



BY RICHARD GRUSIN

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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 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 twenty-first 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 re-mastered 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 implications of Peter Greenaway's ambitious, hyper-mediated *Tulse Luper* project.

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 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.

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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 Noé’s troubling film *Irréversible*). Nolan uses the interactive features of the DVD in a number of interesting ways. The clever interactive design 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 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).

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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, game-like 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, slow-motion, 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 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 video-game 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 remediates 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 remediates 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 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 mediological 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 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*.

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Richard Grusin is Professor of English at University of Wisconsin-Milwaukee, where he directed the Center for 21st Century Studies from 2010-2015. His work concerns historical, cultural, and aesthetic aspects of technologies of human and nonhuman mediation. With Jay David Bolter he is the author of *Remediation: Understanding New Media* (MIT, 1999), which sketches out a genealogy of new media, beginning with the contradictory visual logics underlying contemporary digital media. *Culture, Technology, and the Creation of America's*

*National Parks* (Cambridge, 2004), focuses on the problematics of visual representation involved in the founding of America's national parks. *Premediation: Affect and Mediality After 9/11* (Palgrave, 2010), argues that socially networked US and global media work to pre-mediate collective affects of anticipation and connectivity, while also perpetuating low levels of apprehension or fear. Most recently he is editor of *The Nonhuman Turn* (Minnesota, 2015) and *Anthropocene Feminism* (forthcoming Minnesota, 2016).

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