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Bionic Eye: The Resources and Limits of the Cinematic Apparatus

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In 1926, Virginia Woolf, who had been reading and contemplating Henri Bergson's theory of memory and consciousness, wrote an article titled "The Movies and Reality." In it, she described film as an art of dream in which the past can be "unrolled" and "distances annihilated" (Woolf 309-10). Cinema itself made possible *The Waves* (1931) with its floating consciousness and several narrators crossfading in montage. Cinema also suggested narrative techniques to Joyce, Fitzgerald, Faulkner, Dos Passos. Indeed, cinematic thinking has gotten thoroughly mixed up with literature, especially narrative fiction and biography. To study narrative today means to confront a challenge to think cinematically. Conversely, to study cinema means also to reflect on the basic problem of narratology: how discrete elements, or *fabula*, become galvanized into a plot.

Without reducing cinema to a linguistic model, we can still recognize that it functions, like certain poetries, through "images." And the most powerful unifying cinematic image seems to be the human face. As early as 1918, the Russian filmmaker Lev Kuleshov demonstrated that the insertion of a close-up of an expressionless human face at various points in a montage consisting of random objects (a bowl of soup, a child holding a teddy bear, the body of a woman in a coffin, etc.) caused film viewers to attribute emotions to the actor's expression. The "Kuleshov effect" illuminates cinematic narrative, which functions through this device of a floating register of "identification." Perhaps, as Deleuze has said, the face even represents the door through which the self passes to meet itself (*Cinema 1* 67). Certainly, though, the human visage becomes the viewer's door to a simulation of consciousness and memory. Inter-cutting the face (as Kuleshov did) with ever more complex sequences of images, filmmakers have explored this realm of consciousness. The face itself comprises a world in the works of Welles, Bergman, Fellini, and others. As I will argue, the genius of the cinema may lie in its power to evoke the self's doubleness – its struggle to unite with itself in a free and creative present. That struggle is symbolized in the apparatus itself, for the camera is a mechanism that seems to live.

Over the past half-century, Hollywood has enlarged the capabilities of the cinematic apparatus enormously. In commercial films, it has become the viewer's "Bionic Eye," which he/she takes up like the crone in the Greek Myth who shared a single eye with her sisters. But unlike the meager vision the eye afforded those three crones, the cinematic eye has come to seem omnipotent, almost without limits. In the final sequence of *Men in Black*, the camera flies in seconds from the known universe into an alternative one. In *Contact*, Jodie Foster shoots through intergalactic wormholes riding in a transparent eyeball. Obviously, the cinematized world is a constructed one. Understanding its mechanisms has become the task of literature professors, too, for its resources and limits are powerfully shaping what we conceive and how we experience.

The Bionic Eye is not ideologically neutral. Jean-Louis Baudry and Jean Comolli were prime instigators of an ideological critique of the film camera of the 1970s. They traced cinematic technology's roots to the theory of perception and rules of painting promoted by the Renaissance theories of perspective (Baudry 43, 46). It all began with Kepler and Descartes, who saw the eyeball as a "mini-projection system with adjustable focus and a built-in rear-projection screen" (Wees 34). The age of exploration demanded instruments for mapping the courses of ocean voyages, and the *camera obscura* led to the development of a monocular, mathematical theory of visual representation. Painters learned to think of their work as the production of a plane intersecting the rays of light emanating from the object in view. This led to the grid – now commonplace in art classes – with which artists duplicated "reality" more accurately. Because this manner of proceeding eliminated so much that makes visual perception so rich and deep, Andre Bazin condemned it polemically as "the original sin of Western Painting" and Jose Arguelles charged that its goal was the "mechanizing [of] vision, and thus mind" (Bazin 12, Arguelles 25).

Painters can include more than one distance-point and therefore more than one implied point of view in a single painting. And so can cinematographers, through the use of mattes and frame division – that is to say, through the superimposition of images. This does not undermine the basic critique that cinematic images spatialize in an enlightenment-optics way, with the perspectivist's grids and "natural" (i.e., monocular) perspective. Kuleshov himself described cinematic space as a "metrical web" – like graph paper in three dimensions (Kuleshov 10). The cinematic image has lost its oddity for us, and we rarely reflect on its severely limited range: little more than two degrees of the 200-degree angle

of normal vision. The "keyhole effect" of the very tight shot maximizes awareness of this limitation, which does not disappear as the shot widens – rather, it becomes simply less occlusive, leaving us less *consciously* aware of our dependence upon the camera's movement to disclose what lies out of frame. The eye rapidly assesses a wide angle of vision, leaping in split-second saccades. Not so the camera.

Professional camera operators have always had to avoid excessive panning, zooming, and tracking so that audiences do not get vertigo. A breakthrough has occurred in the development of a stabilized "handheld" camera that is strapped to the body of the operator and equipped with levers and pulleys, allowing the camera to communicate rapid movement in a less peculiar way. Such innovations have ameliorated, not fundamentally altered, the restricted nature of cinematic space. Anthropologists have reported that people with no experience of pictorial perspectivism find photographs nearly uninterpretable. We cannot recapture that sense of its strangeness.

The preceding account harks back to Bergson's critique of the film camera as an extension of the spatializing, tool-making ability of the human race. A valuable innovation, it also covers over immediate experience, absorbing and transforming perception: "We imagine perception to be a kind of photographic view of things," says Bergson, "taken from a fixed point by that special apparatus which is called an organ of perception – a photograph which would then be developed in the brain by some unknown chemical process of elaboration" (*Matter and Memory* 31). The problem is that "the very mechanism by which we only meant at first to explain our conduct will end by also controlling it" (*Time and Free Will* 237).

For film theoreticians like Baudry and Comolli, film technology has just such sinister implications. Comolli argued that the apparatus itself embodied a capitalistic ideology (Comolli 128-130). This argument is overdone, and yet even non-Marxists acknowledge that mass-market film encourages each of us "to desire and possess a consumable space from his or her own perspective," as Dudley Andrew has said. The claims of the camera to scientific objectivity valorize the desire of viewers "to rule the world with their eyes just as science itself rules it with knowledge and a bourgeois class rules it with capital" (Andrew 23). Baudry argues that this effect is real and that it is repressed. Here, we have passed from the biological (ocular) to the social-psychological aspect of perception, which has important ramifications for film theory.

This is an important aspect of Bergson's concern over spatialization and mechanism in cinematic representation. Bergson described the most significant fallacy of modern thought as the "cinematographic method" and said that when we over-conceptualize life, a "parasitical self" begins to encroach upon and destroy us, turning us into automatons. From this view, the camera's insectival drone creates insidious, hypnotic, alienating effects.

To interdict such dangers in the film apparatus has been the conscious goal of some avant-garde filmmakers. Stan Brakhage wrote in the 1960s of "deliberately spitting in the lens or wrecking its focal attention" to free the cinematic image from "Western compositional perspective" ("The Camera Eye" n.p.). Ernie Gehr's *Serene Velocity* (1970) is a direct assault on perspectivism. It shows a long corridor whose lines converge on a classic vanishing point. By juxtaposing four-frame shots from the identical camera position taken with widely varying focal lengths (a zoom lens was used), Gehr makes the corridor pulse and stretch and appear to slam itself, shattering the camera's illusion of three-dimensional space (Wees 50-54). John Belton (to whom I am indebted for the main title of this paper) has described the zoom lens as a "metaphor for the disintegration of space through time," because under its influence, "Space is no longer defined in terms of perspective cues and parallax, but in terms of changing image size and time" (Belton 26-27). Sidney Peterson's *The Lead Shoes* (1949) also undermines perspective by employing an anamorphic lens that elongates and foreshortens objects, estranging the viewer's eye from the illusion of three-dimensional accuracy.

Like literature or painting, then, cinema can be self-reflexive. Novels contain letters and other documents. Film employs video or film, as in *Citizen Kane's* newsreel opening (1941). The tendency of film to become "intertextual" is perhaps epitomized in Woody Allen's work. For example, the ending of Hitchcock's *Lady from Shanghai* (already an emblem of the confusion of original and copy, since it is set in a hall of mirrors) plays through the conclusion of Allen's *Bullets over Broadway*. Film also grapples with its own mechanism through symbols. In Hitchcock's *Sabotage*, a young boy's doomed journey to deliver booby-trapped film-cans is intercut with images of clocks and stoplights. Pathetic in itself, the boy's destruction by a clockbomb in a film-can also symbolizes the losing war of freedom against mechanism in an age of mass media. To say mass culture is cinematized is to talk in circles.

Bergson's conception of the self seems perfectly reflected in the cinema's bodiless consciousness: "Itself an image, the body cannot store

up images, since it forms a part of the images" (*Matter and Memory* 196). Film projects a flow of images, a constantly moving consciousness filled with a dual sense of its internal omnipotence and its powerlessness in the world. For Bergson, conscious life means living through two distinct selves, one of which, conscious of its liberty, erects itself into an independent spectator of a scene which the other seems to be playing in a mechanical way. But the duplication does not go through to the end. It is rather an oscillation between two standpoints from which one views oneself (*Mind Energy* 169).

From this doubling of self we receive contradictory impressions: "We act and yet 'are acted.' We feel that we choose and will, but that we are choosing what is imposed on us and willing the inevitable." And because these selves are "logically incompatible," we represent them as two characters, "one of which appropriates freedom, the other necessity: the one, a free spectator, beholds the other automatically playing his part" (*Mind Energy* 169-170). These competing personages – one free, one mesmerized – haunt film's dream.

As teachers of literature and interpretation we must press to make the cinematic as well as the literary experience a fully conscious one. We must nurture readers of everything, and that especially includes film, for today we understand the literary experience in a context imposed by the Bionic Eye. The glimpse art affords into the abyss of time and memory must be understood through writing and speech, even though neither text nor talk will finally tame it. As teachers of literature and language, we face an inevitable confrontation with cinema. Let us not blink.

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