Cinema 3.0: The Interactive-Image

by **Kristen Daly**

**Abstract:** Cinema is taking on the characteristics of new media, existing in a networked, intertextual space, which enables new developments in narrative that are increasingly interactive. Using examples from a variety of different genres, this essay analyzes how narrative might mimic the work, play, and networks of the contemporary digital society.

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PR(A) = (1 - d) + d(PR(TI)/C(TI) + \ldots + PR(Tn)/C(Tn))
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—Lawrence Page and Sergey Brin

In *Cinema 2: The Time-Image*, Gilles Deleuze defined a break coinciding with World War II, describing an emergent way of making sense of the world that was represented in postwar cinema. Instead of actions leading to reactions as in the classical movement-image’s rational and stable representations of Cinema 1, the postwar time-image presented seemingly irrationally linked images. I would like to explore the idea that a new way of making sense of the world is being represented in our contemporary cinema—a new form, which better represents the new economies and systems of work, play, and violence of the digital networked society.

Cinema 2 for Deleuze was a “cinema of the seer and no longer of the agent” as the movement-image gave way to the time-image. As D. N. Rodowick describes Cinema 2, “Acts of seeing and hearing replace the linking of images through motor actions; pure description replaces referential anchoring.”

I propose that Cinema 3.0

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3 Ibid., 277.
4 Ibid., 2.

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might be a cinema of the user, as the time-image gives way to the interactive-image. Rodowick describes how with the digital electronic image "the spectator is no longer a passive viewer yielding to the ineluctable flow of time, but rather alternates between looking and reading as well as immersive viewing and active controlling." As he explains, these are "overlapping states." Interaction becomes a natural consequence of digital media. Computer and digital users have been trained by their immersion in digital culture to participate in/with what they consume. With the disappearance of the spectator, what becomes of the spectacle? Instead of world as picture we have world as game.7

A number of theorists have written recently on aspects of complex narrative in films. Jan Simons provides a wonderful review of the different recent approaches in his article "Complex Narratives," citing recent work by David Bordwell, Edward Branigan, Allan Cameron, Thomas Elsaesser, Marsha Kinder, and Lev Manovich.8 I hope to expand on this body of work by giving a broad picture of how cinema is increasingly taking on the characteristics of a new medium. For Cinema 3.0, a movie no longer exists as a cohesive, unchanging art piece but instead participates in a world of cross-media interaction, and this has enabled new forms of narrative requiring, as part of the enjoyment, interaction in the form of user-participation and interpretation.

Of course, there are plenty of movies being made in the traditional mode, but, using a variety of examples from the mainstream to the art house, I hope to make the case for an emerging trend. In arguing the case for cinema as a new medium, the term "viewer" becomes unsatisfactory, as the same person is not only watching the movie but also participating with it across other media platforms, so I have chosen the term "viewser" to better represent the multitude of interactions of a person with cinema.9

Training, Soothing, Inscribing. As Walter Benjamin and Siegfried Kracauer explained some time ago, cinema could soothe the masses because it mimicked the everyday shocks of industrial society. Kracauer describes how cinema could reflect the shocks of modernity and make them bearable, with the "small moments of material life" as presented in movies soothing "our minds, fragmentized as they are."10 These shocks, produced by the increasing speed, distraction, and repetition of modern life, were mirrored and soothed in the cinema. Benjamin writes, "Technology has subjected the human sensorium to a complex kind of training. There came a day when a new and urgent need for stimuli was met by the film. In a film, perception in the form

6 Rodowick, The Virtual Life of Film (Cambridge, MA: Harvard University Press, 2007), 177.
9 Similar terms have been employed, but with slightly different usages. The term "(v)user" has been used by artists Joseph Nechvatal and Miroslav Rogalla for the interaction of viewers with an artwork and with each other, usually in a public setting. Alex Bruns has used the term "produser" to define how users of technology have become active producers of content. And in 1980, in The Third Wave, Alvin Toffler coined the term "prosumer," with the prediction that the roles of producers and consumers would merge, primarily with highly customized products.
of shocks was established as a formal principle. That which determines the rhythm of production on a conveyor belt is the basis of the rhythm of reception in a film.\(^{11}\) Similarly, I argue, the contemporary Cinema 3.0 mimics the everyday shocks of our emerging digital society.

Thomas Elsaesser sees what he refers to as mind-game films as “indicative of a ‘crisis’ in the spectator-film relation,” a crisis in which the normal film tropes and techniques are “no longer deemed appropriate, compelling or challenging enough.”\(^{12}\) I would give both audience and technology more agency and assert that the globalized, networked, digitized society demands a new cinema form based on interactivity, play, searching, and nonobvious relationships. Even the logic of the computer, emphasizing the processibility of complex series of possibilities, bifurcations, and combinatorics, articulates narrative forms based on stochastic logic and Markov chains where contingency is a function of game and chaos theory, creating a network of probabilities, and not a determinant cause and effect as in traditional narrative. Thus, as this essay is on movies that train and stimulate the viewer in ways that mimic the logics of the contemporary computer and digital economies, I open with the PageRank function.\(^{13}\)

**Narrative Norms, Continuities, Fan Mode.** Media theorist Sean Cubitt traces the application of narratology to cinema, where scholars, moving away from André Bazin’s and Kracauer’s somewhat mystical proposals “that cinema’s destiny was the depiction of the world,” have argued that narrative is innate to cinema, even finding narrative in the symmetric elements of the Lumière brothers’ *La sortie des usines* (1895).\(^{14}\) For Cubitt this argument stretches the concept of narrative too far; he argues that narrative is an “effect” created by special techniques, namely the “cut.” He writes that “certainly one can assemble cinematic events into a narrative. But equally one can assemble them to make a pattern, or even jumble them together at random. It is important to recognize that narrative is neither primary nor necessary to cinema, and it forms no part of any putative essence of the medium.”\(^{15}\) Deleuze too feels that narrative, presenting a story, was the direction that cinema took in order to become a language, but that other directions were possible.\(^{16}\) I would like to present the case for a new tendency in cinema, where the dominance of narrative, at least in the classical sense, is waning in favor of a form of cinema where navigating, intertextual linking, and figuring out the rules of the game provide the primary pleasures.

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13 Friedrich Kittler begins each section of *Discourse Networks 1800/1900* with an equation representing 1800 and 1900. For 1800 he has e\(^x\) = cos x + i sin x by Euler, an equation for spiral-like growth. For 1900 he has the iterative Boziano equation y = (+a) + (-a) + (+a) + (-a) . . . Friedrich A. Kittler, *Discourse Networks 1800/1900* (Stanford, CA: Stanford University Press, 1990), 1, 175.


15 Ibid., 38.

16 “The historical fact is that cinema was constituted as [a language] by becoming narrative, by presenting a story and rejecting other possible directions.” Deleuze, *Cinema 2: The Time-Image*, 25.
Critics of digital hype have claimed that, although digital technologies are having large effects in the realms of style, narrative has nonetheless remained classical. Rodowick, for example, argues that “with respect to digital technologies, cinema is reinventing itself—just as it has done in previous periods of technological transition—by producing stylistic innovations while respecting narrative continuities. In short, [George Lucas’s] Attack of the Clones (2002) and [Peter Jackson’s] The Two Towers (2002) are perfectly recognizable in most respects as classic Hollywood cinema despite their innovations in visual style.”17 Although I largely agree that many studio-produced, contemporary movies respect classic Hollywood narrative norms, I will present examples of a variety of popular movies that question the dominance of narrative as the primary raison d’être of cinema. In fact, one might take issue with Rodowick’s two examples. In The Two Towers, a viewer very familiar with the book’s plot might well be disappointed to find that the narrative takes a far backseat to the trompe l’oeil special effects and digitally generated battle scenes. And, as Cubitt writes, “Recent movies like Star Wars: Episode Two—Attack of the Clones move from set piece to set piece along only the slenderest thread of narrative, like washing on a line.”18 So, one can argue against the classification of these two movies, and many other big-budget “effects” movies, as classic Hollywood cinema in respect to narrative continuities.

A movie like Pirates of the Caribbean: At World’s End (Gore Verbinski, 2007) provides a good example of a big-budget, tent-pole movie whose narrative required new modes of watching that left the critics behind their more digitally involved fan audiences. Critics, in general, found this movie hard to follow.19 Nathan Lee of The Village Voice wrote, “Long before the third, fourth, or fifth climax in this endless, obligatory summer diversion, I slunk into my seat in a passive, inattentive stupor, fully submitting to the fact that I hadn’t the slightest idea what the hell was going on.”20 Joshua Rothkopf of Time Out New York called it “maddeningly incomprehensible.”21 Yet, as of July 2007, two months after its release, it had a worldwide box-office gross of close to 1 billion dollars.22 Internet Movie Database (IMDb) users rated it a very respectable 7.3 out of 10,23 and user comments indicated that these viewers were more familiar with the previous two Pirates installments than the professional critics were. Viewers who had seen the previous two movies on DVD, Video on Demand, and cable and who had

17 Rodowick, The Virtual Life of Film, 30.
18 Cubitt, The Cinema Effect, 238.
19 Website Rotten Tomatoes, which aggregates criticism, gave it a 46 percent, polling 188 reviews. The consensus according to the site was that “[i]t mixes too many characters with too many incomprehensible plot threads”; http://www.rottentomatoes.com/m/pirates_of_the_caribbean_3/ (accessed July 20, 2007).
23 By comparison, Spider-Man (Sam Raimi, 2002) has a 7.4 user rating; http://www.imdb.com/title/tt0145487/ (accessed May 28, 2009).
followed articles on stars and production would not have forgotten what the “Black Pearl” was as Anthony Lane of The New Yorker did. Once movies exist in a mode of replay and are part of online discursive space, the narrative can be more complicated and intertextual. Furthermore, there is a community aspect to movie interpretation for the Cinema 3.0 viewer, as cinema has become an increasingly networked medium. At World’s End played with narrative, giving viewers the overload of plot, characters, and special effects that the fan mode requires and confusing the overworked, nonfan, traditional film critic.

This type of community, complexity, and multimedia intertextuality was available before digital and computer technologies. The French New Wave and its community in Cahiers du Cinéma and other journals and cineclubs of the time was a networked and intertextual form of cinema experience. But this took place solely in a handful of urban centers and required great effort and an almost cultlike commitment. Henry Jenkins has traced the history of fan communities before the Internet, focusing on science fiction fan communities who interacted via letters, conventions, and fanzines; as he notes, the fans have moved from the boundaries to become increasingly powerful communities. Indeed, the fan mode of interactive and intertextual engagement with the text has become, I would argue, a more prevalent viewing mode as it has become easier and almost unavoidable, particularly in respect to big-budget movies advertised in every medium.

From a reception standpoint, our cultural products are fulfilling audience expectations. On the other hand, as Elsaesser notes, from a production standpoint the narrative intricacies of “mind-game films” perfectly represent the economic and material necessities of “multi-platform” films. Movies, particularly tent poles, are made to be one artifact in a multimedia, interactive cinematic experience involving websites, video games, DVDs, contests, mobile media, and so on. Thus, many film narratives are constructed with these other platforms in mind; together, they create a full experience. Elsaesser’s point is an important reminder of the contemporary debate across disciplines about the implications of new media interactivity and the continuing power struggle between corporate content producers and consumers.

The Project: Movie as Artifact. Sean Cubitt uses the Lumières’ La sortie des usines, a film of workers exiting through the gates of a factory, as the exemplar of a moment in culture when ways of being and seeing, work and play were being rearranged according to industrial means of production—the moment of transition between the factory clock and the flâneur, as he describes it. Sortie, as he says, takes place at the juncture

24 “A subplot requires Will to save Bill by getting hold of the Black Pearl, but for the life of me I couldn’t remember whether the Pearl was a man-of-war, a precious stone, or a sex toy—or, for that matter, whose heart was in the treasure chest, and which sailor, at any given moment, was on board which damn ship.” Anthony Lane, “Men at Sea,” New Yorker, June 4, 2007; http://www.newyorker.com/arts/critics/cinema/2007/06/04/070604crcl _cinema_lane (accessed March 6, 2010).
between work and leisure; it exists by their “contradiction.” The electronic age with its emerging economies is blurring this contradiction, and similarly, I posit, this moment in culture is reflected in our current cinema. Increasingly, for computer and mobile users, existence is in some intermedial zone of work and leisure; the experience of moving images through computer and digital technologies is interactive, blurring the lines between producer and consumer, spectacle and spectator, representation and information, as embodied by mashups and crowdsourcing. To represent these new sets of relations between art, culture, work, and relations of power, Cinema 3.0 must move beyond vision to engage thought. In Future Cinema, Peter Weibel calls this “neurocinema,” which presupposes that the eye is “no longer adequate for understanding or interacting with the world and that it should be replaced by the brain.” As in an earlier era, when the human vision of the audience was synchronized with “machine perception,” as Cubitt and Benjamin have described it, now the cognition of the audience must be synchronized with digital logics.

A characteristic of Cinema 3.0 movies is that they put the viewer to work. Thus, the experience of the movie is more like a project and a piecing together of disparate parts, some perhaps contained in the movie text itself and some which may be found in other media. In the case of the Blair Witch Project (Daniel Myrick and Eduardo Sánchez, 1999), distributor Artisan’s marketing campaign mimicked the technology of the movie, prefiguring what has now become a norm of the intermedial experience of cinema. The fictional movie was marketed as a documentary about three student filmmakers who vanished while working on a documentary about a legendary witch near the town of Burkittsville, Maryland. The story supposedly unfolds through footage, which a group of student anthropologists discovered a year after the disappearance, and which Artisan then assembled. The website offered additional “found” materials creating a supplementary experience to the movie: users attempted to figure out what had happened, what was real, and what was not. The movie (or “project”) itself, as J. P. Telotte notes, becomes just one more artifact, along with the Web materials, to use in figuring out “what really happened.” As Telotte explains, the movie’s marketing implies that the pleasures of the movie mimic those of the Internet, where seeking and finding information provide the primary thrill. Blair Witch was a breakout hit and successfully exploited a climate of confusion of sources and reliability. Viewers were happy to participate. Thus the movie brought out both the pleasure and the early anxieties of a society of interactivity, web navigation, and digital communication.

The narrative form of the project takes advantage of the narrative potentials of new media. As Cubitt writes, “One of the attractions of cyberspace is its rewriting of the very concept of art, and with it the boundary demarcations between art and


29 “In the cinematograph, the human vision of the audience is synchronized with a machine perception in the process of formation.” Cubitt, The Cinema Effect, 30.


31 Ibid., 38.
communications media." The "project" ushers in a new form of narrative based on interactivity, peer distribution, community, and a combination of documentary and scripted fare where the boundaries between what is real and what is not are defined in context. As Thomas Elsaesser says of movies with active Internet fan sites, "The film is thus part-text, part-archive, part-point of departure, part-node in a rhizomatic, expandable network of inter-tribal communication." Even a mainstream, studio movie like Sacha Baron Cohen's *Borat: Cultural Learnings of America for Make Benefit Glorious Nation of Kazakhstan* (Larry Charles, 2006) participates in a similar project, where the thrill of the movie lies in the constant mental weighing of what is real and what is not, and in navigating the artifacts of which the movie is only one piece of the puzzle. Viewers could participate in the *Borat* world, comparing how certain scenes played out in real life (e.g., how Baron Cohen had to flee from the rodeo after the scene) and observing the various lawsuits that followed the film and the political and cultural reactions of the governments of Kazakhstan and Romania.

*Borat* was nominated for an Oscar for best-adapted screenplay, which is particularly telling of new cultural expectations, because the movie is partly documentary. The character Borat interacts with the unscripted world; thus, a good portion of the film is not scripted at all. The screenwriters wrote permutation upon permutation so that Baron Cohen would have options for whatever might happen, more like the programming of interactive video game software than the writing of a traditional script. Reality television has certainly shown that this can be a dominant narrative form, where enjoyment exists in a liminal space between what is real and what is scripted. The interactive work for the viewer consists of weighing what is real and what is not, a job normally carefully controlled for the viewer by the filmmaker, but now the programming of movies as "projects" puts this job into viewers' hands. The movie becomes a project, one artifact, as Telotte stresses, among websites, articles, and blogs, in which the viewer searches and navigates for enjoyment. The pleasure is in the action of searching and navigating, not simply watching.

*Cloverfield* (Matt Reeves, 2008), produced by *Lost* (ABC, 2004–2010) creator J. J. Abrams, is one of the more recent and elaborate project films, the online marketing of which film theorist Ben Walters has described as an "alternate-reality-game" (ARG). Writing before the movie's debut, Walters described the leaking of trailers and linking of clues. Participants could find out about the characters on the characters' MySpace pages or follow the many linked blogs where players would speculate on possible clues. Encouraged by *The Lost Experience*, an ARG developed for the television show *Lost*, participants were eager to find and pursue clues in every license plate, T-shirt, and song preference in the film's leaked trailers. Some of these clues were created by the producers, others by fans, and others were completely random. So the experience of *Cloverfield* for these fans/players becomes an expansive, open-ended art project. Media theorist

33 Elsaesser, "The Mind-Game Film," 23.
Peter Lunenfeld writes that “‘unfinish’ defines the aesthetic of digital media.” The pleasure comes not solely from narrative as a story with a beginning and an end as such, but from the interaction of the differing and uncontrolled factors and the determining of truth within the context of the project.

Again the question arises, which will be discussed more in the conclusion, as to whether this is a new, productive, democratic, and interesting cultural form or just a complete absorption of art by marketing. As Elsaesser discusses in his examination of film fan site discussions, the common questions concern “data—trivia, fine detail, esoteric knowledge,” but tend to avoid any form of interpretation. One might consider this an enslavement of fans, who are co-opted by virtue of their willingness to work for free and do the marketing for the studio, or, on the positive side, one might consider this a participatory, communal art form with cultural and social benefit for the participants.

**Remix and Modular Cinema.** As we live in a more and more mediated world, our moving images increasingly refer to and cross-reference other moving images. A common topic in popular media is how, with the modularity of digital objects, remix becomes a primary activity of the electronic society. Quentin Tarantino’s *Reservoir Dogs* (1992) was one of the first mainstream movies to feature as a dominant trope the remixing of pop culture. With a background as a video store clerk, Tarantino popularized a form of filmmaking featuring dialogue with other movies as a fundamental pleasure. Tarantino remixes not only movies but also pop music and pop culture themes. In *Reservoir Dogs*, *Pulp Fiction* (1994), and *Kill Bill* (2003–2004), Tarantino uses temporal dislocation so that the job of the viewer becomes not only one of matching references but also of determining order and interconnection in a scrambled database of scenes and characters. Tarantino’s films appeal to audiences and critics alike; both recognize many of the shout-outs and stylistic odes to cult filmmakers and films. In the early stages of the Internet, Tarantino fans had to work hard to pick up on these references, using film fanzines like *Film Threat* and interacting through early online message boards and forums.

And yet, Tarantino’s mode of referencing other directors and films is not new. Jean-Luc Godard, a hero of Tarantino, is well known for referencing other films. But I would argue that the extent to which this can be taken in an age of digital literacy is new. For example, IMDb’s “movie connections”—although put together by users and not thoroughly reviewed—lists 129 movie references in *Pulp Fiction*, whereas for Godard’s *Breathless* (1960) it lists only 8. Going beyond the plot, Tarantino’s movies represent a database of references that provide pleasure across mediums for the viewer encouraged to make the associations, links, and collective collaborations necessary to sort them out.


36 Elsaesser, “The Mind-Game Film,” 35.

Increasingly, this has become a popular trope with contemporary filmmakers. Wes Anderson (The Royal Tenenbaums [2001], The Darjeeling Limited [2007]), Robert Rodriguez (Sin City [2005], Grindhouse [2007]), and Stephen Chow (Shaolin Soccer [2001], Kung Fu Hustle [2004]) are prominent examples of directors who “cross-pollinate” their movies with references to other movies.\(^{38}\) In light of their popularity with many viewers and critics, it’s clear that these films have kept enough of the classical narrative that they have not suffered unduly the barbs of confused nonfans. Yet, for many viewers, one of the primary pleasures of these movies is to make these associations. These references take the viewer in and out of the movie narrative. I maintain that the viewer accepts this as an entertainment form because it is a representation of his or her everyday social and work activities: websurfing, networking, and hyperlinking. To take this to the extreme, the viewer may not need his or her art objects to refer to or represent a world outside media; simply remixing and being asked to reorder the media world is a satisfying act.

**Database Cinema.**

And the database? No longer hierarchical, its order becomes that of a comprehensive but incomprehensible labyrinth: a vast and boundless maze of images and sounds, dreams, and visions in which one follows, backtracks, veers off, loses oneself in multiple trajectories, all the time weaving tenuous threads of association in the logically endless teleology and texture of desire. Here, the materials of the world are never fixed data or information merely requiring *re-collection*; here, from the first, they are unstable bits of experience and can only be *re-membered.*

—Vivian Sobchack\(^{39}\)

Lev Manovich explains how the computer age introduces the correlate to narrative as the key form of cultural expression of the modern age—the database.\(^{40}\) According to Manovich, instead of beginning with a script and then finding the elements to fulfill it, database cinema starts with a database of elements and then generates narrative from the database.\(^{41}\) The database, though, is not a random collection but a collection organized by a particular model.

The database implies searching, and Manovich is interested in this as a characteristic of contemporary society. He stresses the development from Charles Baudelaire’s flâneur to “[William] Gibson’s data cowboy who zooms through pure data armed with data-mining algorithms.”\(^{42}\) He writes, “If the subject of modern society looked for refuge from the chaos of the real world in the stability and balance of the static composition of painting, and later in the cinematic image, the subject of the information

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41 Ibid.

society finds peace in the knowledge that she can slide over endless fields of data, locating any morsel of information with the click of a button, zooming through file systems and networks. The database implies a form of cinema less concerned with storytelling and visualization and more interested in cognitive and navigational processes. In this way, the everyday use of computer technologies might contribute to new habits and desires in the viewer and therefore new expectations for cinema.

Database cinema is modular and thus encourages “flashback, time travel, and temporal dislocations.” Marsha Kinder defines database narratives as having a structure that “exposes the dual processes of selection and combination, which may not have a clear beginning or end nor a coherent chain of causality.” Database cinema forces the viewer to imagine that there could be other configurations. The DVD and other forms of cinema enable viewers to rewatch, rewatch, and reexamine, and enable Internet communities to crowsource criticism and historical information, in such a way that viewers can follow a complicated, unconventional narrative.

Some movies have taken this to the extreme. These are movies made up of clues, references to other media and complex internal rules. I call these Sudoku Cinema in reference to the popular Japanese logic-based number placement puzzles. The narrative in these movies is controlled by specific diegetic constructs at odds with a cinema of mimesis. For digital citizens this provides an interactive game, so the movie is not just passively consumed but must be figured out.

Cubitt writes, “Beyond the modernist opposition of narrative and non-narrative, the structuring of such films depends on the satisfaction to be had from realizing the pattern underlying the events, in Manovich’s terms ‘discovering the algorithm.’” Television shows like Lost and Heroes (NBC, 2006–2010) indicate the mainstream nature of this narrative trope. The filmmaker/designer must not only consider mise-en-scène in terms of vision but must also consider how the viewer will interact with the movie in regard to design and form. Thus, the filmmaker must anticipate interactivity with the viewer much as a video game designer would.

In Memento (Christopher Nolan, 2000), the main character, Leonard, has a head injury such that he has no short-term memory and thus is an unreliable narrator. Anything he does he immediately forgets, so he has developed a complex system of tattoos, Polaroids, and notes to help him “remember” so that he can solve what he thinks is the murder of his wife. These material clues also provide a database for the viewer to keep track of the scenes and events, which are presented nonsequentially. Colored scenes, which move backward in chronological order, are interspersed with black-and-white flashbacks, which go forward in chronology. Shots are sequenced not to create a narrative but to remix one according to an algorithmic, not a narrative, sense.

43 Manovich, The Language of New Media, 274–275.
44 Cubitt, The Cinema Effect, 239.
46 Cubitt, The Cinema Effect, 238.
47 As Allan Cameron points out, the colored scenes do not show us what Leonard remembers but “progressively reveal what he is unable to remember.” Allan Cameron, “Contingency, Order, and the Modular Narrative: 21 Grams and Irreversible,” Velvet Light Trap 58 (2006): 65.
Stefano Ghislotti notes that, with its algorithmic structure and clues, "Memento presents in fact a mnemonic system: a structured set of memory aids which parallels the two main story lines." Ghislotti argues that "[m]nemonic connections are different from temporal or causal connections: they are free from a rigid direction as well as from strict chronological binds. They can be used as a differentiated set of memory functions, such as recognizing, comparing, anticipating, recalling, suggesting relationships, finding gaps, waiting for more details, and so forth." The job for the viewer is to make and test hypotheses as the movie goes along—learning the mnemonic constructs or rules of the game. The DVD has enabled even more interaction and "remembering" via its special features. The enjoyment thus goes beyond the plot and stems from figuring out the film’s clever construction.

*Prime*, the 2004 Sundance Grand Jury Prize—winner by first-time director Shane Carruth, similarly presents a puzzle to unlock. Having built a time machine in their garage, the inventors use the machine every day to bet on the stock market, but the movie gets increasingly complicated as a double is produced with every use and then—spoiler alert—one time machine is put inside the other. The movie is best appreciated after a second or third viewing and a reading of all the Internet commentary discussing, debating, and clarifying how the parts fit or slip together. The narrator, usually a reliable source, provides added confusion by switching, as critic Dennis Lim points out, from past to future conditional tense. A movie like *Prime* provides viewers with a puzzle almost impossible to figure out in one viewing. Such films are made to be re-watched, graphed, and discussed online. The brain’s puzzle-solving capacities are engaged to a high degree, as the film goes beyond visual storytelling to a networked form of narrative.

"Novelesque" Cinema. According to Deleuze, with Godard the cinema ceases to be narrative and becomes "novelesque." By novelesque, Deleuze refers to a cinema that is less totalizing and unified. He quotes Russian literary critic and philosopher Mikhail Bakhtin, who “defined the novel, in contrast to the epic or tragedy as no longer having the collective or distributive unity through which the characters still spoke one and the same language.” The characters in a novel could each have their own idiom and perspective. Taking this as a way to discuss a tendency in cinema, Deleuze interprets and contrasts Sergei Eisenstein’s conceptions of harmony in film. He writes, “There was thus a whole of the film which encompassed the author, the world and the characters, whatever the differences or contrasts. The author’s way of seeing, that of the characters, and the way in which the world was seen formed a signifying

49 Ibid.
52 Ibid.
unity."53 Yet in Godard, the internal monologue is replaced by "diversity" and "the otherness of free indirect discourse."54 I would like to extend Deleuze's concepts to describe a tendency in a number of contemporary filmmakers not only to allow but also to encourage plural and uncontrolled discourses and independent relationships between characters, situations, and audiences outside of authorial control in ways that exceed Deleuze's expectations. With the advantages of digital distribution and online discursive spaces, filmmakers can increasingly create films with multiple levels of interpretation operating in and out of the diegesis, where characters not only speak different languages, but the persona of each character may even vary. Thus there are levels of interpretation and indirect discourse preventing a unifying, self-contained diegetic monologue.

Lawrence Sterne's *The Life and Opinions of Tristram Shandy, Gentleman* (1760) was long considered an unfilmable novel. The intertextual references (from the seventeenth and eighteenth centuries), disordered scenes, multitude of characters, stream of consciousness, and side discourses made *Tristram Shandy* seem an unlikely candidate for cinematic adaptation and better suited to the hypertext Web project.55 Only in 2006 did director Michael Winterbottom and writer Martin Hardy (nom de plume of Frank Cottrell Boyce) manage to wrangle the novel into movie form as *Tristram Shandy: A Cock and Bull Story*. They adapted *Tristram Shandy* as a movie within a movie, going back and forth between scenes from the novel and scenes of the actors enacting scenes from the novel. Thus, the viewer sees "backstage," except that backstage is also staged—partly. There is a third level in that the movie references within it real events like actor Steve Coogan's real-life infidelity and the ensuing press scandal. So there are three levels of diegesis involved.

The viewer might find him- or herself necessarily less concerned with the film's linear narrative than with its meta-construction and intertextual linking. Interactions with digital media have made viewers familiar with a disordered, hybrid, and unhierarchical navigation of information and with the breakdown of the fourth wall and intertextuality such that they are well prepared to consider Steve Coogan as Steve Coogan, Steve Coogan as an actor in Winterbottom's *Tristram Shandy*, and Steve Coogan as Tristram Shandy all at once. The pleasure is derived from this intertwining trilevel interpretation—the alternation and overlap, as Rodowick puts it, of looking and reading, which takes advantage of the new media use of the screen as a place for representation but also for information.56 Of course the star system, enabling the viewer to recognize the actions of Steve Coogan as Steve Coogan, has existed for many years, predating digital technologies and the Internet. But the system has been greatly amplified so that it is not just actors like Marilyn Monroe who exist in an iconic realm outside the movies in which they appear; increasingly information is readily available on all aspects of a movie: the production methods, the locations, the actors, the costs, and the marketing. Thus the level of intertextuality

53 Ibid., 182.
54 Ibid., 184.
56 Rodowick, *The Virtual Life of Film*, 177.
is greatly amplified and can be played with by filmmakers and their networked audiences.

The movies of writer Charlie Kaufman, such as Being John Malkovich (Spike Jonze, 1999), Adaptation (Jonze, 2002), Eternal Sunshine of the Spotless Mind (Michel Gondry, 2004), and his directorial debut Synecdoche, NY (2008) take advantage of this playful structure of multilevel narrative pastiche. Adaptation features a screenwriter, named Charlie Kaufman and played by Nicholas Cage, trying unsuccessfully to adapt the book The Orchid Thief by Susan Orleans, played by Meryl Streep, into a screenplay. His happy-go-lucky brother, Donald, also played by Nicholas Cage, comes to stay with him and takes up screenwriting. Donald learns the classical Hollywood techniques from Robert McKee (played by Brian Cox) and ends up helping Charlie, who becomes so desperate that he uses his brother's trite suggestions. The movie ends as Donald's adaptation. So, again, we have three intertwining levels of diegesis. There is the real Charlie Kaufman, who co-credited the screenwriting to his brother Donald (who does not exist), and the real book that he was assigned to adapt, and the real screenwriting method that Donald studies. Then there is the narrative in the movie of the brothers trying to adapt the book; and at the next level is Donald's Hollywood-style script, which plays out as the end of the movie. Synecdoche, NY has so many layers of narrative and diegesis that just to begin to map them would fill up an entire article and require an interactive map.

Of course, none of this diegetic complexity requires technology; authors, playwrights, and filmmakers have played with outside references and plays-within-a-play for hundreds of years. And yet, the extent of the complexity and the popularity of this form, I believe, does represent a new form of filmmaking. Viewers are encouraged, if not forced, throughout the movie to try to figure out where they are in time and in levels of diegesis; thus, they are constantly navigating and popping in and out of immersion. This form of cinema mirrors and reenacts the experience of the digital world as described by theorists like Sherry Turkle, Lev Manovich, and even Deleuze, where viewers travel freely and seamlessly between information, representation, narrative immersion, and linkages.

**Multi-Bodied Characters.** In David Lynch's Mulholland Drive (2001), the characters switch partway through the movie and are played by different actors, without explanation, much like in Luis Buñuel's 1977 That Obscure Object of Desire, in which two actors, Carol Bouquet and Angela Molina, play the unattainable object of desire, Conchita. In Mulholland Drive, though, the purposes are perhaps less psychoanalytic, “objet petit a,” and instead represent the changing identities and role playing in what might be more indicative of what I call “that mutable object of desire.” Todd Solondz takes this to the next level with Palindromes (2004), where the character, thirteen-year-old Aviva, is played by eight different actresses of varying sizes, ethnicities, and ages. In director Todd Haynes's interpretive biopic I'm Not There (2007), seven different actors play incarnations of Bob Dylan. Some take part in actual events of Bob Dylan's life.

re-creating well-known documentary footage; others are more completely imaginary, like the young black actor Marcus Carl Franklin, who calls himself “Woody Guthrie” and rides train cars, and Richard Gere, who is Bob Dylan as “Billy the Kid” in an imaginary Wild West town. The names, persons, and aesthetic styles vary from character to character and yet are woven together in a single movie.

Although I would not claim that these examples constitute a movement, these changing identities used by well-established directors might demonstrate that the viewer, accustomed to the multiple avatars and personas of the digital networked world, is willing to exceed the limitations of a single actor as character, or is at least happy to make the effort to follow without the necessity of a single identifying character. Sherry Turkle’s studies of online identities demonstrate that the digital subject can handle multiple personalities and identities easily, “cycling-through.” As she says, online avatars are used to “shift gender, age, race, and class. The effort has been to create richly rendered virtual selves through which one could experience identity by playing out parallel lives in constructed worlds.”58 “The aesthetic of this cinema mimics this shape-shifting identity in a digital world.

In these examples, the discourse is multiple and not unilateral or totalizing. The filmmaker cannot control the references and connections, which the viewer will make. Each actor and aesthetic style in I’m Not There conjures different references. The filmmaker chooses to simply set up the design and let it run, allowing the outside influences of different story lines, contemporary media influences, and outside references to interpenetrate and distort any unified and totalizing text. And the viewer, accustomed to this as a way of viewing and interacting with computer technologies, is also happy to make these outside references, to feel his or her world distorted, and to try to make connections as a participant in the cinematic discourse.

Digital Literacy, Causality, Complexity. As Rodowick writes of Deleuze’s Cinema 2, the time-image represented how the relation between time and thought was imagined differently in the postwar period, which, as Deleuze points out, paralleled changes in biological science’s study of the brain and thought mechanisms and the image of time produced in probability physics.59 We are at a similar point of flux in biological and computer science. Neurobiology is rapidly diagramming the networks of the brain, and the genome mapping and epigenomic studies promise to reveal the complex workings of all human processes. Increasingly, networks and codes are found that control what appears to be human nature. Mathematics of chaos and game theory can predict our actions even in the context of a large number of variables.

Complex functions govern computer software. Many tasks of the computer rely on discrete-state stochastic processes. These are nondeterministic processes, in that one state does not fully determine the next state. Complex patterns like neural networks and genetic algorithms require stochastic processes to map out processes. Unlike the ordinary differential equations of calculus, more than one possible outcome or state is


59 Rodowick, Gilles Deleuze’s Time Machine, 13.
conceivable in the evolution of the process. This indeterminacy is described by probability distributions. Therefore, from a given starting point or set of conditions there are a number of possible paths, some of which are more probable than others. A Markov chain is a type of stochastic process, a series of states of a system, such that each transition from one state to another state is independent of every prior state given the current state. The probability of moving from one state to another, \( X \) to \( X + 1 \), is not determined by the manner in which state \( X \) was reached. Information theory and game theory work on stochastic processes and Markov chains. (And Google uses a Markov chain to determine the PageRank of a Web page.) Markov models are used to analyze the Web navigation behavior of users. Thus deterministic cause is replaced with the system based on the probability of moving from one state to another. These systems have become the dominant method of determining the probability of outcomes in the digital era.

These mathematical systems of probability and nondeterministic causality are reflected in Cinema 3.0. In her review of David Lynch’s *Inland Empire* (2006), Amy Taubin refers to cyberpunk author William Gibson’s comment about his favorite authors, “Meaning, ultimately seemed a matter of adjacent data.” Taubin says of *Inland Empire* that scenes seem to be contiguous only because “they reside in the selects bin on Lynch’s Avid hard drive,” noting that one way to look at the movie is as a remix of Lynch’s previous *Mulholland Drive* and of his subscription website. Within *Inland Empire*, he includes actors from his previous movies as well as scenes of people in rabbit suits spouting creepy non sequiturs on a sitcom set to canned sitcom laughter from his Web series *Rabbits*.

The story involves what film critic Dennis Lim calls “a grave identity crisis,” where the protagonist, Laura Dern as actor Nikki Grace, gets a role in a movie, which begins to become confused with her life. But, as Lim notes, Lynch’s use of low-quality digital video makes it seem as if “this lurid, grubby fantasy springs from deep within the bowels of YouTube as much as from inside its heroine’s muddy unconscious.” Lynch’s *Inland Empire* presents an example of database cinema, in which, as William J. Mitchell says, “[l]ogical associations of images in databases and computer networks become more crucial to the construal of reality than physical relations of objects in space.” The pattern or function might be beyond our ability to discern without the data-processing ability of a computer. Lynch thus consistently remains relevant by working at the forefront of experimentation.

60 “We assume page \( A \) has pages \( T_1 \ldots T_n \) to which it points (i.e., are citations). The parameter \( d \) is a damping factor which can be set between 0 and 1. We usually set \( d \) to 0.85. Also \( C(A) \) is defined as the number of links going out of page \( A \). Note that the PageRanks form a probability distribution over web pages, so the sum of all web pages’ PageRanks will be one.” Brin and Page, “The Anatomy of a Large-Scale Hypertextual Web Search Engine.”


In *The Matrix* (Andy and Larry Wachowski, 1999) and in *π* (Darren Aronofsky, 1998), only our protagonists have the ability to see through the code governing the world. Their superpower is to recognize the infinitely complex pattern otherwise only to be read/comprehended by a computer. Increasingly, our digital tools work with these mathematics. Consumption habits are controlled by these equations as referral functions, like Amazon.com’s recommendations: if you like book “x” then you might like book “y.” Digital consumers are accustomed to not quite grasping the links, to knowing that only a computer could make such a link and that there is some positive probability that a different link could be made. The decisions are based on the consumption habits of networks and communities of which the user is not even aware he or she is a part. This vagueness is commonplace and accepted by the digital user who is happy to find another book or song he or she likes even while cognizant that the path to get there was complicated and unknowable.

Marshall McLuhan makes the argument in *Understanding Media* that film language was based on text literacy and linearity, and that written text literacy was necessary to a viewer’s understanding of film structure and narrative in terms of cause and effect. McLuhan says, “Literate people think of ‘cause and effect as sequential, as if one thing pushed another along by physical force.” Although this may be a simplification of the process of movie reception and construction, it provides an interesting jumping-off point to consider what might be described as points of disjunction in the representation of causality in Cinema 3.0. There is a growing trend in popular films where causality is networked or mapped spatially, associatively, and rhythmically. These films have been referred to as complex narratives, puzzle films, modular narratives, database narratives, and mind-game films. As Jan Simons explains in “Complex Narratives,” causality, according to system theorists, “is one of the means through which a human ‘system’ (whether an individual, a social group, or a social institution) tries to come to terms with its environment by reducing the latter’s complexity to features that are relevant to its own functioning within and engaging with that environment. Narratives provide one very powerful way to tentatively and provisionally construe causal relationships among actions and events. But movies like Tarantino’s *Pulp Fiction*; director Alejandro González Iñárritu and writer Guillermo Arriaga’s *Amores Perros* (2000), *21 Grams* (2003), and *Babel* (2006); Guy Ritchie’s *Lock, Stock and Two Smoking Barrels* (1997) and *Snatch* (2000); Stephen Gaghan’s *Syriana* (2005; Gaghan also wrote Steven Soderbergh’s *Traffic* [2000]); and Paul Haggis’s *Crush* (2005) seem to have defined a new relationship between the human system and the environment—one which is much

66 Ibid., 287.
more open to complexity. The movies are replete with many characters, motivations, and interweaving plots motivated by seemingly chance occurrences.

Sean Cubitt says that *Lock, Stock and Two Smoking Barrels, Snatch, and The Usual Suspects* (Bryan Singer, 1995) "only appear to be narrative." He writes that "[i]n fact they are the result of many possible rifles through a database of narrative events whose coincidence is more structural or even architectural than temporal."69 Straightforward causality no longer appears to be the motivating factor of these narratives. Instead, the obvious coincidences and criss-crossings of characters and the scrambling of the modular narrative serves to foreground the nodes, as Simons notes, the points where different choices could be made and different outcomes could be created. Possibilities and probabilities of differing outcomes are foregrounded like the branching path of a binomial lattice.

**Viewer: Privilege or Punishment?** I hope to have demonstrated a tendency in current cinema whereby innovative filmmakers are presenting new ways of making sense of the world. In the conclusion to *Cinema 2: The Time-Image*, Deleuze looked toward the future of cinema and stressed that the screen is no longer like a window or a painting, but "rather constitutes a table of information, an opaque surface on which are inscribed 'data,' information replacing nature."70 The films discussed in this essay tend toward this future, combining classical tropes with digital logics. The next question is, Why do people enjoy these movies? Why do they want to make the effort to think and link rather than just be passively entertained? Viewers seem not to be able to avoid re-creating their world of everyday work in the cinema, much like the viewers Benjamin imagined in describing early cinema mimicking the mechanical work technology of industrial modernity.

Media theorist Alex Galloway feels that the new forms of cinema represent the larger political economy and power structure of the day—ambient, interconnected, intense, informative, serendipitous. This narrative structure best translates the experience of globalization, remix, and interconnection in our digital society. He calls it the "sublimation of a growing globalization in which we are all connected even though we don't realize how or what for."71 Many of these films represent a negative side to this network interconnectivity, where violence appears without cause based on unexpected ties between people who do not know one another.

Siegfried Kracauer asked how the films of Weimar Germany reflected the rise of Hitler and the Nazi masses.72 We might ask ourselves how these movies of Cinema 3.0 might represent or portend our consumer and political culture. Are we dupes of Hollywood and marketing empires, putting together movies ourselves and paying for

70 Deleuze, *Cinema 2: The Time-Image*, 265.
them? Did Artisan with Blair Witch teach Hollywood that audiences could be enslaved in little lies? Can we be wrapped up and pacified by the puzzle aspect of movies like Primer and Memento? Do the pop connections of Kill Bill merely divert us, making us indifferent to the violence portrayed therein? Are we too busy “figuring out” to be anything but inured to the violence occurring around these clues? Does the vagueness of complicated contingency in a movie like Syriana make us passive in the face of complicated real issues like the Middle East, war, and our dependence on oil? As vision is subsumed to thought, do we lose an emotional experience of moving images and a tie to a world outside the movies?

Elsaesser examines these issues in “The Mind-Game Film,” bringing up the larger contemporary cultural debate currently raging about choices and consumerism.73 He is wary of the reception of cinematic images as “picture puzzles, data-archives, or ‘rebus-pictures’” rather than as “indexical, realistic representations,” and reminds us that the new form of cinema can be seen as a clever strategy of production and marketing to create objects that are adaptable across platforms for many audiences.74 Cubitt too warns of contemporary films that the most successful succeed “because they have nothing to say: no roots in the social or material world, alternatives to reality, neither antidotes nor commentaries.”75 This poses the danger of a cinema about little more than commodification.

While sympathetic to and mindful of the above threats, I am encouraged by the interactive aspects of Cinema 3.0, which I believe act as a counter to commodification. Cinema 3.0 makes us think, but also makes us interact—with the filmmakers, with the movie and other movie artifacts, and with communities of viewers. I think that this interaction has empowered us as viewers, and that the new regime of Cinema 3.0, the interactive-image, opens up exciting venues of expanded narrative, which energize the audience as co-collaborators.

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73 Elsaesser, “The Mind-Game Film.”
74 Ibid., 39.