



**IN  
THE  
BLINK  
OF  
AN  
EYE**

A PERSPECTIVE ON FILM EDITING

2<sup>ND</sup> EDITION

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## Why Do Cuts Work?

Well, the fact is that *Apocalypse Now*, as well as every other theatrical film (except perhaps Hitchcock's *Rope*<sup>3</sup>), is made up of many different pieces of film joined together into a mosaic of images. The mysterious part of it, though, is that the joining of those pieces—the “cut” in American terminology<sup>4</sup>—actually does seem to work, even though it represents a total and instantaneous displacement of one field of vision with another, a displacement that sometimes also entails a jump forward or backward in time as well as space.

It works; but it could easily have been otherwise, since nothing in our day-to-day experience seems to prepare us for such a thing. Instead, from the moment we get up in the morning until we close our eyes at night, the visual reality we perceive is a continuous

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<sup>3</sup> A film composed of only ten shots, each ten minutes long, invisibly joined together, so that the impression is of a complete lack of editing.

<sup>4</sup> I was aware, talking to an Australian audience, of the bias inherent in our respective languages. In the States, film is “cut,” which puts the emphasis on *separation*. In Australia (and in Great Britain), film is “joined,” with the emphasis on *bringing together*.

stream of linked images: In fact, for millions of years—tens, hundreds of millions of years—life on Earth has experienced the world this way. Then suddenly, at the beginning of the twentieth century, human beings were confronted with something else—edited film.

Under these circumstances, it wouldn't have been at all surprising to find that our brains had been "wired" by evolution and experience to reject film editing. If that had been the case, then the single-shot movies of the Lumière Brothers—or films like Hitchcock's *Rope*—would have become the standard. For a number of practical (as well as artistic) reasons, it is good that it did not.

The truth of the matter is that film is actually being "cut" twenty-four times a second. Each frame is a displacement from the previous one—it is just that in a continuous shot, the space/time displacement from frame to frame is small enough (twenty milliseconds) for the audience to see it as *motion within a context* rather than as twenty-four different contexts a second. On the other hand, when the visual displacement is great enough (as at the moment of the cut), we are forced to re-evaluate the new image as a *different context*: miraculously, most of the time we have no problem in doing this.

What we *do* seem to have difficulty accepting are the kind of displacements that are neither subtle nor total: Cutting from a full-figure master shot, for instance, to a slightly tighter shot that frames the actors from the ankles up. The new shot in this case is different enough to signal that *something* has changed, but not different enough to make us re-evaluate its

context: The displacement of the image is neither motion nor change of context, and the collision of these two ideas produces a mental jarring—a jump—that is comparatively disturbing.<sup>5</sup>

At any rate, the discovery early in this century that certain kinds of cutting "worked" led almost immediately to the discovery that films could be shot discontinuously, which was the cinematic equivalent of the discovery of flight: In a practical sense, films were no longer "earthbound" in time and space. If we could make films only by assembling all the elements simultaneously, as in the theater, the range of possible subjects would be comparatively narrow. Instead, *Discontinuity is King*: It is the central fact during the production phase of filmmaking, and almost all decisions are directly related to it in one way or another—how to overcome its difficulties and/or how to best take advantage of its strengths.<sup>6</sup>

The other consideration is that even if everything *were* available simultaneously, it is just very difficult

<sup>5</sup> A beehive can apparently be moved two inches each night without disorienting the bees the next morning. Surprisingly, if it is moved two *miles*, the bees also have no problem: They are forced by the total displacement of their environment to re-orient their sense of direction, which they can do easily enough. But if the hive is moved two *yards*, the bees will become fatally confused. The environment does not seem different to them, so they do not re-orient themselves, and as a result, they will not recognize their own hive when they return from foraging, hovering instead in the empty space where the hive used to be, while the hive itself sits just two yards away.

<sup>6</sup> When Stanley Kubrick was directing *The Shining*, he wanted to shoot the film in continuity and to have all sets and actors available all the time. He took over almost the entire studio at Elstree (London), built all the sets simultaneously, and they sat there, pre-lit, for however long it took him to shoot the film. But *The Shining* remains a special exception to the general rule of discontinuity.

to shoot long, continuous takes and have all the contributing elements work each time. European filmmakers tend to shoot more complex master shots than the Americans, but even if you are Ingmar Bergman, there's a limit to what you can handle: Right at the end, some special effect might not work or someone might forget their lines or some lamp might blow a fuse, and now the whole thing has to be done again. The longer the take, of course, the greater the chances of a mistake.

So there is a considerable logistical problem of getting everything together at the same time, and then just as serious a problem in getting it all to "work" every time. The result is that, for practical reasons alone, we don't follow the pattern of the Lumière Brothers or of *Rope*.

On the other hand, apart from matters of convenience, discontinuity also allows us to choose the best camera angle for each emotion and story point, which we can edit together for a cumulatively greater impact. If we were limited to a continuous stream of images, this would be difficult, and films would not be as sharp and to the point as they are.<sup>7</sup>

<sup>7</sup>Visual discontinuity—although not in the temporal sense—is the most striking feature of Ancient Egyptian painting. Each part of the human body was represented by its most characteristic and revealing angle: head in profile, shoulders frontal, arms and legs in profile, torso frontal—and then all these different angles were combined in one figure. To us today, with our preference for the unifying laws of perspective, this gives an almost comic "twisted" look to the people of Ancient Egypt—but it may be that in some remote future, our films, with their combination of many different angles (each being the most "revealing" for its particular subject), will look just as comic and twisted.

And yet, beyond even these considerations, cutting is more than just the convenient means by which discontinuity is rendered continuous. It is in *and for itself*—by the very force of its paradoxical suddenness—a positive influence in the creation of a film. We would want to cut even if discontinuity were not of such great practical value.

So the central fact of all this is that cuts *do work*. But the question still remains: *Why?* It is kind of like the bumble-bee, which should not be able to fly, but does.

We will get back to this mystery in a few moments.

## Don't Worry, It's Only a Movie

Earlier I asked the question, "Why do cuts work?" We *know* that they do. And yet it is still surprising when you think about it because of the violence of what is actually taking place: At the instant of the cut, there is a total and instantaneous discontinuity of the field of vision.

I recall once coming back to the editing room after a few weeks in the mixing theater (where all movements are smooth and incremental) and being appalled at the brutality of the process of cutting. The "patient" is pinned to the slab and: Whack! Either/Or! This not That! In or Out! We chop up the poor film in a miniature guillotine and then stick the dismembered pieces together like Dr. Frankenstein's monster. The difference (the miraculous difference) is that out of this apparent butchery our creation can sometimes gain not only a life but a soul as well. It is all the more amazing because the instantaneous displacement achieved by the cut is not anything that we experience in ordinary life.

We are accustomed to such things, of course, in music (Beethoven was the innovator and master of this) as well as in our own thoughts—the way one realization will suddenly overwhelm everything else, to be, in turn, replaced by yet another. But in the dramatic arts— theater, ballet, opera—there didn't seem to be any way to achieve total instantaneous displacement: stage machinery can only move so fast, after all. *So why do cuts work?* Do they have some hidden foundation in our own experience, or are they an invention that suits the convenience of filmmakers and people have just, somehow, become used to them?

Well, although “day-to-day” reality appears to be continuous, there *is* that other world in which we spend perhaps a third of our lives: the “night-to-night” reality of dreams. And the images in dreams are much more fragmented, intersecting in much stranger and more abrupt ways than the images of waking reality—ways that approximate, at least, the interaction produced by cutting.

Perhaps the explanation is as simple as that: We accept the cut because it resembles the way images are juxtaposed in our dreams. In fact, the abruptness of the cut may be one of the key determinants in actually *producing* the similarity between films and dreams. In the darkness of the theater, we say to ourselves, in effect, “This looks like reality, but it cannot be reality because it is so visually discontinuous; therefore, it must be a dream.”

(Along those lines, it is revealing that the words a parent uses to comfort a child frightened by a nightmare—“Don't worry, darling, it's only a dream”—are

almost the same words used to comfort a child frightened by a film—“Don't worry, darling, it's only a movie.” Frightening dreams and films have a similar power to overwhelm the defenses that are otherwise effective against equally frightening books, paintings, music. For instance, it is hard to imagine this phrase: “Don't worry, darling, it's only a painting.”)

The problem with all this is that the comparison of films and dreams is interesting, probably true, but relatively barren of practical fruits: We still know so little about the nature of dreams that the observation comes to a stop once it has been made.

Something to consider, though, is the possibility that there may be a part of our waking reality where we actually do experience something like cuts, and where daylight images are somehow brought in closer, more discontinuous, juxtaposition than might otherwise seem to be the case.

I began to get a glimmer of this on my first picture-editing job—*The Conversation* (1974)—when I kept finding that Gene Hackman (Harry Caul in the film) would blink very close to the point where I had decided to cut. It was interesting, but I didn't know what to make of it.

Then, one morning after I had been working all night, I went out to get some breakfast and happened to walk past the window of a Christian Science Reading Room, where the front page of the *Monitor* featured an interview with John Huston. I stopped to read it, and one thing struck me forcefully because it related exactly to this question of the blink:

"To me, the perfect film is as though it were unwinding behind your eyes, and your eyes were projecting it themselves, so that you were seeing what you wished to see. Film is like thought. It's the closest to thought process of any art.

"Look at that lamp across the room. Now look back at me. Look back at that lamp. Now look back at me again. Do you see what you did? You *blinked*. Those are *cuts*. After the first look, you know that there's no reason to pan continuously from me to the lamp because you know what's in between. Your mind cut the scene. First you behold the lamp. *Cut*. Then you behold me."<sup>12</sup>

What Huston asks us to consider is a physiological mechanism—the blink—that interrupts the apparent visual continuity of our perceptions: My head may move smoothly from one side of the room to the other, but, in fact, I am cutting the flow of visual images into significant bits, the better to juxtapose and compare those bits—"lamp" and "face" in Huston's example—without irrelevant information getting in the way.

Of course there are limits to the kind of juxtapositions I can make this way—I can't jump forward or backward in time and space (that is the prerogative of dreams and films).<sup>13</sup> But even so, the visual displacements available to me just by turning my head (from the Grand Canyon in front of me to the forest behind me, or even from one side of this room to the other) are sometimes quite great.

<sup>12</sup> *Christian Science Monitor*, August 11, 1973. John Huston interviewed by Louise Sweeney.

<sup>13</sup> But see footnote #16.

After I read that article, I started observing people, watching when they blinked, and I began to discover something much different than what they tell you in high-school biology, which is that the blink is simply a means to moisten the surface of the eye. If that's all it is, then for each environment and each individual there would be a purely mechanical, predictable interval between blinks depending on the humidity, temperature, wind speed, etc. You would only blink when your eye began to get too dry, and that would be a constant number of seconds for each environment. This is clearly not the case: People will sometimes keep their eyes open for minutes at a time—at other times they will blink repeatedly—with many variations in between. The question then is, "What is causing them to blink?"

On the one hand, I'm sure you've all been confronted by someone who was so angry that he didn't blink at all: This is a person, I believe, in the grip of a single thought that he holds (and that holds him), inhibiting the urge and need to blink.<sup>14</sup> And then there is the opposite kind of anger that causes someone to blink every second or so: This time, the person is being assailed simultaneously by many conflicting emotions and thoughts, and is desperately (but unconsciously) using those blinks to try to separate these thoughts, sort things out, and regain some kind of control.

<sup>14</sup> There is that telling phrase from classic cowboy (and now diplomatic) stand-offs: "he blinked." The loser in this mental game of chicken could not hold fast to his single position and instead allowed some other thought to intrude at the critical moment. The blink signals the moment he relinquished his primary thought.

So it seems to me that our rate of blinking is somehow geared more to our emotional state and to the nature and frequency of our thoughts than to the atmospheric environment we happen to find ourselves in. Even if there is no head movement (as there was in Huston's example), the blink is either *something that helps an internal separation of thought to take place*, or it is *an involuntary reflex accompanying the mental separation that is taking place anyway*.<sup>15</sup>

And not only is the *rate* of blinking significant, but so is the actual *instant* of the blink itself. Start a conversation with somebody and watch when they blink. I believe you will find that your listener will blink at the precise moment he or she "gets" the idea of what you are saying, not an instant earlier or later. Why would this be? Well, speech is full of unobserved grace notes and elaborations—the conversational equivalents of "Dear Sir" and "Yours Sincerely"—and the essence of what we have to say is often sandwiched between an introduction and a conclusion. The blink will take place either when the listener realizes our "introduction" is finished and that now we are going to say something significant, or it will happen when he feels we are "winding down" and not going to say anything more significant for the moment.

*And that blink will occur where a cut could have happened, had the conversation been filmed.* Not a frame earlier or later.

So we entertain an idea, or a linked sequence of ideas, and we blink to separate and punctuate that idea from what follows. Similarly—in film—a shot

<sup>15</sup> Dr. John Stern of Washington University in St. Louis has recently (1987) published experimental work in the psycho-physiology of the blink that seems to confirm this.

presents us with an idea, or a sequence of ideas, and the cut is a "blink" that separates and punctuates those ideas.<sup>16</sup> At the moment you decide to cut, what you are saying is, in effect, "I am going to bring this idea to an end and start something new." It is important to emphasize that the cut by *itself* does not create the "blink moment"—the tail does not wag the dog. If the cut is well-placed, however, the more extreme the visual discontinuity—from dark interior to bright exterior, for instance—the more thorough the effect of punctuation will be.

At any rate, I believe "filmic" juxtapositions are taking place in the real world not only when we dream but also when we are awake. And, in fact, I would go so far as to say that these juxtapositions are not accidental mental artifacts but part of the method we use to make sense of the world: We must render visual reality discontinuous, otherwise perceived reality would resemble an almost incomprehensible string of letters without word separation or punctuation. When we sit in the dark theater, then we find edited film a (surprisingly) familiar experience. "More like thought than anything else," in Huston's words.<sup>17</sup>

<sup>16</sup> This can occur regardless of how big or small the "idea" happens to be. For instance, the idea could be as simple as "she moves quickly to the left."

<sup>17</sup> William Stokoe makes an intriguing comparison between the techniques of film editing and American Sign Language: "In signed language, narrative is no longer linear. Instead, the essence is to cut from a normal view to a close-up to a distant shot to a close-up again, even including flashback and flash-forward scenes, exactly as a movie editor works. Not only is signing arranged more like edited film than like written narration, but also each signer is placed very much as a camera: the field of vision and angle of view are directed but variable." William Stokoe, *Language in Four Dimensions*, New York Academy of Sciences (1979).



## Dragnet

If it is true that our rates and rhythms of blinking refer directly to the rhythm and sequence of our inner emotions and thoughts, then those rates and rhythms are insights into our inner selves and, therefore, as characteristic of each of us as our signatures. So if an actor is successful at projecting himself into the emotions and thoughts of a character, his blinks will *naturally and spontaneously* occur at the point that the character's blinks would have occurred in real life.<sup>18</sup>

I believe this is what I was finding with Hackman's performance in *The Conversation*—he had assumed the character of Harry Caul, was thinking a series of Harry's thoughts the way Harry would think them, and, therefore, was blinking in rhythm with those thoughts. And since I was absorbing the rhythms he

<sup>18</sup>One of the things about unsuccessful acting is that the actor's blinks seem to come at the "wrong" times. Although you may not notice this consciously, the rhythm of the actor's blinks don't match the rhythm of thoughts you would expect from the character he is playing. In fact, a bad actor is probably not thinking anything like what the character would be thinking. Instead: "I wonder what the director thinks of me, I wonder if I look okay," or "What's my next line?"

was giving me and trying to think similar thoughts myself, my cut points were naturally aligning themselves with his "blink points." In a sense, I had re-routed my neural circuitry so that the semi-involuntary command to blink caused me instead to hit the stop button on the editing machine.

To that same end, one of the disciplines I follow is to choose the "out point" of a shot by marking it in real time. If I can't do this—if I can't hit that same frame repeatedly at twenty-four frames per second—I know there is something wrong in my approach to the shot, and I adjust my thinking until I find a frame I *can* hit. I never permit myself to select the "out point" by inching back and forth, comparing one frame with another to get the best match. That method—for me, at any rate—is guaranteed to produce a rhythmic "tone deafness" in the film.

Anyway, another one of your tasks as an editor is this "sensitizing" of yourself to the rhythms that the (good) actor gives you, and then finding ways to extend these rhythms into territory not covered by the actor himself, so that the pacing of the film as a whole is an elaboration of those patterns of thinking and feeling. And one of the many ways you assume those rhythms is by noticing—consciously or unconsciously—where the actor blinks.

There is a way of editing that ignores all of these questions, what I would call the "Dragnet" system, from the 1950s TV series of the same name.

The policy of the show seemed to be to keep every word of dialogue on screen. When someone had

finished speaking, there was a brief pause and then a cut to the person, who was now about to talk, and when he in turn finished speaking there was a cut back to the first person who nodded his head or said something, and then when *that* person was finished, they cut back again, etc. It extended to single words. "Have you been downtown yet?" *Cut*. "No." *Cut*. "When are you going downtown?" *Cut*. "Tomorrow." *Cut*. "Have you seen your son?" *Cut*. "No, he didn't come home last night." *Cut*. "What time does he usually come home?" *Cut*. "Two o'clock." At the time, when it first came out, this technique created a sensation for its apparently hard-boiled, police-blotter realism.

The "Dragnet" system is a simple way to edit, but it is a shallow simplicity that doesn't reflect the grammar of complex exchanges that go on all the time in even the most ordinary conversations. If you're observing a dialogue between two people, you will not focus your attention solely on the person who is speaking. Instead, while *that person is still talking*, you will turn to look at the listener to find out what he thinks of what is being said. The question is, "When exactly do you turn?"

There are places in a conversation where it seems we almost physically *cannot* blink or turn our heads (since we are still receiving important information), and there are other places where we *must* blink or turn away in order to make better sense of what we have received. And I would suggest that there are similar points in every scene where the cut *cannot* or *must* occur, and for the same reasons. Every shot has po-

tential "cut points" the way a tree has branches, and once you have identified them, you will choose different points depending on what the audience has been thinking up to that moment and what you want them to think next.

For instance, by cutting away from a certain character *before* he finishes speaking, I might encourage the audience to think only about the face value of what he said. On the other hand, if I linger on the character *after* he finishes speaking, I allow the audience to see, from the expression in his eyes, that he is probably not telling the truth, and they will think differently about him and what he said. But since it takes a *certain amount of time* to make that observation, I cannot cut away from the character too early: Either I cut away while he is speaking (branch number one) or I hold until the audience realizes he is lying (branch number two), but *I cannot cut in between those two branches*—to do so would either seem too long or not long enough. The branch points are fixed organically by the rhythm of the shot itself and by what the audience has been thinking up to that moment in the film,<sup>19</sup> but I am free to select one or the other of them (or yet another one further on) depending on what realization I want the audience to make.

In this way, you should be able to cut from the speaker to the listener and vice versa in psychologically interesting, complex, and "correct" patterns that reflect the kinds of shifts of attention and realization that go on in real life: In this way, you establish a

<sup>19</sup>One way to shift the actual branch points themselves is to place the shot in a different context, where the audience will be thinking (and noticing) different things.

rhythm that counterpoints and underscores the ideas being expressed or considered. And one of the tools to identify exactly where these cut points, these “branches,” may be is to compare them to our patterns of blinking, which have been underscoring the rhythm of our thoughts for tens of thousands, perhaps millions, of years of human history. Where you feel comfortable blinking—if you are really listening to what is being said—is where the cut will feel right.

So there are really three problems wrapped up together:

- 1) identifying a series of potential cut points (and comparisons with the blink can help you do this),
- 2) determining what effect each cut point will have on the audience, and
- 3) choosing which of those effects is the correct one for the film.

I believe the sequence of thoughts—that is to say, the rhythm and rate of cutting—should be appropriate to whatever the audience is watching at the moment. The average “real-world” rate of blinking is somewhere between the extremes of four and forty blinks per minute. If you are in an actual fight, you will be blinking dozens of times a minute because you are thinking dozens of conflicting thoughts a minute—and so when you are watching a fight in a film, there should be dozens of cuts per minute.<sup>20</sup> In

<sup>20</sup> This would make the audience participate emotionally in the fight itself. If, on the other hand, you wanted to create an objective distance—to have the audience observe the fight as a phenomenon in itself—then you would reduce the number of cuts considerably.

fact, statistically the two rates—of real-life blinking and of film cutting—are close enough for comparison: Depending on how it is staged, a convincing action sequence might have around twenty-five cuts a minute, whereas a dialogue scene would still feel “normal” (in an American film) averaging six cuts per minute or less.

You should be right with the blinks, perhaps leading them ever so slightly. I certainly don’t expect the audience to blink at every cut—the cut point should be a *potential* blink point. In a sense, by cutting, by this sudden displacement of the visual field, you are blinking *for* the audience: You achieve the immediate juxtaposition of two concepts for them—what they achieve in the real world by blinking, as in Huston’s example.

Your job is partly to anticipate, partly to control the thought processes of the audience. To give them what they want and/or what they need just before they have to “ask” for it—to be surprising yet self-evident at the same time. If you are too far behind or ahead of them, you create problems, but if you are right with them, leading them ever so slightly, the flow of events feels natural and exciting at the same time.