THE FILMMAKER'S HANDBOOK

A COMPREHENSIVE GUIDE FOR THE DIGITAL AGE

FOURTH EDITION

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A PLUME BOOK

CHAPTER 13

Picture and Dialogue Editing

My movie is first born in my head, dies on paper; is resuscitated by the living persons and real objects I use, which are killed on film but, placed in a certain order and projected onto a screen, come to life again like flowers in water.

-ROBERT BRESSON

R diting is the selection and arrangement of shots into sequences and the sequences into a movie. It's sometimes thought to be the most important element in filmmaking. On many films, the storyline is substantially formed or re-formed in the editing room, sometimes "saving" the film.

The earliest filmmakers made films from one unedited camera take or shot. A few years later, it became obvious that shots could be trimmed and placed one after another, with the audience accepting that the action occurs in the same setting. The joining of two shots, with the abrupt ending of one shot and the immediate beginning of the next, is called a *cut*. In traditional film editing, the word "cut" applies not only to the transition from one shot to another on screen, but also to the physical cutting and joining (splicing) of pieces of film (hence editing referred to as cutting). In video, the term *edit point* is often used to indicate the point where a cut takes place. When editing on a digital system, the *head* (beginning) of a shot may be referred to as the *In Point* and the *tail* (end) as the *Out Point*.

SOME FILM THEORY

Montage

Perhaps the most developed theory of film comes from the silent era; it's called Russian *montage theory*. The word "montage" is derived from the French and means to "put together" or "edit." The Soviet filmmakers held that the ability to change images instantaneously was unique to film and in fact constituted its potential as an art form. In editing, the image can shift from one person's point of view to another's; it can change locales around the world; it can move through time. The Soviets, for the most part, looked at the shots themselves as meaningless atoms or building blocks and asserted that meaning first emerges from the images through the juxtaposition of the shots.

In the early 1920s Lev Kuleshov, a Soviet film teacher, created experiments to show how the meaning of a shot could be totally altered by its context. He took a series of shots of Ivan Mosjoukine, a famous contemporary actor, looking at something off screen with a neutral expression on his face. He then constructed a few different sequences. In one sequence, he cut from a medium shot of Mosjoukine to a close-up of a bowl of soup and then back to a close-up of Mosjoukine. In the next sequence, the middle shot, called an *insert shot*, was replaced with a shot of an injured girl. Kuleshov's students commented that the last shot in each of the sequences, called the *reaction shot*, showed the actor's great acting ability to convey with subtlety hunger in the first sequence and pity in the next.



Fig. 13-1. Three-shot sequence. (A) The meaning of the actor's expression depends on the insert shot. (B) The meaning of the actor's expression depends on the ordering of the shots. (Carol Keller)

In another of the Kuleshov experiments, a sequence was constructed as follows: an initial shot of Mosjoukine smiling, an insert shot of a gun, and a reaction shot of Mosjoukine frowning. Kuleshov then rearranged the order: first the frowning shot, then the gun, and finally the smiling shot. In the first sequence, the actor's reaction seems to be one of fear; in the second, one of bravery. The important point of these experiments is that the actor's expression is constant, but the viewer attributes changes in emotional states to him on the basis of the editing. A woman looks off screen; there is a cut to a bomb blast and then a reaction shot of the woman. The audience assumes the woman is looking directly at the blast, even though the blast could have, in fact, occurred in another part of the world at another time (see Fig. 9-12). Sergei Eisenstein, the most renowned of the early Soviet filmmakers, felt that film space is the constructed space of montage, not the space photographed in the shot. Film space is more than the simulation of real space; it can also be abstract. It is possible to cut from a shot of Kerensky, who was head of the provisional government, and whom Eisenstein portrays as a villain in his film *October*, to shots of a glass peacock to suggest that Kerensky suffers from the sin of pride. There is no suggestion, however, that the peacock and Kerensky share the same physical space. Two shots, edited together, produce a new meaning, and film space allows for these kinds of metaphorical relationships between images. In addition to narrative content and metaphor, shots can be held together by abstract elements such as movement, tone, compositional weight, and image size.

Similarly, Eisenstein saw film time not as the duration of real movement but as the time set up by the rhythms and juxtaposition of montage. An event may take only a split second in real time, but, as its importance may be great, its duration should be lengthened in film. In *Potemkin*, Eisenstein extends time by showing a crying baby in a carriage teetering on the edge of a steep flight of stairs and then cutting to other shots before returning to the baby. Suspense is heightened by prolonging the event. Real time can also be condensed. Cutting from a horse race to a reaction shot of the crowd (a shot away from the main action is called a cutaway) and then back to the race allows a large portion of the race to be deleted. Similarly, a character's walk will seem continuous if you cut from him walking off screen to a point much further along in the action. Like film space, film time is also a construction created in editing.

Eisenstein also experimented with the montage of very short shots. In *Potemkin*, a sequence of brief shots of statues of lions in different positions cut quickly gives the illusion of their movement. A few frames of an attacking Cossack convey horror. There is no absolute rule for the minimum length of a shot; the minimum depends on the nature of the shot and the context. During World War II, it was found that plane

spotters could recognize a female nude in just one frame, but it took them much longer to recognize a Messerschmitt.

The directors in Hollywood never adopted the Soviet concept of montage in its broadest sense. In Hollywood, a "montage sequence" is a sequence of short shots that condenses a period of time. For example, the hero might be shown growing up through a sequence of five or six shots that show him at different ages. The aspect of montage that was accepted by Hollywood (indeed, the Soviets had discovered it in early American films) was the *three-shot sequence*—that is, actor looks off screen, cut to a shot from his point of view, and then cut back to the reaction shot. Alfred Hitchcock constructed *Rear Window* almost entirely using this cutting technique (see Fig. 9-16).

Montage theory underlies much advertising and some experimental films. The juxtaposition of women, happy teenagers, and upbeat music with automobiles, soft drinks, and other products is used to manipulate consumers. In experimental films, the tradition of montage seems to find new life. In *A Movie*, Bruce Conner cut together *stock footage*—that is, footage purchased from a service (also called *library* or *archival footage*) —from widely disparate sources, ranging from pornography to newsreels, to form a unified whole. Music videos popularized a shooting and editing style with seemingly no rules about how images can be combined. Although the shots come from different times and places and are shot in vastly different styles, the viewer integrates them into a flow.

In *What's Up, Tiger Lily?* Woody Allen dubbed new dialogue into a Japanese action film to change the storyline completely. It is not that the original film loses its meaning. The joke is the ease with which meaning is changed by editing, in this case, by altering the relationship of sound and image.

APPROACHES TO EDITING

While the general public tends to focus on the role of the director and the creative decisions made on the set or during production, the decisions made in the editing room by the editor and director are just as important to the success of a film. As noted earlier, production is a time to gather footage that can be put together in any number of ways. It's in editing that the movie truly takes shape. Editing can have an enormous impact on pace and mood, on content and meaning, and, for dramas, the effectiveness of actors' performances. With a scripted film, the script is a starting point; but as the edited movie comes together, it is the footage and the edited sequences that determine the best way to tell the story, which may or may not follow the script. With documentaries there may be no script at all, and the editor plays a key role in the storytelling.

As the editor shapes the film, he or she must anticipate how audiences will experience the movie, and use structure and pacing to guide them through the story. But when an editor has been really successful, the craft that goes into the film may go completely unnoticed by the viewers. Editor Walter Murch (*Apocalypse Now*) likes to quote director Victor Fleming (*Gone with the Wind*), who said in 1939, "Good editing makes the film look well-directed. Great editing makes the film look like it wasn't directed at all."

Before reading further, be sure to read Style and Direction, starting on p. 332.

Story Structure

Think of someone you know who's a good storyteller—a person who can tell an anecdote, perhaps an event from his or her life, in a way that's engaging, well-paced, clear, funny, or sharp. Good storytellers know what facts you need to understand the story, in what order you need to know them, where to stretch out the tale with specific details, and where to gloss over events to get to the good parts. We all know bad storytellers as well—people who overload their audience with information or leave them confused or focus on irrelevant details—whose stories seem to go nowhere. Good stories have a discernible shape, with distinct *story beats*—moments in which something important happens, a key piece of information is revealed, or emotion is expressed.¹ The audience may not be consciously aware of the story's overall shape or of individual beats,

but they feel them nonetheless. In a similar way, after years of watching different kinds of movies, audiences have instinctive expectations about length and, for feature films, how far the story should have progressed by the ninety-minute or two-hour mark (more on this below).

It's commonly said that every story needs a beginning, middle, and end, but engaging stories can start in completely different ways. Some start broadly, helping the audience get oriented to the time and place, the physical environment, and the characters. Once those things are established, the plot or storyline is initiated. Other stories start much more narrowly, perhaps with a specific action, like a robbery. In this structure, unfolding events pull us along, and as they move forward we learn more about the characters, the environment, and so on.

Filmmakers can sometimes feel pressure to crowd as much information as possible toward the front of the film. This is particularly true in documentary. They want to set everything up, revealing all the *backstory* (history and events that took place before the contemporary action of the film) so the audience can be fully informed and prepared for the film's story. *Expository scenes* are sequences that are primarily concerned with bringing out information. Exposition, while necessary, can bog down the forward movement of a film. One of the chief tasks of the editor is to parcel out information, and good editors understand when to *hold back* details because exposition at a certain point might slow the film down and/or because audiences can find it intriguing to put pieces of the puzzle together themselves.

Stories, whether scripted dramas or unscripted documentaries, are divisible into *acts*. Acts can be defined in various ways, but in general terms, an act is a unit of storytelling made up of a series of scenes that may share a tone and build to a particular dramatic point or climax. In dramas, at the cusp between one act and the next there is often a reversal that sends the story in a new or unexpected direction and builds to a higher level of tension.

In a traditional three-act structure, the first act introduces the protagonist(s) and the *inciting incident*, which sets the story in motion. The second act brings conflicts or obstacles that prevent the protagonists

from reaching their goals. The third act builds to a major climax, then resolves in a denouement.

People debate about how many acts a dramatic film should have, and even whether asking that question implies a formulaic approach. Nevertheless, it's helpful to look at where the acts fall in your story and how you can sharpen the flow and intent of each one. Each act should have a set of ideas and objectives, and scenes that don't contribute to that intent may need to be cut. In television dramas, acts are defined by commercial breaks, with the goal of locating a key plot point or cliffhanger at the end of each act, to keep viewers from changing channels.

With both dramas and documentaries, it's very helpful to chart out the scenes in the movie and look at their structure in terms of acts. Some editors like to make a three-by-five-inch card for each scene and put the cards on a bulletin board so they can quickly see the overall structure and easily rearrange individual cards. Some use software like Final Draft to display and arrange scenes. You can also create a *continuity*, a list of all the scenes, with any word processor.

For more on story structure, see the screenwriting books in the Bibliography.

Joining Sequences

One traditional method of editing connects shots into a sequence with straight cuts and then brackets the sequences themselves with *fades* and *dissolves*. Fades work like theater curtains opening and closing on an act or like a sunset followed by a sunrise. Dissolves, on the other hand, suggest a closer connection between one sequence and the next. Like fades, dissolves convey the passage of time—sometimes short time gaps within a sequence and sometimes long periods, as when a close-up of a person dissolves into another close-up of the same person shown at a much older age. When dissolves are used within sequences to signal short time gaps, their only function often seems to be to avoid jump cuts. Sequences can also be joined by wipes and many other visual effects (see Chapter 14).

In contemporary filmmaking, two sequences are typically joined with a straight cut (that is, one follows directly after the other with no dissolve or other effects). This sometimes creates the problem of distinguishing cuts *within* sequences—those that signal no significant time change from cuts *between* sequences where there is a significant change of location or time. Filmmakers like Luis Buñuel and Alain Resnais like to explore this ambiguity. On the other hand, even with straight cuts there are many cues to signal the audience that the sequence has changed, including differences in sound level, lighting, dress, locale, or color. Even dream and fantasy sequences may be introduced with a straight cut, unlike in the American films of the 1930s and 1940s in which they would be signaled by eerie music and a *ripple* or *oil dissolve*. It's not unusual to see a contemporary movie with no effects other than a fade-in at the opening of the film and a fade-out at the end.

Another way to join two sequences is to *intercut* them (also called *parallel editing*). For example, the perils of the heroine heading toward a waterfall in a canoe are intercut with the hero's race to arrive in time to save her (always just in the nick of time). We cut back and forth to develop two threads of action simultaneously. More on this below.

Beginners tend to think of scenes as separate units to be shaped and polished individually. Always keep in mind the story as a whole and how one scene can best draw the audience forward to the next one. As discussed above, cuts between sequences can be used to make associations between them or suggest metaphors. In *The Graduate*, Dustin Hoffman pulls himself up on an air mattress in the pool and lands in one motion—across a brilliant cut—on Anne Bancroft in bed. Be attentive to any kind of similarities between the last frames of one scene and the first frames of the next in terms of where characters are in the frame, color, sounds, movement. You can create momentum and deliver meaning by drawing connections between scenes that might otherwise seem unrelated.

Continuity Editing

As discussed in Chapter 9, invisible or match cutting usually refers to

the construction of sequences (or scenes) in which space and time appear to be continuous. Typically, both fiction and documentary sequences are match cut to appear continuous. On a film set, however, shots are rarely done in the order that they will appear in the final movie and it is the director's responsibility to shoot scenes with adequate coverage so that the editor can construct continuous sequences. On a documentary shot with one camera, every cut alters continuous time, which may be disguised in editing or not, depending on the context.

There are various ways to make action seem continuous. If the eye is distracted, a cut becomes less noticeable; therefore, editors "cut on the action" (a door slam, punch, or coin flip) to hide a cut. The action draws the viewer's attention away from the cut and from any slight mismatch from one shot to the next. Overlaps of action allow the editor to cut just before or just after the action or on the action itself. Cuts tend to propel time forward and to pick up the pace. Sometimes the action looks too fast due to cutting, and the editor must include a few frames of action overlap between two shots.



Fig. 13-2. In the opening sequence of *Rashomon*, the camera moves from an establishing shot to close-ups, orienting the audience to the locale and environment before delving into details. At each cut, there is a significant change of camera position, focal length, and/or angle, which helps maintain the sense of continuity in time and space within the scene. Compare to Fig. 13-3. (The Criterion Collection)

Changing camera angle and focal length between consecutive shots disguises discontinuities and may make the cut "work"—that is, look as though it matches and is not jarring. Cutaways and reaction shots are tools that maintain continuity between shots that do not match. Cutting away from the main action to a reaction shot allows you to delete uninteresting dialogue or mistakes in the main action. Cutaways and reaction shots also allow you to control the tempo of the film through editing, which would be impossible with a continuous take.

THE JUMP CUT. The sequence of cuts that moves from long shot to medium shot to close-up is generally made up of match cuts. In other words, each of the cuts appears to occur in the same space and time period. However, when there is a noticeable discontinuity between two similar shots, that may be considered a *jump cut*. For example, to cut from a shot of a person sitting to a shot of the same person standing in the same spot creates a noticeable jump in time. If the image size and angle don't change very much from one shot to the next (for example, two medium shots of the same person cut next to each other), that may also be considered a jump cut. There is no fixed rule about when joining two shots will result in a jump cut, but generally speaking the smaller the change in image size or angle, the more likely it is the cut will seem discontinuous. Also, whether or not sound (including background sound) seems continuous from one shot to the next makes an enormous difference in whether a cut seems to jump or not.

The director Jean-Luc Godard, in the early 1960s, began to use the jump cut as a creative element in his filmmaking. He cut out what he felt were boring middle parts of shots or spliced together two close-ups of the same character with a definite jump in time. Not only did these jump cuts comment on the nature of film space, but they also created exciting rhythms that seemed to express the feeling of modern life.



Fig. 13-3. In this sequence from *Breathless*, there is no change in focal length or angle from one shot to the next, creating a jump cut that results in an obvious discontinuity in time. (The Criterion Collection)

Today jump cuts are used widely in sequences where match cuts were traditionally used, and audiences have come to accept them as a routine part of the visual language of editing. Some films establish a visual language in which jump cuts are part of the editing grammar throughout the film. In some sense, the meaning of jump cuts is disappearing since they no longer really command attention. On the other hand, many movies are constructed using continuity editing from the outset, and the sudden use of a jump cut would seem jarring or even an error. While shooting, it makes sense to cover yourself with alternate shots, cutaways, and the like, rather than be forced to resort to jump cuts to salvage a sequence. Sometimes a quick dissolve or a fade-out/fade-in is used to cover what otherwise would be a jump cut.

Screen Direction

A basic rule of film editing is to try to preserve screen direction at cuts (see The 180-Degree Rule, p. 344). If you cut from person A looking off screen to the right to a shot of person B also looking to the right, it will appear that they are both looking in the same direction rather than at one another. Much of the directional information in a chase sequence comes from screen direction.

When two shots violate the 180-degree rule and there is no shot available where the camera crosses the line, you can separate the shots with a neutral shot (for example, a shot taken on the line).

In editing, if a character walks off screen right, he should generally

come in from screen left to appear that he is continuing on his walk (if he comes in screen right, the audience may think he's returning to his previous spot, though in many cases this is not an issue). Screen direction to the right is usually accepted by audiences as meaning travel from west to east; to the left is travel from east to west. A plane flying from New York to Paris is typically shown flying left to right.

Intercutting

The idea of intercutting is to advance two or more scenes at the same time by cutting back and forth between them, which at times may involve placing sound from one scene with the picture from another. Done right, intercutting can be a powerful tool to develop several ideas or plotlines at once, helping the audience draw connections between the different ideas, using one scene to provide a kind of commentary on another. Done wrong, intercutting can be confusing or irritating.

Figure 13-4 is a sequence from Out of Sight (directed by Steven Soderbergh, edited by Anne V. Coates) that shows an interesting use of intercutting, screen direction, and other shooting and editing concepts.² The sequence begins as George Clooney sits down with Jennifer Lopez in a bar—we see a two-shot followed by angle-reverse shots of each actor. As the sequence progresses, the framing of their shots becomes tighter, something that is commonly done as scenes develop and become more intense or intimate. In frame 6 we cut to Lopez putting her hand on her glass. In frame 7 Clooney puts his hand on her knee, which might appear to be taking place under the table. In frame 8 we see Lopez with reversed screen direction (and also a warmer color balance), the implications of which—and location of the shot—are unclear at first. The conversation continues in the sound track and frame 9 is clearly still in the bar. However, as the sequence goes on we realize that their seductive talk at the table is being intercut with the next scene in her hotel room in which they go to bed together. The use of very close shots plays with the ambiguity of which space we're in. The intercutting moves the story along by combining the seduction with the results-it's economical (relatively little of the hotel room scene is shown) and a deft way to hint

at what they're thinking about while they talk. Also used in this sequence and elsewhere in the film are very short freeze frames that call attention to little moments, as though remembered by the characters or singled out by the filmmaker for our notice. Frames 17 and 18, though not contiguous in the sequence, make a lovely parallel by pairing profile shots, first at the table, then in bed.



Fig. 13-4. Intercutting. Selected shots from *Out of Sight*. See text. (Universal Pictures)

DIALOGUE EDITING

Dialogue and Scene Structure

In both fiction and documentary, dialogue editing is part of shaping the basic storyline. What gets said, and when, is a fundamental part of moving the story ahead. Careful editing of dialogue can have a big impact on individual sequences, even if the scene has been carefully scripted.

Unlike stage plays, which may include long speeches that work well when delivered to a live audience, film dialogue tends to work best when it's quite simple and spare. Images, facial expressions, and juxtapositions of editing should tell the story as much as dialogue, when possible. In documentary, even expository material usually plays best when pared down to essentials. For more on this, see Script Preparation, p. 354.

When editing a scene, look for places where you can remove unnecessary dialogue. Sometimes you can begin the sequence after most of the setup has already taken place, doing away with unneeded exposition. Sometimes a pivotal line can be moved to the beginning of a sequence, allowing the rest to be made more succinct. Real people often speak with false starts, digressions, repetition, long pauses, or uninteresting detail; people on screen (whether they're in documentaries or dramas) generally need to be a lot terser to hold audience interest. Find places where a look from one character to another might replace dialogue. Let the audience fill in the details.

The use of simple cutaways is the most common method of condensing or rearranging speech. A three-shot pattern is used. While one person is speaking, we cut to a person listening or to another relevant shot. During the cutaway, the speaker completes one thought and the sound cuts to another sentence (to the audience this sounds like the normal flow of speech). Before the picture cuts back to the speaker's face, pauses, words, and whole sections of dialogue can be removed or added. The editor can construct any number of possible sentences from the collection of recorded words. Sometimes cutaways are not needed to condense dialogue: a match cut or jump cut may work just as well.

Cutting away from sync-sound dialogue can be a useful tool for providing a sense of dynamic flow in a conversation. Say you cut from one person asking a question to a shot of someone else responding. If the picture cuts from the first person to the second before the question is finished, the editing may take on a more natural, less mechanical feeling (see Fig. 14-25). Showing the person being spoken to, and not just the person speaking, can give the audience insights into the characters as well as clues on how to interpret what is being said. Hitchcock insisted that what is said on the sound track should contrast with what is seen. Cutaways may be chosen to provide an interesting counterpoint to the spoken dialogue.

When the sound cuts before or after a picture cut (instead of in sync with it) this is called a *sound overlap*, *split edit*, or *L-cut* (see Basic Sound Editing, p. 584). Sound overlaps play a big part in creating the illusion of continuity across cuts (see Sound and Continuity, p. 642).

Replacing Dialogue

It's essential that the audience be able to understand spoken dialogue. Bad sound and unintelligible dialogue can quickly alienate viewers and make them lose interest in the movie. Listen critically to your dialogue tracks and avoid using takes that are hard to hear (for more, see Evaluating the Sound Track, p. 642).

In fiction films, where the pacing of dialogue may be quite consistent from one take to the next, it's often possible to substitute the sound from one take with that of another (while keeping the picture from the original take). This can be used not only to improve sound quality, but to find better performances as well. Pauses between words usually need to be trimmed or expanded slightly to maintain sync.

When location audio on feature films is unacceptable, dialogue tracks may be replaced using *ADR* (*automatic dialogue replacement*), also called *looping*. Actors are brought into a sound studio to redo their lines

while watching repeating loops of picture. An *ADR cue sheet* is prepared that lists every bit of dialogue by timecode with space to indicate best takes when they're recorded. In the session, ADR software plays three beeps before each bit of dialogue and a visible streamer goes across the screen, which cues the actor to start speaking. It's easier to do short sections, but actors may get into character better with longer passages.

ADR can be slow and expensive. Often the timing is wrong or the voices sound "canned" and unnatural. The dialogue must be mixed properly with Foleys or other sound effects to make the takes believable and to try to match them with the ones recorded on location. Software such as Synchro Arts' VocAlign and Adobe Audition can automatically adjust the timing of a redone take to match the pacing of the original take. During sound editing, the ADR lines are put on their own tracks and the original audio is moved to the *X* and *Y* production dialogue tracks in case the director wants to hear them.

When dialogue contains swear words that are unacceptable to a TV network, there are various solutions to creating a *soft version* of the film. In a drama, the actors may record similar but inoffensive words during production that can be edited in when needed; or this may be done in ADR. For a documentary, you might choose to edit in a beep sound over the offending word (which makes it very clear what you're doing) or you might simply drop the audio for an instant (but be sure to have some tone underneath). Some networks require that people's lips be blurred if you can see what they're saying without the sound.

Cutting Dialogue Tracks

When editing dialogue, it's often necessary to separate words that are spaced closely together on the track. This is a skill that improves with practice. Use the NLE's audio waveform display to help locate the beginning and end of a word (see Fig. 14-24). Sometimes you can't avoid clipping a word—perhaps because someone else starts talking—which sounds jarring (chopped-off words are sometimes called *upcut dialogue*). Often a two-frame crossfade can make an otherwise awkward cut sound natural. Some NLEs can cut within a frame (subframe editing), which

may make a cleaner cut. If a word is cut off, sometimes you can find a different take where the same word appears and substitute the word or even just the end of the word. Be attentive to breaths between words—avoid cutting in the middle of a breath. It's often better to leave the whole breath in place and fade it down quickly.

Narration

Narration, or *voice-over* (*VO*), is used in both documentary and fiction. It may be used to deliver information, provide the point of view of an unseen character, or allow an on-screen character to comment on the action.

Narration should be kept simple and clear—it shouldn't sound "written." When writing narration, practice speaking it aloud to be sure it sounds like natural speech. Avoid complex phrasing or vocabulary that taxes the audience's ability to understand.

Narration sometimes works best when woven in with sync sound from the scene. Look for places where you can float a line of narration, then bring up sync sound, then run another line of narration. This needs to be done carefully—if the narrator speaks over a close shot of someone else talking, it can be distracting.

Editors or directors often record their own voices as a "scratch" narration during editing that will be replaced by the actual narrator after the picture is locked. Many NLEs have a voice-over or direct recording tool that allows you to record a scratch narration straight to hard drive, while watching the picture if you want.

Narration recording sessions should be logged to keep track of good and bad takes; often you want to combine parts of several takes. Recording narration with timecode facilitates logging and editing.

Ideally, final narration should be recorded in a sound booth to get high-quality, clean sound with no background noise. Some narration sessions are done while watching the picture, but this can be distracting and is usually not necessary. Instead, prepare your scratch narration to be sure the copy fits properly in each scene, then record the final narration at a similar pace. You can bring a stopwatch to the session to ensure the narrator reads at the same speed. If the recorded VO is too slow, you'll need to edit out pauses between words or perhaps extend the picture to make it fit. See p. 457 for narration recording suggestions.

See Chapter 15 for editing music and other sound editing concerns.

THE EDITING PROCESS

The editing process varies by type of production, type of editing equipment, and individual editors' preferences. In the sections below, procedures from different types of productions are discussed together.

The Editing Team

Today many independent filmmakers, journalists, and corporate videomakers edit by themselves on a laptop or desktop system. A Hollywood feature, on the other hand, will have a large hierarchy of editors doing specialized tasks in several locations. It's instructive to see how that system is organized, even if you're working on a much smaller team.

In the studio system, the *supervising film editor* oversees the entire organization. Under that person are one or more *film editors*, a *supervising sound editor*, a *music editor*, and a *supervising VFX* (*visual effects*) *editor*. Under each of those people may be several other editors. For example, sound editing may be done by a *dialogue editor*, an *FX* (*effects*) *editor*, and a *Foley editor* (see Chapter 15). Under those editors may be several assistants, apprentices, and production assistants.

On a small team, the editor may be responsible for a number of those tasks, and assistants do things like manage data and hard drives, synchronize rushes, keep logs, and output files and DVDs when needed for screenings.

When the picture and sound for a project are stored on shared drives that can be accessed by several editing systems, picture editors, dialogue editors, effects editors, and assistants can all work on the project at the same time and easily pass updated files back and forth.

The Editing Schedule

On feature films, it's typical for the editor to begin cutting during production, both to provide feedback for the director on the shoot and to shorten the overall schedule. The editor will produce an *editor's cut*, which becomes the *director's cut* after the director has had a chance to view and make changes. On some productions, editing begins after the shoot has wrapped. Projects vary widely in terms of how long editing takes. For a feature film, the DGA (Directors Guild of America) contract allows ten weeks, or a day of editing for each two days of shooting, to prepare the director's cut. Many films are edited much faster, and some slower.

Unscripted documentaries may begin editing during production, but it's often only after most of the material is shot that the film can really be shaped. Many documentaries are essentially "written" in the editing room (whether or not there is literally writing involved for, say, narration). Independent documentaries often take months and sometimes years to edit; a span of time that is not uncommonly punctuated by downtime for fundraising.

The Editing Room

Editing equipment is discussed in Chapter 15. The editing room should have a comfortable workstation for the editor and ideally a large monitor and viewing area for other members of the production team.

Make certain all the material for the project is clearly labeled with the (working) title of the production, the name of the production company, and any reel, roll, or drive numbers. The backup files of all camera footage and any camera original master tapes and/or camera original film footage should clearly labeled as such and stored in a safe place—preferably offsite, in a storage facility, a lab vault, or postproduction house.

Organizing Material

Editing involves juggling many elements including picture, production audio, music, effects, and so on. As editing goes on there may

be several versions of the movie in different forms. It's essential that the editor be able to quickly locate anything that's needed. Many editors create their own log that accounts for all the material in the editing room along with their own notes about takes and performances. Many other tools and techniques are available for organizing and identifying editing assets:

- On a dramatic film, the script supervisor will prepare a continuity script that shows the editor how each scene was covered in terms of camera angles and takes. There will also be an editor's log and the script notes (see p. 377). Camera and sound reports also indicate what was filmed and recorded, along with notes (see p. 377).
- On a documentary, there may be a log of what was shot or topics discussed in interviews. Verbatim transcripts are usually made of any interview material.
- Various applications let you review footage prior to editing. Some, such as Digital Heaven's MovieLogger and Adobe Prelude, can capture timecode and mark In and Out Points that can be exported to the NLE. Sometimes directors use logging programs or NLEs to assemble their preferred takes into a sequence, then pass that to the editor. Intelligent Assistance's prEdit allows a director to make selections from a transcript, rearrange them, see the associated video clips, and export the sequence to an NLE. On a documentary or reality program with lots of footage, assistants may log the material for the editor.
- Several programs can phonetically index your media so that you can type in a phrase and the software will find every shot or section of audio media that contains the phrase. Avid's PhraseFind and AV3's Get are two examples. Avid's ScriptSync goes a step further in synchronizing the text version of a feature script with every take of audio or video media that was recorded for that part of the script. You can quickly find all the takes recorded for any section of dialogue. On a documentary, you can use these apps to go quickly from the transcript to the relevant sections of media. Adobe

Premiere Pro can automatically generate a written transcript from your media, but in the current version it's far less accurate than a human transcriber (albeit, far cheaper too) so the document will need some touching up by hand.

- Smart use of metadata (see p. 242) is essential for wrangling large amounts of media. NLEs have increasingly sophisticated tools for identifying and searching for media based on different labels and criteria. For example, starting with version X, Final Cut Pro allows you to assign keywords to clips or sections of clips, such as "interviews," "exteriors," or "shots of Zoe." You can then easily find any material that has that particular keyword, regardless of when it was shot or where it is on your system. Some NLEs have face-detection capability; after the system analyzes the footage, it can indicate which shots have one or more people in them.
- For projects shot on film and edited digitally, a shot log will usually be generated in the telecine for every camera roll, correlating key numbers and timecode numbers (see p. 693). This log should be checked for accuracy when loading material into the NLE (see p. 698).

See Chapter 14 for more on organizational systems.

Selecting Shots

As useful as they are for organizational purposes, production logs and continuity scripts can sometimes get in the way of editing judgments. On the set, directors indicate the takes they like, often having seen them only once. Sometimes the director may be attached to a shot because it was hard to get. The editor, on the other hand, can bring to the project a fresh set of eyes, unbiased by what took place during production. Some editors prefer *not* to view dailies with directors so they can form their own opinions about what works and what doesn't. In this case, the editor may put together a first cut from the script and then discuss it with the director. Similarly, though it may save some money not to include or transfer takes considered "bad" on the shoot, these takes can be a gold

mine to the editor who may be looking for something very specific to solve an editing problem. A take with a bad line reading may make a perfect cutaway. The dead air before a slate may supply just enough room tone to fill a hole.

In his book *In the Blink of an Eye*, Walter Murch talks about an interesting, unexpected drawback caused by the ability of nonlinear editing systems to instantly locate any shot. In film and linear videotape editing, you're forced to wait and watch while fast-forwarding to find a shot. NLEs save this "wasted" time, but that may deprive you of some serendipitous discoveries—shots you weren't looking for that trigger new ideas for the cut. You can do something similar with an NLE by making a sequence of all the unedited takes together, forming a string of rushes that can be easily viewed from beginning to end.

On documentaries, sometimes producers or directors go through a transcript marking up the bites they want, creating a script before editing begins. If done without actually watching the footage, this can be tremendously misleading, since something that reads well on the page may actually sound terrible, or can't be cut where you want because of the way the words were spoken. Also, working straight from a transcript can lead to visually dull editing.

All of these are reasons to avoid too much "preselecting" of material prior to real editing.

That said, it must be pointed out that on some projects, particularly in news and documentary work, the edit is highly determined by preselection. The director may view the footage and create a *paper cut* or *paper edit*—a list of the selected shots or interview bites in their proper order, identified by timecode; or, as noted above, an NLE or other app can be used to actually assemble shots. Starting with this selection, the editor then puts together the sequence, tunes the transitions, and makes other adjustments. If your budget is limited, this technique can save a lot of time and money in the editing room.

PICTURE AND SOUND QUALITY. You must always try to translate what you see and hear on the editing system to what the

audience will see and hear in the finished movie. Sometimes the editing system is not a reliable indicator of what the footage will look like.³ When using a small monitor or editing with a low-resolution codec, fine details may be harder to see and landscapes and detailed shots may be harder to read. Wide vistas or even medium shots that may ultimately look great when the project is shown at high resolution on a bigger screen can seem paltry during editing. The need for good sound quality is noted above. Bear in mind that small speakers and fan noise of an editing system can mask a lot of detail in the original audio recording. You may not be able to hear problems or even desirable-but-quiet sounds (see Chapter 15).

From Rough Cut to Picture Lock

Different editors have their own process for sculpting a movie from the footage that comes out of the camera (the dailies or rushes), and different projects may call for different approaches. Start by organizing the bins or folders in the NLE's browser. You might create a bin for every scene as well as separate bins for music, stills, visual effects, sound effects, and the various cuts (sequences). In Final Cut Pro X, there are no bins, but you can use keywords or events to organize the different elements.

The next step is to view the dailies, log them if necessary, and then divide the material into the shots you want to use (the *selects*, *in-takes*, or *ins*) and the shots you put aside (the *outtakes* or *outs*). Some editors like to mark and rearrange clips in the NLE's browser; others immediately start adding the in-takes to a timeline and begin building the cut.

An *assembly* (sometimes called a *string-out*) puts the shots in the order called for by the script. For unscripted material, an assembly may simply be all the sequences in chronological order. The *rough cut* is the first attempt at shaping the film. For scripted films, the assembly and first rough cut may be essentially the same thing. In a documentary, the rough cut may be made by shortening and reordering the sequences from the assembly. The editor usually attempts to put together the rough cut fairly quickly, worrying less about the pace of scenes and getting

everything to work well, and concentrating more on establishing the overall direction of the work. Most editors prefer to edit rough cuts on the long side, in order to try out shots and scenes, even if they're questionable and likely to be dropped later. Rough cuts are usually a great deal longer than the final film will be. This is nothing to worry about. Starting loose and then refining is often the best way to proceed.

As the movie continues to be edited and refined, you may have several rough cuts. You may want to save old versions for comparison be sure to name each version in a clear way so you can tell when it was made and what type of cut it is (such as editor's cut, director's cut, etc.).

When the basic scene order is in place and you start polishing individual sequences and transitions, this is called *fine-cutting*. It's usually easier to fine-cut and pace individual sequences after you've seen the overall flow of the rough cut. As you continue to work, the rough cut becomes a *fine cut*.

Some people prefer to fine-cut from the start of editing instead of making a rough cut. Even though this approach requires more time to complete the first cut, you may be better able to judge the editing and whether scenes are working if you get them relatively tight as you move forward. The two approaches have been compared to carving a work out of a mass of material versus building up a structure piece by piece. With experience, you'll find what works best for you.

As you progress, a continuity (also called a *reel continuity*) should be prepared, which is a list of all the scenes in the movie, the running time, and, for a theatrical film, where the reel breaks fall (see p. 705). The continuity is useful to help structure the film, compare different versions, and aid in feedback screenings. As noted above, some editors like to make file cards with individual scenes and move them around get a feel for structure.

Picture editors differ in how much they like to fine-tune sound, color, and music during the rough-cut/fine-cut stages. Some want to concentrate mostly on the story and flow of the film; others feel that until details like the sound balance and color consistency within scenes are done carefully, it will be harder to judge if the picture is really working. This becomes even more of an issue when outside audiences view the work in progress (see below). Sometimes other editors or assistants will work on audio and color in preparation for a screening.

For larger projects, as editing continues you will often need to export a cut of the film for such things as publicity, trailers, special effects, or music. Since the movie is still changing, you may need to send out updated cuts, or *change lists*, generated by the NLE, that indicate with frame-accurate precision which shots have been lengthened, shortened, or *lifted* (dropped altogether). A sound editor, for example, might use a change list to update her DAW to the new version of the film.

When you're done making changes to the picture, this is *picture lock* or *picture freeze*.

Test Screenings and Feedback

Editing requires an intense, focused kind of thinking. You sit close to the screen and get deeply involved in large problems and tiny details. This is not a good environment to judge whether the movie is really working. You need to step back occasionally and see it from a different perspective.

For projects that will ultimately be shown on a big screen—either in large-screen digital projection or on film—it's imperative that you view the movie on a big screen during the editing process. The transition from small screen to large can be startling. Sometimes the pace of the movie seems to speed up and sometimes to slow down. Wide shots that may seem boring on the small screen suddenly reveal fascinating detail. Close-ups may seem overpowering when ten feet tall. Cuts in which the eye's attention shifts from one side of the screen to the opposite side may seem a little jumpy on the small screen and very jarring on the big one. If you can't get access to a big screen, at least make a DVD or Blu-ray that you can take out of the editing room and view in a different setting.

Watching the movie with outside viewers—a few at a time, or many —is another important part of getting a fresh perspective. Screenings can be invaluable to determine whether something in the movie is confusing or boring or really doesn't work. Even watching the movie with one person who is not part of the editing team will cause *you* to see it in a different way, with a different sense of the timing and content. Try to leave a few days off between when you last work on a cut and when you view it, so you can see it with freshest eyes.

Filmmakers vary on the value of test screenings with large audiences. Some love to get feedback (or may be forced to get it by backers or studios). Some resent the idea of putting important, personal decisions to something that seems like a popular vote. Since a few vocal audience members can sway or overwhelm those who are uncertain, it can help to have people fill out paper questionnaires prior to any discussion, then have a moderator (not the filmmakers) lead a directed conversation with specific questions about what's working and what's not. Often test audiences disagree with each other on which scenes should stay or be cut. One group may laugh where another is silent. The differences in "temperature" between different screenings can be stunning (which you'll continue to find as you screen the finished film).

Another factor in test screenings is the problem of showing unfinished work. You can explain all you want about what a rough cut or a rough mix or uncorrected picture means, but even experienced professionals often lack the ability to imagine what the movie will be like when finished. For more on showing unfinished work to backers or distributors, see Chapter 17.

Whether you show the work in progress to one or many people, it's important to learn how to receive *notes*, and to listen to feedback and criticism. Don't argue or try to talk them out of their position. You've asked for their thoughts, so take in what they say. Don't react too quickly, even within yourself. After some time goes by, and you've had a chance to talk it over with your collaborators, you may find new solutions that hadn't occurred to you before. It sometimes takes days (or more) to sort out which bits of feedback constitute valuable new perspectives and which are just unhelpful and to be ignored. Then of course there are the truly off-the-wall comments that always seem to pop up at screenings, which you have to train yourself not to respond to or mull over on sleepless nights. Something to keep in mind when you're *giving* notes: calibrate your comments to what the filmmakers can actually use. If you're looking at an early rough cut—and there's time to change things—then let them know what works, what doesn't, or what might improve things. If the film is nearly complete, then limit your suggested changes to what's still fixable, not aspects for which there is no turning back.

Finding the Right Length

If your movie miraculously lucks out in the combination of writing, direction, and editing, it occasionally happens that the rough cut plays just fine at the length it was intended to. If so, congratulations, and enjoy the easy finishing process ahead.

For most projects, however, you may face some tough decisions. The rough cut may be many hours long. Or the fine cut may seem too *short*. How do you find the right length for the project? Do you let the material dictate length, or do you try to cut it to a standard length?

Start by asking yourself what would make the best, tightest movie. If a movie is too long, audiences can turn on it, even if they liked it at first. Well-edited, taut movies keep audience energy high and allow the ideas and emotions in the film to emerge clearly. Be hard on yourself—don't hold on to a sequence just because you're in love with it; only keep it if it really works in the context of the whole film. The advice to "murder your darlings" applies when paring down a rough cut. If two sequences repeat the same idea or emotion, consider dropping one of them. If you can get away with starting a shot ten seconds later, trim off the head. Sometimes ideas or plot points you cut out have a way of emerging subtly in other scenes, and don't need to be explicated.

It's easy for filmmakers who have nurtured material from script through production to feel attached to things the audience won't be attached to in the least. The editor must always try to see the film through the eyes of the audience, and to understand which shots and scenes are essential and which aren't. One of the qualities of good editors is their ability to take an unsentimental and coldhearted view of each sequence and make the required cuts. A strong scene, idea, or joke can lose a lot of power if later scenes seem to be repeating it.

Many filmmakers have had this experience: They finish a fine cut, declaring the movie finished and tight and done. Then, perhaps to fit a broadcast slot (see below), they begrudgingly have to cut some time out. They comb the film for every slack or wasted moment. In the end, they like the shortened version better. Barry Sonnenfeld (*Men in Black*) has remarked that he's one of the few directors whose director's cuts are sometimes *shorter* than the released version of the movie.

Be especially attentive to the first few minutes of the movie. Outside of a theater (where the audience is captive) some people will choose to watch a movie only if they're hooked in the first several scenes. On the other hand, if you start things out too quickly (in the first minute or so) you may lose people who haven't settled into their seats. If the movie begins with head titles and credits (see below), consider developing the story visually under or between the titles—this keeps things moving even while people settle in.

LENGTH AND DISTRIBUTION OPPORTUNITIES. In determining length, you must also consider potential distribution. If you're making a feature film, typically these run about ninety minutes to two hours, give or take. If a film is only slightly over an hour, it may not be considered a "feature" for theatrical, festival, or broadcast slots. If a feature runs substantially over two hours, exhibitors (theater owners) get nervous because it means they can have fewer shows per day and broadcasters may want to cut the film shorter to fit a two-hour (or even ninety-minute) program slot. Documentaries may be feature length, or they may be shorter. A one-hour documentary is much easier to sell to cable or broadcast television than a ninety-minute doc (even a series may sell to more markets if each show is an hour or a half hour). For any broadcast slot, you need to deduct time for station IDs and advertising or promotions. A "one-hour" program may run fifty-seven minutes or a whole lot less, depending on the broadcaster's needs. Feature-length docs are often trimmed to fifty-seven or fifty-two minutes in order to get a TV sale.

When producing something for an educational market, keep in mind the typical length of a class in whatever age bracket you're targeting. Sometimes a one-hour film is cut down to twenty to forty minutes for educational distribution, and any particular content that might be inappropriate for a school environment is removed. Movies for young children are often ten minutes or less to accommodate short attention spans.

For corporate and industrial projects, about ten to fifteen minutes is sometimes the longest that busy executives or workers want to spend watching a movie. For training pieces you must weigh how much information people can absorb and how much "seat time" they want to put in. Short and punchy is better than too detailed and long. Training is often done with short chapters and/or with interactive tools on the Web, allowing users to answer questions and digest material before moving on.



Fig. 13-5. Supered title. Text should stay inside the title safe area (the inner box; see also Fig. 9-7). Drop shadows help separate the text from the background and add dimensionality. Shown here is one of the title

tools in Avid Media Composer. (Avid Technology, Inc.)

TITLES

Planning the titles and credits and placing them in the movie is part of the editing process (though the actual title design and production may be done after editing is finished). You can hire a professional designer or a postproduction facility to create titles and credits, or you can work them out on your editing system. Sometimes people shoot titles with physical objects or artwork—like shooting a wall with graffiti titles spray-painted on.

Some titles and credits appear as lettering over a plain background or other nonmoving graphic. Titles that appear over action (a moving film or video image) are called *supers* (for superimposition, see Fig. 13-5).

When a name appears as static (nonmoving) lettering, this is considered a *title card*. If there are *head credits* at the beginning of the film, these are usually individual cards that fade in or cut in. Title cards may be supered or nonsupered, though some people use the term "title card" to mean a nonsupered title. End or tail credits may be done as cards, but more often they are done as a *credit roll*, in which a long list of names moves up from the bottom of the screen. Vertically moving titles are also called scrolls or crawls (though in video, "crawl" is often used to mean a line of horizontally moving type). The advantage of a credit roll is that the various credits can be given equal screen time (whereas cards tend to favor the names at the top of the card) and the whole list can be read comfortably in less time. With cards, on the other hand, it may be easier to make changes or correct errors. Cards also have the advantage of no motion artifacts, which credit scrolls often exhibit, especially when there's any difference between the frame rate the titles were produced in and the frame rate of the broadcast or distribution format or the display.

Extensive head credits are common in Hollywood films (with the biggest star credits coming before the title), but lengthy head credits on a student film can seem pretentious. Some films start better without head

credits, to plunge the audience straight into the story, without reminding them that it is just a story, which was written, directed, produced...you get the idea.

There is a generally accepted order for various credits, which is often stipulated in contracts or union rules. Be aware that some broadcasters have restrictions on how credits are done in terms of placement, length, and who can be thanked or credited. They may also impose restrictions on including Web addresses.

Double- and triple-check for correct spellings and proper job titles, and make sure you don't omit important credits! Start collecting your list of personnel and thank-yous during production so you don't forget anyone.

Timing

Different movies use different timing for titles. One rule of thumb is to keep titles on screen long enough to read them twice (or read them aloud once). Experiment with pacing. Titles that linger too long may slow down the film and bore the audience. Too quick titles may leave them frustrated. Another rule of thumb for credit rolls is that it should take about seven to twelve seconds for a line of text to travel from the bottom of the screen to the top; however, rolls may go slower on feature films and often go a great deal faster on TV programs (where broadcasters, who couldn't care less about your credits, are racing to get to the next show).

Typeface and Placement

When choosing a typeface for the lettering, avoid fonts that have very narrow lines or serifs (the angled lines that extend from and ornament some type styles). The smaller the font size, the more likely it is that thin lines or elements will flicker, look noisy, or disappear altogether. Small titles, especially if they move, look worse on interlaced video formats than progressive.

Usually lettering should be no smaller than about 1/25 of total image height (that is, no more than 25 lines on screen at once). The maximum characters per line seems to work well at around 40 for many formats; in

theatrical films, up to about 55 characters may work. The longer the line, the harder it is to read quickly. When doing subtitles for dialogue, consider breaking the titles into two shorter lines rather than one long one.

Today almost every project for TV or theaters is produced in a widescreen format (16:9 or wider). Sometimes titles extend across the wide-screen image. However, because movies are often shown at some point on nonwidescreen TV, it may be safer to prepare titles that fit within the 4:3 rectangle (see Aspect Ratio Choices, p. 74).⁴ Regardless of whether you're laying out titles in 4:3 or 16:9 aspect ratio, all lettering should fit within the *TV safe title area*, which is smaller than the *TV safe action frame* (see Figs. 13-5 and 9-7). Credit rolls often look best if centered on a central *gutter* with the job title extending to the left of the gutter and the name extending to the right. Look at movies for layout ideas.

Try to put superimposed titles over shots without excessive movement or complexity that might fight with the titles. Titles will make any camera jiggle especially noticeable. Supers should almost always be done with *drop shadows*, which rim the letters with a dark edge to separate them from the background. When a movie is subtitled in a foreign language, it's common to use an *outline font* that has a dark edge all the way around each letter to improve readability against bright backgrounds.

Supers used in documentaries to identify film subjects are sometimes called *lower thirds*, since they fall in the lower third of the frame. Lower thirds are frequently set against a darker *pad* to help separate them from the background (which can be opaque or semitransparent). If lower thirds are anticipated, be sure to shoot your subjects with enough room at the bottom of the frame to accommodate titles. If the project is distributed in foreign markets, broadcasters will ask for a textless version of the movie so they can do foreign language titles. If you plan for this during post, you can create textless background elements on which titles can be added later.

In digital, it's easy to do either supered or nonsupered titles. When

finishing a film project the traditional way on film, supered titles may cost more than nonsupered titles, depending on the printing method used. For more on generating digital titles, see p. 594.

1. The term "beat" can also mean simply a short amount of time in a scene, as in "wait a beat after she turns before cutting to the man."

2. Fig. 13-4 does not include every shot in the sequence.

3. For projects that originate on film and are edited digitally, the telecine transfer may not capture details in the highlights or shadows that may be visible later when a more careful transfer is done. You may or may not be happy when you later see the hidden details. Be sure to check carefully for flash frames and overexposed frames nearby.

4. Of course, widescreen films are often letterboxed when shown on nonwidescreen TV, in which case the whole frame is visible, but the titles will look smaller (see Fig. 2-12E).