

Touch of Evil and Ecological Optics: Toward a Demystification of Conventional Film Editing Practice

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In the history of narrative cinema, the long take has often been employed to mark significant moments within texts—especially when the shot continues longer than most other shots in a given film. The decision to keep the camera rolling, that is, to go for a significantly extended length of time without a cut, is usually seen as a privileged moment, an occasion for artistic statement. One could imagine a "long-take hall of fame" consisting of those striking moments when cutting is set aside, allowing for some special visual experience to be had: the 360-degree turn leading to the murder of the villain in *Le Crime de M. Lange*, Valli's long, aloof stroll past a hapless Joseph Cotten at the end of *The Third Man*, Jean-Pierre Leaud's extended escape to the sea in *400 Blows*, Godard's unrelenting track down a disaster-strewn highway in *Le Weekend*—the list could go on. But perhaps the most celebrated of all the famous long takes is the opening shot of Orson Welles' *Touch of Evil*. Bordwell and Thompson, in fact, chose this shot as "the classic example of how the long take can constitute a formal pattern in its own right" in their introduction to basic film analysis, *Film Art*.¹ In this paper I will argue that while the shot certainly deserves a permanent and prominent place in the history of film art, its brilliance is such that it stands apart from less sophisticated long takes, even such "classics" as those mentioned above. For the opening shot of *Touch of Evil* is not a "classic" in the sense of employing traditional film practice in an exemplary manner. Rather, it exhibits a remarkable sensitivity to the way we experience movies and the world—a sensitivity which is so faithful to the "movie" (as distinguished from all other forms of art) that it deserves more than what traditional film analysis, mired as it is in the discourses of painting, photography, and literature, can offer. To do justice to the shot, I will propose the application of analysis based on the ecological approach to visual perception.

Bordwell and Thompson, presenting the shot as a "classic example," offer a prose rendering of the action accompanied by a series of stills. After their summary, they announce what has just happened: "The shot has guided our

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response by taking us through a suspenseful process of narrative development."² True enough, but the same could be said for many other shots, or almost any narrative film—in fact, the statement could apply to most literary works as well. What is it about this shot, then, that makes it so attractive? It is not the editing, of course; and when there is no editing to discuss, traditional formal analysis offers the option of *mise-en-scène*. But this notion of what has been "put in the scene" seems to fall short as well. It works well enough for the films of Renoir (one thinks of *Le Règle de Jeu*) or for Antonioni (one thinks of *Blow-up*) and even Welles' own *Citizen Kane*. How many books of analysis include stills from these and other films to illustrate the composition of the frame, the depth of field, the play of light and shadow? Even Bazin's famous reading of *Le Crime de M. Lange*, which privileged the shot over montage, included a diagram of camera- and actor-movement in the sophisticated assassination shot. But if we look at the page in *Film Art* which is filled with stills from *Touch of Evil*,³ we find that too much is missing. Are there simply too few stills? By the time we had assembled enough still photographs to render anything like what we witness on the screen, we would probably be near the number of frames in the shot anyway. Camera movements, including pans, tilts, tracking, and craning are simply too elementary to the dynamics of this shot to be left out. Clearly the shot defies both verbal and graphic summary, at least insofar as the summary would be succinct enough to be of any use in analysis.

One reason that the shot eludes formal analysis is that it parallels human visual processing in ways that we might not normally expect from a film. We have learned to think of visual perception in terms of an eye that works like a camera sending images to the brain. However, if we follow J. J. Gibson in his attempt to consider human vision as a system that involves much more than just the eye transmitting messages to the brain, important differences between camera and human vision become clear.

The most important element in Gibson's optics is an environment filled with light. Without an environment there would be no visual perception. Thus the basis of Gibson's concept of ecological optics is a relationship between the perceiver and the phenomenal world. The relationship depends on a reconsideration of perception that includes a distinction between "looking at" and "looking around." This distinction can be difficult to grasp, for as Gibson explains, it goes against some everyday assumptions:

We modern, civilized, indoor adults are so accustomed to looking at a page or a picture, or through a window, that we often lose the feeling of being *surrounded* by the environment. . . . We do not look *around* We live boxed-up lives. Our ancestors were always

looking around. They surveyed the environment, for they needed to know where they were and what there was in all directions. Children pay attention to their surroundings, when allowed to do so. Animals must do so. But we adults spend most of our time *looking at* instead of *looking around*.⁴

Movies, too, have contributed to our sense of "looking at" instead of "looking around." Continuity editing works because it conflates the two; by "looking at" the separate angles in a shot-reverse-shot dialogue sequence, for example, an editor can simulate "looking around" without the jarring effect of a rapid pan from speaker to speaker.

Again, reliance on *mise-en-scène* has traditionally been valued as the more realistic representation of vision, in which the camera works more like an eye beholding a scene without recourse to the "manipulation" of cutting between different angles. Hitchcock's *Rear Window* may be the ultimate extended treatment of such an approach: but the note that the protagonist is immobile is due to a broken leg. The entire film depends on "looking at" but also, *a priori*, on the elimination of mobility. This would seem to support Gibson's point that visual perception is dependant upon a subject capable of *mobility*, surrounded by an environment, and that "false problems arise from the false analogy between photography and visual perception that everyone has taken for granted."⁵

Welles' camera in the long take in *Touch of Evil*, by contrast, is constantly moving. However, it is not enough to say simply that we are given a *succession* of distinct images to look *at*. Hitchcock does that much in *Rear Window* when his camera pans from window to window, presenting us with a series of distinctly separate images which bear no particular relationship to each other. In *Touch of Evil*, there is a sense of one continuous *environment*. Or, in the language of environmental optics, a sense of an ambient optic array. Unlike *Rear Window*, which privileges a "scene" arranged for the protagonist and his singular position, Welles' shot privileges "surroundings" which contain an infinite set of possible positions.

Because of its emphasis on mobility and surroundings, the shot resists cinema's traditional analytical discourse. However, Gibson's use of "surfaces" to describe what we perceive seems fitting. Rather than discussing what *objects* are chosen by the camera in succession, we might speak of how *surfaces* undergo reversible occlusion according to how the camera, as well as objects, moves in the environment. The beauty of the shot is largely due to a strong sense of continuity, but the continuity is achieved neither through editing nor by banal panning from object to object or event to event. It is achieved by a carefully orchestrated system of reversible occlusions, by which surfaces are continually

hidden and unhidden. This arrangement mimics the way we perceive continuity in the real world, where "to perceive the persistence of surfaces that are out of sight is also to perceive their coexistence with those that are in sight. In short, the hidden is continuous with the unhidden. They are *connected*."⁶

The first moments of the shot depend on the simple occlusion of detached objects (the assassin and the doomed couple) by larger, attached objects (the building). Tension in these moments before the bomb is planted depends on Gibson's postulate about continuous but hidden surfaces, both for us and for the man with the bomb, as the building occludes the couple for us, and occludes the assassin for the couple. But at the same time selective framing and camera tracking are used to occlude surfaces for dramatic effect: as the couple turns to go behind the building, the assassin runs out of the frame, and the camera begins to move in the direction he has taken (screen right). Soon the camera's motion brings the parked car into view, and the assassin re-enters the frame to put the bomb in the trunk. Thus not only do objects in motion provide occlusion; the camera does as well. Throughout the shot, the edge of the frame serves as an occluding surface. This aspect of the shot illustrates an important restriction on the comparison of motion pictures to optic arrays. Although selective framing in the shot is remarkably in line with the fact that "the [visual] field sweeps over the ambient array with progressive gain and loss at its leading and trailing edges, and the ambient structure remains invariant,"⁷ it is important to keep in mind that "the visual system *hunts* for comprehension and clarity. It does not rest until the invariants are extracted. Exploring and optimizing seem to be the functions of the system."⁸ The sense of constant exploration and relentless investigation by the perceiver is crucial to Gibson's visual optics—and of course, when we watch a film our ability to explore the environment is largely overtaken by the camera; "exploring and optimizing" are the functions of the filmmakers. The rules of ecological optics "emerge from the animal-environment system."⁹ Here, however, we are confronted with a camera-environment system. One difference between camera and animal exploited by Welles is that for the camera, the edges of the visual field are clearly discernable. Certainly if I were to take the place of the camera in the environment, at the moment when the assassin runs out of the shot, I would follow him by turning my head and/or body. And as I walked in the direction of his flight I would not aim my visual field at his shadow on the wall, as the camera does, but at him. Thus when I watch the film, I have an "urge to look" which is cleverly frustrated, and the result is a dramatic tension which can only be produced by cinema. Note that this urge to look is not grounded in voyeuristic tendencies linked to the cultural formation of the subject, but in the fact that the visual perception system has evolved as a link between animal and environment. The "suspenseful process of narrative development" in the shot

would seem to depend significantly on a perceptual system produced by evolution and determined by physical reality.

One moment, mid-way through the shot, illustrates this distinction between camera and human perceptual systems rather conveniently: As Mike and Susie stroll down the bustling street, the camera tracks along with them, keeping the couple centered in a medium shot. The camera is slightly ahead of the couple, so it is actually moving backward as they walk forward. Mike and Susie both look around the street—"exploring"—when suddenly Mike's wandering gaze—"optimizing"—settles on something ahead. Whatever he sees is occluded by the frame, but as the camera continues to track, the object of amusement comes into the frame: a small herd of goats has blocked traffic in the street. In this instance, Mike is able to visually perceive the diegetic world in the way described by Gibson: "Perceiving is an achievement of an individual . . . It is a keeping-in-touch with the world, an experience of things."¹⁰ We, however, cannot have the same awareness of Mike's world, precisely because our ability to explore the environment is taken over by the camera. Watching the film, our perception follows a different set of priorities determined by narrative rather than by an animal-environment system. Still, the filmmaker's technique, approximating the human visual processing system as closely as possible, capitalizes on the differences between camera and human perception by capitalizing on the similarities. Information is concealed or revealed as motion in an ambient optic array creates the occlusion, progressive or retrogressive, of surfaces. Interestingly, this is a structuring principle for characters in the story as well as for the camera.

Deep-focus cinematography, of course, is crucial to the construction of the long take. The 18.5 mm lens, as Bazin has put it in a discussion of *Touch of Evil*, "is used with diabolical cleverness and mastery, its optical qualities exploited to the maximum."¹¹ Here again, the ecological approach provides a way of discussing technique in less mystifying terms. Accounting for the physiological functions of the eye in relation to the ambient optic array, Gibson points out that "at all levels at the activities [of the eye] are *adjustments* of the system instead of reflex reactions to stimuli, or 'motor' responses, or responses of any kind, for that matter."¹² The word "system" is important here; it is because the human lens functions as part of a system (which includes the environment as well as the various levels of anatomy) that we never perceive the adjustments made as we look around. The technology of the 18.5 mm lens allows Welles to simulate the sensation of a perfectly focused world—in effect, his lens does the work of the human lens for all the visible surfaces at the same time, so that as we look around the screen, we need not re-focus with our eyes. Meanwhile, the information provided by depth cues satisfies us that our

perceptual system is working as usual. Without the special lens, the same shot would have to constantly rack-focus, bringing some surfaces into sharp relief at the expense of others. This never happens, as far as we are aware, when we look around the world, and its presence in the shot would defeat the effect of an artificial optic array. Thus the presence of a movie camera alone is not enough to allow an approximation of the human visual *system*; several technologies, among them deep-focus lenses and highly mobile dollies and cranes, are needed. "A Man with a Movie Camera" may exploit the manipulatable properties of the cinematic apparatus, but "A Man With a Movie Camera, Crane, Dolly, 18.5 mm Lens, and Proper Lighting" may exploit the fact that cinematography, like human visual perception, is best thought of as a system. Welles' long take is not "diabolical" at all—it is in fact remarkably "ecological."

To realize the uncanny similarities between Welles' cinematography and the ecological approach to visual perception is not to deny the ultimate function of this long take, which indeed "take[s] us through a suspenseful process of narrative development." But even considered as narrative progression, the shot lends itself to an analysis based on Gibson's notions of perception. Along with places, attached objects, objects and substances, we perceive events, "which are the changes of these things."¹³ Gibson observed that when we look around in the world, "events are nested within superordinate events. The motion of a detached object is not the prototype of an event that we have been led to think it was."¹⁴ This idea of nested events is crucial to Welles' long take: as the shot progresses, events and objects are gathered together in a bustling array. The largest superordinate event is the seemingly random movements in the street, full of vendors, cars, pedestrians and buildings, all moving in various directions. The smallest nested event is the ticking of the time bomb, which we know is in the trunk of the doomed couple's car. While we watch Mike and Susie, we also are aware of the car stopping at intersections and at the goats. The fact that these events are nested is important. It frustrates our urge to "read" objects and events, and puts us in the position of "perceiving" them instead. The information is there, but because the camera system is able to present them all together in a constant process of (limited) exploration and optimization, the nested information "resonates" between us and the screen more than it is "transmitted."

An ecological approach to visual perception does not account for the construction of the opening shot of *Touch of Evil* any more than psychoanalytic theories of subject formation and voyeurism account for the construction of *Rear Window*. However, the shot's ability to provide so much information in a continuous flow, without resorting to editing, is remarkable. By not employing continuity editing to achieve a sense of continuity, the shot affords an opportunity to discuss what film editors usually try to achieve. The occlusion and nesting of

surfaces, nested events, and other percepts which seem so remarkable in this shot, may be taken for granted when the flow of surfaces is disrupted by cutting, but they are always important determining factors and should be taken into account. An investigation into "conventional" film editing practice, in the light of ecological optics, should indicate that the rules of technique developed over the past century have in fact been determined as much by the human system of visual perception as by such "ideological" factors as artificial perspective and spectator positioning. We may find that the evolution of editing owes much to our ability to walk around, turn our head, and constantly refocus our eyes. In *Touch of Evil* Orson Welles has, intuitively it would seem, tried to reproduce as closely as possible the human visual system and its environment, and thus exposed some formal aspects of the cinematic apparatus which conventional editing tends to make invisible.

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Notes

1. David Bordwell and Kristin Thompson. *Film Art*, 2nd ed. (New York: Knopf, 1986) 190.
2. 191.
3. 190.
4. James J. Gibson, *The Ecological Approach to Visual Perception* (Boston: Houghton Mifflin Co., 1979) 203.
5. 220.
6. 209.
7. 220.
8. 219.
9. 232.
10. 238.
11. Andre Bazin. *Orson Welles: A Critical View* (U.S.A.: Harper and Row, 1978) 129.
12. Gibson 220.
13. 240.
14. 242.

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