
Chapter
10
Sequencing Film Events

In recent years it has become increasingly apparent to people involved in education and in the study of how people take on the customs of a group—that is, learn their culture—that understanding how people manipulate *things* is not enough to explain how people do what they do and become what they become. Increasingly, it has become clear that people manipulate objects that stand for, or refer to, things in a variety of ways: that people manipulate symbols, and furthermore that they manipulate symbols—speech and pictures, for example—in different ways, for different purposes, at different times. There seems sufficient evidence that such manipulations and uses of symbols and symbolic forms or modes are patterned, have regularity and structures, and in some cases have rules of use which are understood or used widely enough within a culture to assume the theoretical level of a theory or a grammar.

We shall now turn to an examination of the Navajo films on the level of symbolic structure; specifically to the way in which the Navajos in our study organized the symbolic events into sequences of symbols meant to communicate some meaning to those viewing the film.

In previous chapters we discussed the ways in which they organized themselves to learn about film, the kinds of things they photographed or did not photograph, and the kinds of actions they thought it important to show. We talked about actions, things (such as faces), events and what they did about them. In this chapter we will discuss how they organized and put together the symbolic representation of these things; how pieces of film representing or symbolizing certain events, ideas, and meanings were organized into a complex symbolic form.

Again we must rely on an inadequate lexicon. We will use words like *semantic* and *syntax*, rather than attempt to find new words which would only add to an already confused jargon. We will be using such words in the sense of syntactic and semantic reasons behind the organization of sequences of cademes and edemes. But we shall try to use syntax and semantics in the semiotic or the ethnosemantic sense rather than in a strictly linguistic sense. Syntax refers to the relations between one sign and another (in our case between one piece of film and another) while semantics refers to the relations between a sign and its referent—between a piece of film and what it is a picture of. In the ethnosemantic sense we are concerned with the way our students divided up their world into little pieces of film and then restructured it by putting the film together.

The distinctions here are subtle and by no means dichotomous. Using such notions is only a convenience. It is almost impossible to talk about putting pieces of unexposed film in sequence, although one can imagine certain art films consisting of a sequence of blank film and black (exposed) film in which neither was an image of anything except possibly blackness and whiteness. One might argue that in such a case the film was about “light” and “no light.” As a matter of fact, certain avant-garde filmmakers in the United States are experimenting with just such ideas. Ordinarily, however, one only sequences pieces of film that are about something, and the way one puts these pieces together usually has some relation to what the pieces are about.

We will describe some rules that seem to govern the way the

Navajo filmmakers structured their films, and the way these rules differed from ours. We have already touched upon some of these things in describing our filmmakers' response to the "snake in the grass" sequence, the "how a piñon tree grows" sequence, and the way in which Susie photographed her mother putting the warp on the loom. Certain classes of objects symbolized on film—that is, certain semantic referents—seemed to call for specific syntactical organization. It is these kinds of rules we will be describing. How, and at what point in a cademe, is a piece of film cut apart to make an edeme? What is allowed to follow what? Where does the filmmaker cut two cademes apart because he feels he needs something to go in between?

We found, for example, that the Navajo were joining edemes together in a way quite different from the way "we" do. It became clear to us that our rules were being broken. In fact it wasn't until we noted that the Navajo were doing it "wrong" that we realized the prescriptive strength of some of our rules of syntactic organization.

The following are two (out of many) basic connected rules governing the way we put film together. All American and most Western filmmakers know these rules implicitly; and most explicitly. In later chapters we will offer some evidence that young people exposed to movies and television have learned these rules merely by watching movies.

RULE I: The major purpose of editing and sequencing units is to make it appear that no join exists, so that the viewer sees one continuous piece of "action."

When a filmmaker has two cademes—a long shot of a man walking, for example, and a close-up of a man's feet walking—he will usually try to match action. That is, he will cut the long shot at a point in the walking that can be placed immediately next to a point in the close-up that follows "naturally." If one cuts at the point where the left heel is just about hitting the sidewalk, the next shot will begin with the left heel having hit the sidewalk. The walk will continue *through* the two shots without a break in continuity.

RULE 1A: Things that aren't joined on action are a form of magic, or are funny, and are not "the way things happen."

When something seems to appear on the screen suddenly and without "explanation" such as a glass appearing in a person's hand before his hand reaches the glass standing on the table, we know we have seen something wrong. For example, imagine two cademes. One is a continuous long shot of a man sitting in a chair near a coffee table. He reaches for a glass standing on the table, picks it up, and takes it to his mouth. Another cademe in close-up shows a hand reaching for a glass, picking it up, and taking the glass back toward a mouth. Now imagine that we cut the first cademe at the point where the hand is some distance from the glass and insert the second close-up cademe at the point where the hand holding the glass is returning to the mouth. On the screen we would have a man reaching out in a long shot and suddenly the glass would *jump* into his hand as if by magic and would be taken to his mouth. The technical name for this kind of editing "error" is the *jump cut*.

It is interesting to note that the French and other avant-garde filmmakers deliberately break this rule occasionally. They use the so-called jump cut for some of the same reasons that painters began using "primitive" art forms; or what is more to the point, for the same reasons that poets will say "the achieve of the thing," knowing that the "wrong" grammar will add power to the phrase, and further knowing that *we* know the *rule* and know that the poet is breaking it deliberately.

On the other hand, some of the black teenagers with whom we worked followed the Hollywood-TV rule, Rule 1. In a film made by a group of eleven- to fourteen-year-old teenagers working in a church-related film club set up by one of Worth's students, the teenagers chose to make a film about their daily activities. The cademes were photographed in much the same way as the Navajos worked. They seemed to know what to do, did it well, and worked quickly. When it came to organizing the cademe material, however, they seemed "innately" to use a different sys-

tem than that used by our Navajo students. They organized their film according to the standard Western notion of plot, building to a climax toward the end, employing suspense, and using sequences which in effect provided comic relief. The film ended in tragedy with one of the boys getting hit by a car and killed on the street.

Syntactically the film was impressively similar to a standard television or Hollywood dramatic film. In all cases where one cademe had to be cut to join another, the cut from cademe to edeme was made at that point where the action could be made to flow smoothly. For example, in a fight scene when a long shot of one boy swinging his fist at another had to be joined to a close-up (because the cademe was not complete as far as the action was concerned), the long shot cademe was cut when the fist was in the center of the screen moving from left to right. The close-up cademe was cut when the fist was in the same place on the screen. When the two edemes were shown together, the fist traveled across the screen smoothly, and the editing join was barely noticeable. The black teenagers seemed to have somehow internalized our system of joining events (although they never verbalized it). We can think of no other place than watching films and television where they could have learned our rules for sequencing or "speaking" film.

On the other hand, the Navajo didn't follow the rule of editing on motion or action at all. The notion of smoothness of action or making a connective unnoticeable didn't seem to occur to them, or wasn't important enough to do anything about, except in specific cases. There are numerous examples of people suddenly appearing on the screen, "jumping" from one place to another, "magically" going from a kneeling to a walking or standing position.

It might be thought that these "rule breakings" are evidence of lack of skill on the part of the Navajo, or lack of a conceptual ability at that stage in their filmmaking. That is, that when they "got better" they would "naturally" follow the rule. But remem-

ber the description of Maxine's first editing effort with the seesaw described in Chapter 6. She deliberately and with great skill *chose* to connect her pieces of film so that the motion of the seesaw was uninterrupted. Again, our black teenagers in the Tabernacle Film Club were as much beginners as the Navajo and also were able "technically" to make what professional filmmakers in our culture call smooth transitions. It will become clear that when the Navajo didn't make smooth transitions, or used jump cuts, they weren't breaking our rules at all. They just didn't accept the rule that a jump cut was strange or unnatural. The fact that a symbolic event (walking, or picking up a glass of water) didn't have to *match* the actual event seemed much more reasonable to them than it does to us.

We spent a great deal of time observing the Navaho at their editing tables, trying, at times without questioning at all, to determine their methods of organizing the material. One day toward the end of June, Worth was observing Mike, who was editing his film, *Antelope Lake*. He watched the cademes as Mike ran them through the viewer and watched as Mike cut and joined them. During one period, Mike was working on a sequence in which a boy, who is washing clothes at the lake, walks down the road. This comes at a point between the boy's lighting a fire to warm water and the actual washing sequence. Mike had about four shots of the boy walking (photos 22-25). Each shot was about eight seconds long. He cut pieces from every shot and joined them, but instead of joining them according to the "cut on motion rule" so that the action is continuous, he made each cut a jump cut. That is, the boy walks down the road, then seems to jump magically about twenty feet and continues walking, then jumps again and walks and so on. Worth walked over to the viewer and asked to see what Mike was working on. Mike happily turned the film back, and Worth wound the film through using the rewinds himself. He stopped at the jump cuts, running them

back and forth so that the jump was very obvious and asked, "Do these cuts seem okay to you?" Mike looked at them again, knowing that the "teacher" was probably pointing out a mistake. He took the rewinds into his hands and looked twice. Finally, very puzzled, he said, "Yes, they are okay—what's wrong with them?" Worth asked, "Doesn't it seem funny to you that the boy is over here and then in the next frame he's over there?" Mike looked up at Worth and said, "No."

Worth left Mike and walked over to the Tsosie sisters and asked to see what they were doing. They were working on a section in which Sam was gathering yucca roots for his sing. One shot showed Sam on his knees cutting roots. The next shot, which they had already put in place, showed Sam walking down the road holding the roots. Not only was he walking but Maxine had suddenly appeared at his side (photos 35–38). Worth had tried being subtle about his questions previously, but we had realized that we would have to ask very direct questions in order to get answers at all. (Adair had found a similar situation with the Navajos in a previous research project in medical care. He had found that doctors could not get answers to general questions, like "What color is your spit?" in an attempt to diagnose tuberculosis. The Navajo not only had no words for the generic question but had difficulty handling the generality even when bilingual.)

Worth asked the Tsosie girls, "Doesn't it seem funny to you that at this place Sam is kneeling, and at this place right afterward he's walking?" Both said that it did not seem funny. It seemed perfectly all right. Worth said, "Well, it certainly seems funny to me to have him sitting one moment and walking the next. Don't you think an audience will be confused?" Maxine seemed pleased that she had finally understood the point of Worth's questions and replied eagerly, "But everybody will know that if he's walking in this shot that comes last, he must have gotten up between time he was sitting and the time he's walking."

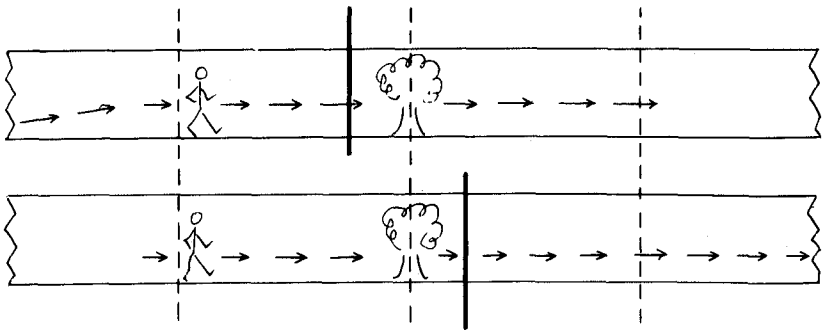
Chalfen later arranged with Mike to go over Mike's finished film, shot by shot. In it there occurred an edited sequence in which the boy in the film walks toward the lake to get his washed clothes (photos 23–25). In the cademe footage, as it came out of the camera, there is one long shot, about ten seconds long, in which the boy walks from the left toward a small clump of trees, passes behind the trees, and just reappears on the right. The next cademe, as it came out of the camera, starts with the boy appearing from behind the trees and walking right, toward the lake. This is followed by a cademe of a still longer (wide angle) view of the boy walking down the road and by another one from another direction. In the first two cademes described, not only is the boy walking toward the tree and passing behind it, but Mike also is panning in the direction of the walk, so that, at the point where the boy is behind the tree, the tree fills most of the frame. As the boy appears on the left side of the screen the tree is on the right in the first cademe. In the second, as the boy appears on the right side of the screen the tree is on the left. In our way of editing, the "natural" place to cut would be while the boy was behind the tree. An editor would cut the first cademe just after the boy moved behind the tree, then cut the next cademe just before he emerged, splicing the two pieces together so the boy walks behind the tree and then emerges again and continues his walk. Thus the boy and the pan would match in action.

Mike edited these cademes as follows. The boy walks toward the tree, but when he is about a second away from the tree, Mike cuts the film. The second shot is cut about a second after the boy emerges from behind the tree. The two edemes are then joined with the resultant jump. The boy appears, as if by magic to jump across the space occupied by the tree. He never goes behind it. Chalfen followed the same procedure that Worth used, asking "Didn't it look funny?" Mike again said "No" in that same puzzled way. Chalfen persisted—pointing out the jump cut twice—and Mike finally seemed to understand what was "wrong," saying, "Well, if I splice the other way, you couldn't see the boy

because he was behind the tree. This shot is about the boy goes down to the lake.”

Since the two cademes overlap in action, Mike had a great choice of points at which he could cut both pieces of film and join them to get the actor down to the lake.

In a small study done by Worth he asked twenty-five students and faculty at Pennsylvania to indicate on the diagram reproduced below at what point they would cut the film to achieve the effect of having the actor get from the left side of the screen to the right side.



The subjects chosen were faculty members in communication, students at the Annenberg School, and members of the anthropology and psychology departments, randomly chosen, with varying degrees of knowledge about editing. Eighteen of the twenty indicated that they would combine the film in *parallel* fashion; that is, no matter where they would cut the first cademe, they would “match” that point on the second cademe. The dotted lines on the drawing represent some of the places where they indicated they would cut. The subjects more sophisticated in film marked the cut as occurring when the actor was behind the tree. This would make the cut the least noticeable.

Two of Worth’s film students, however, marked the diagram for a jump cut, that is, so as not to achieve continuous action. But what is most striking is that both (they did this at different times

and had not spoken to each other) immediately looked at Worth after marking the diagram with smiles on their faces. One said, "Fooled you, didn't I?" and the other observed, "That screws up your experiment, doesn't it?"

Both students knew of our work with the Navajo and were clever enough to see the point of the study without being told. They deduced what it was that Worth was attempting to demonstrate. Apparently they knew the rule of continuous action so well that they deliberately broke it—but couldn't resist telling Worth about it. When he pointed out that they were confirming the hypothesis that continuity of action was a rule for "us," they sheepishly agreed.

Mike, on the other hand, cut the sequence as shown by the heavy line in the diagram.

In many ways this result is similar to that of the Brown-Lenneberg study conducted with Navajo and Harvard students, in which the subjects were given color names for color swatches, consisting of the same syllables, *mo, mo; ma, ma*, but spoken with the vowels varying between long and short *o* and *a*. When the subjects were asked to name the colors with the new names, the Navajos correctly repeated the long and short vowel names for the colors while the Harvard students named two different colors with the same syllable, disregarding their vowel length. When Brown subsequently asked the Harvard students, "Didn't you hear the difference?" they replied, "Sure, but we knew it didn't matter." Their rules for language told them that vowel length was not a significant difference, just as Mike knew that continuity of action was not a significant difference.

*The Horse Has to Come
After the Footprints of the Horse*

Another of the things we tried to learn in interviewing the students at an editing table in our office at the Trading Post was their reasoning in choosing one shot over several others which

seemed to us very similar, or why certain shots “went together” at all when we could see no apparent reason for it. In many cases, we were told merely, “Those two shots (cademes out of the camera) are all right together, but these two need something in between.” This phrase “it needs something in between” was a frequent explanation. It indicated an acute sensitivity about what could go together and what could not, but the students were never able fully to articulate the rules for this. In our analysis of the complete corpus of film shot, we found large sections of film used as it came out of the camera, and then evidently something was shot which demanded separation. The sections of cademe which they used just as it came out of the camera were sections containing innumerable jumps in action. These were the sections where “we” would need something in between. Western filmmaking finds it intolerable in general to continue actions which are discontinuous. We have a special term for the edeme we insert at that point, a *cutaway*.

It was just this point that Worth had tried to explain to Mary Jane when he told her to shoot close-ups of Sam’s hands, face, and cans of sand. So it is not that we do not have the “in between” constraint, but rather that our rules of what specific events need something in between are different from theirs.

One reason, however, for their choice of shots and sequence that seem unreasonable to us might simply be that their knowledge of the world—of nature—is so very different from ours on a simple experiential level. It might have been as difficult for Mike to understand how Worth could edit a subway sequence as it was for Worth and Chalfen to understand how Mike edited the following sequence.

While Mike was photographing his film about a lake, he explained that he planned to walk around the lake, starting at the source and continuing clockwise or sunwise, showing all the things that “happen” at the lake. It was our impression that Mike had made, over the course of several days, a series of cademes of horses, sheep, and what to us looked like several cademe close-ups

sitting and then suddenly walking, represent performers of an action for us. They are walking, or kneeling actions, and for us the logic or linkage between edemes must continue the action. For Mike the boy walking was already linked to an action already defined. In Mike's words, "This shot is about the boy goes down to the lake." For walking *in and of itself* there seem to be no mandatory connections when symbolized in film structure. The shot of hoofprints, however, and the horses or sheep which *must* follow them are mandatory connections because they are connected as "entities linked to actions *already* defined in part" by the preceding shot. The horse and the sheep which followed the hoofprints were mandatory because the hoofprints defined, as Mike might have said, that this shot is about a horse goes in the lake, or a sheep goes away from the lake.

Hoijer further writes, "This division of nature into classes of entity in action or movement is the universe that is given; the behavior of human beings or of any being individuated from the mass is customarily reported by assignment. . . ." (Hoijer 1954)

The hoofprints represent a class of "entity in action or movement," and the horses or sheep are a "being individuated from the mass . . . [and] reported by assignment." The horses and sheep are assigned a syntactic position after the edeme representing a class of entity in action.

In Susie's film about weaving we also find instances of mandatory connection of an "entity in action or movement" being reason for the choice of place to start or stop an edeme or an edeme sequence.

In the sequence in which her mother is rolling the spun wool into balls we seem to have too many shots of a seemingly trivial nature. It takes too much screen time to watch her mother rolling yarn into a ball, just as in the warp sequence we spend too much time watching the knots being tied. In both cases we have to continue seeing this action until the end of the wool is in sight—literally. We have to watch until the very end of the hank of wool is on the ball, or has been knotted. The class of entity in

constrained to certain modes of interpretation even while he thinks himself most free. . . . We are thus introduced to a new principle of relativity which holds that all observers are not led by the same physical evidence to the same picture of the universe. . . . We cut up and organize the spread and flow of events as we do largely because, through our mother tongue, we are parties to an agreement to do so, not because nature itself is segmented in exactly that way for all to see. (Whorf 1952)

Many of the things we have been discussing bear direct relation to the above point of view. It is almost as if Whorf were thinking of filmmaking when he talked about cutting up and organizing the spread and flow of events. It is clear that when we talk about the way Susie shot and organized the sequence in which her mother strung the warp on the loom or the way the Tsoie sisters shot and organized the sand painting or Al Clah his entire film, we are suggesting that "through (their) mother tongue (the Navajo students) were parties to an agreement" to segment nature in a particular way.

Harry Hoijer, a Navajo linguist, might have been explaining in the following analysis of one aspect of the Navajo language why Mike felt it correct or even mandatory to pay attention to the link between a set of hoofprints and their consequent, and not to pay attention to the relationship between one shot of a boy walking and the next.

We are now ready to isolate . . . a possible fashion of speaking peculiar to the Navajo. The Navajo speaks of "actors" and "goals" (the terms are inappropriate to Navajo), not as performers of actions or as ones upon whom actions are performed, as in English, but as entities linked to actions already defined in part as pertaining especially to classes of beings. . . ." (Hoijer 1954)

According to Hoijer there seem to be in this case two types of what we call "action," one seen as entities linked to action already defined and one seen as we do as mere action performed.

The boy in Mike's film walking behind the tree, or Sam Yazzie

action is rolling *all* the wool into a ball, or knotting all the knots. The wool end individuates the action from the mass of wool rolled up or the number of knots.

Examples like these, which can be carried out in many other segments of these films, also point out the value of the Whorf-Sapir hypothesis as one possible method of understanding the way the Navajo present themselves to us in their films. Although much of our analysis stems from a research point of view motivated by what Sapir formulated by writing "Language is a guide to social reality," we do not wish to overstate the point nor to enter the controversy surrounding the Whorf-Sapir hypothesis. For us it is an extremely important heuristic, lending insight to our own development of a methodology by which we can examine the way a people see their world.