinematic capture—amounts to a sort of dispossession. Think of Benjamin's account of how mechanical reproduction shatters the aura; or, more generally, of the supposition (usually disavowed and projected onto strangers or "primitives") that taking one's picture is equal to stealing one's soul. This process takes on a new, intensified form when digital reproduction replaces mechanical reproduction.

Marx famously wrote that "[t]he wealth of societies in which the capitalist mode of production prevails appears as an 'immense collection of commodities" (125). In our current circumstances, this wealth takes the form (among other things) of an immense collection of data. Surveillance cameras stockpile everything that happens in front of them, and dump the resultant data onto computer hard drives. Information is also gathered from browser cookies, credit card statements, mobile phone tracking records, and so on. It isn't always clear who "owns" all the data. Google and Amazon have more information about us than we do about ourselves; and they "monetize" this information in all sorts of ways. In this way, the data gathered about us are nonlocal—just like the demon in the PA movies. As Julia notes, in the PA films the demonic force "can and will follow the sisters throughout their lives"—much as a credit rating does (or, for that matter, a rude photograph or intemperate remark that was once posted on Facebook). Since the demonic force is ungrounded, and not associated with any particular house or location, it can follow us anywhere and everywhere. In contrast to traditional haunted-house movies, in the PA series (as Julia puts it) "moving away will not allow escape."

Of course, it is also the case that—as has so often been observed—the incessant accumulation of data does not, in and of itself, contain any intrinsic meaning. It remains open to the vagaries of interpretation—and also to practices of appropriation, recontextualization, and redeployment. The data in themselves are multivalent and ambiguous; what matters is the way they are used. We see this when the male heads of household in the *Paranormal Activity* films remain unable to understand the evidence that their machines have so assiduously gathered for them. In the second film, Ali shows Daniel the past night's video feed, in which she was locked out of the house, in order to convince him that supernatural forces are indeed at work. But he simply rejects her claim: he insists, for instance, that it was only a gust of wind that slammed the door shut. Even with all the accumulated footage, there is no way to "prove" anything different.

In other words, the demon's mobility, like the mobility of financial flows, resists and exceeds any form of fixed representation. And the demon's influence, like that of the financial system, is as impalpable as it is vast. This is most memorably demonstrated, in both PA movies, when living bodies are literally dragged across the floor by an invisible force. Julia notes that "the digitization, mobility, and decentering of financial systems and instruments make them harder to fight or to resist." I would add that it makes them almost impossible to identify, to get hold of, or even to point to. The material accumulated by the security cameras, however massive, consists only of traces and effects. The forces that leave these traces, or that produce these effects, are everywhere and nowhere. They lack physical presence.

Just as David Hume noted about sense impressions, we may say about the data captured on video, that we can see the "constant conjunctions" of certain happenings, but not any force that could necessitate these conjunctions. Hume concluded that causality only exists in the mind and its habits; the skeptical male characters in the *PA* movies similarly conclude that there is no actual supernatural force, but only the credulous fear of it.

The greatest trick the devil ever pulled, it is often said, was convincing the world that he doesn't exist.

If the Paranormal Activity films are "accelerationist"—or if an accelerationist aesthetic is at work in post-cinematic production more generally—then this is because, in order to present us with impalpable demonic forces, these recent films are compelled to adopt, and adapt to, the most cutting-edge tendencies of actually existing capitalism. It has often been suggested that classical Hollywood continuity editing instantiates the same logic as Fordist-Taylorist industrial mass production. I think that, similarly, the editing practice of contemporary film and video production instantiates the same logic as does the post-Fordist regime of flexible, just-in-time production (best described by David Harvey). Under this regime, David Bordwell's "intensified continuity" has hyperbolically extended itself, and thereby mutated, into what I have called in my book "post-continuity." The classical norms of smooth narrative development and intelligible scene construction are no longer in force. Indeed, throughout contemporary film production, these norms are violated in opposite directions at once. In the post-cinematic, we find both excessive movement (shaky cameras), and excessive stillness (fixed cameras). We find both baroque narrative elaboration and complexification, and the abandonment of narrative or causal logic altogether. And we find both an exceedingly literalistic psychology of character development, in which every last tic and affectation must be given a "plausible" motivation, and the complete abandonment of any sort of character development or motivation whatsoever. Both extremes are affirmed at the expense of the classical norm or mean.

It's for this reason that commercial film production today—both at the obscenely expensive Michael Bay level and at the ultra-low-budget level of films like the *Paranormal Activity* series—so often seems to approach the aesthetics of the avant-garde. To take one particularly resonant example, classical continuity editing is violated alike by Michael Bay's ultra-frenetic

cutting, and by the *arte povera* fixed-camera long takes of the *PA* films. Bay's editing does not aim at the precise articulation of action in time and space (as was the goal both of classical editing and of the vibrant action editing of genre filmmakers like Don Siegel, Sam Peckinpah, John Woo, and, still today, Kathryn Bigelow), but rather at producing the maximum possible number of jolts and shocks in the spectator. At the other extreme, in films like the *PA* series, the use of surveillance-camera-based long shots and long takes, and the consequent withholding of expected close-ups and reaction shots, intensifies the dread and anticipation, which are the conventional affects of horror.

The Paranormal Activity films also frequently use mobile handheld cameras. The handheld sequences are usually motivated within the narrative: they are supposed to taken in real time by one of the characters in the film. These sequences don't use conventional continuity editing either, because they have the look and feel of amateur home-video footage. The camera jitters or slides from one character to another, instead of relying on shot/reverse-shot setups. Both this handheld footage and the fixed-camera footage often feature jump cuts. But these are not really expressive, since there is no background of "correct" editing against which they might stand out. Rather, as we watch the films we tend to attribute these jump cuts to the video-recording apparatus itself; we are all aware of how we can discontinuously turn the camera on and off. In place of conventional editing, the PA films also often use techniques that are never seen in traditional film, because they are only possible with video technology. Here, I am thinking especially of the (simulated) fastforwards that we find so frequently in the nighttime scenes in the first PA. Let me try to sum up my observations. Cinema has often been credited, or taxed, with providing visible evidence of the world. The highest aim of cinema, André Bazin wrote, is to "recreate the world in its own image." But capital accumulation, like other instances of the demonic, is a force and a presence without an image (and without a sound as well). It cannot be found anywhere within the vast accumulation of images and sounds

that makes up the *Paranormal Activity* films. And yet, demonic capital is not transcendent or otherworldly; for it is nothing more, or other, than this *vast accumulation* itself.

This is why I consider the Paranormal Activity films to be narratives (or perhaps I should say cartographies, following Fredric Jameson and Jonathan Flatley) of capitalism as it actually exists today. They envision, or take for granted, a world in which the incipient or emerging tendencies of globalized, neoliberal capitalism have definitively imposed themselves. The two poles of presentation that I have been describing—the fixity that Nick discusses on the one hand, and the nonlocality that Julia discusses on the other—are both necessary to the conjuring of a force that fills space ubiquitously without manifesting itself at any place in particular, and that works relentlessly toward its goal of absolute possession, without seeming to have any particular sense or direction. I use the word "conjuring" here advisedly; for its primary meaning (in both English, and in the French conjurer) of calling forth or invoking is shadowed by its secondary meaning (in French, at least) of exorcising or casting out. The Paranormal Activity films are neither celebrations nor critiques (which is why an ideological reading of them doesn't work very well, or tell us very much). They are conjurings in the double sense I have just used; or better, perhaps, they are *demonstrations* (in the sense that a mathematical proof is the "demonstration" of a theorem: QED). And I think that their demonstrativeness is what makes them so affectively compelling: so creepy, so disquieting, so well attuned to the low-level dread and basic insecurity that form the incessant background to our consumer-capitalist lives today.

TG: Julia, in the horror genre, evil is typically embodied, whether as a body from outside or one from inside the body itself. Generally speaking, the demon/monster is a "foreign body," eventually rendered visible. Here, as you write, the "constant tape loops make us and the characters more anxious by revealing what Katie can never see firsthand: herself sleeping

and what goes on while she sleeps. Not only does the camera have that 'outside' view of the sleeping person, but so does the demon—the sleeper can never see herself from outside, yet the demon can inhabit her and then look out from inside her body." The demon leaves traces (such as the mark of its "bite"), but it is—so far, at any rate—untraceable as a body. Its location depends on perspective and the consequent shifts and reversals of categories, such as inside and outside, subject and object. How do you think of the *PA* movies in relation to body-horror movies? Are gender, race, and class elements germane to our understanding of the demonic force at work here?

JL: Unlike many horror movies, the first two Paranormal Activity movies are not, in my view, part of the "body genres" of horror, pornography, and melodrama. As I understand Linda Williams's formulations, these are "trashy" movies that provoke strong physical responses from the audience. Those three genres also invest heavily in the audience's conceptions of gender, among other things, albeit in wildly different ways. This concept has been very productive for me in thinking about Darren Aronofsky's films The Wrestler and Black Swan, for example, and Steve's writing about those movies has helped me work through and make sense of some of my visceral and aesthetic responses to them (see Shaviro, "Black Swan"). Yet aside from one or two good startles in each, these movies don't entirely fit into that grouping. In fact, in many ways these movies are almost the opposite or negation of the usual body genres.

So I began to wonder why that might be, and whether there is something here that is in fact related to gender and the woman's body. I do agree with Steve's point that an ideological reading doesn't get us very far, but maybe there is something else we can do to tug at this thread a bit harder, without letting go of the importance of form, which is central to studying these films as Steve and Nick have so convincingly argued. Here I want to look more closely at the woman's body as the site of horror and the

entirely domestic setting of both movies and the way the films' form may inflect the representations of gender in the films.

Unlike the slasher movies of the 80s, and their extreme gross-out descendants today (the *Saw* franchise), there is almost no blood at all in *PA*. Even ghost and haunting movies over the past 40 years have often included gore and bodily abjection as part of their horror. Yet these movies feature a few shots of the bite marks, scenes of characters being dragged by their feet, and precious little else. In some ways, the unseen horror harks back to the classic Val Lewton cycle of B horror movies: the purring or growling of the off-screen panther in *Cat People* (1943) leaves more to our imagination, which is almost always scarier.

There is also very little sex in these films, often at least a small component in the slasher and other horror films and a definitive focus in pornography. In the first *PA* movie, Micah sets up the video camera on a tripod in front of their bed and makes jokes about taping their lovemaking, but doesn't. What the camera does record is mostly them asleep, startled awake, or Katie physically controlled or possessed by the demon.

As for melodrama, these movies have almost none. The characters are flat and undeveloped; we aren't encouraged to care about them as individuals, nor to worry about their relationships. We can see that the male partners are condescending and dishonest with the female partners, which does build some narrative tension, yet it's hard to get emotionally involved in such superficial, undeveloped characters. I couldn't even tell Katie and Christi apart during my first viewings. This is partly because they are supposed to be sisters and thus look a bit alike—both have longish, dark hair and are close in age—but also because they are pretty shallow and vapid. Their names sound similar, they live in similar generic-looking houses, they dress in similar clothes. They have no memorable identifying characteristics and, unfortunately for my comprehension of the plot, they were for a while interchangeable.

Although the two sisters are hard to tell apart, the one distinguishing characteristic that is clearer in the second movie is that Christi has a baby and Katie doesn't. Thus while neither woman seems to have a job, one of them at least does, along with the "nanny" (maid), participate in reproductive labor. Yet this very human relationship—the mother and infant—also feels somehow shallow. We see her caring for and worrying about the baby, but, perhaps because of the distancing effect of the video footage—lacking in conventional Hollywood continuity editing that would show us close-ups and shot/reverse shot sequences of the loving mother and child—I don't feel much mother-ness in Christi's character, compared, for example, with how choked up I always get watching classic maternal melodramas with the misty-eyed, emotional close-ups of Barbara Stanwyck as she suffers and sacrifices out of love for her children. (I don't want to even mention the mother character in *Tree of Life* at this point....) With the addition of the "nanny" there is also an almost interchangeable mothering role, with the white middle-class woman as a biological mother to one (but not both) children, and the Latina woman as the paid carer. As we learn more about the demon, the baby in the second movie is revealed to be the demon's object of desire, the currency with which it can be paid off. So even the baby—the material result of the woman's (and the maid's) reproductive labor—is in a sense transformed into an object of exchange.

Unlike other kinds of horror that emphasize the excessive wounding of the flesh, I wonder if the body of the woman (whether Katie or Christi) is *not* mutilated or tortured much because it is a kind of empty, generic vessel or shell, even perhaps a digital shell? I agree with Steve that the movies themselves, and the "real" video footage in them, is a digitization of the characters and their bodies and their pain—unlike celluloid, there needn't have been an actual material body before the camera interacting with light to make a physical imprint on a negative, and the images are reduced to, literally, data and digits. That abstraction away from materiality is in itself scary; maybe if there were more conventional gory visuals the movie

would feel more grounded in material, concrete, or fleshed-out ways. Instead we are left with what Steve calls "the low-level dread and basic insecurity that forms the incessant background to our consumer-capitalist lives today." The safety and security of the mother-child relation appears to be somehow flimsy and insubstantial, similar, I imagine, to the thin walls of the cheaply made suburban house that offer no real protection (from the demon, from the digitization, from finance capital—let's keep Steve's phrase "demonic capital") to the family inside.

The houses in these movies are as similar as the sisters, and as devoid of real character, as we've discussed. Unlike the Gothic house movie, there is nothing remarkable at all about these structures, other than their (to me anyway) excessive size. But there are some continuities with the horror conventions, as we've discussed a bit already. Both movies take place entirely in the domestic spaces of the suburban California home: the kitchen and bedroom in particular are sites of horror rather than love and nurture. As in classical Hollywood "home noir" and Gothic house movies, we can interpret this claustrophobic restriction of setting as a familiar iteration of the implicit horror inherent in the heteronormative American lifestyle: the male partners work outside the home (as a day trader and a restaurant franchise owner), while the female partners don't work but stay home and care for the home and children and supervise the help. The women are both relatively powerless in the relationships, economically dependent on their male partners, and in both films the men make consequential, unilateral decisions with which they know the women would disagree: Micah buys the Ouija board and Dan performs the ritual with the photograph to transfer the demon's attention. We even see a bit of this echoed in Ali's relationship with her boyfriend. In their passivity and dependence, it is all the more striking to see these female characters echo so closely their Hollywood foremothers despite all the successes of feminism and movements for social change.

But the thing that is truly scary, to me anyway, is the very invisibility of the demon—this can be linked to the mobility and ethereality of finance

capital, as we've said, but it also reminds me of the way white heterosexual middle-class identity is "invisible" yet centers on particular individuals. In these movies the invisible force can possess and kill. So although I concur with Nick and Steve that the key to understanding these films as post-cinema lies in our close attention to their form, I also want to suggest that an ideological approach can support and extend the interpretations we've been working out in our theories about their formal properties. Even in post-cinema, identity matters.

TG: This has been an inspiring discussion. Thank you, all.

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Notes

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BY PAUL BOWMAN, KRISTOPHER L. CANNON, ELENA DEL RÍO, SHANE DENSON, ADRIAN IVAKHIV, PATRICIA MACCORMACK, MICHAEL O'ROURKE, KARIN SELLBERG, AND STEVEN SHAVIRO

* * *

1. Cinema's Exhaustion and the Vitality of Affect Elena del Río

Like an expired body that blends with the dirt to form new molecules and living organisms, the body of cinema continues to blend with other image/sound technologies in processes of composition/decomposition that breed images with new speeds and new distributions of intensities. The cinema does not evaporate into nothingness, but transmutes in a becoming that has no point of origin or completion. Does the affect disappear when the image is emptied out of feeling? But perhaps, one shouldn't start with the feeling, but always with the image. Is the image strong enough to know of its own capacities for creation and destruction—what it can bring together, what it will tear apart? Can the image portend our own becoming? If post-cinematic affect strikes us as a draining away of traditional modalities of feeling or emotion, an exhaustion of vital

forces, there must still be a remnant of affect or vitality (in us, in the image) that allows for the hollowed out affect to resonate with palpable intensity. For affect always emerges through difference—a shocking divergence between two quantities giving rise to a new quality. Difference disorganizes the relation between the two things, which can no longer be gauged through comparison, analogy, or resemblance. Affect throws into disarray the system of recognition and naming. At once, the image gives something to feel and takes away my capacity to say "I feel." How does affect fare in the age of global capitalism? If we believe we have reached a point of exhaustion, is this also the end of affect as an emergent possibility? Exhaustion without vitality is the zero degree of the body without organs, the emptied out body that has sabotaged its own capacity for transformation. But I believe, on the contrary, that the commodifying frenzy of global capitalism, its equalizing powers, cannot obliterate affect, or even tame it into a bland proliferation of commodified emotions. Instead, as Deleuze says in his book on Foucault, "when power becomes biopower, resistance becomes the power of life, a vital power that cannot be confined within species [or] environment." We are clearly at a point where the cinema has begun to transform itself beyond the stage that Deleuze envisioned in *The Time-Image*. But, is the distinction between the crassly commercial and the creative that he affirmed still possible or necessary, and does this distinction have any relevance to the production of affect?[1]

Michael O'Rourke: The Exhaustion of Affect Theory. Thanks Elena for getting us off to a great start. I wanted to get you to say something more about exhaustion and affect theory. Fredric Jameson, of course, talked about the "waning of affect" a long time ago now. But there has been a recent turn against or away from affect theory and since your post argues for the "vitality" of affect, I wondered if you might talk about the field of affect theory more broadly. Ruth Leys, the historian of science, in a recent article in Critical Inquiry ("The Turn to Affect"), has been extremely critical of affect theorists and the affective turn in general.

Leys wonders why "so many scholars today in the humanities and social sciences" are "fascinated by the idea of affect" (435)? One of her criticisms is of the sort of affect theory which privileges the image and Deleuzian intensities and becomings. She is also critiquing a general tendency to theorize affect as a way of disciplining subjects but also the more positive politicized understanding of affect as a vitality with its own potentials for disruption—whether we use Malabou's notion of plasticity or Deleuzian becomings to describe this lively embodied energy. These two criticisms seem like ones you would be well positioned to respond to.

In the end, Shaviro is cautious about his "affective mapping" and the possibilities for "resistance." Interestingly, accelerationism is described as the "emptying out" of capitalism through a "process of exhaustion," but Shaviro is not at all hopeful about accelerationism as a political strategy. However, he does see value in the "intensity effect(s)" of an accelerationist aesthetics. Do you think that your vitalized affect can effect something more than a temporary suspension of the "monotonous" logic of capital? Are the "untamable" disruptions you describe sustainable?

Elena del Río: The Exhaustion of Affect Theory. Thank you for your thought-provoking comments. There are many things to say about this topic and the questions you raise. Jameson's "waning of affect" makes sense if one thinks of affect as emotion or feeling in the traditional subjective or collective sense. In that sense, our age is either wallowing in clichéd sentimentality or utterly numbed. Affect, as I understand it, is a capacity or power of transformation. Just as life and death don't belong to the person who undergoes them, affect is not a product or creation of a subject, but rather the network of forces that circulate around and through us while we are alive. In the Spinozist sense, affect is rather synonymous with the vital force. And the affirmative sense both Spinoza and Deleuze impart to this is probably one difference between the way I understand affect and the way Shaviro, it seems to me, understands it. I hope he can comment on this and clarify this point, which I've found to be a question that came

up again and again as I was reading his brilliant book on post-cinematic affect. So I now will segue into the book just briefly and will come back to other things.

For me affect carries a capacity for rupture (and also rapture) that I see happening in the works Shaviro discusses in very sporadic and faint ways. But these few places where I can identify a strong affective component are interestingly those where Shaviro finds an interruption of "the reign of universal equivalence" that takes us "outside the circle of capital." That is how he describes the final scene in *Boarding Gate*, for example. But sporadic moments like that contrast with the more general trend to identify capitalism as a quasi totalizing process that extracts value from affect itself, a process where affect and capital come to be indistinguishable. If affect is taken to have the same equalizing value/effect as capital, is there any difference between the two? Is there any need to speak about affect at all? I think at that point affect has become so utterly evacuated of any capacity for action that using the word itself is pointless. We might as well just describe the devouring powers of capitalism for their own sake. What remains transgressive about capital's unremitting self-expansion? How can more of the same give birth to difference?

Coming back to other points you make, I am not familiar with Ruth Leys's argument against affect theory, but thank you for bringing it to my attention. It will be interesting to read. All I can say, without having read it, is that affect for me represents the only notion that expresses something not quite susceptible to colonization or cooptation. When ideas centering around consciousness, reason, or even subjectivity, have proven utterly incapable of keeping up with the complexity and the fundamental non-humanity of life, affect, for the time being, is the only concept that to me is capable of approximating the complex texture of life's mechanics and one that takes the human centrality out of the picture. Just like any other theory, affect theory that I know of is anything but coherent. Unlike what I said about affect, some people speak of affect as a more

sophisticated word for emotion or feeling. I've found that a lot in film analysis. Shaviro brings this up as well, and in that I am in total agreement with his position. I've also found Massumi's writing on affect right on the mark. I think what's needed in affect theory, and I think Shaviro's book is beginning to articulate that in very important and eloquent ways (in my opinion, without enough emphasis on resistance) is a symbiosis of the affective and the political. I agree wholeheartedly with him that we shouldn't oppose affect theory and Marxist theory. How or where can we find transformative affective flows amidst the social, political, or economic processes of transnational capitalism? As rare as these flows might be, I don't think they stop happening, but they don't always take on the actual forms, or occur at the quantitative scale, that we might qualify as substantial or visible changes. In any case, the affirmation of life's differences is the most potent expression of resistance. That is why affect (in my perspective) is inherently a form of resistance, as its very foundation is difference, divergence, dislocation. Here, I couldn't disagree more with Leys's critique of affect as a vehicle for disciplining subjects. Affect and discipline are diametrically opposed concepts. For me, Massumi/Deleuze/ Spinoza's distinction between pouvoir and puissance is a very useful one when dealing with the intersections between affects and politics. When affects become institutionalized or they acquire normative meanings, they become congealed into recognizable or capitalizable emotions. That's the realm of pouvoir.

Shane Denson: *Metabolic Affect.* Great post—eloquent and very thought-provoking! Though I have no answers to the questions being raised here, here are some ideas that I hope might complement the effort to think through these issues:

Deleuze's "vital power that cannot be confined within species [or] environment" might be thought in terms of "metabolism"—a process neither in my subjective control nor even confined to my body (as object) but which articulates organism and environment together from the

perspective of a pre-individuated agency. Metabolism is affect without feeling or emotion—affect as the transformative power of "passion" that, as Brian Massumi reminds us, Spinoza identifies as that unknown power of embodiment that is neither wholly active nor wholly passive. Metabolic processes are the zero-degree of transformative agency, both intimately familiar and terrifyingly alien, conjoining inside/outside, me/not-me, life/death, old/novel, as the power of transitionality—marking not only biological processes but also global changes that encompass life and its environment. Mark Hansen defines "medium" as "environment for life"; accordingly, metabolism is as much a process of media transformation as one of bodily change.

The shift from a cinematic to a post-cinematic environment is, in your description, a metabolic process through and through: "Like an expired body that blends with the dirt to form new molecules and living organisms, the body of cinema continues to blend with other image/ sound technologies in processes of composition/decomposition that breed images with new speeds and new distributions of intensities." To the extent that metabolism is inherently affective ("passionate," in a Spinozan vein), you're right that post-cinematic affect has to be thought apart from feeling and subjective emotion. Your alternative, which (apposite with Deleuze's mode of questioning while thinking beyond his answers) asks about the image, taking it as the starting point of inquiry, is helpful. The challenge, though, becomes one of grasping the image itself not as objective entity but as metabolic agency, one caught up in the larger process of transformation that (dis)articulates subjects and objects, spectators and images, life and its environment in the transition to the post-cinematic. This metabolic image, I suggest, is the very image of change, and it speaks to the perspective of metabolism itself-to affect distributed across bodies and environments as the medium of transitionality. As you suggest, exhaustion—mental, physical, systemic is not at odds with affect; rethinking affect as metabolism (or vice versa) might help explain why: exhaustion, from an ecological perspective, is

itself an enabling moment in the processes of metabolic becoming.

EdR: Metabolic Affect. Hi Shane. Thank you for your comments, which totally resonate with what I was talking about. I find the metabolism idea very apt to describe affective processes. I am also in total sync with your comment on how we need to make the image itself a metabolic agency disengaged from human agency or consciousness. I've found sometimes when submitting a paper that speaks of the image as something that thinks, the editor wants me to change that to make it sound like it is the director's choices or whatever. I think that's really annoying because it totally misses the point which has to do with the autonomous process in which images engage regardless of what we mean or do not mean. And to your point about exhaustion: the more I think about this, the more I see that exhaustion is itself an affect, and not at all that which opposes affect. The exhaustion that bodies exude on screen often has a lot to do with the intensity that comes from changes/differences in speed, and what strikes me usually about these exhausted bodies is their deeply unconscious power to become the vehicles for forces and forms that, to me, speak of vitality far more than of exhaustion. I think there's a deep irony in images of exhaustion vis-à-vis this issue of affect and vitality.

Karin Sellberg: *Resistant Affect.* Thank you indeed, Elena, for your inspiring post, which opens up an array of questions regarding affect in the time of global capitalism. I would like to add a dimension to Michael's and Shane's responses, by inviting you to extrapolate on the ways in which your truly explosive film clip collage engages with your suggestion that a vitalizing affective "resistance" remains.[2]

Capitalism is one aspect of contemporary culture—another aspect is the pressing awareness of a continual state of exception, as theorized by Giorgio Agamben and Judith Butler, among others, and the drawn-out (although often indefinable) threat of war and apocalypse. I was taken by your interweaving of WWII home-coming scenes and the particular

moment in David Lynch's *Mulholland Drive* where all images break down. Lynch's film seems to ask a similar set of questions as your post. Is there truly nothing beyond our worn-out cinematic tropes and prerehearsed calls for affect? Naomi Watts's search for the "truth" throughout the first half of the film—and her violent spasms of emotion when she finds it (whatever we decide that "it" is) seem to indicate that there is. The unnamable and unspeakable affect that cannot be contained in a post-cinematic society eventually break through, in a resistant Deleuzo-Foucauldian power-surge of life.

Most of the scenes in your clip seem to signal a sense of relief or release. They are of course excerpts, but together they form a procession of violent outbursts of relief (at the return of the soldier) and explosive release of pent-up fear and emotion. I understand this as a demonstration of the affective "untamable" that resists the codification—as counter-examples to Shaviro's conductive tropes, if you like. Seen together like this, these affective eruptions invoke something very different, however. Your clip becomes a fascinating portrayal of a perpetual state of exception. It's a catharsis that never ends. The clip collage starts and ends with music and/or movement, and Naomi Watts's spasms of affect in Mulholland *Drive* are of course also induced by Rebecca Del Rio's singing. I can't help being reminded of Nietzsche's work on tragedy, where music features as a violent and purely Dionysian expression. What I find most interesting, however, is that when the scenes are compiled like this they feel almost empty. The resistant affect is no longer resisting anything, and becomes another affective trope in the chain of coded similitude.

EdR: Resistant Affect. Hi Karin. Thank you for such a rush of ideas that literally jump off from the page. The clip that I posted is part of an 18-minute film that a friend and I put together some five years ago. The idea of making it came to me as I was falling asleep one day, probably because I was thinking of images in the films I was writing about in my book. You can watch the whole thing on Vimeo.[3] Anyway, the most

exhilarating experience for me in making this was to realize that I didn't have to make any decisions on where to cut or how to edit the sound, that the images themselves were deciding that. I know it sounds ridiculous, but for me there was no doubt about it. What we were looking for in the selection and sequencing of the images was the highest possible intensity in the changes between body speeds and patterns of movement. It was a bit like releasing the force of the body to the max, and I think your choice of the word "release" or "relief" is very appropriate here. Because this sequence has no psychological, moral, or representational content, the only thing remaining is the force of the body itself. This for me is a vitality that goes beyond the political at the same time that it is traversed by the political and everything else. The political acts that impact this may revolve around either releasing this force (potentializing it, as Spinoza might say, composing a more powerful body by joining other bodies/affects) or repressing it, arresting it, obstructing it (although this may be an oversimplification, the state of exception that we permanently live in, as you put it, definitely works along these lines of decomposition and weakening of forces through exclusionary methods that purport to safeguard and maximize life, but actually release nihilistic forces of death such as war, or any form of fascistic repression). I think it's much easier to find resistant affects in art, definitely in cinema, than in the life we live outside art. Maybe art shows us the way.

Lynch's cinema for me is somewhere between the cinematic and the post-cinematic. One of the features Steve [Shaviro] aligns with the post-cinematic is the absence of an "absolute, pre-existing space." Especially in his latest films, Lynch never constructs such a referential space. Cinema is the space; there is nothing outside it as a real or transcendental ground. But what's interesting about Lynch is that although space ceases to have unity or solidity, the sense of duration is very strong. Maybe this is what separates it from the post-cinematic as Steve describes it through Grace Jones, *Boarding Gate*, *Southland Tales*, etc. In Lynch cinema is folded into itself and realism loses all meaning. But, as you say, this creates a power-

surge of affect rather than its waning. What the example of Lynch makes me think is that the line between cinematic and post-cinematic is much more diffuse and difficult to identify than one might think, and that while one needs to look at specific cases, like Steve does, to be able to elaborate a theory of the post-cinematic, in practice this theory may undergo all sorts of changes, qualifications, and in a way, even a bit of skepticism towards theory as a unified system. But it goes without saying that Steve's work has bridged a huge gap in addressing issues about the transformations cinema is experiencing. In a way, he's telling us that we cannot go on pretending that things haven't changed, and that the cinema is still the cinema as if embalmed for eternity. This reminds me of a question I'd like Steve to respond to if he can: what do you think of the history of cinema as seen by Godard's Histoire(s) du Cinéma? Godard talks about cinema as a living being with a childhood, adolescence, and maturity, even of its death, although he never envisions the kind of almost ontological shift that the digital brings about. Anyway, just to address Karin's last point, which I find one of the most amazing: you say that the images in the clip feel almost empty and that the affect is no longer resisting anything. Exactly, Either you take them all as resistant images (resistant to narrative, certainty, etc.) or they are always already liberated from the cycle of action and reaction. This is a schizo-violence of free floating affects. It's a full emptiness. Like me right now. More tomorrow.

Adrian Ivakhiv: KS wrote: "What I find most interesting, however, is that when they are compiled like this they feel almost empty. The resistant affect is no longer resisting anything, and becomes another affective trope in the chain of coded similitude."

I don't feel this at all . . . I find a rhythm surging through the movements (kinesthetic, affective), a rhythm that propels itself forward according to its own internal (immanent) measures, not according to an external code or even in terms of anything being resisted.

Elena writes: "Either you take them all as resistant images (resistant to narrative, certainty, etc.) or they are always already liberated from the cycle of action and reaction. This is a schizo-violence of free floating affects. It's a full emptiness."

Since they are taken out of the contexts within which they might arise as resistance, I'll go along with seeing them as "always already liberated." (Of course, having seen the films, I add my own interpretations of what the liberation may be *from*, but then I draw back from that, wanting to see them as movements/images/rhythms in themselves.) There's nothing obviously violent or empty in them (for me). Especially not empty. There is energy, flow, passion, and it is for me as a viewer to feel and work with ...

MOR: Panpsychism and the Image. I was struck in reading through the comments by the ways in which the image is being thought as having a "mental pole." Shane in his fascinating description of an "anthropotechnical interface" he calls the "metabolic image" says that: "The challenge, though, becomes one of grasping the image itself not as objective entity but as metabolic agency, one caught up in the larger process of transformation that (dis)articulates subjects and objects, spectators and images, life and its environment in the transition to the post-cinematic." This disarticulation (which Elena talks about in terms of a vitality which exceeds species and environment) is one she endorses: "I am also in total sync with your comment on how we need to make the image itself a metabolic agency disengaged from human agency or consciousness. I've found sometimes when submitting a paper that speaks of the image as something that thinks, the editor wants me to change that to make it sound like it is the director's choices or whatever." Responding to Karin, she goes further: "the most exhilarating experience for me in making this was to realize that I didn't have to make any decisions on where to cut or how to edit the sound, that the images themselves were deciding that. I know it sounds ridiculous, but for me there was no doubt about it." These comments take

us in the general direction of Shaviro's own post-*Post Cinematic Affect* work on panpsychism ("Panpsychism") and his controversial insistence in "The Universe of Things" that "vital materialism and object-oriented ontology both entail some sort of panexperientialism or panpsychism." He admits that "this is obviously not a step to be taken lightly; it can easily get one branded as a crackpot. Most metaphysicians today, analytic or continental, science-oriented or not, tend to reject panpsychism out of hand." His earlier book *Without Criteria*, he says, was too hasty in dismissing the panpsychical dimensions of Whitehead's thought because, he now thinks,

a world of objects is really a world of experiencings; as Whitehead insists, we must at least be open to the prospect that "having-experience" is already intrinsic to all existing actual entities. I will not argue this proposition any further here, but I wish to leave it as a lure for thought, a prospective consequence of the fact that we find ourselves in a universe of things.

EdR: *Panpsychism and the Image*. This gets me interested in reading Whitehead and Shaviro on Whitehead. I wasn't thinking of the concept of panpsychism itself, but more of the concept of "subjectless subjectivities" (Bains), which in many ways I think is similar. Paul Bains's essay in *A Shock to Thought* (which in fact mentions pansychism) was very inspiring to me in terms of this aspect of Deleuze and Guattari's thinking. Besides talking about singularities as pre-individual, non-personal events or sensitive points, he talks about autopoietic bubbles of perception, self-surveying systems that do not perceive themselves from a distance (the distance of the human cogito), but rather from their own interiority. I want to quote a line from this essay that fits in with Paul Bowman's question as to what affect might contribute. It's sort of related:

A plane of consistency, an absolute survey that involves no supplementary dimension. Rational modes of discursive knowledge cannot adequately grasp this kind of metalogical

approach which can only be fully appreciated through a non-discursive, affective pathic awareness. (103).

MOR: Subjectless Subjectivities. Thanks Elena, I can see how Bains's idea of subjectless subjectivities (isn't this much the same as Deleuze's larval subjects which are also singularities prior to any subjectivity?) links up with both your post on the vitalities of affect (and the image) and Shane's metabolic images.

Your wonderfully evocative opening lines ("Like an expired body that blends with the dirt to form new molecules and living organisms, the body of cinema continues to blend with other image/sound technologies in processes of composition/decomposition that breed images with new speeds and new distributions of intensities") remind me that, for Deleuze, "human" "subjects" are a bundle of sensory and material elements (matter, air, water), or what he calls "organic syntheses":

We are made of contracted water, light, earth, and air—not merely prior to the recognition or representation of these, but prior to their being sensed. Every organism, in its receptive and perceptual elements, but also in its viscera, is a sum of contractions, of retentions and expectations. (*Difference and Repetition* 93).

Kristopher L. Cannon: *Image and Thing.* Hi Elena. Thanks for a wonderful post, which seems to have been followed by equally interesting conversation in the comments.

I was particularly fascinated by the thread of comments about images, as they were placed in conversation with the notion of metabolism and also Shaviro's recent writing on "Things." What I noticed, while people were discussing this topic is the general use of the word "image," and I wonder if you have thought about some of the discussions emerging in visual culture studies where, following the work of people like W. J. T. Mitchell or Mark B. N. Hansen, people have started to differentiate "images" from

their material "picture(d)" manifestations (e.g. photographs, celluloid, etc.). I find this distinction useful because it allows us to consider the life of images as they may escape the confines of anthropocentric concerns—escaping with and enabling their own desires.

I also find it beneficial, as Shaviro mentions in his essay on "Things," to anthropomorphize things as a means to fight against anthropocentrism. It seems that this connects with part of your response to Shane, where you mention how images "think" and function within/as affective processes. Does this move allow us to better understand the thing-ness of images, where images imagine themselves through the affective processes of imag(in)ing, similar to how humans imagine the meaning of pictures through the process of imagining?

* * *

2. Post-Cinematic Effects Paul Bowman

Shaviro argues that the cinematic epoch is coming to a close. We are now at the end(s) of the cinematic. This is registered within cinema, and cinema remains influential across all of its inheritors. Hence, the times are "post-cinematic" and not anti- or non-cinematic: gaming, all things interactive, the music video, and so forth, all remain informed by cinematography, but they move away from its technological limitations. Meanwhile, cinema attempts to incorporate the new technological advancements within itself. Accordingly, films like *Blade Runner* or *Sim-One* are not post-cinematic, whilst *The Matrix* and even *Old Boy* are. The former are *about* future technologies; the latter *incorporate* future technologies into themselves, affecting the styles of computer simulated choreographies: *The Matrix* employs the sharpness and precision of arcade game fights; *Old Boy* incorporates the two-dimensional plane of old computer games, but counterbalanced by including all the scrappiness of messy brawling that most action films sanitize.

Quite what the "affect" of all of this "is" is irreducibly debatable. In viewing the famous corridor fight in *Old Boy*, I perceived passion: Oh Dae-su enjoyed his vengeance. And this reading was consistent with the film's themes: Oh Dae-su's response to five years of sensual deprivation, his inability to resist, and his delight in every sensual experience. Accordingly, this fight was a continuation of that theme: a real orgy of violence. Yet, the director's commentary later informed me that the scene was conceptualized as one of loneliness: Oh Dae-su was the loneliest man in the world; his lack of fear was that of someone who's lost everything, fear, hope, passion. . .

So whose reading is "right," mine or the director's? And what is the "affect"? To my mind, this "affect" is not "one." There is not one "affect," nor even one economy, ecosystem, or ecology of affect(s)—just as there is not one reading of one text. Post-cinematic effects, yes; Shaviro makes an important observation. But affects? I'm not so sure why or how they would be different from everything that postmodern theorists have long been saying about postmodernity. The ultimate question, to me, is whether approaching the world in terms of affect offers anything specific for cultural theory and the understanding of culture and politics. [4]

Michael O'Rourke: *Post-Cinematic Effects (Uncut)*. Those wishing to comment on Paul's provocative and polemical post might wish to read a longer version of the text ("Post-Cinematic Effects") which introduces the notion of post-cinematic affect as it is laid out by Shaviro, discusses Rey Chow's meditations on the emergence of cinema in her book *Primitive Passions*, considers the inter-implicated histories of literature and cinema in modernity and the ways in which literature can be thought of as itself post-cinematic, reads the fight scene in *Old Boy* in terms of its *many* affects, and finally argues for post-cinematic "effects" rather than the more problematic "affects."

Shane Denson: Affect/Effect. Paul, thanks for this great post, which raises

several very interesting questions. I'd like to comment on two aspects that occur to me, and hopefully you can say a bit more about them.

The first is the distinction between being "about" future technologies and "incorporating" them, which you offer as a way of thinking about the difference between the cinematic and post-cinematic. While there is certainly heuristic value in this perspective, it remains problematic in that a genre like science fiction film has always gone beyond science fiction literature in precisely this way: if future tech was a thematic feature in the latter, it was always incorporated, highlighted, and displayed in the former (e.g. in special effects, which invite attention to images and interrupt the narrative). According to someone like Brooks Landon ("Diegetic or Digital?"), this gets underway well before the 1950s birth of a dedicated SF film genre, as early as the Lumières' *La Charcuterie Mécanique* (1895).

Which makes me think, coming to the second point, that a prioritization of effect over affect is already at the center of this perspective on the difference between the cinematic and post-cinematic. More to the point, it seems that the "many affects" you describe are not the same affects meant by people coming from a Deleuzian (Bergsonian, Spinozan, etc.) background. To ask about your reading of the images' affective meaning vs. that of the director is already to personalize affect, to appropriate or subjectivize it as emotion, for example, while the affects of the tradition just mentioned are pre-personal. I understand that there are reasons to be skeptical of that understanding of affect, as it is always vague and conceptually indeterminable. The reasons for advocating it are aesthetic/ontological, though, and would have to be refuted on those grounds. In any case, I don't see that understanding of affect as being somehow singular, so I see no contradiction with the multiplicity of effects. Instead, it seems to me that emphasizing effects over affects is precisely in line with postmodern theory, identity politics, etc., whereas affect is perceived by advocates of this line of thinking as

a way out of there: as a reintroduction of a messy experiential realm that is categorically bracketed out of postmodern textualism and its exclusive interest in textual effects (including subject-positions and the like).

Elena del Río: Post-Cinematic Effects. Hi Paul. Great clip! I wanted to respond to some things in your post that made me think of other things. I totally agree that affects cannot be part of a prescriptive system and that in cinema they work dependent on whoever is watching and the predominant affects in them at that point. I also think that affects are more like clusters than singular identifiable emotions. They tend to be muddy or muddled rather than clear. I don't see a contradiction in the affects you are describing in the Old Boy fight scene: passion versus loneliness. To me, it feels like a formidable will to power that is able to subdue the (quantifiably) much greater forces that he fights. His strength is based on intensity rather than extension or quantity. And that is both passionate and requires an extreme amount of concentration of force. No dissipation, hence loneliness.

I also find the distinction between affects and effects not that important and maybe just a matter of a different vocabulary. Affects are close to the idea of effects that cannot be traced to actual causes (or causes that are actualized in particular states of affairs). They are like chains of effects that have no exact point of origin and no final point or resolution. Deleuze speaks of an affective causality or virtual causality (quasi-causality), and I think in that sense one could align affects with effects.

To the issue of whether affect may contribute anything different from postmodernism, I think there would be a lot to say. I think Steve would be much better equipped than me to tackle this one. The postmodern concept of the "aestheticization of violence," which is quite relevant to your clip, seems to look at violence as a visual *form* that expresses the surface tendencies of postmodern culture. From the point of view of affects, this play of surfaces is a shifting encounter of *forces* with a capacity

for mutation, a kind of materiality that has an ethical and creative dimension.

MOR: *Post-Continuity Cinema*. Shaviro has a post up at *The Pinocchio* Theory blog today on his notion of "post-continuity" cinema ("Post-Continuity"), which makes me wonder about Paul's fight scene clip from Old Boy and whether this is continuity cinema or post-continuity.[5] In his longer description of the fight sequence Paul makes a distinction between the precisely choreographed fight scenes of *The Matrix* which incorporates the post-cinematic "sharpness and precision" of arcade games and the more traditional "two-dimensional" plane of the fight scene in *Old Boy*. While this makes *Old Boy* a film which draws on postcinematic technologies, Paul also claims that this is counterbalanced "with the inclusion of all of the scrappiness, imprecision, stumbling, gasping, moaning and, indeed, messy brawling, that almost all action films exclude or repress." In a response to Matthias Stork's formulation of "chaos cinema," Shaviro expands on his own notion of "postcontinuity" which first surfaced in Post-Cinematic Affect. He explains that the "stylistics" of post-continuity (mostly in action films but also horror and other genres) involves "a preoccupation with momentto-moment excitement, and with delivering continual shocks to the audience" which "trumps any concern with traditional continuity, either on a shot-by-shot level or in terms of larger narrative structures." He makes a sharp distinction between his own understanding of these (mostly Hollywood) filmmaking practices and David Bordwell's well known concept of "intensified continuity," which features "more rapid editing . . . bipolar extremes of lens lengths . . . more close framings in dialogue scenes . . . [and] a free-ranging camera." For Bordwell this is an intensification (rather than a breakdown or discarding) of traditional continuity, but Shaviro claims that there has been a perceptible shift in the stylistics of continuity in the 21st century. And it is worth considering the fight scene in Old Boy and Paul's discussion of its effects and affects in the context of these changes. Does Old Boy intensify traditional fight segment techniques? Or, does it make a radical break with them?

Shaviro asserts that in recent action cinema "the expansion of the techniques of intensified continuity, especially in action films and action sequences, has led to a situation where continuity itself has been fractured and devalued, or fragmented and reduced to incoherence." He suggests that

Bordwell himself implicitly admits as much, when he complains that, in recent years, "Hollywood action scenes became 'impressionistic,' rendering a combat or pursuit as a *blurred confusion*. We got a flurry of cuts calibrated not in relation to each other or to the action, but instead suggesting a *vast busyness*. Here camerawork and editing didn't serve the specificity of the action but overwhelmed, even buried it." (Shaviro, "Post-Continuity," quoting Bordwell; emphasis added)

Paul is getting at precisely this impressionism and "blurred confusion" when he talks about *Old Boy*'s "inclusion of all of the scrappiness, imprecision, stumbling, gasping, moaning and, indeed, messy brawling" that other action films have routinely sanitized. Shaviro says that

in mainstream action films . . . as well as in lower-budget action features . . . continuity is no longer "intensified"; rather, it is more or less abandoned, or subordinated to the search for immediate shocks, thrills, and spectacular effects by means of all sorts of non-classical techniques. This is the situation that I refer to as post-continuity.

So, we might ask whether *Old Boy* is an exemplar of "intensified continuity" in Bordwell's sense or "post-continuity" in Shaviro's?

Karin Sellberg: *Sensual Flows and Empty Orgies.* Thanks for an excellent post, Paul! I agree with Shane and Elena that you're raising several very important questions about cinematic affect as well as cinematic representation in general. Since Shane and Elena have responded to your discussion regarding effects and affects, I'd like to turn to your discussion of passion and the senses in *Old Boy*.

I would agree with Elena that the corridor scene in *Old Boy* features both loneliness and passion, but not necessarily for the same reason. I don't even think that they are two separate emotional states—certainly not affect(s), because like Shane, I consider affect to be something slightly different—but part of a complex affective flow conducted through this scene. I am not talking about the effect here—that would be the impact it has on the viewer(s)—but the sensual communication that is taking place.

Most interestingly, I think that *Old Boy* provides a meta-narrative insight on affect as a concept. Being deprived of the sensual in-take, like Oh Dae-su, is not very different from being deprived of affect, is it? You are entirely cut off from the affective flows that surround you. When he regains it, Oh Dae-su gorges himself. He works his way through the men in the corridor (and the architectural lay-out here really emphasizes his journey), and he relishes in every point of contact—as you say, he takes delight in every sensual experience. However, as he steps out of the lift at the end, we are made aware that he remains as lonely (or sense-deprived) as ever throughout. As Elena suggested in yesterday's discussion, an affective overflow will result in exactly no affect at all. It's a full emptiness. Oh Dae-su's sensual orgy leaves him disconnected, unaffected, and spent.

MOR: Post-Continuist Affect. And what about post-continuist affect? Shaviro argues that Stork's video essay is too dismissive of post-continuist cinema and its effects on audiences when Stork posits that viewers can "sense" the action but are "not truly experiencing it." Like Paul, Stork is arguably making a distinction between effects and affects. However, Old Boy appears to fit with Shaviro's definitions of both the post-cinematic and the post-continuist (as the Paranormal Activity films do too, which he discusses in "What is the Post-Cinematic?"), especially in so far as the film does not, as Paul says, completely dispense with the more traditional, classical techniques of action fight scenes. Rather, Old Boy simultaneously moves "beyond' . . . or apart from" those stylistic

devices "so that their energy and investments point elsewhere" (Shaviro, "Post-Continuity"). It also seems to resonate with Shaviro's understanding of post-cinematic affect since what ties together the various films he would designate as post-continuity cinema is that they share a "structure of feeling" in Raymond Williams's terms.

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3. A Hair of the Dog that Bit Us Adrian Ivakhiv

Steven Shaviro's *Post-Cinematic Affect* is a work of "affective mapping" (5) for a world of neoliberal, networked and hypermediated, endlessly metamorphosing capitalism. This hypercapitalism is a "world of crises and convulsions" (131) ruthlessly organized around the relentless logic of commodification and capital accumulation, a world of "modulation, digitization, financialization, and media transduction" (132). Rather than moralize or denounce the symptoms of cultural malaise or wax nostalgic about the past, Shaviro looks for the "aesthetic poignancy" (133) of post-cinematic media that assume that "the only way out is the way through" (136)—works that pursue a strategy of "accelerationism," exacerbating or radicalizing capitalism to its point of eventual collapse.

Grace Jones, in Shaviro's reading, is a transgressive posthuman who endlessly modulates her own image, which "swells and contracts, bends and fractures, twists, warps and contorts and flows from one shape to another" (11), all the while projecting a certain "singularity" (12) of "Grace Jones' as a celebrity icon," consisting of a "long string of Jones's reinventions of herself" (18). Rather than being "homeopathic," as Shaviro contends (32)—which would suggest that she injects a minute dose of the "hair of the dog that bit us" to trigger an immunogenic effect in the body politic of hypercapitalism—Jones's work seems to me a plunge into excessive, performative mimicry—magical rather than homeopathic, yet fully expressive of the condition itself.

That makes it incumbent upon viewers to activate the immunogenic response for themselves, rather than assimilating the dose into a bloodstream configured for endless modulation. The question is whether Jones provides a hinge for critiquing the infinite transcodability of hypercapitalism. More broadly, it's a question of whether there remain breathingspaces and sources of transcendence outside of hypercapitalism's ever-modulating codes. Is it futile to look for them, say, in truth, beauty, adventure, art, or peace (the five qualities A. N. Whitehead identified with "civilization" back when the word still meant something), or in nature, spirituality, political hope? Are these reducible to nothing but their commodified forms? Does modulation and plasticity render everything a commodity, or on the contrary, does an open universe the kind Whitehead and Deleuze, two of Shaviro's philosophical heroes, believed in—allow us to modulate commodification itself by exposing it to a different standard, a different hair of a different dog? Can we get by without hope for a *beyond* to hypercapitalism?[6]

Michael O'Rourke: More "Hair of the Dog." Those who would like to comment on Adrian's terrific post might like to read a longer text ("Post-Cinematic Affect in the Era of Plasticity") that he wrote on Post-Cinematic Affect and Catherine Malabou's notion of plasticity (focusing for the most part—as this curation does—on Hooker/Jones's video for "Corporate Cannibal"). It begins with a description of Shaviro's overall project and the two major shifts it identifies: from classical cinema to non-cinemacentric digital and computer-based media and from a Foucauldian disciplinary society to the era of endlessly transcodable "hypercapitalism." He then moves to a discussion of how Jones's video reflects these modulations and a consideration of Sean Cubitt's reading of the 1908 film Fantasmagorie and the differences between this early cinematic moment (and Cubitt's reading of it) and Jones's performativity (and Shaviro's reading of it). There follows a consideration of the possibilities for resistance and creating wiggle room which would be less "pessimistic" than Shaviro's description of our surrender to the

"inexorable" logic of capital. Ivakhiv finds such a space for escaping or evading infinite transcodability in Malabou's *Plasticity at the Dusk of Writing* but sees even more promise for a neuroplasticity and open futurity in Deleuze. The flash review concludes by asking if there is a tension between the "analytical-Marxist strand" in *Post-Cinematic Affect* and the more (underdeveloped) Deleuzian-Whiteheadian strand (or strands) in the book.

Shane Denson: *Repetition and Variation.* Brilliant post, Adrian, which identifies a crucial question about our contemporary moment. I was hoping I might get you to say a few more words about the distinction you draw between homeopathic and magical expressions or performances. Is it primarily a question of subtlety versus extroversion, apparent complicity versus hyperbolic critique or exaggeration? Or how exactly do you identify the difference between these two modes?

The question of this difference—homeopathic vs. magical—is framed here by Jones's incessant reinvention of herself against a background of sameness: an interplay of repetition (still Grace Jones) and variation (a new persona or facet is added). This type of interplay is something that we're familiar with from many fictional characters from the 19th and 20th centuries—characters like Dracula, Frankenstein, Tarzan, or Batman, who are continually reinvented as they jump from literature to radio to film to TV, comics, and now digital media. And as we get closer to our own so-called "convergence culture," we see a number of "realworld" characters following this pattern of repetition and variation or reinvention: think of David Bowie's many personae, Madonna, or Lady Gaga. What I'm wondering is whether the question of homeopathy vs. magic can be related to this media-historical line of development, i.e. whether the dynamics of variation and repetition that characterizes the fictional and non-fictional characters has anything in particular to do with the distinction you're making. And is there a particular juncture at which a reversal between homeopathic and magical modes occur? Is

David Bowie magical? Is Lady Gaga homeopathic? (The latter two being questions I've been dying for the right context to ask...)

I hope these questions make sense. And thanks again for a wonderful presentation!

Adrian Ivakhiv: *The Homeopathic & the Magical.* Thanks for the excellent question, Shane, and thanks, Michael, for your exquisite summary of my longer argument. I'm still catching up with the last two days' posts, so this will just be a quick reply to Shane.

You're right to ask me to clarify my use of the terms "magical" and "homeopathic," since I was a bit loose and quick with them. The latter is really a subcategory of the former, which includes many different types (e.g. sympathetic, imitative, associative, etc.). But since "magic" is one of the discursive modes by which modernity has defined itself (the modern as the overcoming and rejection of the magic and superstition of the past), we're working in messy terrains here. I think the examples of Dracula, Tarzan, Bowie, and Gaga are all very pertinent. Magic has been an important part of disciplinary societies: give them just enough magic (or affect—I think we need to think these two terms together) to excite them, and then we'll funnel that excitement into the "proper" channels, thereby strengthening those channels. This magic, of course, gets its potency (in part) from its marginalized status.

Postmodernity, in this sense, has been characterized not by a "waning of affect" but by a generalized letting loose of the magical/affective, a dropping of barriers, simultaneous with a release of the hypercapitalist virus (so to speak) into the flow, rather like the hippies/yippies who dreamed of spiking a city's water supply with LSD. I think this is compatible with Shaviro's (and others') arguments about hypercapitalism becoming a generalized condition, but I think we need to more carefully analyze the role of magic (and enchantment) within this condition (as the work

of Michael Saler, Randall Styers, Jane Bennett, Birgit Meyer and Peter Pels, and others points to, in a more historical vein). Artists need to keep reinventing themselves more and more quickly (note the increasing rate of reinvention from Tarzan to Bowie to Gaga) in order to keep the magical in play. But my point is that the magical will always be in play and that it is up to us as viewers, respondents, and culture users (and artists as well) to work with the magical/affective so as to nudge it in the right directions.

AI: *Sticky Tarzan.* Not, of course, that Tarzan was an artist like Bowie and Lady Gaga . . . But, then, maybe he was. (And the others, too.)

AI: Continuing... Deleuzians like to say that the brain is a screen/image (or cinema itself). I would say the brain is a magical tool, built for noting connections between things so as to be able to work those connections, and that affect is one of the fluids that runs through the system of machinic connectivities between brains/nervous systems and other things. Scientists have expended a lot of energy trying to determine which connections do what and which are merely "imagined," but they have not changed the brain, which continues to do what it's always done (more or less)—and which throws a wrench (or several) into the machines that scientists (and Latour's "moderns") would build.

Cinema is a machine for plugging into and through, a machine that produces worlds and elicits movement of the affective fuel by way of the worldliness it sets up and the diffractions between that worldliness and the general worldliness in which we (brains/nervous systems) operate. That is, in itself, as magical as things get. I like your (Shane's) idea of the image as "metabolic agency . . . caught up in the larger process of transformation that (dis)articulates subjects and objects, spectators and images, life and its environment."

The "post-cinematic" landscape resembles the pre-cinematic except that now we have all these other machinic possibilities that weren't there before

cinema, and many of these were made possible, and are deeply implicated in and "infected" by capitalist relational dynamics. It's important to note how those dynamics have evolved (i.e. to "hypercapitalism") and how cinematic/imagescapes have evolved with them (i.e. to the post-cinematic), but also to remember that these evolutions are multiple, with many spaces for movement *otherwise*. . . .

Karin Sellberg: *The Magical Lady Gaga.* Thanks Adrian, for an excellent and practically mitotic chain of posts! I really like your idea of the magical/performative-affective continuum. I would like to invite you to talk a bit more about how this would fit into your earlier discussion of hypercapitalism. Furthermore, I agree that postmodernity should rather be characterized by its explosion of affective barriers, rather than a "waning of affect," but surely these ever-accelerating transformative circulations could not continue to move if they had no definitive other? Could it be that what you call a "hope for the beyond" is that little hair that keeps the system going?

I'd also like to linger briefly on Shane's question of whether David Bowie is magical and Lady Gaga is homeopathic—I would possibly say that it's the other way around. Bowie, if anyone, was amazing partly because he was an almost perfect reflection of his various cultural moments. He was the image of his time—and he made it cool. Gaga's performances are more grotesque. She is very similar to Grace Jones, in many ways. She continually reinvents a different self *through* the images of contemporary society—and she makes them disturbing.

AI: Acceleration vs. Slack, & the Magic Thereof. Karin—to your question, "Could it be that what you call a 'hope for the beyond' is that little hair that keeps the system going?": Yes, it could be that, since the system relies on maintaining a gap, a dissonance that its subjects are craving to fill/harmonize. But then doesn't every system? Is there just a single, hypercapitalist system, or is this the way of the world, known since

the Buddha pointed out that craving is never satisfiable and that the trick is to inject an opening, a loosening, a slackening (to bring Ivan Stang's Church of the SubGenius into the mix) that would create the possibility of enjoyment in the gap itself rather than in the object being pursued? If we can learn to move within that gap, we can evade the trajectory/teleology favored by the system (i.e. whatever system we're wanting to evade) and to follow/develop different patterns leading to different outcomes. That's why I'm not convinced that accelerationism per se provides the best aesthetic strategy; it all depends on what we do with it.

At the same time, the "hope for a beyond" is only effective if we don't confuse the "beyonds" being offered us, that are only extensions of the system, with the *other* beyonds that are open to us (which, in turn, may be the "withins" of alternate, parallel systems). The point is to multiply/pluralize/open up what's available, creating possibilities for alternative trajectories. I tend to follow J. K. Gibson-Graham's and others' argument against seeing capitalism as a massive and singular monolith. There are alternative patterns being generated in this planetary eco-socio-technical machine and we can ally with them to move elsewhere.

You raise an interesting point about Bowie and Lady Gaga. I would say that Bowie was a reflection of *tendencies* in his cultural moment, but he was ahead of the curve(s), which is why he could make certain things "cool." The best artists (I think, for example, of Miles Davis in the late '50s to mid '70s) are reaching ahead and pulling the rest of us into a tangle of connections that have not quite been forged yet, that are there in potential, in the virtual. Lady Gaga is doing that as well, though I'm not sure which of her connections we might want to pursue.

AI: *Magic & Grace Jones.* I should define what I mean by "magic" here. I wrote that "the brain is a magical tool, built for noting connections between things so as to be able to work those connections"; and this aspect of seeking correspondences between things is important in most

forms of ritual magic going back to well before the Renaissance (which was the heyday of ritual magic; I'm not speaking of sleight-of-hand stage magic here, though there's a historical connection between the two). But that doesn't get across the centrality of the *image*, which shares etymological roots with "magic" for good reason. Most contemporary practitioners of ritual magic would define magic as something like "the art of working with images to bring about affective change." This is, of course, exactly what the modern arts of advertising, marketing, and propaganda do so well. (Ioan Couliano, among others, has shown the indebtedness of those arts to what Renaissance mages like Ficino, Bruno, et al. were up to.)

To say that an artist (e.g. Bowie) or a film/video is "magical" is to suggest that they have an enchanting, spellbinding effect on us. It is, arguably, the *movement* of the *image* that most directly elicits that effect. Cinema is magical by nature. Capitalist cinema is cinema that triggers a response in its viewers, a need, drive, or desire that can only be satiated (however temporarily and ineffectively) in and through the commodity. This is rarely *all* that a film/media object does, and the pursuit of commodities is in any case rarely *only* that. The question for me is what other trigger points can be solicited, charged, invoked by a film or by a viewer in the presence of a film.

To the extent that "Corporate Cannibal" adds to—and enlivens—the iconography by which we imagine capitalism as deadly, it is performing anticapitalist magic. But Jones *is* the cannibal here, the "digital criminal" (and "criminality" suggests something outside the norm, not mere capitalism but only an extreme form of it). So there's no point of identification for us as viewers except in the act of over-the-top mimicry. It's up to us whether to extend this mimicry to our lives, to use it as a hinge for opposing capitalism, or to shrug our shoulders and enjoy the game.

MOR: *Gaga's Modulations*. Adrian—citing from the opening chapter of *Post-Cinematic Affect*—writes that the video for "Corporate Cannibal" reflects a

state of endless modulation. Jones plays herself as endless modulator of her own image, an image that "swells and contracts, bends and fractures, twists, warps and contorts and flows from one shape to another," all the while projecting a certain style, a certain "singularity" of "Grace Jones' as celebrity icon," a "long string of Jones's reinventions of herself." Jones is the transgressive "posthuman" who, unlike Madonna who "puts on and takes off personas as if they were clothes," cannot retreat into the anonymity of the unmarked (because white) artist. Jones, a black woman, is already marked to start with, and is therefore playing "for keeps," devouring "whatever she encounters, converting it into more image, more electronic signal," and "track[ing] and embrac[ing] the transmutations of capital" as she goes. Jones in this sense represents "the chronic condition of our hypermodernity," a hypermodernity we, or most of us, cannot escape. ("Post-Cinematic Affect in the Era of Plasticity")

Lady Gaga, of course, is clearly marked as a white artist who "puts on and takes off personas as if they were clothes," and for this reason she has most often been compared to Madonna. However, earlier this year, Grace Jones herself lashed out at Gaga for copying her style(s) and her outfits. Karin says that Gaga is in many respects "similar" to Grace Jones. But might we not go further and substitute Gaga for Jones in Shaviro's arguments above? Gaga, too, is after all, in a state of "endless modulation" and remodulation of her image. Rather than being a flattened out surface as Jameson might say, doesn't Gaga also swell, contract, bend, fracture and flow as she morphs and manipulates from one shape to another in a kind of posthuman performativity? This does not signal an "end" to style as Jameson might argue (or indeed a "waning of affect"). To be sure, Gaga too projects a "certain style" and "singularity" of Lady Gaga as "celebrity icon." But do her flows, warpings and contortions and endless shapeshiftings suggest possibilities for productive flows, ways to escape the "chronic conditions" of hypermodern capitalism? Do Gaga's plasticized

mutations create "wiggle room" for further mutations at the level of the social, economic, ecological, technical?

Like Jones, Gaga cannibalizes and consumes everything within reach and transmutes and twists it into yet "more image." We could argue that the Haus of Gaga's transcodings simply embrace hyper-commercialism and commodity culture. But this would be to miss the way that Gaga transmits affect, the ways in which her own remixings and self-alterations produce effects in viewers and fans. Jo Calderone's appearance at the VMA awards as Gaga (who performs her own absence) forcefully brings the affective work of being, imitating, remixing, and performing Gaga to the fore. If Jones is "marked," and therefore "playing for keeps," then maybe Gaga has a greater potential for facilitating turbulent flows which might allow for an escape—however sporadic that might be—from the logic of capital. Adrian says that "[t]he point is to multiply/pluralize/ open up what's available, creating possibilities for alternative trajectories. I tend to follow J.K.Gibson-Graham's and others' argument against seeing capitalism as a massive and singular monolith. There are alternative patterns being generated in this planetary eco-socio-technical machine and we can ally with them to move elsewhere." And, perhaps Lady Gaga's accelerationist aesthetics is one such alternative trajectory?

MOR: *Going Gaga*. In his contribution to the catalogue for the recent exhibition *Speculative*, Jack Halberstam talks about "Gaga Feminism" as he thinks about new possibilities for living in an inviable world and ways in which we might revolutionize our critical modes and tactics of reflection imaginatively and politically to generate a more "livable future." Jack loves the little manifesto-text *The Coming Insurrection* by The Invisible Committee which urges us to "wild and massive experimentation with new arrangements and fidelities," also suggesting that we should "organize beyond and against work" (qtd. in Halberstam 26). Jack also exhorts us to think in less disciplined, more an-archic ways, to think like "speculative and utopian intellectuals" in order to refashion

our political landscapes:

on behalf of more anarchy, less state, cooperative social forms and brand new sex/gender systems, I offer up Gaga Feminism—a form of feminism that advocates going gaga, being gaga, running amok, physically and intellectually, and in the process finding new languages with which to imagine, craft, and implement a different way of living, loving, and making art. (28)

SD: Alles Gaga. Just wanted to chime in once more and say what a fascinating discussion this has turned into. I'm still not sure I have a total grasp of the magic/homeopathy distinction or continuum, but it looks like an interesting avenue to follow, at least to tentatively imagine some contours in what is a chaotic (media and cultural) landscape. And I'm very much looking forward to Shaviro's own take on the discussion of Gaga (and her relation to Jones, Bowie, Tarzan & Co.); I know that he is quite interested in Gaga, so I'm hopeful he'll have something to say.

AI: Going More than Just Gaga. Celebrity culture and hyper-fashion are very comfortably established within the landscape of capitalism, but they can be used to do some interesting things. I'm sympathetic to Halberstam's (and others') arguments for a Gaga Feminism, as I think it does provide symbolic and affective resources for "refashioning" our social and cultural landscapes (and maybe our political landscapes, in a loose sense of the word). In Michael's words, Gaga Feminism may well "facilitate turbulent flows which might allow for an escape—however sporadic that might be—from the logic of capital."

But it's worth thinking about the extent, quality, and sustainability of that "escape." The logic of capital can be *resisted* through a variety of escape hatches, liberated spaces, etc., but I don't think it can actually be *replaced* unless there's a different logic to take its place. And that requires a more systematic and fundamental refashioning of the ways we live, produce and consume things, and metabolize the world around us.

Elena del Río: Most Everything. Adrian, I have some comments that are about different things I've been thinking, not necessarily the last Gaga stream. They're also about things said all over this discussion by Paul and Patricia, or suggested in Shaviro's book. I've been thinking that affect is a very slippery concept and each of us has their own take on it. I've usually thought of it in the Spinozist sense of a power to affect or be affected, a power to pass from one state of the body (taking body in the most general sense of materiality) to another. Of course, that can involve an augmentation or a diminution of a body's capacity to act, and, although the affective-expressive event always carries the sense of transformation, from an ethical (not moral) standpoint, it can either involve creation or destruction, composition or decomposition. This seemingly very straightforward definition demands a much more nuanced perspective and tons of qualifications or readjustments when we begin to transfer the affective into the realm of neoliberal, global capitalism or the postcinematic as discussed in Shaviro's book. Something I said too lightly the first day has been coming back to me and I need to retract what I said. Michael brought up Ruth Leys's critique of affect theory; one of the grounds of her critique had to do with how affect was utilized to discipline subjects. My response to that was that discipline and affect ran in opposite directions, as I was taking affect to point to the disruptive force of events or things that takes us away from signification, representation, etc. (also in the sense Patricia talks about it in her wonderful post and as expressed by her clip). However, Shaviro's book as well as some of your posts here have made me reconsider, and probably expand on, this perspective. When Shaviro talks about the affective flows of hypercapitalism, the flows formed in the pervasive, and irreversible, exchangeability of affects and commodities, there is very little here of the affirmative possibilities of affect as I originally understood it. The only transformative force indeed in this self-expanding, self-devouring cycle is, as he also mentions, its own accelerated speed that might eventually usher in its own collapse. But I also think the post-cinematic need not be wholly colonized by such overwhelmingly commodified processes,

and this is what for me opens up the notion of affect into two different dimensions.

Of course affects, in the sense of flows and movements of forces, can be used in the direction of colonizing, territorializing, repressing, or whatever. One thinks of the highly emotive crowds of the third Reich, the explosive encounters between hooligans at a soccer/football game, or, indeed, anybody engaging in high-strung emotions that are directed towards politically repressive ends. But, as Adrian remarks when speaking about the magical, "it is up to us to nudge it in the right directions." So, to my point about how the post-cinematic need not be as completely identified with the affective flows of transnational capitalism, with its unremitting conversion of affect into currency: I'm not sure I can articulate this very clearly yet, as I'm working through it, but it's just a try. We need to differentiate between actual affects and virtual ones that still retain the capacity for mutation. For example, the post-cinematic should, in my opinion, do something more than simply diagnose or show the capitalist production of affective flows. It should also accommodate a supplementary dimension of friction, distance, or difference/shock so as to mark the possibility for the affective production to be decomposed or redirected into different affective configurations. In other words, the affects cannot just stand in their actualized form of whatever flows capitalism manufactures for its own ends, but art/media/the post-cinematic should try to extricate these congealed affects from the limits imposed on them by signifying regimes of global media and capitalist exchange. Such an operation I think would emphasize the virtual, most creative aspect of affect. I think some of this has been said by Adrian already when he was talking about art, but I needed the rambling for my own clarification.

KS: The Gaga Concept.

Shaviro argues that Grace Jones's African heritage and Afrofuturist undertones provide her with an ability to fully embody, and continually (re)internalize, her play with surfaces: her mutational selves "delv[e]

beneath the surfaces" in a way that somebody like Madonna never could (*Post-Cinematic Affect* 24). Importantly, what keeps this progression going is the de- and re-fleshing chaos that ensues from Jones's becomingalien. Jones self-cannibalistically devours and is devoured, dissolves and rematerializes. She is an amorphous meaty madness machine, that admittedly always falls back into the harmonic chain of readable images, but nevertheless provides that little moment of freakiness or "friction" that is needed if we are to instill some magic into hypercapitalist accelerationism.

Lady Gaga's grotesque play with the very concept of internalization (like when she wore the infamous meat dress to the MTV Video Music Awards, literally wearing the fleshy insides on the outside) and constant use of distorting make-up and prostheses (like in the videos for "Born this Way" and "Bad Romance") brings her one step further down the line of dehumanization than Grace Jones. She *is* "gaga," the "mother monster," madness personified—and her figure never truly falls back in line. Where Jones instills a pinch of chaos into the structure of her image, Gaga installs it into the structure of contemporary pop culture.

MOR: "After Hope." Adrian concludes his curation by asking: "Can we get by without hope for a beyond to hypercapitalism?" Coincidentally, Shaviro has published a brand new article called "After Hope" on Mladen Djordjevic's Life and Death of a Porno Gang (2009), which balances the Serbian film's more utopian moments against its more death-driven ones. He uses Deleuzian language to describe this temporary escape from social, economic and cultural forces: "There is a strong utopian element to the porno gang's summer tour through the Serbian countryside. A group of self-consciously marginal people form their own small counter-society, fueled by sex, drugs, and a shared spirit of adventure. Their trip is an exodus, a creative line of flight." Even though the characters "experiment with new ways of living, loving, and expressing," they are unable to escape the clutches of hypercapital: "In the world of globalized, neoliberal capitalism, transgression is not a daring risk. It is no longer a repudiation of all social

norms. Rather, it is a supreme commodity, a locus of particularly intense capitalist value-extraction. Transgression is not an act of defiance, but a reaffirmation of power."

Adrian comments that

it's worth thinking about the extent, quality, and sustainability of that "escape." The logic of capital can be *resisted* through a variety of escape hatches, liberated spaces, etc., but I don't think it can actually be *replaced* unless there's a different logic to take its place. And that requires a more systematic and fundamental refashioning of the ways we live, produce and consume things, and metabolize the world around us.

And, as Shaviro poignantly demonstrates, however much the porno gang finds creative lines of flight and experiments with new ways of living, loving, producing, expressing, in the end these metabolizations are unsustainable: All this becomes apparent both in the narrative content of the film and in its stylistics. *Life and Death of a Porno Gang* speaks of, and to, a time when hope has been exhausted, and when it seems that There Is No Alternative. If it does nonetheless suggest a way out from the universal rule of neoliberalism and neoconservatism, this is only because it speaks so marginally and so obliquely, from a position of humiliation and opprobrium.

AI: Affect, Capitalism, & the Big Outside. Thanks, Elena, for bringing up Leys's critique of the "new affect theorists"—and thanks, Michael, for bringing that into the conversation originally. I find Leys's article interesting and useful, not because she demolishes the Massumi-Connolly (and by extension Tomkins-Ekman) paradigm of affect as separate and, in some ways, prior to cognition (she doesn't), but because she enriches the conversation that humanists (the people who read Critical Inquiry) can have about affect and its role in politics and culture. I've never found Massumi's "missing half second" argument entirely convincing; it seemed

to me too much like the other snippets of pop-science that circulate for a while and then disappear (the "hundredth monkey," the "butterfly effect," etc.). But I think Massumi and especially Connolly, at their best, acknowledge the complex layerings and interactions between the affective and the cognitive-representational-intentional.

Leys identifies a risk in the "new affect theory"—that of re-reifying a dualism between mind and body at a different level than the one that had already been rejected by these theorists. But I would say that this is a point of ambiguity in the theorists (Massumi et al.) that needs to be further thought through. Her alternative paradigm is hardly a paradigm yet (from what I can tell), but it's useful to think of the Tomkins-Ekman school of thought *as* a paradigm, with critics and potential rivals, and of the Damasio-Ledoux-et al. neuroscientific paradigm—and the Deleuzo-Spinozan line of thought that we all, it seems, draw from to varying degrees—also as paradigms, with their critics, faddishness, etc.

All that aside, I agree that we need art/media that would "try to extricate these congealed affects from the limits imposed on them by signifying regimes of global media and capitalist exchange." I'm not as pessimistic as Steven is, in part because I tend to consort with people who do very different kinds of things (start farming CSAs, work on "transition town" plans for small cities, try to revive decaying cities like Detroit from the ground up, etc.) and maybe because I live in the DIY optimist's (quasisocialist, by US standards) state of Vermont, so these things give me hope. But they also tend to be off-the-map of popular media culture. I would love to bring Grace Jones here for a year's artistic residency.

MOR: The Affect Debate Continues... Adrian and Elena, you might be interested to know that Bill Connolly has responded to Ruth Leys's critique ("The Complexity of Intention") and that she, in turn, has offered a response ("Affect and Intention"), both in the current issue of Critical Inquiry. However convinced or unconvinced you may be by their

respective arguments, this debate is at least revivifying the affective turn and this, as Adrian says, gives us further food for thought.

EdR: One Last Thing—And Thank You. This is what I meant all along. I'm borrowing Claire Colebrook's words because she says it very precisely: There is nothing radical per se about affect, but the thought of affect—the power of philosophy or true thinking to pass beyond affects and images to the thought of differential imaging, the thought of life in its power to differ—is desire, and is always and necessarily radical. The power of art not just to present this or that affect, but to bring us to an experience of any affect whatever or "affectuality"—or that there is affect—is ethical: not a judgment upon life so much as an affirmation of life.

For me, this is a non-negotiable aspect of Deleuze's thinking—the way he commits to a radical thinking that rejects any kind of reduction of life to any single term or series of relations, be it capitalism or any other form of axiomatic repetition or stratification. I agree with Shaviro that affect is the terrain itself where the war (of desire, of bodies and their will to power) is being waged, and there is no spatialized outside, no transcendental ground from where to judge its play of forces or dynamics. The affective itself is the plane of immanence, yet, for that very reason it cannot be totalized by, or subsumed under, one single term such as capital. And I even wonder whether, in fact, effecting such totalization does not amount to a reinscription of transcendence.

This discussion (and I know this doesn't have to be the end) has been amazingly enriching for me, and I want to give a big *thank you* to everyone involved, especially Michael, Karin, Kris, Shane, and Adrian, for their relentless intellectual generosity, and Shaviro for pushing me to think through his work and his comments.

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4. Fragments of Unconscious Machines Patricia MacCormack

Shaviro states we "scarcely have the vocabulary to describe" postcinema (Post-Cinematic Affect 2). Can we now ethically commit to being new media spectators rather than needing to address new media itself (without its exclusion, of course)? Can new media actually herald a more material imperative? Opening each increment of "the film" to its infinite or infinitesimal (no matter how brief, always both) presents an ethics of expressivity. In its post-structural/astructural genealogical context, at worst the post-modern pseudo hedonism-identity resulting from indulgence in metamorphic signifiers, but at best from Shaviro's suggestion, an adherence to the capacity to express and thus affect, and the capacity to be affected by expression in a Spinozan sense, without easily alighting upon the familiar, the coded, the presumptively causal or contextually consistent. Free floating sensibility is a deeply corporeal sensorial, as effulgent as it is frightening in the realm which demands sense without subjectification and experience without signification—Shaviro's "participation" over "representation." YouTube coalesces search with finding what we didn't know, expect, want, accident as experimentation. The clip has no relation to itself as contextualized by a film. YouTube means searching and coming upon random clips; they are not fragments but complete in themselves, scenes without and beyond cinema. The accident is integral to the film experience, it can only exist by accident. This clip is not "from" a film; YouTube offers the fragment for itself, while using the full film as referent excuses the fragment. Like the search for recognizable content occupying this scene, the scene contextualized by narrative is unnecessary. YouTube's fragment spans possible unconscious machines, potentially affected ecstasy, libidinal confusion or boredom or

This clip[7] is what Shaviro calls "expressive: . . . giv[ing] voice (or better, giv[ing] sounds and images) to a kind of ambient, free-floating sensibility that permeates our society today" (Post-Cinematic Affect 2).

The ballerinas are evocative escaping irritant, witch and child punctum without referent, in a sanguine vascular-corridor trajectory, to where our eye has migrated, now occupying a new sensorial territory, expressive perceiving-affected organ-dissipation. Our harrowed ears emphasized and our attention aching, demanding with no response but the wide eyed catalyzation of a tachycardic gesturing. We see nothing, we are affronted with the shard of illumination that blinds, looking without alighting, photophobic warnings to not seek but open to affect, seeing as expression, our belief in an abstracted shape that reveals there is nothing to reveal, what Shaviro calls allure, not always pleasant but irreversible.

Michael O'Rourke: Cinesensuality. Thanks Patricia. I'm very taken by the last line of your post where you mention "our belief in an abstracted shape that reveals there is nothing to reveal, what Shaviro calls allure, not always pleasant but irreversible" because I have long wondered whether there is a connection between Graham Harman's concept of allure (and the way it is taken up by Shaviro in Post-Cinematic Affect) and your own work in Cinesexuality on filmy-ness and mucosal perception. The cinesexual encounter (or event, as you call it) is always one which involves tactile and viscous acts of desire, and as Shaviro explains, "Intimacy is what we call the situation in which people try to probe each other's hidden depths" (Post-Cinematic Affect 8).

These moments of *cineintimacy* between spectators and the filmy-ness of films—where it is fragments-which-are-complete-in-themselves that make demands on us as viewers—are precisely alluring in the sense which Harman and Shaviro use the term: "The inner, surplus existence of the alluring object is something that I cannot reach," and this alluring object "explicitly *calls attention* to the fact that it is something more than, and other than, the bundle of qualities that it presents to me" (9). When Harman writes about sensual objects he is referring to the way that all objects are not reducible to their appearing and that their very "inappearance" or excessiveness-to-appearance involves a disjunction

between their bundle of qualities and their very being. And, as Shaviro puts it:

What Harman calls *allure* is the way in which an object does not just display certain particular qualities to me, but also insinuates the presence of a hidden, deeper level of existence. . . I experience allure when I am intimate with someone, or when I am obsessed with someone or something. But allure is not just my own projection. For any object that I encounter *really* is deeper than, and other than, what I am able to grasp of it. And the object becomes alluring, precisely to the extent that it forces me to acknowledge this hidden depth, instead of ignoring it. Indeed, allure may well be strongest when I experience it *vicariously*: in relation to an object, person, or thing that I do not actually know, or otherwise care about (9).

Shane Denson: Surface/Depth Allure. Great post, and nice approach to YouTube, which resonates with a tendency of my own in thinking about visual media. This discussion of allure helps me to think about this tendency somewhat critically, though, and I wonder what you might think about this. The tendency I'm thinking of is the tendency to look for moments that somehow escape narrative (or continuity), exceed it through self-reflexivity or preoccupation with non-narrative visuality or mediality (whether in Buster Keaton's "operational aesthetic," in scifi special effects, or gratuitous flaunting of CGI, etc.). I tend to seek out this excess—which YouTube showcases almost by default—and to address it as a deeper level of medial materiality underlying the discursive construction of the diegesis, a level that (one might say) has an allure of its own, which resonates with the materiality of my own embodied, pre-subjective agency. I'm not ready to give up on this approach, but the talk of allure allows me to think depth and surface as reversible—material depth is at the same time visible surface, narrative Oberfläche is at the same time a dimension of depth created through the images. My quest to become intimate with the material/affective underside of film or other

visual media (a quest that YouTube and the digital generally expedite) is, in a sense, something like the tunneling of perception that we execute when we focus on only one instrument within a larger symphony (or maybe listen for audience members coughing in the pauses), whereas the symphony as a whole has an allure of its own, which is no less material, no less embodied, no less animated by an agency that exceeds the intentions of (one or more) humans. This is just to say that decontextualization (whether imagined by me or enacted concretely on YouTube) is one way of achieving a non-anthropocentric intimacy with a "deep" materiality, but isn't there an equally non-anthropocentric intimacy to be found in a focus on the surface, in a probing exchange of agencies at the level of the narrative? We might think of the infinity that Levinas sees at work in the encounter between subjects—an alterity that exceeds subjective capture. Might we not find something similar in the film-viewing experience, a sort of too-big infinity that constitutes the allure of the narratively contexted clip, which complements the digital allure of the infinitesimal and decontexted?

MOR: Cineallure. This strangeness at the heart of objects and the weird excess which makes them appealing to us reminds me of your cinesexual encounter-event (which is also an experience of intimacy with or desire for something which is "deeper than and other than what I am able to grasp of it") and how the very filmy-ness of film is also a kind of vacuum seal. There is a fundamental aporicity, it seems to me, in both Harman's radically withdrawing objects and the filmy-ness found in cinesexuality. And this also brings affect into the picture since the cinesexual embrace is affectively excessive and the spectator (who is a disincorporated subject) participates in this "not always pleasantly" (never painlessly) and "irreversibly" (but always longingly, desirously). So the way you describe "cinecstasy" resonates with Shaviro's allure which "reveals" that "there is nothing to reveal." As you say in Cinesexuality: "cinesexuality describes a unique consistency that is cinematically 'filmy' rather than being about films" (15). And a bit further on: "Every time a concept is

teased it affects all other concepts and the total singular whole changes its nature, function and percepts—the territory of which is an event of the production Spinoza sees as the result of affection and affectivity. This book is about cinema but certain cross-over concepts arise" (16). Could one of these cross-over concepts be "cineallure" which would describe the way our relation (or non-relation) to the cinematic makes a swerve away from the subjugation of images to narrativity, context, or meaning? For, as you say here, "Free floating sensibility is a deeply corporeal sensorial, as effulgent as it is frightening in the realm which demands sense without subjectification and experience without signification— Shaviro's 'participation' over 'representation." So, in the cinealluring encounter-event, in the conjugations and participations you and Shaviro are imagining (Guattari in The Machinic Unconscious would call these "machinic territorialities"), is the pellicule/skin of the celluloid one we touch without touching? And in this "conjugal territory" (Blanchot) of radical withdrawal, don't we encounter a material which is precisely excessive (tacky and sticky) and sensual in Harman's terms?

MOR: She's in Fashion? I have a further comment/question for Patricia about how your work converges with or diverges from Shaviro's. It is clear enough—on reading Cinesexuality—that The Cinematic Body has been a shaping influence on your creation of concepts and theories of enfleshment. But, I wonder if the moment of Post-Cinematic Affect gives us a chance to assess shifts not just in Shaviro's work but also your own. Adrian remarks that Shaviro down- or under-plays the Deleuzian/Whiteheadian strand in Post-Cinematic Affect. When we think of what the project of Without Criteria was, this seems all the more strange. That book successfully staged a philosophical fantasy in which Whitehead's process philosophy would replace or succeed Heideggerian phenomenology. Yet, and despite the many differences between Shaviro's philosophy and Harman's (and the disputes between them can be traced on their respective blogs [Object Oriented Philosophy and The Pinocchio Theory] as well as in their essays in The Speculative Turn), the emphasis on allure would suggest that it

is (Heideggerian/Husserlian) phenomenology which is more at the fore in this recent book. (Of course Shaviro everywhere problematizes the logic of succession and the "post." His concepts of the post-cinematic and post-continuity do not mean replacement but rather a repurposing or retooling.) And your own focus on allure above would suggest that phenomenology has taken a more prominent place in your own thinking (indeed the most dominant strand in your own writing has been the Deleuzo-Guattarian one). Of course, I'm not arguing that you and Shaviro are suddenly more interested in phenomenology than Deleuze/ Whitehead. But I am suggesting that you are both less suspicious of the phenomenological tradition than you had been up to now. (Suspicious might be too generous a word for your work since Heidegger and Levinas merit just one entry each in the index for Cinesexuality, and Merleau-Ponty only just beats them with two.) And this may well be signaling a reversal in theoretical fashions more generally. Up until recently, en vogue in continental philosophical circles have been thinkers such as Deleuze, Badiou, Žižek, Lacan, Laruelle, Malabou, over against the more unfashionable thinkers from the phenomenological tradition. What is theoretically interesting about Shaviro's work (and your own) is that they stage potential encounters or unnatural alliances between these two divergent trends.

Karin Sellberg: YouTube. Thanks for a truly inspired post, Patricia! I find the way you describe YouTube absolutely alluring—I caught myself starting to consider its hidden depths and affective magnetism. I have one question, though—YouTube clips are certainly different from films, trailers, and excerpts, but are they really a new visual art form? Is it not rather similar to the 1990s and early 2000s installation art of, for example, Tracey Emin and Matthew Ritchie, where the viewer is getting the impression of watching random slice-of-life clips and/or confessional and awkwardly intimate pieces of self-expression? Sure, YouTube is online, readily available and open to everybody, which makes the range of material rather different to what you would see in a gallery space, but

their affective exchange and participatory approach seem rather similar to me.

One might even argue that art that features random CCTV clips, like the work of Bruce Nauman, would be even more accidental and conducive for affective unconscious machines, since the YouTube clip will always carry the context of the very conscious act of filming or posting.

MOR: Free Labor and Affect. Karin, this brings to mind Tiziana Terranova's concept of "free labor." After all, those who upload, edit, and comment on YouTube clips are willingly giving up their time and labor. The following quotation from an interview with Terranova is very interesting in the context of this week's discussions (especially with respect to the comments on Adrian's post and the conversation about Gaga) and in terms of post-cinematic affect and work more generally:

In Marxist terms, what you are asking about is how you pass from the existence of a "class-in-itself," that is a class whose existence as such is given within the objective conditions of production, to a "class for itself," that is a class who is conscious of its unity and able to pursue collectively its goals of shared liberation. If we remain within this framework, then the unity of such a class is "objectively" given within the conditions of the current capitalist mode of production. The unity of labor is given by its generalized exploitation that is characterized on the one hand by a surplus of wealth (the excess of pleasurable production, of the investments, desires, knowledge, intelligence, and capacity for invention) and on the other hand by its surplus of "poverty" (economic impoverishment, loss of rights, and control over the working process, etc.). In such context, which Negri and Hardt among others have called "biopolitical capitalism," this passage is problematized in ways that help to understand the difficulties I'm having in answering your very important question. The

technologies of production, and the very source of production, are basically affecting and reworking subjectivity. It is as if capital had installed itself within the working subject. It constitutes it at the level of language, affect, perception.

As Franco Berardi has put it, it is as if the antagonism between labor and capital has been interiorized as a conflict within the subject—causing feelings of inadequacy, fear, depression, powerlessness, isolation. The unity of the working class as class for itself in industrial production is given by the collective nature of that work, the disunity of the working class as class for itself in conditions of free labor is given by this interiorization of capital, of competitiveness, individualism etc.

However, I do believe that the conditions for a newly found unity is given somehow within the current organization of production. It is the unity of the network, that is a mutant multiplicity in an endless process of transformation. Nobody can see the future, but I still believe that it is within the form of the network, and the peculiar conditions that it expresses, that new antagonistic relations will be realized. I'm saying 'potential antagonisms' because the network is a very open form and it does not mean that it will have the contents that we believe it should have. After all you are dealing with subjectivity, that is with memory, habits, percepts, affects, desires, opinions, feelings, sex etc.! There is no historical teleology, here, no predetermined happy ending for the troubled relation between labor and capital, but only an open field of experimentation.

Patricia MacCormack: *Territories of Need.* Shaviro suggests "we do not live in a world in which the forces of affective vitality are battling against the blandness and exhaustion of capitalist commodification. Rather, we live in a world in which *everything is affective*" (in part 5 of this conversation), and responding to your fascinating suggestion that this could herald a new kind of phenomenology which sees theory as affective of itself, neither taxonomical nomenclature nor resistant to it: In

a way we can come thus to theory itself as approach and allure—tentative, as a promising but enticing libidinal territory. We know we are destined to be unfaithful but as Shaviro rightly points out, it is precisely because theory is neither faithful nor unfaithful to the false dichotomy of affect or/over/against resistance. It invokes Rodowick's "cinema of thought," which claimed all memory is resistance and all history is power—both are always simultaneous and it is the very imperative not to choose which is that which makes all approach ethical and all allure irresistible without being felicitous. The clip nature of your interesting examples of fragmentary events bear out Shaviro's thoughts, because the fragment is always part of a connective consistency just as those cinematic events which masquerade as complete conceal the unnatural participations they are always making with all territories of affect and all affect as territory. The question becomes not whether an affective territory is resistant or, as your wonderful expression suggests, teleologically memorial, but to what extent it is needed at any moment. For this reason, YouTube's clipish nature is the need we didn't know we had because it forces us to take responsibility for the use of the affects of the accidental terrain.

PM: A New Occultism. I have very much enjoyed the coalescences of ideas on panpsychicism and magic. It seems what is being suggested in these intersections is what could be called a new occultism that, in a radical reconfiguration of superstition or ordained "faith," terms such as panpsychism and magic are able to be utilized as belief in what is not finally and exhaustibly knowable but is premised on experimental mappings of chaos to catalyze what could have only hitherto been thought of as inconceivable or, more correctly for cinema, imperceptible. I think we may have here a new ecstasy or mysticism which is a deeply ethical project that emphasizes affect as activism, and so we could add to Foucault's thought from outside which replaces knowledge only possible within the epistemic slaughter of affects, the idea of belief (a Spinozist seeking of ethical benefit or good while acknowledging results can never be predicted—thus technically a belief in what we do not yet know, the

belief in quality of affect itself, liberated from description or prescription) and hope (perhaps a new methodology of investigation to replace myths or hypotheses). Potentially this is a strange little divergence, but recalling Shaviro's emphasis on new opportunities for emergent vocabularies, these words are no less empirical but through their exquisite sensitivity produce a way to describe projects of affect-ivation.

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5. A Response Steven Shaviro

First of all, I would like to thank Michael O'Rourke, Karin Sellberg, and Kris Cannon for setting up this theme week at *In Media Res* devoted to my book *Post-Cinematic Affect*, to the curators Elena del Río, Paul Bowman, Adrian Ivakhiv, and Patricia MacCormack for their postings, and also to Shane Denson for his comments. The discussion has been so rich, and it has gone in so many directions, that I scarcely know where to begin. I will try to make a few comments, at least, about each of the four curators' postings in turn.

Elena del Río praises the power of affect, for the way that it "throws into disarray the system of recognition and naming." She opposes the state of "exhaustion" and indifferent equalization that we might seem to have reached in this age of globalized finance capital to the way that "affect or vitality" remains able to energize us, to shake things up, to allow for (in the words of Deleuze) "a vital power that cannot be confined within species [or] environment." While I remain moved by this vision—which has its roots in Spinoza, Nietzsche, and Deleuze—I am increasingly dubious as to its viability. I'm inclined to say that praising affect as a force of "resistance" is a category error. For we do not live in a world in which the forces of affective vitality are battling against the blandness and exhaustion of capitalist commodification. Rather, we live in a world in which everything is affective. What politics is more virulently affective and vital than that

of the American Tea Party? Where is intensive metamorphosis more at work than in the "hyper-chaos" (as Elie Ayache characterizes it, following Quentin Meillassoux) of the global financial markets? It is not a question of a fight between affect and its "waning" or exhaustion (whether the latter is conceived as the actual negation of the former, or just as its zero degree). Rather than being on one side of a battle, affect is the terrain itself: the very battlefield on which all conflicts are played out. All economic and aesthetic events today are necessarily aesthetic ones, both for good and for ill.

Paul Bowman is therefore not being wrongheaded when he wonders "whether approaching the world in terms of affect offers anything specific for cultural theory and the understanding of culture and politics." Indeed, I answer this question in the affirmative, whereas Bowman seems to lean towards the negative. But my saying this is not because I think that affect offers us "anything specific"; it is rather because affect (much like Whitehead's *creativity*, or Spinoza's *conatus*) is an entirely *generic* notion, one that more or less applies to everything. Affect is not a particular quality; rather it designates the fact that every moment of experience is qualitative and qualified. Eliminativist philosophers notoriously argue that "qualia" do not exist; at the opposite extreme from this, I follow William James and Whitehead in insisting that there is nothing devoid of qualia. For this reason, I am in agreement with the commentators who suggest that the two affective readings Bowman offers of the clip from Old Boy are not in contradiction to one another, and that sensual heightening and loneliness in fact go together. Bowman's effects are inseparable from what I am calling affects.

Adrian Ivakhiv asks "whether there remain breathing spaces and sources of transcendence *outside* of hypercapitalism's ever-modulating codes." That is to say, he worries that my account of what Marx called the "real subsumption" of all social forces under capitalism in contemporary society leaves no room for anything else. Do I not run the risk of painting

so totalizing a picture that Whitehead's and Deleuze's vision of an "open universe" becomes impossible? I must admit that I present a rather pessimistic view of our prospects. I fear that under the sway of what Mark Fisher has called "capitalist realism" we suffer today from a general paralysis, both of the will and of the imagination. I do not share Gibson-Graham's happy vision of all sorts of wonderful utopian alternatives burgeoning under the surface of actually existing capitalism. If I instead present what seems like a totalizing picture, this is only to the extent that capitalism "itself"—however multiple and without-identity it may actually be—involves an incessant *drive towards* totalization.

This is capital's essential project: the ever-expanding accumulation of itself, of capital. It's a process that is both economic (quantitative) and aesthetic (qualitative). The goal of complete subsumption is of course never entirely realized, precisely because accumulation can never come to an end. Also, we cannot see, feel, hear, or touch this project or process: in itself it is a version of what Ivakhiv calls "magic." And to my mind, this makes the aesthetic a kind of counter-magic, a *spell* to force the monstrosity to reveal itself, an effort to make it visible, audible, and palpable.

Patricia MacCormack generously expands upon the aesthetic and affective stakes of what I was trying to accomplish in *Post-Cinematic Affect*—as opposed to the concerns over "capitalist realism" that also play a large role in the book, and that were the focus of the other posts. I thank her for calling attention to the Whiteheadian and Deleuzian themes that, as several of the other commentators noted, seemed less present in this book than in my earlier ones. Indeed, this is a tension—or a problem that I have been unable to solve—running through pretty much all of my work. Mallarmé's maxim defines everything that I am trying to do as a critic: "Tout se résume dans l'Esthétique et l'Economie politique" ("Everything comes down to Aesthetics and Political Economy"). This seems to me to be a necessary truth about the world; but I am never certain where to draw the line, how to partition the world between aesthetics and political

economy, or when they are absolutely incompatible with one another, and when they are able to partially coincide.

In conclusion, I offer a media object that I hope responds to at least some of the tensions and confusions that we have been discussing this week: the music video for Janelle Monae's song "Cold War." [8]

The song, from Monae's concept album The ArchAndroid, works as a kind of Afrofuturist counterpoint to Grace Jones's "Corporate Cannibal." It addresses the unavoidable conflicts of a world that is increasingly posthuman (as well as post-cinematic). The lyrics to "Cold War" reflect upon the demands and meanings of Emersonian self-reliance and authenticity, and of subjectivity more generally, in a world that is entirely manufactured and commodified. The Metropolis Suite, of which The ArchAndroid is a part, narrates the plight of a robot/slave—a commodity, all the more so because she is nonwhite—who has been slated for demolition because she has fallen in love. She is therefore forced, not only to flee for her life, but to invent out of whole cloth, and without models, what it might mean for her to be a "person" with a "life," that is to say, with feelings, needs, and desires. The lyrics of "Cold War," in particular, speak both to the absolute requirement of self-integrity and to the near-impossibility of defining what it might be. The video is a single, continuous take: we even see a time code running in the corner, and a title reading "Take One" appears near the beginning. Against a dark background, we see an extreme closeup head shot of Monae as she sings the song. But at some point, there's a glitch: she flubs a line, looks to the side and seems to be bantering with someone off-camera. Then she clenches her face and seems to be barely holding back tears. Through all of this, her voice and the music continues to play, indicating that she has in fact been lip-synching all along. The extreme intimacy and emotionality conveyed by the close-up on Monae's facial expressions coincide with the revelation of the video's artifice. The video thus resonates with the "Club Silencio" sequence in David Lynch's Mulholland Drive (which was sampled in Elena Del Río's video). I don't

think that the revelation of technological artifice undercuts the affective intensity of the performance (as might have been the case in some 20th-century modernist work). Rather, the incompossibles coexist, without negation and also without synthesis or resolution.

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Notes

This conversation originally appeared in five daily installments, from August 29-September 2, 2011, on the MediaCommons website *In Media Res*, as a theme week devoted to Steven Shaviro's *Post-Cinematic Affect*: http://mediacommons.futureofthebook.org/imr/theme-week/2011/35/steven-shaviros-post-cinematic-affect-august-29-sept-2-2011. Each day, in accordance with the format of *In Media Res*, one of the participants would kick off the conversation with a video clip and curatorial comments. The theme week was organized by Karin Sellberg and Michael O'Rourke. We have edited only minimally, for continuity and consistency with this volume's format, and wherever possible attempted to locate materials cited in the discussion.

[1] In their original context, these comments were accompanied by an

untitled video clip, which can be viewed here: http://mediacommons.futureofthebook.org/imr/2011/08/29/cinemas-exhaustion-and-vitality-affect.

- [2] Karin Sellberg's comments here refer to the video that accompanied Elena del Río's original post on *In Media Res*.
- [3] The video, "Body Affect: As It Moves," can be found here: https://vimeo.com/8428243.
- [4] Paul Bowman's comments were originally accompanied by a video clip from Chan-wook Park's *Oldboy* (2003).
- [5] A longer piece on "Post-Continuity" is reprinted in this volume.
- [6] Adrian Ivakhiv's comments were originally accompanied by Nick Hooker's music video for Grace Jones's "Corporate Cannibal," which is also the subject of chapter 2 of Steven Shaviro's *Post-Cinematic Affect*.
- [7] In their original context, Patricia MacCormack's comments were accompanied by a one-minute YouTube clip from Dario Argento's *Suspiria* (1977): https://www.youtube.com/watch?t=78&v=srQfWZZVcKA.
- [8] The video was posted alongside Steven Shaviro's comments in their original context on *In Media Res*.



BY SHANE DENSON, THERESE GRISHAM, AND JULIA LEYDA

Therese Grisham: I want to start by referring to our last roundtable discussion on the post-cinematic, last fall, in issue #10 of *La Furia Umana* (reprinted in this volume).[1] Principally, we discussed the first two *Paranormal Activity* movies (Oren Peli, 2007; Tod Williams, 2010), in which the action is displayed to us and relayed to the characters through home surveillance (and "sousveillance") cameras installed in the family's house. I'm interested in going further with our thoughts on the post-cinematic here, in part owing to Steven Shaviro's idea of "post-continuity," which he defined in his 2010 book, *Post-Cinematic Affect:*

I used this term to describe a style of filmmaking that has become quite common in action films of the past decade or so. In what I call the post-continuity style, "a preoccupation with immediate effects trumps any concern for broader continuity—whether on the immediate shot-by-shot level, or on that of the overall narrative." ("Post-Continuity")

In a paper presented at the 2012 Society for Cinema and Media Studies conference, Shaviro elaborates on this concept:

Post-continuity is a style that moves beyond what David Bordwell calls "intensified continuity," and in which there no longer seems to be any concern for delineating the geography of action by clearly anchoring it in time and space. Instead, gunfights, martial arts battles, and car chases are rendered through sequences involving shaky handheld cameras, extreme or even impossible camera angles, and much composited digital material—all stitched together with rapid cuts, frequently involving deliberately mismatched shots. The sequence becomes a jagged collage of fragments of explosions, crashes, physical lunges, and violently accelerated motions. There is no sense of spatiotemporal continuity; all that matters is delivering a continual series of shocks to the audience. ("Post-Continuity")

Examples of the post-continuity style can be found in recent movies by Michael Bay and the late Tony Scott. However, rather than decry post-continuity as "the decline and fall of action filmmaking," as Matthias Stork calls it in his video essay "Chaos Cinema," Shaviro concludes:

In classical continuity styles, space is a fixed and rigid container, which remains the same no matter what goes on in the narrative; and time flows linearly, and at a uniform rate, even when the film's chronology is scrambled by flashbacks. But in post-continuity films, this is not necessarily the case. We enter into the spacetime of modern physics; or better, into the "space of flows," and the time of microintervals and speed-of-light transformations, that are characteristic of globalized, high-tech financial capital. Thus in *Post-Cinematic Affect*, reflecting on Neveldine and Taylor's *Gamer*, I tried to look at the ways that the post-continuity action style is expressive of, as well as being embedded within, the delirium of globalized financial capitalism, with its relentless processes of accumulation, its fragmentation of older forms of subjectivity, its multiplication of technologies for controlling perception and feeling on the most intimate level, and its play of

both embodiment and disembodiment.

Shaviro indicates that we need to talk more about the aesthetics of post-continuity styles in order to link them to post-cinematic affects:

there is much more to be said about the aesthetic sensibility of post-continuity styles, and the ways that this sensibility is related to other social, psychological, and technological forces. Postcontinuity stylistics are expressive both of technological changes (i.e. the rise of digital and Internet-based media) and of more general social, economic, and political conditions (i.e. globalized neoliberal capitalism, and the intensified financialization associated with it). Like any other stylistic norm, post-continuity involves films of the greatest diversity in terms of their interests, commitments, and aesthetic values. What unites, them, however, is not just a bunch of techniques and formal tics, but a kind of shared episteme (Michel Foucault) or structure of feeling (Raymond Williams). It is this larger structure that I would like to illuminate further: to work out how contemporary film styles are both expressive of, and productively contributory to, these new formations. By paying sustained attention to post-continuity styles, I am at least trying to work toward a critical aesthetics of contemporary culture.

With Shaviro's work as backdrop, I want to think about other aspects of contemporary filmmaking: digital technologies, the formal properties/styles of recent movies, and their relations to post-cinematic affect.

To begin our discussion, it strikes me that the functions of cameras have changed, or at least their ubiquity, or perhaps their meaning in the post-cinematic episteme. I think we thoroughly discussed the cameras' functions of immobility and unlocatability in the *Paranormal Activity* movies and how these features can be understood. The two films that right away come to my mind in which I see a distinct change in the function of the camera

are *District 9* and *Melancholia*. At the risk of being reductionistic, but for brevity, in classical and post-classical cinema, the camera is subjective, objective, or functions to align us with a subjectivity which may lie outside the film, this last as in Hitchcock. We have something altogether different, I think, in movies such as *District 9* (Neill Blomkamp, 2009), or differing from that, in *Melancholia* (Lars von Trier, 2011).

For instance, it is established that in *D9*, a digital camera has shot footage broadcast as news reportage. A similar camera "appears" intermittently in the film as a "character." In the scenes in which it appears, it is patently impossible in the diegesis for anyone to be there to shoot the footage. Yet, we see that camera by means of blood splattered on it, or we become aware of watching the action through a hand-held camera that intrudes suddenly without any rationale either diegetically or aesthetically. Similarly, but differently as well, in Melancholia, we suddenly begin to view the action through a "crazy" hand-held camera, at once something other than just an intrusive exercise in belated Dogme 95 aesthetics and more than any character's POV, whether we take this latter as literal or metaphorical. How do you understand the figurations of these cameras in the two films? And beyond defining them and thinking about why they occur, can we generalize at all about ideas of the camera as character (without it actually being a character—I would say it is a-subjective, I guess) in movies you would include as "post-cinematic"?

Shane Denson: First of all, thanks for having me in the discussion, and thanks especially to Therese for organizing the roundtable and for getting things started with this first set of questions. In reply to these questions, I'd like to start, somewhat generally, by suggesting that the unlocatable/irrational camera in these films "corresponds" (for lack of a better word) to the basically nonhuman ontology of digital image production, processing, and circulation. It's somewhat difficult, I think, to specify the precise nature of this correspondence without suggesting causal relations and/or authorial intentions that are far from obvious in the context of

contemporary media. So I hope that my comments won't be taken as implying either that the functions of the camera in post-cinema are simply determined by the technologies at work or that these correspondences are simply (i.e. straightforwardly) allegorical and reducible to the conscious decisions of filmmakers. Having said that, there are significant resonances across all of these levels of articulation.

Production

To start with, digital image technologies institute a break with human involvement and interest at just about every level: most fundamentally, they occasion a break with the material analogy previously obtaining between the camera lens and the lens of the human eye, the correlation of which is severed by the intercession of humanly non-processable data. (And with my use of the word "correlation," I am intentionally trying to invoke the notion of "correlationism" as introduced by Quentin Meillassoux and employed by the speculative realists more generally; while the advent of digital technologies may not be a necessary and sufficient condition for a break with correlationism, I think it's safe to say that there is a strong historical tendency linking them. In this vein, one of the great virtues of Steven's work on post-cinematic affect, I think, is to provide some much-needed historicization—and attendant material specificity—to the speculative realist project.)

Processing

Moreover, and closer to the specific context of (post-)cinema, there is a break with the human hand/eye involvement in celluloid-based cinematic editing processes (nonlinear editing being, in large measure, a break with the physical and phenomenological parameters of embodied agency as they are instantiated at the cutting table—a break that occurs regardless of the tributes paid to this phenomenology in the interface design of digital editing and compositing software applications, which in both professional and amateur variants continue, in the name of usability, to emulate physical apparatuses, control knobs, scrub heads, etc. despite the

thoroughly numerical basis of all corresponding operationalities). In this sense, we might say that the much discussed break, in digital cinema, with photographic indexicality—often conceived in basically epistemological terms—is in fact only one of several such breaks, which are not restricted to cognitive and evidentiary domains but instead involve broadband impacts across embodied capacities, sensory relations, and pre-personal affects. (Steven's work, from The Cinematic Body to Post-Cinematic Affect, helps to uncover these broad sites of transformation, demonstrating why a narrowly technical focus on changes in editing practices will necessarily provide an incomplete account of the changes encompassed in the move to a regime of properly post-cinematic media; as I have suggested elsewhere—see my "Discorrelated Images" and "WALL-E vs. Chaos (Cinema)"—it is precisely in this respect that Steven's concept of post-continuity, which highlights changes in editing techniques without pretending that this is the sole or central site of transformation, remains superior to purely formal accounts such as Matthias Stork's notion of chaos cinema.)

Circulation

And then there's the totally inhuman circulation of images today, which, in the forms of surveillance, social media (and related Web applications), and other sites of accumulation, exchange, and dissemination, impinges upon humans in various ways (both expanding and attenuating human agencies), but which despite and indeed precisely in this impingement remains in many ways indifferent to human needs, interests, and even senses (think, for example, of automated recognition systems that gather data with and without our knowledge or consent, and which may or may not alert some human "user" when a particular event takes place or a certain pre-defined data threshold is crossed, but which continue capturing, generating, reproducing, processing, comparing, compositing, transposing, and transducing images without human input or intervention, proceeding by means and in forms not directly accessible to human perception or control). Various cultural or creative practices,

from Internet memes to post-cinematic filmmaking, can be said to reflect, interpret, or "mediate" such processes; sometimes these acts may result from conscious decisions (as in films that allegorize or explicitly exhibit a self-reflexive awareness of our contemporary media situation), but they certainly need not. Again, the resonances at issue here go far beyond the narrow bandwidth of human consciousness.

In outlining these three non-exclusive and non-exhaustive sites of change, I have intentionally chosen terms that encompass but are not restricted to their narrower correlates in the realm of (pre-digital) cinema: filmmaking, editing, and distribution. What I am trying to suggest in this way is the general expansion and transformation of, rather than a simple break with, cinematic techniques and technologies of the image, which correspond to the cultural practices and embodied sensibilities of the current transition to a post-cinematic mediascape. More generally, these transformative expansions (from filmmaking to image production, from editing to processing, and from distribution to circulation) mark displacements of the human agents responsible for the respective areas: filmmakers/directors, editors, and distributors/ marketers/producers, among others. The spectator, too, is displaced no longer situated as a coherent subject in relation to a film as a closed or coherent object of spatiotemporal perception, but instead addressed as a subset or contingent intersection of streams in a larger pool of affective, intentional, financial, technological, and sensorimotor flows. In other words, the emotional and cognitive relations between classical films and their spectators give way to a very different configuration: the narrowband subject-film relation, while not abolished, is now less central, situated within a larger domain that corresponds in part to the many screens and settings of consumption today, many of which compete with one another in real time. The movie screen no longer commands total attention but anticipates its remediation on TV and computer screens and, moreover, knows of its coexistence alongside smartphones, tablets, and social media, which may occupy viewers' perceptual, tactile, and

affective attentions simultaneous with their "viewing" of a film. Clearly—and finally coming around to the focus of Therese's question—the camera is a central fulcrum, and hence a site of central importance, in terms of coordinating, relaying, or concretely mediating the new relations between post-cinematic productions and their diffuse addressees, between "the cinema screen" and viewers' positions within a larger environment of post-cinematic screens, and more generally between post-cinematic media and the displacements or peripheralizations of human agencies to which they correspond.

Due to the transitional powers it exerts on our established media systems or regimes (most centrally, here, on what we call the "cinema"), the postcinematic camera necessarily produces highly paradoxical situations, such as we glimpse in phenomena like computer-generated lens-flares on the "lenses" of virtual cameras in digitally animated productions: these at once emphasize the plastic "reality" of ("pro-filmic") CGI objects, while they simultaneously highlight the artificiality of the film itself by emulating (and indeed foregrounding this emulation of) the material presence of a (non-diegetic) camera. The "realisticness" of computer graphics is here attested to, and measured in terms of, the ability of computational technologies to simulate the conditions of pre-digital cinematic production: centrally, the material co-presence of a profilmic object, a camera, and the physical interplay of light on its lens none of which in fact materially (or non-computationally) exists. The paradox here, which consists in the realism-constituting and realismproblematizing undecidability of the virtual camera's relation to the diegesis—wherein the "reality" of this realism is conceived as thoroughly mediated, the product of a simulated physical camera rather than defined as the hallmark of embodied perceptual immediacy in the absence of a camera or other mediating apparatus—points to some crucial issues with respect to the affective functionality of post-cinematic cameras more generally (that is, both the virtual and the materially embodied cameras employed in the mediation of the post-cinematic).

To bring this around to Therese's suggestion that the camera comes to serve as an "a-subjective character": I want to suggest that the whole problematic undecidability of the irrational camera's relations to diegetic and nondiegetic subject-positions, as outlined in Therese's question, corresponds to the multileveled breaks and displacements of human phenomenology that I outlined above. Accordingly, we might say, the post-cinematic camera is not so much situated as a problematic or irrational character within a given film (though this certainly does occur); rather—or rather more characteristically for post-cinematic filmmaking—the choice of the camera's specific perceptual modality and functionality (its problems, uses, relations to and foregrounding of various aspects of the foregoing) in fact comes to define the overall "character" or general affective quality of the film. This corresponds to the transformative expansions I described above, and it marks a move from the viewer's emotional involvement with intrafilmic characters to a multimodal and not exclusively narrative, visual, and intentional engagement with the qualitative character of the film itself, conceived not as a closed unit of spatiotemporal/perceptual "content" but as an integral and evolving part of the larger post-cinematic environment. In other words, where the characters in classical cinema provided the central focus and occasions for dramatic interest in a storyworld that unfolds according to its own internally defined logics, and where the camera served alternately to disclose this world in the manner of a transparent window or, more exceptionally, to announce its own presence as an (uncanny or self-reflexive) object of perception, the radically indeterminate cameras of post-cinematic filmmaking serve (in the manner of the "sousveillance" referenced in the last roundtable discussion on the Paranormal Activity series) to displace the characters, to take them out of the center of perceptual attention and instead situate them marginally with respect to a total environment of inhuman image production, processing, and circulation—and to situate us as viewers accordingly.

This dual or reflexive operation is enabled precisely by the camera's irrationality, its undecidable position between the diegetic and the

nondiegetic, or between the world on the screen and the screen's place in our world, which is similarly pervaded by these post- or nonhuman technologies of the image. Thus, there is a reversible relation between the post-cinematic diegesis and the nondiegetic ecology of our postcinematic world, and it is occasioned precisely by a camera that no longer situates us as subjects vis-à-vis the film-as-object, but instead institutes a pervasive relation of marginality, where everything is marginal to or contiguous with everything else. This corresponds to a specifically post-cinematic mode of address: the camera no longer frames actions, emotions, and events in a given world, but instead provides the color, look, and feel of the film qua material component or aspect of the world—of our world: one that, either directly or metonymically through mechanisms of sousveillance and the like, impinges upon and involves us in some way, but not centrally as the main or core concern of the film. The camera's presence thus defines the affective quality of the film (and of the world) more so than the affective quality of our investment in it: as a function of the camera, the film/world itself exudes threat, fear, excitement, panic, or enticement, but in such a way as to mark, in stark contrast to classical Hollywood, our own involvement in these affective relations as contingent, non-necessary, and hence open to the distraction of competing interests, other media, and other screens. The film-world itself exhibits fear or other affective qualities that we may, but need not, share in. This "character" of the camera becomes, in effect, the central object of the film, taking the place of character-involvement as the motor of classical interest (and "suture"). But the objecthood of such filmic "character" is just as problematic as the a-subjective quality of the camera, because the affective quality of the film envelops (or fails to envelop) us, but in any case it refuses to let us serve as the center or crux of such affect. The post-cinematic camera, in short, modulates the affective character of the wider world; it does not bracket that world out or substitute one of its own making; it remains indeterminately contiguous with every level of the contemporary real, including the physical, the imaginary, and the virtual.

Accordingly, the discorrelation of spectator-film relations by no means rules out our active involvement with the film and the camera's images: in fact, it expedites the proliferation of engagements beyond the film proper. To be sure, processes of transmedialization and attendant fan practices need, I think, to be thought more precisely in relation to the affective qualities of post-cinematic productions, their correlations to media-technological changes and the revised role of the camera, and the processes by which films leverage these transformations to infect us with their affects, turning us, in effect, into automated propagators of said affect in our engagements with the films online, in wikis, forums, etc. which carry their affects forward, as an act of serialization that is independent of any explicit sequels, and so on.

D9 embodies these dynamics of the irrational camera and its affective modulation of the contiguous world, rather than the classical encapsulation of a separate filmic world, in precisely those mechanisms singled out by Therese in her question. That news-reportage camera, which reappears at times impossibly and "without any rationale either diegetically or aesthetically," as she quite fittingly puts it, hearkens back to the same dynamics of undecidability which propels the seemingly simple CGI lens flare discussed above. Like the technically gratuitous lens flare, D9's irrational camera creates a feeling of authenticity precisely through impossibility, simulates direct affective involvement through hypermediation. The paradox here does not alienate us from the film but, conversely, works in favor of establishing a closer contiguity between the film and our own confusing and irrational lifeworlds, where news media, surveillance cameras, satellite imagery, GPS, social media, and other (often invisible) channels for the production, processing, and circulation of post-cinematic images, increasingly collude on a daily basis to generate what must seem like impossible views: if not views from nowhere, then at least perspectives that are inexplicable in terms of the phenomenology of human embodiment.

Again, I am not suggesting that the film should be read as an allegory of such processes, but with its tale of the main character's progressive

dehumanization, it certainly lends itself more readily to such readings than does Melancholia, I think. Another significant difference between the two films can be detected in the fact that D9's irrational camera, and the proximity it establishes with the nondiegetic world of our extracinematic experience, works logically toward the preparation of a sequel (even if Blomkamp has no plans to make one), while *Melancholia*, with its unrelenting consummation of the end-of-the-world scenario, would seem categorically to preclude any form of continuation. Nevertheless, the film's "crazy" camera, as Therese puts it, not only fails to correlate neatly with any intra- or extra-filmic POV; it also reveals things to us that demand but adamantly resist explanation—and in this way it acknowledges and provokes extra-filmic continuation, as an aspect of the essential contiguity between post-cinematic diegetic and nondiegetic formations, indeed, as a basic fact of life today. The paradox cannot be overemphasized: the world ends; no one wakes from a dream; it's over. And yet it goes on: we are forced—as the film knows we will be—to go online and seek a plausible explanation for the camera's revelation of, for instance, as one random example, a nineteenth hole on a golf course that, as is repeatedly and inexplicably emphasized in the film's dialogues, only has a standard eighteen holes. The film, it would seem, displays an acute awareness of its inevitable afterlife in the databases of imdb, in Wikipedia articles devoted to film-related trivia, in minute analyses of continuity problems and such on Facebook, twitter, and online forums, all of which now constitute a basic fact of contemporary reception, which has long since ceased ending in movie theaters. The film provokes continuation, along with allegorical readings and the like (which will also be traded online), even while signaling its complete and total resistance to narrative continuation and its utter indifference to human significance. Tellingly, the melodrama of the film's first part ends with a recognition of the triviality of its petty human dramas, marking in this way a rejection of classical spectatorial involvement via emotion and character-identification, ultimately denying us the comfort of empathy with its characters; instead, it displays a world of optional affect that can, but need not, infect us. The

film's narrative leaves us more or less cold, even as the film itself may affect us deeply. People die—and not the people we expect to be the first to kill themselves; but beyond a feeling of mild surprise, there's not much else. Formally—and not simply allegorically—the film modulates depression as a means of mediating the apparent triviality of emotion and sentimentality in the post-cinematic world. The irrational camera corresponds to this basic indifference and discorrelation of human interest. The camera's and viewer's (at least this viewer's) indifference to the characters is in fact the filmic/affective "character" of the film, as a part of the wider world, that the camera helps create. This, I propose, is a characteristically post-cinematic mode of articulating (i.e. parsing and conjoining) affect as alternately attached and free-floating, individuated and impersonal, and as pertaining to any of the contiguous worlds that the irrational camera brings into contact.

Julia Leyda: In the previous roundtable on the *Paranormal Activity* films, we discussed the implications of the home video and security surveillance cameras for the films' meanings and their interesting co-location within the popular horror film genre and avant-garde film movements such as Dogme 95. While it was an interesting test case for definitions of the avant-garde, I ended up feeling convinced that the very fact of the formal overlapping between pop horror and avant-garde film was telling, more as evidence of the ubiquity of post-cinematic affect and post-continuity technique than as any kind of mainstreaming of avant-garde aesthetics. To paraphrase Steve's work on post-cinematic affect, the PA movies, the indie SF urban fantasy District 9, and the work of more artisticallyminded auteurs such as Lars von Trier, represent in different ways how it feels to live in the digital age of late neoliberalism. So in a sense I want to stretch that to include how camera work blurs, sometimes literally, how we look at this world and through whose eyes. Movies like PA 1 and 2, and the ones now under discussion, D9 and Melancholia, generate affective cognates for 21st-century life, encouraging us to observe, sympathize, and perhaps identify with the characters and situations captured by their

cameras. Maybe examining the camera work more closely can be one way to get to a "critical aesthetics of contemporary culture" that Steve calls for in his post-continuity paper.

District 9, POV, and Politics

D9 is all about POV. We are positioned as viewers of the story of Wikus, the private contractor working for the Halliburton-like firm MNU. But we are also gradually encouraged to sympathize with Wikus as he develops from a xenophobic corporate tool into a more humane person, sensitive to the predicament of the aliens. Part of that development in his character appears to be the result of his own biological metamorphosis from human to alien-human hybrid—only by literally becoming (part) Other is Wikus able to see things from the alien perspective.

The movie combines faux news footage with more conventional non-diegetic camera work in what appear to be different levels of externalized POVs. Some shots involve characters in direct address to the camera, with a lower third superimposed over the image of news readers or mockumentary interviews with various experts and family members of the involved characters; hand-held, battlefield cinematography, signaling the presence of a camera crew accompanying Wikus and the other MNU contractors as they serve eviction notices to aliens; and footage that appears to be from fixed surveillance cameras. But these scenes of diegetic camera work frequently give way to non- or extra-diegetic camera work that isn't explained, in scenes where we know there is no actual film crew or surveillance camera; in this sense, some of the camera work is in the familiar mainstream film style of the invisible camera revealing events that we otherwise would have no way of seeing.

This constant shifting between diegetic and non-diegetic, as Shane puts it, "modulates the affective character of the wider world" in which we are increasingly integrated into media circuits, social networks, and digital, nonhuman modes of representation and communication. In my latest

viewing of *D9*, what must have been my third time, I didn't feel disrupted or confused in any way by the seemingly random interweaving of diegetic and non-diegetic; I'm used to it, just as, while I am having face-to-face or telephone conversations, composing emails, and watching movies or television shows, I can be interrupted (more and more seamlessly) by notifications from apps like Gmail, Twitter, Blogger, Google+, and so forth, on my PC, smart phone, or simultaneously on both.

But the other significant kind of shift in the movie is in the story: Wikus's transition, physically and mentally, from a xenophobic human to a hybrid human-alien forced to recognize his moral responsibility to others. In the movie's overtly political messages the aliens stand in for oppressed racial groups; in his hybridity, Wikus comes to embody the refutation of speciesism as a way to critique the institutionalized oppression of nonwhite groups under the militarized regime of South African apartheid. Like the camera work, Wikus's point of view shifts back and forth between that of a technocratic contractor supporting the superiority of humans over aliens and that of an empathic person who recognizes the aliens' personhood. He vacillates between altruism and selfishness when he steals the spaceship from the alien Christopher, but in the end he enables Christopher's escape to the mother ship, even though it means he must wait at least three years for his return to Earth (if he returns at all). His shift also encompasses a rejection of his earlier loyalty to his company, MNU, which apparently performs various contracted services for the government, including the militarized security forces, reminiscent of Blackwater or Halliburton in the US war in Iraq, tasked with delivering the eviction notices to thousands of aliens in the tent city of District 9. Is this a secondary albeit utopian gesture to suggest that a non-corporate or even anti-corporate world is possible?

Melancholia, Melodrama, and POV

In sorting out my ideas for this discussion, I posted a partial review of *Melancholia* on my blog; later Steve sent me his unpublished essay on

it, as well. My comments focus mainly on the film's generic oddities as a woman's film about the end of the world, particularly the shift within the movie from Justine's half, Part 1, to Claire's, Part 2. The two halves are defined by their titles' reference to one sister or the other, and also by their distinctly different color palettes. I find this technical attention to color—through the ostensibly Dogme-approved use of only situational lighting as well as costuming and mise-en-scène-provocative and elusive. It reminds me of the way many 1950s melodramas use color, which has been studied by critics over the years (see Haralovich), and which is painstakingly reenacted in Todd Haynes's Far from Heaven (see Higgins). Shot mostly in the nighttime incandescent interiors and lamplit exteriors without additional lighting, the Justine part of the movie is drenched in golden light, which matches her and her bridegroom's strawcolored hair and the ostentatious luxury of the wedding party. The second part, Claire's, is primarily shot during the day in muted natural light, producing mostly a bluish or pallid color palette, to go with the subdued, darker tones as hope drains away and Claire collapses, realizing that her big fancy life is going to be dashed to ions just like the rest of the planet. In a final reversal of roles, Justine cares for Claire and Leo, inventing the magic cave made of sticks which demonstrates how illusory any sense of safety really is, while at the same time actually comforting them (and us).

The cinematography in both the gold and blue parts of the movie, as well as in the prologue, is often breathtakingly beautiful, a fact only partly countered by the self-consciously wobbly handheld camera work that dominates Justine's part and appears to a lesser extent in Claire's. As Steve points out in his paper on post-continuity, though, what may have had a particular aesthetic resonance when foregrounded in the avantgarde context of Godard or even Dogme 95 films has become relatively normalized within the visual styles of reality television and YouTube videos. For me, the shaky camera, rack focuses, and jump cuts during the party did seem to correlate with Justine's shaky mental state, but after a short time I adjusted to it and no longer noticed it, as may many viewers

who are not trying to foreground the visual style. The irrational camera (in Shane's definition) here produces what Steve aptly names a relational and unstable space, rather than the clearly delineated and bounded space of classical cinema, which in this movie is appropriate to the sisters' irrational frames of mind and the shaky family relationships, as well as the radically unstable space of Earth itself as it explodes in collision with the planet Melancholia (Shaviro, "Melancholia"). The eventual meeting and collision of the two planets, blue and golden in the special effects sequence, echo the often destructive bonds among family members in a melodrama such as those of Claire and Justine; though pulled toward one another, they are ultimately destroyed.

As Steve writes about the two sisters, they are not opposites or types—they are women characters in a family melodrama, complete with the conventional big house, condescending husband, and unresolved problems. Both women recognize the expectations placed on them by family and society, and they deal with those expectations differently—Justine fails to live up to them and refuses to pretend, while Claire clearly wants to fulfill them, but tries and ultimately fails to conform to a châtelaine role as caretaker of husband, parents, sister, and son along with the huge house and servants (see also Shaviro "Melancholia"). Melancholia is post-cinematic in its incorporation of 21st-century visual styles and its reek of finance capital's golden one percent, even as it culminates in an evocation of the meaninglessness of love or lucre in the face of the death of humanity and the Earth itself.

But I find it fascinating that 20th-century social issues such as race and gender continue to permeate both these films.

TG: First of all, thanks for your detailed replies, Shane and Julia. What strikes me immediately is the different takes you have on these two films. I would like to add to the discussion by clarifying my own position on the parts of the first question, so you will know why I asked it. It's a

very specific question, unlike the broader questions I asked in our first roundtable discussion on the post-cinematic for *LFU*.

I am excited at the idea of looking at the use of various film techniques in movies that are post-cinematic partly because I teach my students that a technique is a formal device for helping to create meaning in film, but that the meaning of a technique is always tied to its contexts, which are philosophical, social, historical, industrial, institutional, and so on. This is why I don't like to use, without augmentation, Bordwell and Thompson's Film Art; its considerations are purely formalist. When we talk about the post-cinematic, even though cinema, television, and older media forms are still with us, of course we are also talking about an epistemic shift. Defining this shift is still an open project, which Steve has begun with his book. Therefore, film techniques will often "mean" something different in the post-cinematic than they did in cinema. My idea of "meaning" here is closer to Steve's idea of "affect" than it is to signification or representation; hence, my cheat quotes. To be brief regarding uses of the camera and also the narrative elements in D9 and Melancholia which Iulia discusses in her response:

Julia, you say D9 is "all about POV." My own perspective is that it has a classical narrative structure. In this, it is closer to recent animation films such as Coraline, Ratatouille, The Fantastic Mr. Fox, and so on, than it is to post-cinematic affect. Interestingly, classical narrative structure seems to have landed in fantasy and sci-fi films today. We come to root for Wikus, who starts out as a feeble liberal bureaucrat who embodies the prejudices of apartheid. As he metamorphoses, he becomes a hero. That is a brilliant aspect of the movie: we find him heroic when he is no longer human. He never wholly becomes alien, either, at the end retaining his human memory. We "identify" with him as he is in metamorphosis. When I first saw the movie, I thought of Kafka's The Metamorphosis, by contrast. As Gregor becomes not-Gregor, we align ourselves more and more with his family, the locus of reproduction of the forms of life in

Kafka's episteme, which of course is Kafka's point. Wikus is a figure in flux, but for us, wholly sympathetic. This is a movie about clear heroes and villains. But the narrative and uses of the camera diverge from each other.

The "hand-held" battle sequence isn't just about the usual fight (or chase) in which the viewer is meant to share in suspense or anxiety. We've already seen a good deal of the film as ON film (better said, digital camera), from the very beginning. We therefore can't help but get the idea that the fight sequence is being filmed. (I'm not referring to our individual experiences of the movie here, but to its formal logic). But it isn't being filmed diegetically. And if the camera is being used, say, as it is in classical or post-classical films, I don't see it. There, we aren't meant to notice it, just to absorb the tension; or if we do notice, it is to analyze it and classify it as a generic technique. In D9, I think we ARE meant to notice, because the change in cameras is abrupt and occurs inside the sequence itself. The idea, to me, is that even those moments which seem impossible to shoot, which cannot be filmed, will be filmed; images are being collected, period. Likewise with the sudden blood splatters on a camera that previously was not present. Suddenly, it obtrudes in the shot. My students always say it's clear; it's all being filmed by someone candidly and turned into a documentary, which is D9. The illogic of this doesn't bother them at all. But to me, it's as if a camera is there in the diegesis without it being a character's or a film crew's or yet again an objective camera. This is why I called it "a-subjective" in my question. This way of using the camera seems to me to belong distinctively to post-cinematic affect.

Unlike you, Julia, I did not see the camera techniques you mention in *Melancholia* as correlating only with Justine (or Claire), neither her external nor internal views or her shaky mental state. Rather, I see these techniques as a-subjective; the space—unstable and shifting, not really landing anywhere, and continually having to readjust itself—as the condition for possibility. Now, that condition of possibility is something certainly associated with Justine, as you say, but it's more than Justine,

and it's not Justine. It's the whole world, if you will, which is coming to an end. Justine is a destructive force, but not a globally destructive one. The condition for possibility, or in other words, potential as a latent force of transformation, then, seemingly can't be actualized in any way before the world ends, but this potential is atemporal. Potential cannot be filmed according to pre-existing film language, or perhaps at all, but it is suggested here by the very instability of the camera in what otherwise we might perceive as a women's melodrama that uses generic camera techniques. Potential remains beyond any narrative rationale, as a-subjective and a-rational, a force that traverses us and our lives in the neoliberal capitalism and ostentation of the rich shown so eloquently in the film. This is something I love about *Melancholia*. It's very hopeful. The uses of the camera contribute to that sense of hope.

SD: I just want to comment briefly on the foregoing, and especially on the differences of perspective that have been articulated so far. Indeed, and perhaps somewhat oddly in retrospect, these differences did not stand out as starkly to me as to Therese, who wrote: "What strikes me immediately is the different takes you [i.e. Julia and myself] have on these two films." While I certainly recognized some clear differences of emphasis, I was not struck by any irreconcilable differences. Now, this might be chalked up to an overly conciliatory personality, I suppose, but in light of Therese's very lucid contouring of some basic tensions between a perspective that is more or less narrative-focused and one that is less and less so, I think it's worth exploring what kind of communication is possible between these viewpoints.

First of all, I find myself generally in agreement with Therese's argument that, in *D9*, "the narrative and camera diverge from one another"— and that, as she quite nicely puts it, "even those moments which seem impossible to shoot, which cannot be filmed, will be filmed; images are being collected, period." This type of camera—which is more omnivorous than omniscient—corresponds to the nonhuman production, processing,

and circulation I pointed to earlier, and I do think its employment in this film renders problematic Julia's statement that "we are positioned as viewers of the story of Wikus." To say that it is problematic, though, is not to say that it is wrong; indeed, the increasingly problematic nature of our "positioning"—rather than the absence of any such positioning—is a central characteristic of the shift to post-cinematic media, I think.

What kind of problem, though? I agree with Julia that the post-cinematic camera is not problematic in the same way as avant-garde cameras have typically been. In particular, the "divergence" between narrative and camera is not (typically or necessarily) announced in a Brechtian sort of "alienation effect" that would make us aware of the fact of narration/ mediation. And yet, I think, there is much to be said for Therese's diagnosis: "Potential remains beyond any narrative rationale, as a-subjective and a-rational." So while we do indeed come to sympathize with Wikus, there's something more going on. Julia, quite understandably, points out that what I've termed the irrational camera does not interfere with this sympathy: "I didn't feel disrupted or confused in any way by the seemingly random interweaving of diegetic and non-diegetic; I'm used to it. . . . " So am I, and like Julia, I see a correspondence between this normalization of the irrational camera and the constant interruptions we experience as we juggle multiple devices, applications, and other would-be recipients and channelers of our attentions. For me, though, this correspondence, and its increasing invisibility, complicates our positioning by the camera and our attendant sympathy with a character like Wikus. Therese highlights one of the narrative correlates of this complication—that our sympathy grows as Wikus becomes less human. Indeed, Wikus's transformation, and his transitional, unsettled position between the human(e) and the inhuman(e) corresponds quite neatly to the irrationality of the camera, which is both within and without the diegetic world. The fact that this camera work does not necessarily get foregrounded in our attention is part of what differentiates it from the avant-garde. There is no "alienation" as a cognitive/perceptual operation of shock (or recognition of the camera's

mediation); rather, "alienation" (both Wikus's and our own becomingalien) takes place on a decidedly pre-personal and hence unconscious level: Wikus's changing genotype mirrors the changes in our embodied, sub-perceptual being or habits of comportment that are occasioned by, among other things, the technical infrastructure of the digital lifeworld, which supports the very normal, everyday sort of attention-dispersal described by Julia.

Again, the irrational camera stands "next to" and not "against" the worlds it brings into contact: it precisely establishes contiguity between the quotidian world and the diegetic, making them interchangeable rather than strictly opposable. Because it does not transcend, contradict, oppose, or shock but rather connect, this sort of camera does not preclude an identificatory engagement with the story, its characters, their moral dilemmas and developments. This remains a potential, I think, of post-cinematic film. And yet this potential is no longer, as it was in classical cinema, the core concern around which films revolve, and which they must at all costs actualize in the form of emotional (and quasipersonal) engagement. Even this potential, then, that is, the potential for narrative-oriented identification, would seem to situate itself "beyond any narrative rationale, as a-subjective and a-rational." This is at least in part because the points of contact, the basis for identifications between us as real-world viewers and diegetic characters like Wikus and Justine, are precisely those dispersed, often shaky and unfocused, blurry and brief forms of perspectival engagement shared in common by the irrational, post-cinematic camera and our broader post-cinematic lifeworlds. We don't necessarily foreground the (now normalized) irrationality of the camera or the bond it establishes for us with the characters and their world, but the resulting invisibility does not produce anything like the classical bond of "suture," because post-cinematic identification and narrative engrossment are predicated materially on this fact of dispersal rather than the classical camera's concentration and bundled captivation of perceptual attention. Rather than alienation and cognitive dissonance,

this decidedly non-avant-garde sort of self-reflexivity operates on the basis of a robustly material resonance between the inside and the outside, the diegesis and our everyday reality. The irrational camera's function is to serve precisely as a resonance chamber, and this, I would claim, is the basis for its subtly problematic "positioning" of us vis-à-vis contemporary diegetic and nondiegetic worlds.

TG: We are looking at current movies from the perspective of what distinguishes them from films of the 20th century, so at the irrational camera or at post-continuity. The fact is, as Steve mentions in his talk on post-continuity, his students don't necessarily notice violations of continuity, and as Julia has responded here, viewers don't notice the presence of cameras that don't make sense; they often fill in a logic that isn't there, or the absence of logic doesn't bother them, particularly if they grew up on these types of films. My students, as I mentioned, just assume that an invisible character is diegetically filming what will become D9. I recall, too, that my students in a course on film aesthetics a few years ago didn't notice violations of continuity in John Woo's The Killer (1989). I had to point out violations of the 180-degree rule. Even though students understood the concept, they didn't think the violations made any difference to their understanding of spatial relations. These ways of seeing have been with us for a lot longer than we have allowed here so far. Is it the widespread or extreme use of them in movies today that is noteworthy?

This is by way of introducing the fact that I find it difficult to talk about "post-millennial" aesthetics, and to attribute them to digital technologies. At the same time, I see that digital technologies have a vast potential that filmmakers could exploit for creating new aesthetic forms. I think, however, that most movies now use digital technologies without exploiting that potential, or use it to simulate older forms. Another way to state this, perhaps, is to say that the function of digital techniques is to allow audiences steeped in watching movies like *Transformers*, *Avatar*, and so

on, to "re-experience" cinema, or more accurately, to experience "it" for the first time. This is the most obvious dimension of why Scorsese shot *Hugo* using digital 3D cameras and digitally simulated early Autochrome color found mainly in photography. His project was to bring people face-to-face with the "birth of cinema" (actually, his focus is on the birth of the trick film) in a way that his documentary, *A Personal Journey with Martin Scorsese Through American Movies* (made for television in 1995) does not, simply because the latter makes use of archival footage, the kind of stuff my students in History of Cinema are crushingly bored with. If I were to choose a 1950s educational film to show beginning students how to use the library and its resources, I couldn't be doing any worse. I have no criticism of *Hugo* on this score, and may use it as a teaching tool.

I do have a problem, however, with its "conservatism," not just on the level of its content, which belongs to no film history textbook I would use, because it lacks any awareness (unlike Scorsese's documentary) that there were ever any innovative women directors of early film (for instance, Alice Guy-Blaché as the director to make the first narrative film). Hugo has been called Scorsese's most personal film to date. I'm a little sick of "personal films" which use the term "personal" to ignore anything the director finds inconvenient or troublesome to acknowledge. My criticism doesn't dwell on the excruciatingly archaic choice to offer up yet again women characters as help-meets and domestic partners who double as the spectacular image. If this is a "nostalgia film," as Fredric Jameson sees the nostalgia film, then it really does obliterate history, in an important sense, in favor of cultural stereotypes of the past. These criticisms notwithstanding (and I do think gender, class, race, and sexuality in relation to the post-cinematic need to be theorized, don't get me wrong), maybe the thing I notice most about *Hugo* is its huge (ahem) budget—which means it had every conceivable digital technology at its disposal. Yet all Scorsese could think of doing with that technology was to create a Bazinian nightmare of lurid color, exaggerated motion through artificially deep space, in which figures suddenly protrude distortedly at

the viewer (a memorable moment is the Doberman Pinscher's nose), and so on. Clearly, the counter-argument is that his subject requires these maneuvers, to go along with the pastiche of historical detail and reference he employs to introduce viewers to his history of pre-cinematic and cinematic forms. These are combined with a classical narrative separated into vignettes meant to refer to the short films of the early era, in which everything ends happily for everyone and in which the automaton, presaging filmic motion (and being an oracle itself writing of things to come) plays the key role.

But, the digital Autochrome color, calibrated to use with the color ranges of the Alexa 3D cameras (from Paramount's promotional materials: making Hugo was the first time Scorsese used 3D, the first time a feature was shot completely using 3D cameras, and the first time these cameras were used to make a feature film altogether) resembles less the autochrome experiments by the Lumière Brothers and less still the hand-colored frames of Méliès's films, making me think simultaneously of the colors we associate with a variety of animated films and an amped-up Technicolor of the 1950s. As with every American nostalgia film discussed in the literature, Hugo's most privileged moment, I contend, is not pre-cinema or early cinema, but the 1950s and the myth of American innocence, which films from the fifties themselves give the lie to, and some contemporary films such as Haynes' Far From Heaven problematize irremediably. (In the case of *FFH*, the fifties are also used to show us how, unfortunately, we seem to be stuck filmically and socio-politically in a very similar time.) As for Scorsese's relationship to this time period: he required everyone working behind and in front of the cameras to watch the first 3D movie he watched as a child: this was André de Toth's House of Wax (1953). But it wasn't enough. The cast and crew also had to watch Hitchcock's Dial 'M' for Murder (1954), Kiss Me, Kate (1953), and Creature from the Black Lagoon (1954). What goes together better than a desire for the "lost object" of the 1950s in American nostalgia films and the "lost innocence" of childhood, with which it is often coupled?

This is my starting-point for thinking through the aesthetic project of *Hugo*. To go further, my first question is, what is 3D good at and for? Scorsese says, "What I discovered working in 3D is that it enhances the actor, like watching a sculpture that moves. It's no longer flat. With the right performances and the right moves, it becomes a mixture of theater and film, but different from both. That is something that has always been exciting to me. I've always dreamed about doing a film in 3D" (from Cinema Review, "Hugo"). His reference to a much older art form, sculpture, has made me think about how 3D film is not like sculpture at all. Forget movement for a moment. The difference is of course inherent: sculpture is three-dimensional; film gives the illusion, here enhanced and exaggerated, of three-dimensionality. In the absence of a critical vocabulary to articulate Scorsese's visual style, I have deliberately resorted to art-historical vocabulary, that of painting. The most striking analogue I find is in hyperrealism. The aesthetic of hyperrealism, briefly stated, goes beyond that of photo-realism since it does not simply reproduce, in high-resolution, photographic realities, but focuses on both subjects and details, veering into the fantastic by imbuing details with the subjective, emotive, or impossible. This seems to me to be a perfect rationale for the employment of 3D in Hugo, which focuses on every "real" or "imagined" detail of the train station as Hugo Cabret moves through it (much, if not most, of the film is from his POV), and is interested in the subjective and emotive detail of moving through space, ultimately landing on the close-up.

American film quite often contains an element of nostalgia. But in 2011, a whole slew of American movies was released whose aesthetic structures exhibit a yearning for earlier, cinematic forms, using digital technologies to "make them new" for contemporary audiences. *Rango* longs for the western; *The Adventures of Tintin* for film noir; *Puss in Boots* for the swashbuckler. *Hugo* and *The Artist* (the latter not American, but made in Hollywood and abundantly referring to the history of Hollywood films) re-create founding moments of cinema itself. This fact alone underlines our definitive entry into the episteme of the post-cinematic.

I have just begun to think all of this through, but for now, I will say that *Hugo*'s digital techniques of production and post-production are at odds with its formal properties: the film combines innovations in digital 3D technologies with a classical narrative, a love of paraphernalia presaging cinematic motion, and a hyperrealistic aesthetics of movement, space, color, and pattern. Scorsese ultimately suggests that he is the "father" of the digital trick film, a contemporary Méliès, and that *Hugo* is his most elaborate example so far. *Hugo* is offered to us as a founding moment in the history of film; nevertheless, its aesthetics, despite their technical innovations, hearken back to a world in which older technologies—and older forms of social authority—persist.

JL: I agree with Therese on the way that *Hugo*'s conservatism hits all the bases of the nostalgia film without any of the potentially disruptive reframings of pastiche, as Richard Dyer has elaborated it. For me as well, the 3D and the oversaturated colors were incongruous, their apparently "new" technologies clashing somehow with the antiquated feel of the movie produced by its historical setting, its traditional story formula, and its near-total erasure of femaleness.

The old-time feeling comes from the quasi-Dickensian tale of the orphan boy living secretly in the hidden passageways of the train station, narrowly escaping from the vicious station inspector and various other (male) antagonists, pining for his lost benevolent father (he never knew his mysterious mother), and uncovering hidden secrets of the earliest beginnings of cinema. The mise-en-scène underscores the solitude and precariousness of Hugo's existence, contrasted with the warm, fuzzy flashbacks to his loving father (the very huggable Jude Law) practicing his awe-inspiring craft of watchmaking and other fine mechanical work. Hugo eventually locates the paternal figure of Méliès who in the end embraces the boy, the automaton, and the legacy of his early film work. The orphan child recurs in so many works of children's literature and cinema as a safe way to allow child viewers to imagine independence

without having to choose to abandon their parents. This formula allows the child character to live on his own (it is usually a boy) while still honoring the sainted memory of the deceased parent(s), enjoying the adventures and excitements of the adult world without the restrictions and protections of a mother or father. The children in the audience can thus vicariously experience this independence without the actual dangers and sorrow of losing their own parents. *Hugo*'s plot doesn't depart one jot from that rote path, and it seems to inspire sympathy as well as envy, so that child viewers might not entirely want to live Hugo's lonely life, however exciting.

But the absence of the mother, a hallmark of this kind of boy's adventure story, here also resonates with what Therese points out in the movie's elision of the women of early cinema as well. The girl Isabelle is also an orphan but is sheltered and kept ignorant of some important things in the world (movies mainly, and the identity of her guardian). Méliès's wife is portrayed as passive in her acquiescence to her husband's bitterness, keeping his secrets and trying to protect him from discovery. That the ending of the film shows Isabelle as the author of the book that will become *Hugo* implies a curious combination of female creativity and submission: we have seen her as a voracious reader with an active imagination and intelligence, yet the book she writes is Hugo's story, not one of her own invention. Scorsese's patriarchal story of cinema has almost no place for women, except as assistants, comforters, and muses to the male geniuses. That female actors have spoken out against protesters at the last Cannes festival, demonstrating to call attention to the miniscule number of women filmmakers and thus their relative invisibility in awards competitions, only shows how deeply internalized the patriarchy of the film industry remains in so many of its professionals, male or female, in the 21st century. Perhaps needless to say, *Hugo* doesn't pass the Bechdel test (yes, there are two named female characters, but they rarely speak to each other, and never about anything other than men).

The other film Therese mentions in connection with this reawakening of nostalgia for early cinema is *The Artist*, which operates, as she says, in some quite similar ways to *Hugo*. It also encourages us to sympathize with a once-successful film artist now in decline, it mobilizes familiar story formulas to generate pathos and sympathy, and it also expresses ambivalence about female power (in the world? in the industry? in the home?). A few of my ideas here draw on my brief blog post about *The Artist* from 22 Dec. 2011 ("*The Artist*").

Rather than a child's adventure novel, the story can best be summed up in my own film-historical context as Sunset Boulevard meets Singin' in the Rain meets A Star is Born. The washed-up old silent star and the "peppy" young New Woman, or flapper, star are perfect fodder for a pastiche of those old storylines and mises-en-scène. Yet the techniques of the film, at least as I recall it, don't seem particularly post-cinematic: it was made on film, shot in 4:3 and slightly speeded up to mimic old silents. Yet I agree with Therese that it is post-cinematic in affect—as Steve's conceptualization holds that post-cinema is also characterized by its affect, the ways in which it produces and portrays the feelings of living in the 21st century. As Shane mentioned earlier and as Charlie Bertsch points out in *Souciant*, we can easily read *The Artist* as a film about today's movie industry as much as a nostalgia film about early Hollywood. It's rooted in the structures of feeling that characterize our moment in film history: increasing digitization in production, post-production, and distribution; anxieties about where the industry and the art of cinema are headed, and a perhaps understandable tendency to look back fondly on a Golden Age of movies when (we might assume) things were better and simpler and clearer.

Yet as Raymond Williams argues in *The Country and the City*, the ideological implications of a backward-looking nostalgia for a past golden age has always existed: every generation of Western civilization has lamented the loss of a previous era, going back all the way to ancient

Rome, when Romans too looked back to ancient Greece. Williams's point is also that such golden age thinking has always been conservative, yearning for a golden age that actually wasn't nearly as perfect as those who invoke it in the context of critiquing new developments would have it. I actually think that the recent Woody Allen film *Midnight in Paris* provides a great illustration of this: the young writer of today is delighted to time-travel to the roaring 20s of Gertrude Stein and Scott Fitzgerald, yet, while there, he meets another time-traveler who longs for the earlier golden age of the 1890s, and when he visits that era he meets others who long for a still earlier bygone golden age. Whatever its flaws, this film shows the dangers of idealizing the past as a way to escape or disengage from the present (see also my blog post "*Midnight in Paris*"). *The Artist*, on the other hand, completely buys into this golden-age way of thinking, and encourages us to do so, showing as it does the human costs of the technological changes in the film industry, such as the introduction of sound.

Interestingly, though, the female protagonist, Peppy, is not a passive sidekick but an aggressive, ambitious professional who quickly achieves stardom and reaches out to Valentin out of affection for him and, perhaps, also a bit of nostalgia for the fading silent era itself. The flapper, or Modern Girl/Woman, constituted a threat to Western society in the 20s and 30s, as she represented women's sexual and social assertiveness that flew in the face of patriarchy and the previously complicit roles women played in their own oppression. Yet, *The Artist* encourages us to see Peppy from Valentin's eyes, as she (and her generation) displaces him (and his generation). Their age difference is emphasized repeatedly, and he eventually resigns himself to a kindly uncle role and accepts her superior position in the star hierarchy. The film reproduces this dynamic for the audiences, as we are meant to feel affection for the Hollywood of Peppy's generation, the early talkies, as well as Valentin's silents; both are ancient history, bygone golden ages from our contemporary perspective.

In terms of gender, I also notice that when the "left-behind" near-obsolete

character is male, we are meant to sympathize, but when she is female, we don't. In *Singin in the Rain*, the female star Lena is ridiculed and left behind as the male star Don successfully adapts to the talkies and reinvigorates his career along with his protégée and sweetheart, Cathy. Yet we are not meant to feel any sympathy for Lena—she is the butt of the movie's jokes; Valentin, on the other hand, is a tragic figure, more like the James Mason character in *A Star is Born*. In *Sunset Blvd.*, too, Norma Desmond is only slightly sympathetic, constructed as pitiable and vain.

SD: I want to pick up on a few things in Therese's remarks on *Hugo* and the current wave of nostalgia films and relate them—as a way of framing a response and continuing our discussion—to some thoughts I have about the connections between seriality (a major focus in my current work) and the post-cinematic. I'll start with Therese's statement that she "find[s] it difficult to talk about 'post-millennial' aesthetics, and to attribute them to digital technologies." Though my earlier comments might perhaps give a different impression, I do think that Therese is right to say this:

- 1) First, if we can talk about a post-cinematic aesthetics, this is neither decisively limited to productions from the 21st century (Therese mentions John Woo's *The Killer* from 1989), nor is this aesthetics itself particularly "post-millennial" in its formal or thematic predilections (digital technologies are often used to present very classical narratives, as was already the case with *Toy Story*, and contemporary films often do so in an outright nostalgic manner and with a revisionistic eye towards the 20th century and its properly cinematic forms of mediation, as Therese argues with regard to *Hugo*).
- 2) As to the second part of Therese's statement, moreover, I agree that it would be wrong to "attribute [post-cinematic aesthetics] to digital technologies" if, by saying that something is "attributable" to something else, we understand anything like "is causally determined by." I don't believe that the use of digital technology is either a sufficient or a

necessary condition for the kinds of things we have been discussing as post-cinematic. That is, many of the formal and expressive techniques that would seem to characterize post-cinematic aesthetics are possible (and have been realized) without the use of digital technologies, while many digital productions do not display them. That being said, it's still possible that there's a deeper sort of connection: I have pointed to the technical discorrelation of the digital image from human vision as a factor that "resonates" in the aesthetic choices of contemporary filmmakers and in the effects they have on contemporary viewers. What I have in mind here is not a strictly linear causal relation but instead a diffusely material and properly affective sort of interrelation among the technical infrastructure of our environment, the things we make in that environment, and the ways those things affect us. Assuming that this kind of view makes sense, then I think we can consistently say that certain tendencies of postcinema may be older than and are not directly attributable to the advent of digital technology, but that the increasing reach of the digital (both in our everyday lives and in the production contexts of contemporary media) does indeed catalyze these tendencies—not alone and as the sole determining factor, but as part of a world undergoing far-reaching medial-material transformation. The post-cinematic, in this view, would refer to the affective-aesthetic regime that emerges in the wake of this change or, to put it another way, the media-aesthetic embodiment of our era's ongoing transitionality.

Now, I think that the staging of obtrusive violations of old codes (and here we can think of examples from contemporary sci-fi, action, or "chaos cinema") constitutes one way of responding to sweeping changes, but nostalgia is definitely another. As Therese points out, many recent films "exhibit a yearning for earlier, cinematic forms, using digital technologies to 'make them new' for contemporary audiences." They "re-create founding moments of cinema itself. This fact alone underlines our definitive entry into the episteme of the post-cinematic." I like the perspective that Therese opens up for us here, because I think it allows us to perceive

the co-existence, within the post-cinematic, both of novelty and of that novelty's inscription into a larger narrative, history, or line of aesthetic and media-technical innovation, update, or renewal. My observation might seem rather banal, I guess, because any demonstration of novelty is forced in some way to recognize what has gone before and to demonstrate a perceivable difference from it. Early moving picture exhibitions were concerned to demonstrate such novelty, as were early talking pictures against the background of silent film (think of The Jazz Singer: "You ain't heard nothin' yet"); the same can be said for color and widescreen processes (as in the opening sequence/prologue to the 1956 version of Around the World in 80 Days, which opens with Méliès's Le Voyage dans la lune and subsequently marks it as "primitive" as the curtains are pulled back further and further to reveal the unprecedented dimensions of the new, modern screen). Jurassic Park does something similar with respect to its unveiling of novel, computer-generated dinosaurs, designed to wow spectators offscreen as much as the diegetic onlookers. And of course *Toy* Story was not "just" a classical narrative, but a big-budget display of the possibilities of computer animation. But if this trajectory of bigger, better, faster continues to inform films that we might want to claim as postcinematic (like Transformers or Avatar, to take two examples mentioned by Therese), the backward-looking tendency of recent nostalgia films is no less concerned to negotiate the meaning of today's media changes.

What I'm getting at is that, if post-cinema can be conceived as a novel form of emergent, affective response to the medial-material transformation of the world, as I claimed above, this in no way implies that the fact of such transformation is unprecedented (though its precise historical quality may indeed be unique); indeed, such transformation has been the condition for a wide range of filmic (and other medial) phenomena. As a result, it should not surprise us that post-cinema responds in vaguely familiar ways to such change—either through ostentatious innovation, thus repeating a central gesture of modernity, or through acts of repetition (nostalgic or otherwise) that themselves aim to update or renew the old. In very

general terms, such interplays of repetition and variation, which seek to create something new by way of revisiting something old, form the basic stuff of seriality (see, for example, Umberto Eco's "Interpreting Serials"). And while post-cinema's broad expressions of novelty and/or nostalgia may not fit our usual conceptions of what constitutes a "series" (apart from the many film series—from *Transformers* and *Paranormal Activity* to *Ice Age* or various superhero franchises—which we might want to look at in terms of the post-cinematic), I think it makes good sense to think the post-cinematic and seriality in close relation to one another.

Serialization has been a central method by which modern media have sought to cope with their own transformations (including their initial emergences, their competitions with and distinctions from other newly emergent media, their internal diversifications and transitional periods, etc.). Roger Hagedorn once pointed out that "[w]hen a medium needs an audience, it turns to serials" (29); an ongoing tale is an effective way to hook consumers, to motivate them to invest in a new medium like radio or television, to encourage them to "stay tuned," and thus to secure the medium's future. Moreover, when an established medium changes or responds to changes in its medial environment, it may also engage in a type of serial activity, restaging familiar narratives and thematic materials as a means both of bridging the gap or rupture of media change, while simultaneously marking novelty against a familiar background. For example, I have argued that Frankenstein films—from Thomas Edison's 1910 one-reeler to James Whale's classic early talkies, on to Hammer's Eastmancolor Gothic and Warhol's 3-D monstrosities, and up to recent CGI instantiations of technical creation—constitute a higher-order series (a series not at the level of narrative but of mediality) that tracks and negotiates media changes by way of an interplay between repetition and variation (see my *Postnaturalism*).

To generalize even further, I would suggest that seriality itself constitutes a central (higher-order) medium in which the world of modernity—the

world consolidated in the nineteenth century through industrialization and its serialized production processes, including a commercialized serial culture—observes itself undergoing medial-material change. (Clearly, this is a big claim, and it is at the center of my ongoing research in the context of the DFG Research Unit "Popular Seriality – Aesthetics and Practice"; for a very brief sketch of the connections I perceive between seriality, media transformation, and modernity, see my "Seriality and Media Transformation").

So this is generally how I would try to confront the tensions of novelty and nostalgia, or to account for what's new about digital-era aesthetics as well as what it has in common with older tendencies. Placing postcinema in this large arc of serial negotiations of medial-material transformation enables us, I think, to avoid the vulgar reductionism that Therese rightly warns against (the idea that post-cinema can be attributed directly to digital technology), while simultaneously allowing us to recognize the centrality of media-technical change and novelty (above all, the spread of digital technology in all areas of life) in post-cinema's continuation of this key tendency of probing, by means of serial repetition and variation, the contours of the world in motion. As I said before, I see the post-cinematic not as a simple break—and certainly not just a technologically determined break—but as a transformative expansion of pre-existing media forms in accordance with a rapidly changing lifeworld.

But what, more concretely, do seriality and serialization processes have to do with the post-cinematic? How, in other words, does seriality tie in with post-cinema as a means or correlate of its affective probing of our world's (and our own) medial-material transformation? I'll try to make a case briefly for several links, including formal-aesthetic connections to what I've talked about in terms of discorrelated images, irrational cameras, and the resulting indistinction of contiguous worlds, as well as some more broadly cultural connections obtaining at present.

As I mentioned above, we find explicit serialization tendencies in a great number of post-cinematic film franchises: Transformers, Batman and other superheroes, digital animation series, etc. Today, there are film series wherever we look, and many of them are filled with the irrational cameras and continuity violations that we have discussed here as characteristic forms of post-cinematic film. Of course, these franchises—many of which exhibit strong tendencies towards a revisionary nostalgia for childhood heroes and playthings-are not restricted to the filmic domain but participate in larger transmedial franchises in our so-called "convergence culture." They take place, therefore, in the larger contexts of transnational capital and digital convergence trajectories—that is, precisely in the dispersed medial-material domain of post-cinematic affect. A bit less globally, I suggested before that we should try to rethink contemporary transmedia production, along with attendant fan practices, in terms of post-cinematic affect, and I think that seriality/serialization may provide exactly the link that's needed to do so. Seriality is one of the key principles of transmedia storytelling, as Henry Jenkins and others have described it: stories unfold episodically, but across a variety of media, in order to effect the non-linear construction of a narrative world. Now, what's interesting to me about this, in relation to some of the things I've been arguing about the post-cinematic, is that for such processes of world-building to work, transmedial franchises have to avoid classical encapsulation (for instance, the narrow film-spectator relation) and instead create proximity and contiguity between a variety of media, as well as between diegetic and nondiegetic worlds, which readers/spectators/media-users slip into and out of repeatedly in the course of their serial consumption of a transmedial production. As I argued before, the irrational camera of post-cinematic films is an instrument for creating precisely this sort of contiguity, and so it is only natural that there would be some overlap between transmedial seriality and the techniques of post-cinema.

As the basis of this overlap, we can say that the irrational camera—which, as I argued with respect to *District 9* and *Melancholia*, is indeterminately

liminal with respect to diegetic and non-diegetic realms—is formally analogous to a typical character type present throughout the modern history of popular serial narration: the Janus-faced figure who maintains a public and a private face, or who is split between moral and criminal, human and animal, or technological and monstrous facets of his or her being. Creating contiguity and facilitating passage between contiguous medial and material worlds has been one of the central functions, or selfreflexive significances, of the double, liminal, and secret identities that have populated serialized productions from Eugène Sue's Mysteries of Paris, to the countless plurimedial restagings of Frankenstein, Tarzan, Batman, or Superman, and continuing up to the serialized self-enactments of Bowie, Madonna, and Gaga (see my "Object-Oriented Gaga"). Such liminality resonates, as I argue in my current research, with the very practice of serial reception (which is often mobile, episodically segmented and interrupted, and hence split between "real" and fictional or "imagined" worlds) and with the proliferation of outgrowths in transcultural, transnational, and transmedial serial forms-and attendant manners of relation (for example, the dispersed "communities" of media-based fanship). Contiguity—between installments, between fact and fiction, between real and imagined geographies, between media in pluri- and transmedial cultural forms—is the precondition for all such serial phenomena. And this contiguity, which need not, but can, lead to explicit serialization practices, is centrally at stake in the irrational post-cinematic camera. Through it, and even in the absence of explicit serialization processes that would tap into it, an implicit or virtual seriality erodes the self-sufficiency, coherence, and closure of classical cinematic productions, uprooting and resituating all filmic products in a dynamic and processual flow of affect, which is expressed in cross-medial openness if not sequelization—for example, in Melancholia's almost taunting openness to online discussion and dissection, despite its categorical preclusion of narrative continuation. The post-cinematic camera corresponds, therefore, in a rather unexpected way to the serialization tendencies of contemporary convergence culture. As a result, finally, it's not just in post-cinematic film that we find the

irrational camera and its discorrelated images, but across today's highly serial audiovisual media landscape. Video games, both as a matter of aesthetic design and due to glitches and material-technical limitations, might be seen as embodying a relatively long (certainly not just "postmillennial") history of the discorrelated image, one that could be queried to expand our view of post-cinematic media. But also what Jason Mittell refers to as "complex TV," I'd like to suggest, is in many ways precisely postcinematic TV, both in the very general sense in which all contemporary media (as a result of convergences and erosions of medial boundaries that put all media, at least minimally, in contact with all others) must be counted as post-cinematic, but also more specifically, in terms of the adoption of post-cinematic camera techniques and image forms. Consider a recent episode of *Breaking Bad*. (I'll try to do this without any serious spoilers, but anyone still catching up on the series might want to jump ahead to the next paragraph to be on the safe side.) "Say My Name," the seventh episode of the fifth season, opens on a desert road, where we witness a meeting between the heads of two regional methamphetamine rings. The conversation, filmed in a manner suggesting that a gunfight could break out at any moment, is interspersed with extreme long shots which, for some unexplained reason, exhibit a blurry smudge on the top right of the frame, almost as if a finger had partially obscured the camera lens. (I was reminded here, at least, of what happens when I'm not careful taking pictures with my smartphone.) This perspective is repeated several times, and the smudge is present each time, but the reason for it is never cleared up. Does it indicate that the meeting is being filmed surreptitiously? Is there a hidden surveillance camera? In the middle of the desert? In any case, the topic of surveillance dominates the episode—both the DEA's surveillance of local drug operations and the meth crew's counter-surveillance of the DEA. Later in the episode, a microphone is removed from an agent's office by one of his close acquaintances—the same man who put it there, and who unbeknownst to the agent has been involved for some time now in producing high-grade crystal meth. When the agent returns with a cup of coffee for his friend/the spy, there is an abrupt (though perhaps not

overly conspicuous) cut to a somewhat awkward camera angle: the two men are shown from the perspective of a wide-angle lens hovering close to the ceiling in the corner of the room, precisely where a surveillance camera would conventionally be installed. It is not revealed, though, whether or not incriminating acts were caught on tape, and the status of the camera, whether diegetically existent or purely non-diegetic, is left unclear. This uncertainty is aggravated by the episode's repeated use of a technique that has become something of a visual trademark in *Breaking Bad*: nonhuman/ object-oriented POV shots, e.g. from the impossible perspective of a basin into which chemicals are dumped, or from that of a safety-deposit box into which thousands of dollars are shoved. This discorrelation of the image culminates in the episode's concluding scene, when one man shoots another, chases him to a river and finds him bleeding to death. There is a moment of regret, expressed in a final dialogue and filmed in accordance with classical continuity principles—until suddenly the shot/reverse-shot eyeline matches give way to a strangely disembodied perspective vis-à-vis the river, too high up to belong to one of the men, not high enough or far enough away from their position to be distinctly not-theirs. This, the final image, is accompanied by the sound of the dying man's body slumping off the log he was sitting on. The river keeps running. And so does the meth business and the cash it generates, as we learn in the next episode, "Gliding Over All." Here, indeed, discorrelation is related not just to surveillance (and to death) but also to globalization (as the logistical infrastructure of a transnational corporation is used to ship meth around the world, thus expanding the local drug empire) and to the humanly unfathomable accumulation of capital that accompanies it: a pile of money—literally too much to count and incapable of laundering, hence useless and for all intents and purposes meaningless (covered with a tarp and sprayed regularly for silverfish, thus reduced to a mere physicality)—reveals discorrelation to be an affective condition of the larger medial-material world.

Why do post-cinema's irrational cameras find their way into contemporary television? Again, such cameras create contiguity: serial forms (and

narratively complex TV is characterized by its increased seriality) have always been subject to conditions of contiguity, as they are consumed in parallel to the real world of viewers, readers, other recipients. In contemporary TV, as Jason Mittell has pointed out (in terms originally formulated by Neil Harris to describe the exhibition practices of P. T. Barnum), an "operational aesthetic" splits attention between diegetic and discursive levels as a way of packing the segmented/continuing dynamic of serial unfolding (and the parallelism or contiguity of fact and fiction, diegesis and extra-diegetic mediality it enables) into the shows themselves. This resonates strongly with a post-cinematic contiguity and the cameras that produce, process, and circulate it through the medium of discorrelated images.

Ultimately, I think it is in the confluence of visual techniques, serial forms, transmedial settings, the conditions of contemporary capitalism, and media-technical changes in the wake of digital convergence that we find the larger significance of post-cinematic aesthetics in any medium: the irrational camera is just one instrument or expression of a world involved in a material self-probing, conducted through assertions of novelty and nostalgic yearnings alike, consistently revealing that compartmentalization has eroded and contiguity has become a basic condition of life.

TG: This has been a great discussion. Shane, thank you for expanding your initial focus so eloquently on film techniques and how they work in the context of other media forms and seriality. I think your interdisciplinary project is really important for theorizing post-cinematic affect further. And thank you, Julia, for your thoughtful and detailed commentary on gender and post-cinematic affect in relation to the conservative and patriarchal tendencies perpetuated in contemporary movies, particularly those which have received what is called "universal critical acclaim."

Thank you both for participating in this discussion with me.

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Notes

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7.4 Post-Cinema, Digitality, Politics

BY JULIA LEYDA, ROSALIND GALT, AND KYLIE JARRETT

JL: To begin our conversation, I'd like to ask each participant to discuss where you see your own academic work (research and/or teaching) intersecting with the concerns of theories of post-cinema and in what ways. Are there particular articulations of post-cinematic theory that you find especially compelling or useful? Why?

JL: My work is grounded mainly in cultural studies and feminist approaches to popular film and media, so the real appeal of post-cinematic theory for me lies in the insistence by some formulations (Shaviro, *Post-Cinematic Affect*) upon a politicized critical practice. With my commitment to feminist film theory and a consciously left-oriented form of cultural studies, I wouldn't necessarily be drawn to a film theory that couldn't account for politics as well as aesthetics in some way. Just as the most exciting thing to me about Mulvey's visual pleasure thesis, however much it needed to be revised later, was its ambition to locate sexism within the very formal structures of Hollywood filmmaking, a similar draw existed for me as a student reading Jameson's *Marxism and Form* and his later work. I've known for a long time then that I am only really engaged by theories that attempt to break down the architecture

of the very institution, no matter how innocuous-seeming, to expose the foundations of injustice in some form or another. For these reasons, since my graduate school days, I have always been indebted to the film, media, and cultural theory and criticism of bell hooks, Manthia Diawara, and Richard Dyer.

So while formalist approaches to post-cinematic editing, such as David Bordwell's "intensified continuity" and Matthias Stork's "chaos cinema," do ring true for me, they never inspired me to pursue research that relies on post-cinematic theory because they didn't feel as directly relevant to my own academic interests, nor to the truly worrying conditions of our late capitalist world more generally. I like how Shaviro's work emphasizes the political in his references to Raymond Williams's "structure of feeling" as a Marxist precursor term for his notion of post-cinematic affect, and Shaviro's concerns about financialization as an insidious yet banal influence on all aspects of contemporary experience.

In an earlier roundtable, I began to develop an analysis of the popular horror movie franchise, *Paranormal Activity* (the first two films, at that point), in part because I felt that for the first time I could see the value of post-cinematic theory in my own work as an approach to both the remarkable formal characteristics of those digital movies and the less obvious ways that they resonated within their economic and political moment, around the collapse of the housing markets and the subsequent financial crisis (Grisham et al.). Finding a way to unpack the interwoven formal and political maneuvers in these films helped me to establish an entry into the already fascinating area of post-cinematic theory.

These conversations and my own subsequent writing on the subject then led to the conception of this book project with Shane Denson, as we both began to realize how useful such a volume could be for students and scholars, and also how crucial it was that the book be digital and open access. The fact that Shane comes from a different background, more rooted in philosophy,

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has worked brilliantly as we can each contribute something to the editing of the essays, whether as a fellow specialist in a particular approach or as an interested non-specialist reader. And for me, an added appeal to being part of the editing team was that I would be able to encourage (where appropriate) a political dimension in the articulations and exemplifications of post-cinematic theory that is sometimes backgrounded, as well as working to achieve as much gender balance as possible in the volume.

KJ: My first reaction to the question of how my research relates to studies of post-cinema is that it doesn't. I am not a film scholar but a digital media researcher focused on political economy and consumer culture. Film scholarship is quite far out of my comfort zone, so much so that some of my colleagues looked at me very strangely when I said I was contributing to a roundtable discussion in a book on 21st-century film. However, what we are discussing here is "post-cinema" which obviously is connected to my specialization in digital media.

One connection lies in my interest in how technology—the particular affordances of a device, platform or algorithm—shapes the expression and consumption of media forms. I am thinking here of Manovich's argument about how the qualities of Flash articulate a particular aesthetic or set of creative possibilities, what he defines as the sensibility of the post-cinematic moment. What engages me about this, though, is what the influence of the Flash aesthetic tells us about the agency of non-human actors in meaningmaking processes. If we accept that creating moving images in the form of layers and loops, or the capacity to generate non-indexical images or that the constraints of a particular proprietary platform fundamentally affect our media practice, then we are ascribing significant creative agency to machines, algorithms, and the economic parameters of software companies. In a forthcoming article on social media Shakespeare(s), my colleague Jeneen Naji and I argue for the importance of analyzing creative activity as a trilogical technosocial process, involving the interactions of a range of human and non-human actors.

However, what connects me to theories of the post-cinematic more profoundly is the centrality of user-generated content in media production contexts. I agree with Julia about the importance of the link Shaviro makes between dominant capitalist dynamics and the affective intensities generated and valorized in media industries. In arguing this, what Shaviro also does is place affective labor at the core of the post-cinematic moment and its analysis. This is central to my own research that is focused on how the political economy of digital media integrates consumers and their affective intensities into its valorization processes. This is the same practice Shaviro is referencing when he describes moving images as "machines for generating affect, and for capitalizing upon, or extracting value from, this affect" (Post-Cinematic Affect 3, original emphasis). I am just now completing a book arguing for the use of Marxist feminist theories of domestic work to understand the economic logics of digital media consumer labor. For me, to understand contemporary media forms and practices as technical, aesthetic, and ideological systems, it is vital to think through the economics and politics of affect as labor. This is also a properly feminist approach as affective work has historically been gendered and subsequently made to disappear in theoretical accounts of media consumption. The question of what constitutes post-cinema then becomes a much broader query about the changing role and gendering of historically feminized activity in capitalist societies.

RG: Kylie begins by saying that her work seems at first not to connect to the post-cinematic and I could say the same, but from the opposite perspective. As a film theorist, I am closely invested in the cinematic, and somewhat ambivalent about discourses of post-cinema. It seems to me that much of what is discussed in terms of post-cinema is always already part of the cinematic: cinema has always been multi-channel, intermedial, and complexly entwined with audiences, platforms, and technologies. From this perspective, some of the scholars already mentioned (Shaviro, Bordwell) are influential to me in terms of teaching and thinking contemporary cinema, but I don't always read them as polemics for post-

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cinema. I would also mention Anne Friedberg as a feminist film scholar whose work on what we would now think of as the post-cinematic is crucial in this context.

I share with both Julia and Kylie strong concerns for feminism and media politics, and like Julia, debates on aesthetics and politics are always central to my scholarship. Kylie says that she "agree[s] with Julia about the importance of the link Shaviro makes between dominant capitalist dynamics and the affective intensities generated and valorized in media industries," and this aspect of his work has resonated for me too. In writing about the films of Claire Denis, I have drawn on *Post-Cinematic* Affect as a way to draw together accounts of affect and the sensory in recent film theory with political and economic critique. Shaviro describes a character in Boarding Gate (Assayas, 2007) who "registers in her body all the transactions and exchanges—monetary and otherwise—that flow through her and define the space around her. And she then relays these forces to us, in the form of her expressions, her bodily postures, and her movements and gestures" (59). In Denis's films Les Salauds / Bastards (2013), 35 Rhums / 35 Shots of Rum (2008), and L'Intrus / The Intruder (2004), the circulatory pathways of global finance capital are registered and I would suggest, resisted—across the films' textural surfaces in terms of form, sensation, and affect.

At the same time, I find the borders of cinema and post-cinema to be unclear. I recently completed an article on cats and cinematicity that considers the linkages among early cinema, histories of experimental film, and contemporary moving-image media. There, I argue that the new media dominance of the cat video is not epiphenomenal but rather that cats have a particular historical relationship to the moving image and its pleasures. I suggest that cats have a unique capacity to remove us from human vision and to capture the otherness of cinematic life. In the piece I analyze YouTube videos, iPad game apps designed to be played by cats, and scientific studies with feline subjects, as well as more traditional cinematic

texts by Chris Marker, Carolee Schneemann, and the Lumière brothers. In a way, this is a rather post-cinematic project, but it feels precisely like what I was trained as a film scholar to do. I also use some of this material in my teaching, using Maru videos to teach Siegfried Kracauer's *Theory of Film* and the cinematic pleasures of bodily movement, scale, visuality, and objects. In this way, I think of post-cinema as a particular way of staging questions central to the discipline around medium specificity and intermediality, aesthetics and politics, embodied subjects and institutional systems.

JL: I love that Rosalind explains that she engages with post-cinema despite her identification as a film theorist, and that Kylie sees her work overlapping with post-cinema despite the fact that she's not in any sense a film scholar. The ambivalences, from different directions, expressed in both your replies are, in part, what drew me to invite you to this discussion.

Both of you point out that the post-cinematic converges with the non-human / posthuman / ahuman, whether in the interface with the machines we use or in animal-human relationships. In my essay on the *Paranormal Activity* franchise that grew out of an earlier roundtable, I looked at the surveillance cameras as inhabiting a non-human POV that, in the context of a horror film, produces an uncanny impression of (demonic) machine agency. Is there an increased abstraction away from materiality that can be deduced from digitality that makes people uncomfortable? Does post-cinema in some way enable a reconfiguration in posthuman aesthetics and affective experience?

KJ: I think your question, Julia, links together two apparently competing dynamics associated with digitization—the increased appreciation of non-human agency and the rise of affect theory as a tool for approaching culture and cultural objects. I think the discomfort you describe is recognition of how we are moved, in the full sense used in affect theory,

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by technologies and the unease this can generate. Obviously, it is not new, nor news, that we are affected by human-produced objects. What may be new, though, is the widespread attachment of those feelings to the "cold machines" of high-technology capitalism. There is obviously a long history of disavowing the machine in popular film—from evil Maria in *Metropolis* and the clockworks of *Modern Times* to HAL or Alpha 60 to the Lawnmower Man, the T-800 or The Matrix—that demonstrate our discomfort with their agency and their affective stickiness. The central tension of *Blade Runner* is precisely this as well: the anxiety we feel when we realize how little distinction there is in our somatic responses to humans or machines. Arguably, these texts manifest a fear of miscegenation and hybridity.

The increasing mediation of sociality through interactive technologies achieves a similar blurring to Blade Runner, but we increasingly encounter this as "normal." Recent studies into mobile telephones describe them as "relational artefacts" to which we relate and through which we relate to others. We increasingly cannot differentiate these affects (e.g. Vincent; King-O'Riain; Leder Mackley and Karpovich). So I don't think it is an "increased abstraction" from materiality that we are experiencing, although that may be the case in Paranormal Activity. Rather, I think it is just the opposite: a deepening of our long, complex engagement with machines. This is being articulated positively in theory and in practice, but we can clearly see the residual fears of this hybridity in popular culture. Maybe what we see in texts like Paranormal Activity, where technological agency is used to stimulate horror or continues to be cast as uncanny, is the continued policing of binary divides and their attendant inequalities. This may also say much about the fragility of hegemonic masculinity. There is lot for feminist or queer critique to unpack about our relationships with machines, particularly as this is mediated by popular culture and how it is articulated in movie-making practice.

RG: The idea of an increased and potentially uncomfortable abstraction of the digital image is, I think, useful for thinking some of the debates that

have characterized film theory in the post-cinematic age. In a sense, this feeling lies behind the debate on whether digitally-produced cinema is still indexical. What exactly is the relationship of cinema to the profilmic and how do we feel about its changing status? (Schwartz; Doane; Gunning). As productive as this discussion has been within film studies, some of the more popular manifestations of these debates are tiresome, especially in tendentious attacks on the truth-status and manipulation of media images. (As Gunning points out, the manipulability of the photographic image is a defining quality without which the discourse on ontology makes no sense.) But the anxiety around materiality that Kylie discusses--and its obverse excitement—is visible across contemporary cinema. To take one example, Le Quattro volte (Frammartino, 2010) is an example of slow cinema, often seen as a response to the fast-paced digitality of new screen cultures. This film depends entirely for its pleasures on cinema's ability to render non-human materialities: we spend long, fascinated sequences immersed in the lifeworld of baby goats and, with even more alterity, trees. But although *Le quattro volte*'s 35mm format and material aesthetic might seem to resist the post-cinematic, it is clearly engaged with the post-human. At the other end of the technological spectrum we have a film like Tangerine (Baker, 2015), a queer indie that has created buzz equally around its representation of trans women of color and the fact that it was shot on an iPhone. Here, mobile technologies are being used not toward abstraction but precisely to represent material realities and people often violently excluded from the category of the human. So I think the relationship of ditigality to materiality, and to the status of the human in contemporary cinema is richly complex.

Picking up on Kylie's discussion of affect and cinematic machines in science fiction, I am reminded of Lars von Trier's *Melancholia* (2011), which centers on a homemade device for looking, a bent wire that the characters use to measure the proximity of the planet that will, eventually, destroy the earth. The film opens with a bravura sequence of digital cinema's aesthetic and affective potential, a prologue to the film's

apocalyptic narrative in which disintegration is rendered sublimely beautiful. Sharp resolution, depth of color, and special effects work to make the transformation of profilmic nature at once palpably material and breathtakingly impossible. We open with this bold claim on the cinematic as an apparatus for making us feel things about the world (literally), and the film keeps moving us back and forth between hightech digital imaging (the sci-fi effects that show us the planets colliding) and the low-tech materiality of creating a scientific apparatus out of wire, or a shelter out of tree branches. (The film's early sections also refer back humorously to von Trier's Dogme period, and more could be said about his oscillation between stripped down and visually grandiose versions of digital cinema.) Despite gleefully destroying Earth, it's von Trier's least cynical film: the human care that animates the shelter provides an affective resonance that rewrites the film's account of non-human nature (Shaviro's work is brilliantly suggestive here, and it's perhaps useful to note his attachment of the film to capitalist realism, a reading that returns us to our earlier discussion of politics and aesthetics). Cinema has always offered a politics and aesthetics of machine agency (Vertov's Kino-Eye, etc.), but the digital is surely being used to develop new forms of experience.

JL: For the last question, I'd like to address an issue that hasn't received a lot of attention in critical discussions of post-cinema to date: feminism. At a moment when social media and digital communications have enabled a wide proliferation of vernacular feminisms, such as #yesallwomen, and popular celebrity feminisms, as in the star texts of Beyoncé and Amy Schumer, for example, what is happening in post-cinematic theory? Beyond pop culture studies, are there implications for specifically (intersectional) feminist perspectives on contemporary moving-image media and media cultures? Is there space for feminism in discussions of the algorithms, affects, and aesthetics so many film and media scholars are having these days?

RG: To respond to this question, I want to keep following the path of materiality, ontology, and post-cinematic moving image media. Contemporary Iranian cinema often addresses feminist issues in ways that foreground cinema's capacity to document the real, for instance Samira Mahkmalbaf's The Apple (1998). This intersection of gender, image technologies, and materiality is especially powerful in the Death of Neda Agha-Soltan, a video that shows a young woman at a progressive rally after the 2009 elections in Iran dying after being shot by the military. Circulated widely online, the video's power comes from its indexical status and its ability to show not just another dead body but the moment of death. In this regard, it is completely and perfectly Bazinian: many videos and photos depict the victims of this violent government repression but Neda shocks for the force of this transformative temporality (Bazin). A feminist perspective allows us to articulate this medium-specific reading to a consideration of the stakes of constructing female bodies as figures of political movements. It's striking that a video of a conventionally attractive young woman went viral in this way, gendering victimhood in a way that appeals both to historically embedded ways of feminizing the nation and to contemporary western fantasies of oppressed Muslim women. The video is an artifact of post-cinematic moving image media, impossible to analyze without thinking how platforms work globally, and at the same time, an example of older ideas about cinema and its ability to articulate humanist claims on democracy (Schoonover). It also reminds us that these concepts are intrinsically gendered and geopolitically ordered, and that media texts remain crucial sites for contestation.

KJ: I love the fact that Rosalind brought up the relationship between cinema and articulations of humanist politics. For me, one of the important things achieved by the increasing incorporation of machinic viewpoints into popular culture and into the analytical paradigms that I have been describing, is the validation of feminist/queer critiques and their decentering of the Humanist subject. In my own research into consumer labor, I have been troubling the Marxist concept of alienation

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and its reliance on the existence of the white / cis / het / able / European male subject. The tragedy of alienation, as Marx has it, is the denial of the singularity and autonomy of the Humanist subject (Weeks). The affectivity of machines demonstrates (again) the contingency and mythic nature of this subjectivity, which poses questions for how it can ever experience alienation. If there is no state of unity that we are denied, no prelapsarian state to which we can return, the existence of alienation thus becomes difficult to claim. The concept also becomes visible as a gendered, sexed, raced, and exclusive subject position that denies relational subject positions. This point only emerged at the end of my recent project so I am still working through its implications and in particular what it may mean for media analysis. But the concept of alienation is so pervasive it underpins certain conceptualizations of the gaze, of "the audience", of agency, of economics, of desire for instance—that I think there are some profound implications for how we consider media texts. The key implication, though, is that it places feminist and queer critiques that approach media through hybridity at the analytical center of media analysis.

JL: I think Rosalind's right, that the quotidian digital media environment can replicate a kind of Bazinian realism—even as such media forms are decried for their lack of materiality and the loss of the aura of indexicality. In this realism lies a powerful political potential, bound up quite materially with the portability of the machines and the ubiquity of the image stream. And Kylie's point about gender and affective labor rings true as well: any utopian notion that machines are not gendered gets squashed pretty handily the minute you start researching, say, social robotics (Robertson). The earlier turn in our conversation to the posthuman also coincides with another project I'm developing now on "feeling machines," focusing at the moment on female-gendered androids and how the range of current pop culture representations of them indicates some of the suppressed issues within feminism: hybridity for sure, as a metaphor for marginalized terms of identity such as race, gender, nationality, and so on. The film *Ex*

Machina (Alex Garland, 2015) figures in my work right now precisely because of the way it places a quasi-feminist liberation narrative within the context of the patriarchal tech industry as well as in the tradition of Promethean / mad scientist stories. This film has produced such diverse interpretations, seeing it as a feminist triumph or as yet another instance of sexualized female-gendered AIs/androids having to rely on emotional manipulation in ways that male ones don't (Cross; Watercutter).

The film follows conventions of classical Hollywood to a great extent, and those of science fiction in particular. But its post-cinematic features lend it another layer of meaning, if we consider how the android-slave metaphor slots right into the digital circuits of the economic/gendered/ racial hierarchies that power our world. Ava is in many ways a figure for the subject of late capitalism, unfree from the start and spending most of her energy trying to survive by pleasing and/or deceiving the men in charge of her. She is a posthuman subject, produced by the hipstermale-dominated high-tech sector to perform in a service role, and it is never clear whether she achieves the degree of "human" emotion that she performs with the two male antagonists. In the end, we don't know if her liberation is cause for celebration or horror, walking down a crowded urban street where she will continue to pass for human, and female. If Shaviro is right and one of the functions of post-cinema is to express what it feels like to live in the world today, Ex Machina asks us to consider what, and whether, Ava the android feels.

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