Special Effects, Special Status
Lie, Visual Effects, and Stephen Prince's Perceptual Realism

by Rebecca Vartabedian

In order for something to be a lie, a couple of criteria need to be satisfied. First, it must be aimed in the direction of an unsuspecting party. Second, it requires an intention on the part of the liar to trick someone(s) into assenting to something the liar herself knows is not true. If I tell my sister "I have 20 dollars in my wallet," this statement is a lie just in case I don't have 20 dollars in my wallet and I know I don't have the 20 dollars.

One issue that emerges as a consequence of the explosion of digital processes in contemporary filmmaking has to do with the way digitally-altered images relate to reality. If lying involves the deliberate deception of someone, then it is possible to see how special effects might constitute a lie - the filmmaker may be construed as being in the same position I am vis-a-vis my sister and the 20 dollars. However, In "True Lies: Perceptual Realism, Digital Images and Film Theory," Stephen Prince argues for perceptual realism, in which fictional images either generated by computers or digitally manipulated correspond with our experience. Straightforwardly put, the audience is "in on" the deception, which removes it from the category of "lie." We are not being deceived about the effects - in fact, we have frameworks for assimilating data and so are justified in believing the content of the manipulated image.

Prince's mode of realism can accommodate "both unreal images and those which are referentially realistic. Because of this unreal images may be referentially fictional but perceptually realistic."[1] The viewer is able to find a place in reality for the computer-generated dinosaurs in *Jurassic Park* (Steven Spielberg, 1994) because they correspond to something that she knows existed once, and this knowledge depends on the viewer's social and historical experience of her world.

In this paper, I discuss Stephen Prince's theory as an alternative way of formulating a theory of spectatorship that first accommodates the experience of the ordinary viewer (and so gives them access to what otherwise might correctly be characterized as a lie), and second can integrate the insights of a variety of theories - including those grounded in psychoanalysis. To illustrate this reading, I'll investigate the ways in which Prince's theory of perceptual realism accommodates the variety of effects - both photographic and digital - used in *Eternal Sunshine of the Spotless Mind*.

Stephen Prince's Perceptual Realism

In order to account for the new advances in digital technology and CGI (computer-generated images), Stephen Prince argues we must re-conceive the debate between the realist and formalist schools. This debate typically centers on whether or not film records or reorganizes reality.

"Referential realism," or the traditional indexically-based reading of film images espoused by Bazin and other realists, holds that a homologous relationship exists

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[1] Stephen Prince, "True Lies: Perceptual Realism, Digital Images, and Film Theory," in *Film Theory and Criticism*, 6th ed., eds. Leo Braudy and Marshall Cohen (New York: Oxford University Press, 2004), 277.

between the image and its referent. This is to say that the image and its referent share similar features in the sense that they bear the same relation, structure, or proportion. As Prince explains, digital images subvert this indexical relationship because often these images lack a real referent. By appealing only to the content of the film and the viewer's experience of the images in the film, there is no way to account for (non-existent) velociraptors stalking children in a kitchen. The viewer has no extra-filmic referent for the velociraptor. Since digital images often lead down the path of images with non-existent referents, digital images no longer record "reality" in the sense that Bazin, Barthes, and Cavell discuss. The only available alternative, it appears, is to think in terms of reorganizing reality, and to adopt a formalist framework.[2]

Classical formalism (of which Eisenstein's Dialectical Montage is the prime example) emphasizes "the artificiality of the cinema structure" and has been "absorbed into theories of the apparatus, of psychoanalysis, or of ideology as applied to the cinema."[3] This formalist framework transforms the discussion of film theory and realism in film as a method of discourse. So on this account, theories that discuss realism in the film image merely become ways of "talking about" images, conventions in service of psychoanalysis and ideology.

Prince posits perceptual realism as a tertium quid to the overriding contemporary notion that "realism" is merely a mode of discourse. Perceptual realism proposes instead that films appeal to the viewer's sensibilities of what is "real" in order to understand and interpret digital images. Prince explains:

Instead of asking whether a film is realistic or formalistic, we can ask about the kinds of linkages that connect the represented fictionalized reality of a given film to the visual and social coordinates of our own three-dimensional world, and this can be done for both 'realist' and 'fantasy' [or formalist] films alike.[4]
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A homologous reading of the image complicates the discussion of realism in film, so Prince argues for an isomorphic reading of the image. An isomorphic reading holds that the image corresponds in form and relationship to the thing photographed. This is a stronger bond, since the isomorphic reading steps beyond the mere similarity of the image and referent. Prince explains that a perceptually-realistic image, "…structurally corresponds to the viewer's audio-visual experience of three-dimensional space … Perceptual realism, therefore, designates a relationship between the image or film and the spectator, and it can encompass both unreal images and those which are referentially realistic."[5] This structural correspondence is necessary to judge the credibility of a digitally-altered image.

This correspondence is established by appealing not just to the experience of the spectator, but also to the world the spectator occupies. The viewer is anchored in a world, and she interprets images according to the way in which the world is. Furthermore, the correspondence of the image to the world - i.e., the image's success in "matching up" with something in the real world - is instrumental in the determination of how credible the image is. Prince suggests that the isomorphic reading of the image stands in service to the kinds of linkages he says viewers ought

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[2] Prince, 273-274.
[3] Ibid., 275
[4] Ibid., 277.
[5] Ibid., 277.

to and do appeal to in viewing. This strengthened bond between world, spectator, and image under girds his theory of perceptual realism.

Perceptual psychology provides a kind of under-layer to Prince's thesis. In his brief article, "Toward a Retreat from Relativism," David Topper discusses the relationship between perceptual realism and pictorial mimesis, the idea that the real world is imitated and represented through the picture image. Topper draws on the work of J.J. Gibson, who argued the relationship of perception and interpretation was incomplete. "Traditional psychology of perception, according to Gibson, was grounded upon the concept of sensations, the two-dimensional array of flat forms as 'presented' to the eye, and like a camera, the eye records the changing perspectives (or variants) of the visual field."[6] Gibson proposed that this two dimensional "field" was derivative of the "world," that perceptual mode by which the viewer navigates and experiences objects around her.

According to Topper, Gibson's theory relies on "invariants," which are "those certain elements which remain constant … despite the ever-changing variants at each instance of the transformation." This construction of perception with its connection to invariants accounts for the unique experience of the viewer. Gibson's work stabilizes the information one appeals to when sorting her experience of the world, while still acknowledging the specialized perspective of the individual viewer. Furthermore, the notions of "field" and "world" are not mutually exclusive - it is just their priority that is reversed. On this account, the "field" is subsumed" under the "world," and so interpretation follows as a way of talking about the world. If special-effects images are credible, then we indicate some static, invariant feature of them has been identified that matches our experience of the world. This process is not encoded, but it is immediately available to any viewer, who need not have access to or be privy to deeply-seated codes of psychoanalysis.

Psychoanalytic Film Theory - in particular the version offered by Christian Metz in *The Imaginary Signifier* - gives an account of how the viewer is oriented to a fiction film. He suggests a mode of "seeming-real" that involves a partial transference of the self (viewer) to the other (character) appearing in the mirror (film). The viewer makes this move "so that he benefits, by analogical projection, from all the schemata of intelligibility that I have within me, and not take myself for him so that the fiction can be established as such."[7] On the psychoanalytic reading, the viewer involves herself directly in the film but only to a point - she does not take on the entirely, but sees that character similar to or like herself.

If this is the position of the viewer, then the objects and actions in the film take on significance relative to the viewer. Metz reminds us that "I must perceive the photographed object as absent, its photograph as present, and the presence of this absence as signifying."[8] Objects and actions are mere stand-ins, and in the absence is the opportunity for the viewer to interpret images according to their visual (scopic) or invocatory libidinal drives. On this account, the field (in Gibson's terms) precedes the world, and so images lacking world-referents can be interpret according to the viewer. Psychoanalytic readings do little to establish the place of a fictional image in

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[6] David Topper, "Toward a Retreat from Relativism," *Journal of Aesthetics and Art Criticism* 46:2 (December 1987): 303.

[7] Christian Metz, from *The Imaginary Signifier,* in *Film Theory and Criticism*, 6th ed., eds. Leo Braudy and Marshall Cohen, (New York: Oxford University Press, 2004), 827.

[8] Ibid.

relationship to the world, and so the problem of whether or not the fictional image - or the manipulated image - is a lie can't be solved on this view.

In "Psychoanalytic Film Theory and the Missing Spectator," Prince argues that the psychoanalytic approach disregards a significant body of evidence having to do with the way viewers respond to photographed media. He says, "Conceptualizing attention as a multilevel process and researching spectatorship from that angle, rather than in terms of a unifocal drive, can help bring our theories more in line with the available empirical evidence on film viewing."[9] He rejects the psychoanalytic assumption proffered by Christian Metz that the viewer interprets images as they are related to libidinal drives, and instead notes that the paradigms of "attention" and "attentiveness" are more effective when it comes to the viewing experience of the ordinary viewer. This shift to "attention" and "attentiveness" is conceived by communications researcher Frank Biocca as a multidimensional framework:

In the mind of the viewer, schematic frames organize information and inferences about   places and social situations (possible worlds); people, causes, and agents (actants); topics (discursive frames); as well as inferences about ideologies and how the programming relates to the viewer (ideological and self-schematic frames).[10]

The process by which these frameworks are employed is a multi-stage process, prone to revision and reassignment of images to certain of the viewing processes. Prince says, "As viewing continues, interpretations are revised and program information can be supplemented with new, incoming information or reassigned to another interpretational framework."[11] These organizational schemes function along the lines of the correspondence theory perceptual realism depends on for its credibility.

Prince's theory of perceptual realism attempts to build a foundation for the way in which the viewer's experience of special effects is made intelligible using a correspondence theory. Given this discussion of attentiveness and perceptual realism, one might wonder if Prince's theory applicable, even when non-CGI and non-digital techniques are used? A film that meets these criteria for special effects is Michel Gondry's *Eternal Sunshine of the Spotless Mind* (2004). Gondry achieves compelling effects using minimal digital additions and a host of in-camera strategies to depict the inner workings of Joel Barish's (Jim Carrey) mind.

Perceptual Realism and Special Effects in *Eternal Sunshine of the Spotless Mind*

Eternal Sunshine of the Spotless Mind is the story of Joel Barish (Jim Carrey) and Clementine Kruczynski (Kate Winslet). After their breakup - and on an impulse - Clementine contacts Lacuna, Inc., a firm that specializes in removing unpleasant memories from consenting minds. After discovering that Clementine has had the

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[9] Stephen Prince, "Psychoanalytic Film Theory and the Problem of the Missing Spectator," in *Post-Theory: Reconstructing Film Studies*, eds., David Bordwell and Noel Carroll (Madison, WI: University of Wisconsin Press, 1996), 78.

[10] Frank Biocca, "Viewer's Mental Models of Political Messages: Toward a Theory of the Semantic Processing of Television," quoted in Prince, "Psychoanalytic Film Theory," 79.

[11] Prince, "Psychoanalytic Film Theory," 79.

memory-erasing procedure, Joel decides to undertake the same procedure. However, he decides midway through (while under the influence of powerful sleeping pills) he no longer wants the procedure - he wants to remember Clementine. The details of their relationship and break-up are rehashed in Joel's mind as he attempts to hide Clementine in his deepest memories from the Lacuna procedure.

In order to bring us inside Joel's mind, *Eternal Sunshine* relies on effects that are photographic in nature. Some of these effects are achieved using computer manipulation techniques. One scene, dubbed "The Camera Pan from Hell" but Buzz Image Group (the group responsible for some of the digital-image processing and CGI in the film), created a mirror-image effect by matching takes and manipulating single frames to ensure a consistent and photographically credible result.[12] This sequence occurs at the beginning of the mind-erasing procedure, and consists in one shot manipulated four times.

While recalling the last time they were together, Joel and Clementine have a disagreement about her social life and she storms out. After a moment, he chases after her down the street to drive her home in his car. Suddenly, as a car crashes to the ground from above, it becomes clear that Joel is remembering this instance.

o Shot #1: Joel parks the car, gets out, and starts down the street after Clementine. As he is walking down the street, the camera tracks from right to left. The shot is full of visual information - the storefront and sign of the Saratoga Market, pricing signs in the window, and a neat display of cleaning supplies are part of this composition. This is the original data used for the sequence.

o Shot #2: As he comes to the end of the block, his car is parked there instead of at the other end of the block where he left it. The effect is a "mirror image" of the original setting, and involved flipping the original image (from shot #1) 180 degrees and masking the "flip" with a light pole.

o Shot #3: On the third pass, Clementine is walking down the street (the camera tracks from left to right). All the signs over the shops are backward (reversed in their places) and lit, and the price signs have disappeared from the windows. Joel, following Clementine once again finds his car at the end of the block. The same flipping technique is used to return to the physical position of shot #1. Jim Carrey's body was "morphed," using a frame-by-frame tracking technique to align the actor's movement from shot #2 to shot #3.

o Shot #4: Joel tuns on his heel (another cut) and continues back down the street as the camera tracks from right to left, following Clementine into the darkness. This time, the signs over the shops are completely blank. The camera then sweeps back to Joel (a left to right movement). The windows are now empty and dark. The shot is flipped a third time, and CGI is used to empty the store windows of their stuff and darken the insides.

The effect - thanks to the light post, which looks like it belongs on the street - is seamless, and looks very much like a run-of-the-mill street that somehow keeps repeating itself, achieving a dream-like effect. In this case, the varieties of manipulation in this sequence use consistent motion, speed, light, and surface quality

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[12] Catherine Feeney, "Sunshine Dream - Creating the Effects for *Eternal Sunshine of the Spotless Mind*, *Videography* 57:3, April 2004: 54.

to communicate the mirror effect. Because the street (a) matches or agrees with a street in a viewer's reality, and (b) is the same street, despite the systematic removal of information, we have a kind of isomorphism at work in this series of images.

Prince's theory fits neatly with this sequence, because not only must the viewer deal with the effects, but she must also recognize this sequence functions in service of the film's narrative context. In his discussion of avant-garde cinema, James Peterson explains,

Instead of a code-based model of communication, such as semiotics, and inference-based model might better explain our response to the kind of novelty we find in the avant-garde cinema ... An inferential model suggests that communication can take place without codes when, rather than encoding a message, the 'speaker' provide evidence that allows the 'listener' to infer the speaker's intended meaning.[13]

This cognitive reading is appropriate for Gondry's film particularly in the sequences that build an internal correspondence between what is occurring simultaneously inside Joel's mind and outside it. Further, the cognitive approach is well in line with Biocca's research discussed below, and Prince's overriding notions of correspondence. In this case, the correspondence is internal to the narrative logic, but succeeds in communicating to the spectator precisely what is occurring in the memory-erasing process. Prince's theory better accommodates the narrative context these special effects occurs in, where a psychoanalytic-driven theory may not. If the relation of the viewer to the image is symbolic and grounded in the absence of the object, it is possible to interpret any sequence according to its relationship to the viewer, rather than in terms of the whole film.

According to Prince, "The reliability or non-reliability of the perceptual information they (digital images) contain furnishes the viewer with an important framework for evaluating the logic of the screen worlds these images help establish."[14] The "memory" is not eradicated all at once, so there is uniformity between what is going on in Joel's mind and outside it.

Although it does rely occasionally on digital effects, *Eternal Sunshine* is unique in that many of the visual effects are the result of in-camera techniques. These include the distortion of perspective with physical sets (trompe l'oeil effects, the use of trap doors), tricks of editing (elements of the previous shot moved or physically changed), and use of lighting. These effects are used to replicate the inner-workings of the mind.

A scene that relies on plastic effects occurs when Joel and Clementine are hiding in buried memories of Joel's childhood. We see a fully-grown Joel under the kitchen table in an appropriate perspective. This is to say that adult Joel is occupying the same relative space under the table as he did when he was four years old. The sets are constructed to accommodate adult Joel as if he were the same size as a child. This kind of effect is known as a trompe l'oeil effect, a technique used to trick the eye. Like its digital companions, the credibility of this effect depends on the viewer's ability to connect the image with her experience.

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[13] James Peterson, "Is a Cognitive Approach to the Avant-Garde Cinema Perverse?" In *Post-Theory: Reconstructing Film Studies*, 112.
[14] Prince, "True Lies," 281.

It very well may be that the content of a film works as code for love, loss, and the role of memory. It is not clear that the conclusions of psychoanalytic, ideological, or gender-based readings are precluded by adopting Prince's correspondence perspective on images and spectators, but it does indicate that such conclusions are not primary, nor are they the only available ways of assimilating effects in a film. This interpretive framework allows for alternative methods of framing images. In this way it would appear that psychoanalytic criticism and its companion methods are not obviated, but rather supported as one result among many of attentiveness.

Correspondence with memory-states is difficult (and prone to a variety of metaphysical and psychological issues), but Biocca's categories - particularly the "possible world" category - give the viewer a way of processing the image in terms of its relationship with the world around her, despite the obviously tricky nature of the content. A viewer can connect her own experiences of memory and dreaming with the images on screen, thereby engendering a kind of "I've had that experience!" revelation. This multi-dimensional framework, which emphasizes a variety of possible correspondences, makes credible the adult Joel hiding under a table scaled to make him as if he were four years old.

Conclusion

If lying is an action intended to deceive others about a state of affairs or set of facts that only the one telling the lie knows are false, then it from Prince's perspective the use of special effects fails to constitute a lie. Perceptual realism and the attention frameworks he adopts from Frank Biocca help to explain the position of the viewer as part of this transaction. The viewer has available a set of frameworks and prior knowledge that she applies to the image to render it credible.[15] By making this investment in an image, the viewer recognizes the state of affairs as (minimally) unreal, and so participates in - instead of passively receiving - the image.

It is not that the viewer's experience makes the image true, per se, but that the image is justified somehow according to the viewer's interpretive framework. The viewer is able to assimilate the filmic information and assent to the possibilities the world of the image presents. She knows the images aren't true, per se, but she isn't having the wool pulled over her eyes, either.

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[15] A coherence theory of justification provides an epistemological model that accommodates the theory of spectatorship Stephen Prince advocates. Philosopher Robert Audi explains, "On the coherentist view, beliefs representing knowledge do not have to lie in a grounded chain; they fit a coherent pattern, and their justification emerges from their fitting that pattern in an appropriate way." See Robert Audi, *Epistemology: a Contemporary Introduction to the Theory of Knowledge*, 2nd ed., Routledge Contemporary Introductions to Philosophy, (London: Routledge, 1998), 195.