CHAPTER 7

Sound in the Cinema

You're planning a scene that shows Jim phoning Amanda. As usual, you confront a choice.

You can show both sides of the conversation, cutting between Jim and Amanda as they exchange lines. (Many phone scenes are staged and filmed as if they were shot/reverse shot conversations.) Or you could stage it in split-screen, which would keep both Jim and Amanda visible for the whole dialogue. Either option yields unrestricted narration, which is ideal if you want to reveal both characters' behavior in the conversation.

Alternatively, you could keep the camera on one character, say Jim, for the entire scene. Instead of showing Amanda, you would simply let us hear her responses. Showing only Jim would restrict us to his range of knowledge, and that choice can add uncertainty and suspense. If we hear Amanda agree to the date, but we don't see her doing so, we might entertain some doubts about her interest or her motives. And is she alone or with someone? As often happens, restricted narration might yield some curiosity and suspense.

But there's another option still. Suppose we don't see *or* hear Amanda. We hear only Jim's side of the conversation, broken by pauses when he's listening to Amanda's replies. Our narration has grown still more restrictive: We know less than Jim knows. This option is often used for perfunctory actions, such as someone phoning to order a cab. Applied to a more significant scene, it could oblige us to listen more intently and imagine what's happening on the other end of the line **(7.1).**

7.1 The telephone teaser. One way to handle a phone conversation: In *Chungking Express,* a young man dumped by his girlfriend calls up other women he's known, eventually reaching those he hasn't seen since grade school. We hear only his clumsy efforts to remind them who he is. The comic effect comes partly from imagining the puzzlement and annoyance the women must be expressing.

Sound Decisions

We've seen at several points that film art offers both opportunities and constraints. As a filmmaker, you face a rich array of options. But you have to choose among them, and each choice has different implications. Moreover, some decisions create a cascade of further choices. If you show only Jim and keep Amanda offscreen, you still have to decide whether to let us hear her lines or not.

Filmmakers have to consider these options, either intellectually or intuitively, because each alternative affects the audience differently. Sound, like every other technique, offers a plenitude of possibilities, but the filmmaker judges which ones to pursue, based on how they suit the film's overall form and how they shape the viewer's experience.

7.2 Sound summons up an unseen space. Orson Welles had a radio career before going to Hollywood, so he understood the power of sound to arouse the audience's imagination. At the start of this scene from *The Magnificent Ambersons*, Georgie Minafer says good-bye to his Uncle Jack, who's about to board a train. But there's no establishing shot of the station, not even a sign identifying it. We see the two men against a pillar while we hear announcements echoing in a large, hollow space. The locomotive is evoked by a whistle, a chugging engine, and blasts of steam. Welles's sound design, aided by rear projection of a roof, has conjured up an entire locale.

As we saw in Chapter 1, in the process of film production, the sound track is constructed separately from the images, and it can be manipulated independently. This makes sound as flexible and wide-ranging as other techniques. Yet sound is perhaps the hardest one to study.

It's not because we're bad at listening. Even before we're born, we can distinguish voices. We differentiate male voices from female ones, and we recognize Mother's above all. Once we've grown, we exist in a continuous bath of sound. Just as our stereoscopic vision helps us locate details in the visual world, our ears can triangulate a sound's location—particularly if it's human speech, to which our auditory system is very sensitive. At our peak of health, we can note volume differences at a range of a trillion to one. We have, auditory scientists tell us, over 400,000 distinct sounds in our memory.

Yet unless we're musicians or sound engineers, we've learned to ignore most sounds in our environment. Our primary information about the color, texture, and layout of our surroundings comes from sight, and so in ordinary life, sound is often simply a background for our visual attention. Similarly, we speak of *watching* a film and of being movie *viewers* or *spectators*—all terms implying that the sound track is a secondary factor. We're strongly inclined to think of sound as simply an accompaniment to the real basis of cinema, the moving images.

This inclination lets sound designers create a world without our noticing. On the screen we may see merely an anxious face against a cloudy sky, but we may hear a fierce wind, a police siren, and a child's cry. Suddenly we conjure up a situation of danger. A low-budget horror film with awkward acting and unconvincing special effects can stir an audience to shrieks with disgusting slurps, snaps, and gurgles. "Sound is the biggest bang for your buck of anything in the movie business," says the manager of Skywalker Sound **(7.2).**

Fortunately, filmgoers have started to notice. *Star Wars* and other hits of the 1970s introduced the broad public to new technologies of sound recording and reproduction. Audiences came to expect Dolby noise reduction processes, expanded frequency and dynamic range, and four- and six-track theater playback. During the early 1990s, digital sound became routine for big-budget pictures, and now virtually all releases have crisp, dense sound tracks. "An older film like *Casablanca* has an empty soundtrack compared with what we do today," remarks the supervising sound editor for *Lost in Translation.* Today's romantic comedy is as densely packed with sound effects as an action picture was 20 years ago. Multiplex theaters upgraded their sound systems to meet filmmakers' challenges, and the popularity of DVDs prompted consumers to set up home theaters with ravishing sound.

Viewers' new sensitivity to sound is apparent in the custom of starting a film's sound track with dialogue or sound effects, before the images appear. You can argue that this device serves to quiet down the audience so that the opening scene gets the proper attention, but often the sonic information draws us slowly into the story. Many modern films lead us by the ear. Not since the first talkies of the late 1920s have filmgoers been so aware of what they hear.

The Powers of Sound

Sound is a powerful film technique for several reasons. For one thing, it engages a distinct sense mode. Even before recorded sound was introduced in 1926, silent films were accompanied by orchestra, organ, or piano. At a minimum, the music filled in the silence and gave the spectator a more complete experience. More significantly, the engagement of hearing opens the possibility of what the Soviet director Sergei Eisenstein called "synchronization of senses"—making a single rhythm or expressive quality bind together image and sound.

The meshing of image and sound appeals to something quite deep in human consciousness. Babies spontaneously connect sounds with what they see. For us, if a sound and image occur at the same moment, they tend to be perceived as one event, not two. Just as our minds search for patterns in a shot or for causal patterns in a narrative, we're inclined to seek out patterns that will fuse lip movements and speech. The power of musical structure to map onto visual structure is evident not only in dance but also when fans of the Pink Floyd album *The Dark Side of the Moon* play it back over *The Wizard of Oz.* Our bias toward audio-visual blending governs both our everyday activities and our experiences of arts like music, theater, and film.

Sound Shapes Our Understanding of Images

> "The most exciting moment is the moment when I add the sound. . . . At this moment, I tremble."
> —Akira Kurosawa, director

Sound is often treated as a lesser partner to the images, but we need to recognize that it can actively shape how we understand them. In one sequence of *Letter from Siberia* **(7.3–7.6),** Chris Marker demonstrates the power of sound to alter our understanding of what's onscreen. Three times Marker shows the same footage—a shot of a bus passing a car on a city street, three shots of workers paving a street. But each time the footage is accompanied by a completely different sound track. Compare the three versions tabulated alongside the sequence in Table 7.1. The first one is heavily affirmative, the second is harshly critical, and the third mixes praise and criticism. The audience will construe the same images differently, depending on the voice-over commentary.

Guiding Our Eye and Mind

The *Letter from Siberia* sequence demonstrates another advantage of film sound. It can steer our attention within the image. When the commentator describes the "blood-colored buses," we're likely to look at the buses, not the car.

Brian De Palma exploits the guiding function of sound in his conspiracy thriller *Blow-Out*. Jack Terry is a sound designer for low-budget exploitation films. While capturing environmental background noises, he records a deadly car crash. Jack takes his recording as proof that an assassin shot out the car's tire in order to kill the politician inside. A crooked detective was on the scene as well, and he shot a film of the crackup. Using still images from the detective's footage, Jack creates a mini-film he can synchronize with his recording **(7.7–7.9).** The result reveals a vital clue that was unnoticed in the published images.

What if the crucial item isn't in the shot at all? Suppose we have a shot of a man in a room. If we hear a door creaking, we anticipate that someone has entered the room, and we probably expect to see that person in the next shot. In other words, a simple sound can prod us to form expectations. Those can then be delayed, as in a horror film; in that genre, it's conventional to suggest an unseen menace but dwell on a character staring fearfully at something offscreen.

In addition, sound gives a new value to silence. A quiet passage can create almost unbearable tension, while an abrupt silence in a noisy passage can jolt us **(7.10, 7.11).** Most contemporary sound mixers drop in about a half-second of silence just before explosions and other loud noises. During the battle between Dumbledore and Voldemort in *Harry Potter and the Order of the Phoenix*, the sound team slipped in brief silences between Voldemort's attacks. The contrast made the thwacks seem abnormally loud. Just as color film turns black and white into grades of color, so sound can include all the resources of silence.

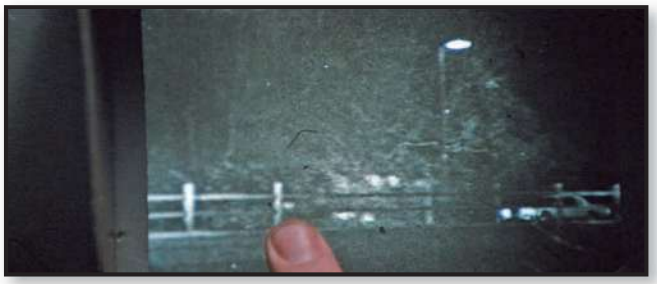
One more advantage: sound bristles with as many creative possibilities as editing. Through editing, one may join shots of any two spaces to create a meaningful relation. Similarly, the filmmaker can mix any sonic phenomena into a whole. With the introduction of sound cinema, the infinity of visual possibilities was joined by the infinity of acoustic events.

TABLE 7.1 *Letter From Siberia* Footage

Images	First Commentary	Second Commentary	Third Commentary
7.3	Yakutsk, capital of the Yakutsk Autonomous Soviet Socialist Republic, is a modern city in which comfortable buses made available to the population share the streets with powerful Zyms, the pride of the Soviet automobile industry. In the	Yakutsk is a dark city with an evil reputation. The population is crammed into blood-colored buses while the members of the privileged caste brazenly display the luxury of their Zyms—costly and uncomfortable cars at best. Bending	In Yakutsk, where modern houses are gradually replacing the dark older sections, a bus, less crowded than its London or New York equivalent at rush hour, passes a Zym, an excellent car reserved for public utilities departments on account of its scarcity.
7.4	joyful spirit of socialist emulation, happy Soviet workers, among them this picturesque denizen	to the task like slaves, the miserable Soviet workers, among them this sinister looking Asiatic,	With courage and tenacity under extremely difficult conditions, Soviet workers, among them this Yakut
7.5	of the Arctic reaches, apply themselves	apply themselves to the primitive labor	afflicted with an eye disorder, apply themselves to
7.6	to making Yakutsk an even better place to live. Or else:	of grading with a drag beam. Or simply:	improving the appearance of their city, which could certainly use it.

7.7

7.8



7.9

7.7–7.9 Sound reveals a clue. In *Blow-Out*, Jack studies his DIY film made from magazine photographs (7.7). He synchronizes his tape with the image track (7.8). When the two play together, the blowout sound matches a flash from the bushes near a fence post (7.9). The flash was visible in the replayed footage, but it took the sound track to make Jack and the audience notice it.

7.10

7.11

7.10–7.11 Subjective silence. In *Babel,* when the deaf teenage girl enters the disco, the club music is about to climax (7.10). Instead, it drops out when we cut to her optical point-of-view on the boy she's following (7.11). Instead of subjective sound, we get subjective silence, and this sharply dramatizes her isolation from what is happening around her.

Fundamentals of Film Sound

Film sound can include any mixture of speech, music, and noise. Filmmakers make decisions about the types and density of sounds as well as their properties, including loudness and pitch.

Perceptual Properties

Several aspects of film sound are familiar to us from everyday experience.

Loudness The sounds we hear result from vibrations in the air. The amplitude, or breadth, of the vibrations produces our sense of *loudness*, or volume.

Filmmakers manipulate volume constantly. A long shot of a busy street is accompanied by traffic noises, but when two people meet and start to speak, the

7.12 Manipulating volume for intelligibility. Establishing shots at the start of *Norma Rae* show the textile factory full of deafening machine noise, so that we register the harsh working conditions. As the story action starts, the noise is turned down so that the women's dialogue in the break room will be audible.

loudness of the traffic diminishes **(7.12).** A conversation between a soft-spoken character and a blustery one is characterized as much by volume as by what they say. Much of the comedy in Mel Brooks's *The Producers* comes from the contrast between the voices of booming Max Bialystock and meek accountant Leo Bloom.

Although loudness can be measured in precise acoustic terms, for the listener it's relative. A lengthy passage of high-amplitude sound may not sound as loud as a lower burst of sound after a stretch of silence. In *Capote,* a killer's confession is presented in a nearly quiet scene, with only the wind audible. That ambience makes the shotgun blast that follows seem exceptionally loud. As with mise-en-scene and the tonal qualities of the image, the sound track seizes our attention through contrast.

Loudness is also related to perceived distance. All other things being equal, the louder the sound, the closer we take it to be. This sort of assumption seems to be at work in the street traffic example already mentioned: The couple's dialogue, being closer to us, is sensed as louder, while the traffic noise recedes to the background. In addition, a film may startle the viewer by exploiting abrupt and extreme shifts in volume (usually called changes in *dynamics*), as when a quiet scene is interrupted by a very loud noise. Changes in loudness may be combined with cutting or camera movement to reinforce our sense of moving toward or away from the source of the noise **(7.13–7.15).**

Pitch The frequency of sound vibrations affects *pitch*, or the perceived highness or lowness of the sound. Most sounds, in life and on film, are complex tones, in batches of different frequencies. Pitch helps our ear sort out the sounds.

Very low-pitched sounds suggest rumbling, whereas very high-pitched ones suggest tinkling. Pitch helps us distinguish music and speech from background noise. The filmmaker can use pitch to distinguish objects too. A thump suggests the object is hollow, but high-pitched jingle bells suggest smoother, harder objects.

Pitch can serve more specific purposes. We've already mentioned the effect of an octave leap in the song "Over the Rainbow" in *The Wizard of Oz* (p. 62). When a young boy tries to speak in a man's deep voice and fails, as in *How Green Was My Valley,* the joke is based primarily on pitch. Marlene Dietrich's vocal delivery often depends on a long upward-gliding intonation that makes a statement sound like a question. In the coronation scene of *Ivan the Terrible,* Part I, a court singer with a deep bass voice begins a song of praise to Ivan, and

7.13

7.14

7.15

7.13–7.15 Volume as a cue for distance. A hiker is trapped at the bottom of a canyon in *127 Hours*. One shot begins on a high-angle shot of him shouting for help (7.13). As the camera pulls quickly up and away from him, his cries diminish in volume (7.14), until the shot ends on an extreme-long view of the desert, with the canyon a dark line in the landscape and the hiker's voice no longer audible (7.15). Director Danny Boyle uses sound perspective, timed with drastic changes of shot scale, to dramatize how hopeless the young man's plight is.

each phrase rises dramatically in pitch **(7.16–7.18).** When Bernard Herrmann obtained the effects of shrill, birdlike shrieking in Hitchcock's *Psycho,* even many musicians could not recognize the source: violins played at extraordinarily high pitch.

Timbre The harmonic components of sound give it a certain color, or tone quality—what musicians call *timbre*. When we call someone's voice nasal or a musical tone mellow, we're referring to timbre. Timbre is actually a less fundamental acoustic parameter than amplitude or frequency, but it's indispensable in describing the texture or "feel" of a sound. In everyday life, the recognition of a familiar sound is largely a matter of various aspects of timbre.

7.16

7.17

7.18

7.16–7.18 Pitch synchronized with cutting. In *Ivan the Terrible,* Eisenstein emphasizes changes in vocal pitch by cutting from a medium-long shot (7.16) to a medium shot (7.17) to a close-up of the singer (7.18).

Filmmakers rely on timbre constantly. An actor's voice—Sean Connery's gruff Scots accent, Tom Waits's plaintive rasp—becomes distinctive, thanks to timbre. For Disney's *Beauty and the Beast*, Robbie Benson's speaking voice was mixed with tiger and lion sounds to enhance the Beast's animalistic side. Timbre, along with pitch, distinguishes musical instruments from each other, and often enhances emotion, as when sultry saxophone music comes up during a seduction scene.

More subtly, in the opening sequence of Rouben Mamoulian's *Love Me Tonight,* people starting the day on a street pass a musical rhythm from object to object—a broom, a carpet beater—and the humor of the number springs in part from the very different timbres of the objects. In preparing the sound track for Peter Weir's *Witness,* the editors drew on sounds recorded 20 or more years before, so that the less modern timbre of the older recordings would evoke the rustic seclusion of the Amish community.

> "The Empire spaceship sounded a certain way as compared to the Imperial fleet; that was a deliberate style change. Everybody in the Empire had shrieking, howling, ghostlike, frightening sounds. . . . You hear it—you jump with fear. Whereas the rebel forces had more junky-sounding planes and spaceships. They weren't quite as powerful; they tended to pop and sputter more."
> —Ben Burtt, sound editor, *Star Wars*

Loudness, pitch, and timbre define the overall sonic texture of a film. For example, these qualities enable us to recognize different characters' voices. Both John Wayne and James Stewart speak slowly, but Wayne's voice tends to be deeper and gruffer than Stewart's querulous drawl. This difference works to great advantage in *The Man Who Shot Liberty Valance,* where their characters are sharply contrasted. In *The Wizard of Oz,* the disparity between the public image of the Wizard and the old charlatan who rigs it up is marked by the booming bass of the huge green head and the old man's higher, softer, more quavering voice. During an action sequence, the threshold for loudness is raised, so the film's sound designer may have to introduce noises of different frequencies or textures—a whining bullet during a rumbling car chase, for example—to make sure that certain details aren't drowned out.

These basic sound qualities can also shape our experience of a film as a whole. *Citizen Kane,* for example, offers a wide range of sound manipulations. Echo chambers alter timbre and volume. A motif is formed by the inability of Kane's wife, Susan, to sing pitches accurately. Moreover, in *Citizen Kane,* the plot's shifts between times and places are covered by continuing a sound thread and varying the basic acoustics. A shot of Kane applauding dissolves to a shot of a crowd applauding (a shift in volume and timbre). Leland beginning a sentence in the street cuts to Kane finishing the sentence in an auditorium, his voice magnified by loudspeakers (a shift in volume, timbre, and pitch).

> "Too many films seem essentially designed to be heard in the mixing studios. I always fight against recording every single footstep, and would rather lose the sound of people settling into armchairs, etc., and fade out a particular atmosphere sound once the emotional impact has been achieved, even at the cost of realism. You have to know how to play with silence, to treat sound like music."
> —Bernard Tavernier, director

Sound processes create wider ranges of frequency and volume, as well as crisper timbres than filmmakers could achieve in the studio years. Today sound editors can individualize voice or noise to a surprising degree. For *The Thin Red Line,* every character's distinctive breathing sounds were recorded for use as ambient noise. Randy Thoms, sound designer for *Cast Away,* sought to characterize different sorts of wind—breezes from the open sea, winds in a cave. Sound even announces a shift in wind direction crucial to one of the hero's plans. "We can use the wind in a very musical way," Thoms notes.

Recording, Altering, and Combining Sounds

Sound in the cinema is of three types: speech, music, and noise (usually called *sound effects*). Occasionally a sound may cross categories—Is a yell classified as speech or noise?—and filmmakers have exploited these ambiguities. In *Psycho*, when a woman screams, we expect to hear a voice but instead hear violins. Still, in most cases, the distinctions hold. Now that we have an idea of some basic acoustic properties, how are speech, music, and sound effects captured?

Recording Dialogue is usually recorded during filming, but that isn't the version we will hear in the finished film. The dialogue in the film has been dubbed, or "looped," later in a recording studio. In a process called automated

dialogue recording (ADR), actors repeat their lines while watching the footage in "looped playback." The dialogue recorded during shooting guides the ADR process.

Music is almost never recorded during principal photography, unless the filmmaker is documenting a musical performance, as in concert films like *Stop Making Sense*, *U2 3D*, and *Year of the Horse*. Much more often, music is added in postproduction. The track might be a selection of existing pieces, such as popular songs, or it might be a score written specifically for the film. Recording a score involves the composer leading the musicians through each cue while watching the footage projected on a screen.

Like music, most sound effects are added during postproduction. A common method is the Foley process, which creates noises tailored to each scene. In a sonically clean studio, experts record people pouring drinks, splashing in mud, rubbing sandpaper, and any other actions that put human movement in contact with surfaces. Foley artists, who often collect shoes, fabrics, and car doors, also devise imaginative equivalents. Foley artist Joan Rowe used a package of liver from the supermarket to get the "liquidy and friendly" sound of the title character of *E.T.: The Extraterrestrial*.

> "We're always looking for things that squeak or clank or make springy, sproingy noises. If you go to a swap meet or garage sale, you're always putting your ear up to things and listening. The weirdest thing is when you listen to things in the grocery store—tap on vegetables and rustle them and crunch them a little."
> —Marnie Moore, Foley artist, *Boogie Nights, Jarhead*

Not all postproduction sound is generated from scratch. A great many postproduction sound effects are culled from libraries. During the studio era, Hollywood's libraries cataloged more than 100,000 distinct sounds. A "Biffs and Bangs" file, for instance, might contain an assortment of the kicks, slaps, and punches associated with fight scenes. The most famous library effect is the "Wilhelm scream," first heard in a 1951 American film when an alligator bites off a cowboy's arm. The scream was recycled in *Star Wars*, *Raiders of the Lost Ark*, *Reservoir Dogs*, *Transformers*, and over a hundred other films. (Google "Wilhelm scream" and you can hear it online.) Sound editors also build their personal collections of noises that intrigue them.

Sometimes the sound track is conceived before the image track. In a musical, the camera films singers and players who are miming to a prerecorded track. Even dancers' footwork, like taps or stomps, will already be on the playback. That track will be married to the filmed images during the editing process. Animated cartoons typically record music, dialogue, and sound effects before camera capture begins, so the action onscreen will match the sound frame by frame. For the adventures of Bugs Bunny and Daffy Duck, Carl Stalling created frantically paced jumbles of familiar tunes, weird noises, and distinctive voices.

Reworking Sound Once the sounds are captured, the creation of the film's sound track resembles the editing of the image track. Just as you can pick the best image from several shots, you may choose what exact bit of sound will serve your purpose. And just as a shot's color or lighting may be manipulated in postproduction, a sound may be processed to change its acoustic qualities.

A common form of manipulation is blending. The noises emitted by the demonically possessed girl in *The Exorcist* consist of screams, animal thrashings, and English spoken backward. To create the roar of a Tyrannosaurus rex for *Jurassic Park*, sound engineers blended a tiger's roar, a baby elephant's trumpeting, and an alligator's growl for lower tones. To characterize a runaway train as a primal force, *Unstoppable* gave it an auditory identity derived from the sounds of beasts. After smashing another train in its path, the rogue locomotive even lets out a bellow of triumph.

Selection Guides Our Attention As you read this, you are attending to words on the page and (to various degrees) ignoring certain stimuli that reach your ears. But if you close your eyes and listen keenly, you'll become aware of background sounds—traffic, footsteps, distant voices. You know that if you set up a

> "We were going for a documentary feel. We came up with a way for the loop group actors to say lines in a way we called 'nondescript dialogue.' They said lines, but they didn't say the actual words. If you put it behind people speaking, you just think it's people talking offscreen, but your ear isn't drawn to it. It would just lie there as a bed, and you can play it relatively loudly and it just fits in with the scenes."
> —Hugh Waddell, ADR supervisor, on *The Thin Red Line*

microphone and recorder in what seems to be a quiet environment, those normally unnoticed sounds can become obtrusive. The microphone is unselective; like the camera lens, it doesn't automatically filter out what's distracting.

It's up to the filmmaker to make what's important stand out. Normally, the sound track is clarified and simplified so that important material stands out. Dialogue, as a transmitter of story information, is usually recorded and reproduced for maximum clarity. Important lines should not have to compete with music or background noise. Sound effects are usually less important than speech. They supply an overall sense of a realistic environment and are seldom noticed; if they were missing, however, the silence would be distracting. Music is usually subordinate to dialogue as well, entering during pauses in conversation or in passages without dialogue.

All of these customs have become conventions. Christopher Nolan learned how strong those conventions are when he included muffled dialogue in *Interstellar*. "There are particular moments in the film where I decided to use dialogue as a sound effect, so sometimes it's mixed slightly underneath the other sound effects or in the other sound effects to emphasize how loud the surrounding noise is. It's not that nobody has ever done these things before, but it's a little unconventional for a Hollywood movie." Some viewers, though, assumed there was a technical problem with the screening. Nolan was asking the audience to adjust their expectations to a sound mix that didn't put dialogue at the top.

Dialogue doesn't always rank highest in importance, though. Sound effects are usually central to action sequences, while music can dominate dance scenes, transitional sequences, or emotion-laden moments without dialogue. And some filmmakers have shifted the weight conventionally assigned to each type of sound. Charlie Chaplin's *City Lights* and *Modern Times* eliminate dialogue, letting sound effects and music come to the fore. The films of Jacques Tati and Jean-Marie Straub retain dialogue but still place great emphasis on sound effects. In Robert Bresson's *A Man Escaped,* music and noise fill out a sparse dialogue track by evoking offscreen space and creating thematic associations.

By choosing only certain sounds, the filmmaker guides our perception of the action. In one scene from Jacques Tati's *Mr. Hulot's Holiday,* vacationers at a resort hotel are relaxing **(7.19).** Early in the scene, the guests in the foreground are murmuring quietly, but Hulot's Ping-Pong game is louder; the sound cues us to watch Hulot. Later in the scene, however, the same Ping-Pong game makes no sound at all, and our attention is drawn to the muttering cardplayers in the foreground. The presence and absence of the sound of the Ping-Pong ball guides our expectations. If you start to notice how such selection of sound shapes our perception, you will also notice that filmmakers often use sound quite unrealistically, to shift our attention to what is narratively or visually important.

7.19 Sound present, then absent. In *Mr. Hulot's Holiday,* in the foreground, guests quietly play cards while in the depth of the shot, Mr. Hulot is frantically playing Ping-Pong. Sometimes we hear the ball, sometimes not.

Our scene from *Mr. Hulot's Holiday* also points up the importance of how a chosen sound may have its acoustic qualities transformed for a particular purpose. Thanks to a manipulation of volume and timbre, the Ping-Pong game gains in vividness. When two sounds are of the same frequency or loudness, contemporary sound designers freely adjust one to make it stand out more clearly. During the jungle chase in *Indiana Jones and the Kingdom of the Crystal Skull,* the skull's thump was altered. "I changed its pitch so that it would coexist with the music," sound designer Ben Burtt explained.

Nowadays, film sound is normally reprocessed to yield exactly the qualities desired. A *dry recording* of the

sound in a fairly nonreflective space will be manipulated electronically to yield the desired effect. Returning to our earlier example, if you chose to present Amanda's dialogue as heard on Jim's phone, her voice would probably have been treated with filters to make it more tinny and muffled. (In Hollywood parlance, this is called "futzing" the sound.) The almost nonstop rock-and-roll music of *American Graffiti* used two recordings of the music. A dry one was prepared for moments when the music was to dominate the scene and had to be of high quality. A more ambient one for background noise was derived from a tape recorder simply playing the tune in a backyard.

> "Spending two days on Alcatraz Island for *The Rock* brought home the eerie, lonely feel to the sound. Anyone who spent any time there and heard the soundtrack would be instantly transported to this place, which has its own unique sound signature. It is very windy, so you have lots of wind whistles setting the mood, combined with seagulls and a lighthouse electric horn, interior jail cell ambiances, and the jail door sounds. These individually common elements, when combined, became quite distinctive in this particular location."
> —George Watters, supervising sound editor

Sound Mixing Guiding the viewer's attention, then, depends on selecting and reworking particular sounds. It also depends on **mixing,** or combining them. It is useful to think of the sound track not as a set of discrete sound bits but as an ongoing *stream* of auditory information. Each sound takes its place in a specific pattern. This pattern both links events in time and layers them at any given moment.

The auditory stream goes beyond linking one line of dialogue or bit of noise to another. It involves a constant set of decisions about how it meshes with the image track. For example, there are many fine-grained choices involved in blending the stream of sound with classical principles of continuity editing.

CREATIVE DECISIONS

Editing Dialogue: To Overlap or Not to Overlap?

If the soundtrack is a stream, the current may carry auditory elements to the surface or sink them out of awareness. One decision that faces the filmmaker involves that current: Should it be choppy or smoothly flowing?

Consider dialogue scenes. Thinking like a filmmaker, we can see that there are many choices about the timing of picture editing. You have to decide when to cut from a shot of A to a shot of B. But another choice is involved, too: How do you cut the dialogue? Editor Tom Rolfe puts it well:

> Is it better to say, "I love you," bang, then cut to the reaction? Or is it better to say, "I love you," hang on it a beat to show the emotion of the person delivering the line, then go for the reaction? It's a matter of choice. Either way, there's a different result for the audience looking at it. Are their sympathies with the guy who said the line, or the girl who said the line? Or is the audience saying, "Don't believe him, he's going to screw you over!" . . . If you find the frame to cut on at that right moment, the audience will be totally satisfied.

There's another alternative. Instead of cutting after the line or holding on the speaker for a beat, you might cut away from the speaker before the line is finished ("I love . . .") to anticipate the reaction of the listener to the final syllables (". . . you!"). Since there are plenty of shot/reverse-shot conversation scenes in movies, and a lot of cutting in those scenes, decision points like these emerge hundreds of times in making most films.

In such situations, filmmakers frequently pick the third option just mentioned, the **dialogue overlap.** In this technique, the filmmaker continues a line of dialogue across a cut, smoothing over the change of shot. During a conversation in John McTiernan's *The Hunt for Red October,* we get the following shots and dialogue:

1. (ms) Over the political officer's shoulder, favoring Captain Ramius **(7.20)**
   Officer: "Captain Tupalev's boat."
   Ramius: "You know Tupalev?"
   Officer: "I know he descends . . ."

7.20 Shot 1

7.21 Shot 2

7.22 Shot 3

7.20–7.22 Dialogue overlap in *The Hunt for Red October*

2. (ms) Reverse angle over Ramius's shoulder, favoring the officer **(7.21)**
   Officer (continuing): ". . . from aristocracy, and that he was your student. It's rumored he has a special . . ."
3. (mcu) Reverse angle on Ramius **(7.22)**
   Officer (continuing): ". . . place in his heart for you."
   Ramius: "There's little room in Tupalev's heart for anyone but Tupalev."

Here the political officer's chatter provides an auditory continuity that distracts from the shot changes. Moreover, by cutting to a closer view of the listener before a sentence is finished, the sound and editing concentrate our attention on Ramius's response. The principle of dialogue overlap can be used with noise as well. In the *Hunt for Red October* scene, sounds of a spoon clinking in a tea cup and of papers being riffled also carry over certain cuts, providing a continuous stream of sonic information.

Sometimes the filmmaker wants to introduce more tension. In Fritz Lang's *M,* the city is on edge because a child murderer is at large. An unprepossessing little man urges a little girl to go home, but onlookers suspect him of being the killer. One comes up to him challengingly.

1. (ls) The little man is accosted by a huge one, who asks, "What's it to you where she lives?"

   The first man turns **(7.23).**
2. (ms) High-angle POV on the little man **(7.24)**

   Little man: "I?" Although intimidated, he starts to speak.
3. (ms): Low angle POV on the big man **(7.25)**

   Little man (offscreen): "Excuse me?"

   Big man: "What do you want with that kid?" (pause)
4. (ms) as 2 **(7.26)**

   Little man (pause): "Absolutely nothing!"

7.23 Shot 1

7.24 Shot 2

7.25 Shot 3

7.26 Shot 4

7.23–7.26 Cuts emphasize pauses in dialogue in *M*.

Here the cuts accentuate the suspense evoked by the pauses. In shot 2, the little man takes time to register the danger he's in. When he finally summons up a feeble self-defense ("Excuse me?"), it is heard offscreen. Lang forces us to wait for the ominous question from the thug, which is uttered in full. In shot 4, the little man gets to assert himself fully. After another pause, he defends himself, and his line isn't interrupted by a cut. The pattern of cutting has given his denial a greater weight because we didn't see him speak during shot 3, and shot 4 plays out his entire line.

Lang was perfectly capable of overlapping sound across his cuts. *M* does it throughout; in fact, the next line the little man speaks initiates a dialogue overlap. By aligning certain cuts with dramatic pauses in the dialogue, Lang gives special weight to the lines spoken by the thug in shot 3 and his innocent target in shot 4. As usual, different stylistic choices produce different effects onscreen.

Layers and Contrasts The sounds flow not only in streams but also in layers. We have already seen that in production, combining sounds is usually done after shooting, in the mixing process. The mixer can precisely control the volume, duration, and tone quality of each sound, weaving them in and out, making them momentarily clear or pushing them out of hearing. For example, in *Jurassic Park,* Steven Spielberg manipulates volume unrealistically for purposes of narrative clarity. After a live cow has been lowered into the velociraptors' pen, the South African hunter gives important information about the habits of these predators, and his

7.27 Selective sound volume. In *Jurassic Park,* Hammond and Ellie are closer to the camera than is anything else in the shot, but their dialogue is an unintelligible murmur. In the background, the hunter supplies important information about velociraptors, and that is clearly audible.

voice comes through louder than those of characters closer to the camera **(7.27).**

In modern filmmaking, a dozen or more separate tracks may be layered at any moment. The mix can be quite dense. An airport scene may combine the babble of voices, footsteps, luggage trolleys, Muzak, and plane engines. Or the mix can be very sparse, with an occasional sound emerging against a background of total silence. That's what happens in the *M* scene (7.23–7.26), where no ambient sound distracts from the confrontation of the two men. Most cases will fall somewhere between a thick mix and a thin one. In our *Hunt for Red October* scene (7.20–7.22), a distant throbbing engine and slight brushings of fabric form a muted background to the conversation.

The filmmaker may create a mix in which each sound blends smoothly with the others. This is commonly the case when music and effects are mixed with speech. In classical Hollywood cinema of the 1930s, the musical score may become prominent in moments in which there is no dialogue, and then it's likely to fade unnoticeably down just as the characters begin to talk. (In studio parlance, this is called *sneaking in* and *sneaking out.*) This sort of smooth rising and falling pattern provides a clearer, simpler sound world than we encounter in everyday life. The legendary sound designer Walter Murch carefully limits the amount of sound information he provides viewers. "There is a rule of thumb I use, which is never to give the audience more than two-and-a-half things to think about aurally at any one moment." In Murch's mix for *The English Patient*, when the nurse feeds the patient a plum, a distant church bell rings. The clean auditory background makes the bell an evocative overtone, suggesting that the hospital is a calm refuge from the war.

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We've been fortunate enough to sit in on some mixing sessions and learn from people who mix sound. See "Christian Bale picks up a rail," "What does a Water Horse sound like?" and "The Boy in the Black Hole."

Alternatively, the acoustic stream may contain much more abrupt contrasts. In *The Godfather,* just as Michael Corleone is steeling himself to shoot the rival gangster Sollozzo, we hear a loud, metallic screech, presumably from a nearby elevated train. The sound suggests impending danger, both for the victim and for Michael: After the murder, Michael's life will change irrevocably **(7.28).** Hollywood films often exploit the dynamic range of Dolby technology to fill chase sequences with startling shifts between low, rumbling engines and whining sirens or squealing tires.

"For the last few years—since *Blue Velvet,* I think—I have tried to do most of the music before the shoot. I discuss the story with my composer, Angelo Badalamenti, and record all sorts of music that I listen to as I'm shooting the film, either on headphones during dialogue scenes or on loudspeakers, so that the whole crew gets in the right mood. It's a great tool. It's like a compass helping you find the right direction."
—David Lynch, director

Yet another alternative is explored in Alexander Sokurov's *Alexandra.* A soldier's grandmother visits him at his camp and wanders freely among the men preparing for war. The sound track includes naturalistic dialogue and effects. But these conventional elements are wrapped in soft voices, orchestral chords, and snatches of rising and falling soprano singing. The murmuring auditory collage suggests a collective dimension to the old lady's stay, as if she is visiting on behalf of the unseen families of all the men, perhaps all soldiers' families throughout history.

A Dramatic Sound Stream: *Seven Samurai* Akira Kurosawa was well aware of how sounds can combine to create a stream of information, as we can see from the final battle sequence of his *Seven Samurai.* In a heavy rain, marauding bandits charge into a village defended by the villagers and the samurai. Kurosawa chooses to keep the torrent and wind as a constant background noise. Before the battle, he punctuates the conversation of the waiting men, the tread of footsteps, and the sound of swords being drawn with long pauses in which we hear only the drumming rain. Like the defenders, we're uncertain about when and how the attack will come.

Suddenly distant horses' hooves are heard offscreen. This triggers the expectation that we will soon see the attackers. Kurosawa cuts to a long shot of

the bandits; their horses' hooves become abruptly louder. (The scene employs vivid **sound perspective:** The closer the camera is to a source, the louder the sound.) When the bandits burst into the village, yet another sound element appears—the bandits' harsh war cries, which increase steadily in volume as they approach.

The battle begins. The rhythmic cutting and the muddy, storm-swept mise-en-scene gain impact from the way in which the incessant rain and splashing are explosively interrupted by brief noises—the howls of the wounded, the splintering of a fence one bandit crashes through, the whinnies of horses, the twang of a samurai's bowstring, the gurgle of a speared bandit, the screams of women when the bandit chieftain breaks into their hiding place. The sudden intrusion of certain sounds marks abrupt developments in the battle, standing out against the pounding rain. Such frequent surprises heighten our tension, as the narration rapidly snaps us from one line of action to another.

7.28 Harsh sound contrasts: *The Godfather.* As Michael sits opposite Sollozzo, the sudden rumble and whine of an offscreen train sound all the more harsh when compared with the calm expression on Michael's face.

The scene climaxes after the main battle has ended. Offscreen the pounding of horses' hooves is cut short by the sharp crack of a bandit's rifle shot, which fells one samurai. A long pause, in which we hear only the rain, emphasizes the moment. The samurai furiously flings his sword in the direction of the shot and falls dead into the mud. Another samurai splashes toward the bandit chieftain, who has the rifle; another shot cracks out and he falls back, wounded; another pause, in which only the relentless rain is heard. The wounded samurai kills the chieftain. The other samurai gather. At the scene's end, the sobs of a young samurai, the distant whinnies and hoof beats of riderless horses, and the rain all fade slowly out.

Kurosawa's relatively dense mix gradually introduces sounds that turn our attention to new narrative elements (hooves, battle cries) and then modulates these sounds into a harmonious stream. This stream is then punctuated by abrupt sounds of unusual volume or pitch associated with crucial narrative actions (hooves, archery, women's screams, gunshots). Overall, the combination of sounds enhances the unrestricted, objective narration of this sequence, which shows us what happens in various parts of the village rather than confining us to the experience of a single participant.

Sound and Film Form By choosing and combining sound materials, the filmmaker can create engaging patterns that run through the whole film. The process is most evident in a film's musical score.

Sometimes the filmmaker picks preexisting pieces of music to accompany the images. Directors like Stanley Kubrick and Terrence Malick are known for their bold choices of classical music, whereas others, like Wes Anderson or Quentin Tarantino, select older pop songs to give their films a hipster cachet.

> "It's a lot like writing an opera. There's a lot of form and structure. We're very conscious that LOTR is one story that has been broken into three parts. My score is a complex piece that has to be structured carefully, musically and thematically, so that all the parts relate to one another."
> —Howard Shore, composer, *The Lord of the Rings*

In other cases, music is composed for the film, and here the filmmaker and the composer make several choices. The rhythm, melody, harmony, tempo, volume, and instrumentation of the music can strongly affect a viewer's emotional reactions. We've already seen how the commentary track of *Letter from Siberia* created different impressions of the footage. The same thing can happen with music alone. A close-up of an actor with a neutral expression may seem happy, excited, melancholy, or disturbed, depending on the kind of music that accompanies the image. Near the end of *Queen Christina*, the heroine renounces her throne in order to marry the Spanish envoy she loves. After he dies in a duel, Christina sails from Sweden to live in his homeland. Director Rouben Mamoulian told star Greta Garbo to maintain a neutral expression in the final shot as the camera tracks into a tight close-up of her on the ship's deck. We might expect to hear

mournful music, but instead a triumphant melody suggests Christina's courage and determination.

A melody or musical phrase can be associated with a particular character, setting, situation, or idea. The ominous, two-note motif played in the lower strings in *Jaws* (1975) becomes a musical signal of the shark's movement toward his victims. The brassy fanfare for *Star Wars* (1977) captures Luke Skywalker's bravery and impetuousness.

As in opera and musical comedy, themes can intertwine. *Local Hero,* a film about a confused young executive who leaves Texas to close a business deal in a remote Scottish village, uses two major musical themes. A rockabilly tune is heard in the urban Southwest, whereas a slower, more poignantly folkish melody is associated with the seaside village. In the final scenes, after the young man has returned to Houston, he recalls Scotland with affection, and the film plays the two themes simultaneously.

In contrast, a single musical theme can change its quality when associated with different situations. In *Raising Arizona,* the hapless hero has a terrifying dream in which he envisions a homicidal biker pursuing him, and the accompanying music is appropriately ominous. But at the film's end, the hero dreams of raising dozens of children, and now the same melody, reorchestrated and played at a calm tempo, conveys a sense of peace and comfort.

Musical Motifs in *Breakfast at Tiffany's*

Musical motifs can subtly compare scenes, trace patterns of development, and suggest implicit meanings. Henry Mancini's score for Blake Edwards' *Breakfast at Tiffany's* (1961) mixes jazz and pop elements to reflect vibrant, cosmopolitan New York City. At the same time, the film employs musical themes to suggest traits of character and situation.

The film's main musical theme, "Moon River," hints at Holly Golightly's rural past. Mancini claimed that the concept of the score grew out of the lonesome, melancholy timbre of the harmonica, an instrument associated with American folk music. The theme first appears over the film's opening shots of Holly exiting a cab near Fifth Avenue. She walks over to the display windows of Tiffany's jewelry store **(7.29).** Later, the visuals echo the film's title by showing Holly munching a croissant and drinking coffee, but the music tells a somewhat different story. The guitar and harmonica sounds seem an odd choice to accompany shots of New York City. Yet the orchestration reflects character traits rather than setting. The harmonica in "Moon River" expresses Holly's pervasive sense of wistful longing. Its rural association foreshadows the later revelation that she was once Lulamae Barnes, a child bride living in Tulip, Texas, married to a widowed veterinarian.

Repetitions of "Moon River" help to develop the storyline of Holly's past. When Holly beds down next to Paul early in the film, "Moon River" plays over vibraphone chords, its wavering vibrato adding a pensive tone as Holly talks in her sleep **(7.30).** "Moon River" returns in the bus-station scene in which Holly bids a tearful adieu to Doc Golightly, her former husband **(7.31).** This arrangement places the theme in the high register of the violins, a musical technique that often indicates strong passions and emotional conflict. Mancini's arrangement captures Holly's feelings by expressing her sadness at abandoning a man she loves, but whose life she cannot share.

At the film's climax, "Moon River" underscores the search for Cat, who Holly capriciously turns loose in an alley during a rainstorm. Holly's gesture demonstrates both her complete independence and her desire to escape the limelight of scandal-infested New York. Holly's emotional resolve softens, though, after

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7.29–7.33 Music suggests narrative development. Henry Mancini's "Moon River" is introduced during the film's opening credits (7.29), but reappears later in the film to recall Holly's past as a "wild thing." Scenes show Holly talking in her sleep (7.30), bidding good-bye to Doc Golightly (7.31), and searching for Cat (7.32). A final variant of the theme enters for the couple's embrace (7.33).

Paul rebukes her for failing to let anyone penetrate her brittle shell. Regretting her impetuous decision, Holly joins Paul as they search the alley **(7.32).** Here the "Moon River" melody plays in a minor key over the lurching rhythm of dissonant piano chords. When Holly finds Cat hiding in a cardboard box, the melody returns to a major key and a slow, simple waltz tempo.

Holly and Paul's reconciliation is emphasized by a lush arrangement of the theme for orchestra and chorus that signals a happy ending **(7.33).** By tailoring each cue's harmony, orchestration, and meter to the needs of each scene, Mancini makes "Moon River" not only dramatically appropriate but a reminder of the rural motif that runs through the film.

A CLOSER LOOK

Orchestrating Romance in *Jules and Jim*

Breakfast at Tiffany's adapts its major melody to the drama of Holly's New York life. Francois Truffaut's *Jules and Jim* ties three musical motifs to different aspects of a character. In the process, it traces how a love triangle passes from light-hearted friendship to melancholy and revenge.

Overall, Georges Delerue's score evokes the Paris of 1912–1933, the years during which the action takes place. Many of the melodies resemble works by Claude Debussy and Erik Satie, two prominent composers of the period. But Delerue constrains himself by limiting nearly the whole score to melodies in 3/4 meter. Many of the tunes are in waltz time, and all the main themes are in keys related to A major. The choice of rhythm and tempo fits the characters' carefree youth, as if they are dancing an endless waltz, while the changes in harmony express the more somber turn that the action will take.

Jules and Jim compete for Catherine's favors, and she enjoys flitting between them. Her view of life is conveyed by her "Tourbillon" ("Whirlwind") song, which says that life consists of constantly changing romantic partners. But as the trio's relationship becomes more strained over the years, the score reflects this in the development of major motifs.

A lyrical melody is first heard when Jules, Jim, and Catherine visit the countryside and bicycle to the beach **(7.34).** This "idyll" tune will recur at many points when the characters reunite, but as the years pass, it will become slower in tempo and more somber in instrumentation, and will shift from a major to a minor mode.

Another motif that reappears in different guises is a "dangerous love" theme associated with Jim and Catherine. This grave, shimmering waltz is first heard when he visits her apartment and watches her pour a bottle of sulphuric acid down the sink **(7.35).** (The acid, she says, is "for lying eyes.") Afterward, this harmonically unstable theme, which resembles one of Satie's *Gymnopédies* for piano, is used to underscore Jim and Catherine's stormy love affair. At times it accompanies scenes of passion, but at other times it accompanies their growing disillusionment and despair.

The most varied theme is a mysterious phrase first heard on the flute when Jules and Jim encounter a striking ancient statue **(7.36).** Later they meet Catherine and discover that she has the statue's face; a repetition of the musical motif confirms the comparison. Throughout the film, this brief motif is associated with the enigmatic side of Catherine.

In the film's later scenes, this motif is developed in an intriguing way. The bass line (played on harpsichord or strings) that softly accompanied the woodwind tune now comes to the fore, creating a relentless, often harsh, pulsation. This "menace" waltz underscores Catherine's fling with Albert and accompanies her final revenge on Jim: driving her car, with him as passenger, off a broken bridge and into the river.

7.34

7.35

7.36

7.34–7.36 *Jules and Jim*: Three musical motifs. An idyllic bicycle ride in the country introduces the main musical theme associated with the three characters' relations (7.34). Catherine pours out the acid, which she has said is "for lying eyes, accompanied by the 'dangerous love' theme." (7.35). The camera slowly arcs around the statue as a new musical motif is introduced (7.36).

Once musical motifs have been selected, they can be combined to evoke associations. During Jim and Catherine's first intimate talk after the war, the bass-line-dominated version of the enigma waltz is followed by the love theme, as if the latter could drown out the menacing side of Catherine's character. The love theme accompanies long tracking shots of Jim and Catherine strolling through the woods. But at the scene's end, as Jim bids Catherine farewell, the original woodwind version of her theme recalls her mystery and the risk he is running by falling in love with her.

Similarly, when Jim and Catherine lie in bed, facing the end of their affair, the voice-over narrator says, "It was as if they were already dead" as the dangerous-love theme plays. This sequence associates death with their romance and foreshadows their fate at the film's end.

A similar sort of blending can be found in the film's final scene. Catherine and Jim have drowned, and Jules is overseeing the cremation of their bodies. As shots of the coffins dissolve into detailed shots of the cremation process, the enigma motif segues into its sinister variant, the menace motif. But as Jules leaves the cemetery and the narrator comments that Catherine had wanted her ashes to be cast to the winds, the string instruments glide into a sweeping version of the whirlwind waltz **(7.37).** The film's musical score concludes by recalling the three sides of Catherine that attracted the men to her: her mystery, her menace, and her vivacious openness to experience. In such ways, a musical score can create, develop, and associate motifs that enter into the film's overall form.

> "So, given this mood-altering potential of music, it becomes a great source of fun, as well as a chance to make a scene that works OK work a whole lot better—to bring out the point of a scene that you haven't captured in the shooting of it, to excite the audience, to create the impression that something is happening when something isn't, and also to create little emotional touchstones which you can draw upon as the story changes—so that the music that seemed so innocent and sweet earlier, in new circumstances brings on a whole other set of feelings."
> —Jonathan Demme, director

7.37 Combining the motifs. The sadness of the ending is undercut by the lilting whirlwind waltz.

Dimensions of Film Sound

We've seen what sounds consist of and how the filmmaker can select among the different kinds of sounds available. We've also seen how sound can guide the viewer's attention and create patterns across the film. But filmmakers have still more choices when they consider how to connect sounds to images.

First, sound unfolds over time, so it has a *rhythm.* Second, a sound can relate to its perceived source with greater or lesser *fidelity.* Third, sound suggests something about the *spatial* conditions in which it occurs. And fourth, the sound relates to visual events that take place at particular points in time, and this relationship gives sound a *temporal* dimension. These dimensions offer the filmmaker a great many areas of control and choice.

Rhythm

Rhythm works on us at deep levels. Our body maintains its own biorhythm, the most basic of which is the heartbeat. Psychologists have shown that music in a film triggers changes in heartbeat and other physical responses. Rhythmic audio stimuli can provoke visual attention, as when a chugging rhythm in the music prompts us to see that a train is approaching.

Rhythm involves, minimally, a *beat,* or pulse; a *tempo,* or pace; and a pattern of *accents,* or stronger and weaker beats. In the realm of sound, all of these features are naturally most recognizable in film music, since there beat, tempo, and accent are basic compositional features. In our examples from *Jules and Jim,* the motifs

can be characterized as having a 3/4 metrical pulse, putting an accent on the first beat, and displaying variable tempo—sometimes slow, sometimes fast.

We can find rhythmic qualities in sound effects as well. The plodding hooves of a farm horse differ from a cavalry mount galloping at full speed. The reverberating tone of a gong may offer a slowly decaying accent, while a sudden sneeze provides a brief one. In a gangster film, a machine gun's fire creates a regular, rapid beat, while the sporadic reports of pistols may come at irregular intervals.

Speech also has rhythm. People can be identified by voice prints that show not only characteristic frequencies and amplitudes but also distinct patterns of pacing and syllabic stress. In *His Girl Friday,* our impression is of very rapid dialogue, but the scenes actually are rhythmically subtler than that. In the start of each scene, the pace is comparatively slow, but as the action develops, characters talk at a steadily accelerating rate. As the scene winds down, the conversational pace does as well. This rise-and-fall rhythm matches the arc of each scene, giving us a bit of a rest before launching the next comic complication.

Rhythm in Sound and Image: Coordination A filmmaker who wants to exploit sonic rhythm faces the fact that the movements in the images have a rhythm as well, distinguished by the same principles of beat, tempo, and accent. In addition, the editing has a rhythm. As we have seen, a succession of short shots helps create a rapid tempo, whereas shots held longer tend to slow down the pace.

In most cases, the rhythms of editing, of movement within the image, and of sound all cooperate. Possibly the most common tendency is for the filmmaker to match visual and sonic rhythms to each other. In a dance sequence in a musical, the figures move about at a rhythm determined by the music. But variation is always possible. In the "Waltz in Swing Time" number in *Swing Time,* the dancing of Fred Astaire and Ginger Rogers moves quickly in time to the music. Yet no fast cutting accompanies this scene. Indeed, the scene consists of a single long take from a long-shot distance.

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We survey Lea Jacobs's theories about cinematic rhythm in "The getting of rhythm: Room at the bottom."

Animated films often closely coordinate visible movement and sound. In Walt Disney films of the 1930s, the characters often move in exact synchronization with the music, even when they aren't dancing. (As we've seen, such exactness was possible because the sound track was recorded before the drawings were made.) Tightly matching movement to music came to be known as *Mickey-Mousing.*

The credit sequence of Quentin Tarantino's *Reservoir Dogs* shows how a director can coordinate the different rhythms of music, editing, and figure movement **(7.38, 7.39).** Although the gang of thieves is striding in slow motion, the music has a very fast tempo, close to 190 beats per minute. The editing rhythm is somewhat slower, as each cut comes at five-second intervals to match the phrase structure of the song. The rhythm of movement and gesture is even slower: The slow-motion image stretches out the characters' movements.

A tight correspondence between musical and visual rhythms can yield a powerful dramatic climax. Michael Mann's *The Last of the Mohicans* culminates in a chase and a fight along a mountain ridge. Alice has been captured by the renegade Magua, and Hawkeye, Uncas, and Chingachgook race up the trail to rescue her. We might expect, then, the standard thunderous action score, but what we hear is a quick, grave Scottish dance, initially played on fiddle, mandolin, and harpsichord. The tune was heard in an earlier dance scene at the fort, so it functions to recall the two couples' romances, but here it gives the scene a propulsive energy. Hand-to-hand struggles stand out against the throbbing music. Eventually, the theme swells to the full orchestra, but the same implacable beat governs the action. When Alice hovers on the cliff edge, about to jump off, somber chords repeat a seesaw pulse, as if time is standing still.

At the scene's climax, Chingachgook sprints into the fray, and faster musical figures played by stringed instruments recall the early dance tune. Chingachgook's attack on Magua consists of four precise blows from his battle-axe; each blow

7.38

7.39

7.38–7.39 Rhythmic contrast in *Reservoir Dogs.* As the credits start, the opening bass line of the George Baker Selection's "Little Green Bag" begins as well. When the drums join in, Tarantino cuts to a lateral tracking shot of the gang, many dressed in black suits, as they walk in slow motion (7.38). When the verse of the song starts, we cut to a medium shot of Mr. White. Harvey Keitel's credit is superimposed over this shot to link the actor and the character (7.39). Each of the principal cast members is introduced in a similar fashion, with each cut coordinated with the start of a new musical phrase.

coincides with the third beat in a series of musical measures. In the final moment of combat, the two warriors stand frozen opposite each other. The shot lasts three beats. On the fourth beat, Chingachgook launches the fatal blow. As Magua topples over, the music's pulse is replaced by a sustained string chord. *The Last of the Mohicans* synchronizes dance music with visual rhythms, but the result doesn't feel like Mickey-Mousing. The throbbing 4/4 meter, the accented beats, and the leaping melody give the heroes' precise movements a choreographic grace.

Rhythm in Sound and Image: Disparities The filmmaker may also choose to create a disparity among the rhythms of sound, editing, and image. One of the most common options is to edit dialogue scenes in ways that cut against natural speech rhythms. In our example of dialogue overlap from *The Hunt for Red October* (7.20–7.22), the editing doesn't coincide with accented beats, cadences, or pauses in the officer's speech. Thus, the editing smoothes over the changes of shot and emphasizes the words and facial expressions of Captain Ramius. If a filmmaker wants to emphasize the speaker and the speech, the cuts usually come at pauses or natural stopping points in the line, as in our example from *M* (7.23–7.26).

The filmmaker may contrast the rhythm of sound and picture in more noticeable ways. For instance, if the source of sound is primarily offscreen, the filmmaker can utilize the behavior of onscreen figures to create an expressive counterrhythm. Toward the end of John Ford's *She Wore a Yellow Ribbon,* the aging cavalry captain, Nathan Brittles, watches his troops ride out of the fort just after he has retired. He regrets leaving the service and longs to go with the patrol. The sound of the scene consists of two elements: the cheerful title song sung by the departing riders, and the quick hoof beats of their horses. Yet only a few of the shots show the horses and singers, who ride at a rhythm matched to the sound. Instead, the scene

concentrates our attention on Brittles, standing almost motionless by his horse. The contrast of brisk musical rhythm and the static images of the solitary Brittles expresses his regret at having to stay behind for the first time in many years.

Sometimes the musical accompaniment might even seem rhythmically inappropriate to the images. At intervals in *Four Nights of a Dreamer,* Robert Bresson presents shots of a large, floating nightclub cruising the Seine. The boat's movement is slow and smooth, yet the sound track consists of lively calypso music. (Not until a later scene do we discover that the music comes from a band aboard the boat.) The strange combination of fast sound tempo with the slow passage of the boat creates a languid, mysterious effect.

In Chris Marker's *La Jetée,* the contrast between image and sound rhythms dominates the entire film. *La Jetée* is made up almost entirely of still shots; except for one tiny gesture, all movement within the images is eliminated. Yet the film utilizes voice-over narration, music, and sound effects of a generally rapid, constantly accented rhythm. Despite the absence of movement, the film doesn't seem uncinematic, partly because it offers a dynamic interplay of audio-visual rhythms.

Most films don't follow just one strategy in combining the rhythms of pictures and sounds. A filmmaker may change rhythms in order to reset our expectations. In the famous battle on the ice in *Alexander Nevsky,* Sergei Eisenstein develops the sound from slow tempos to fast and back to slow. The first 12 shots of the scene show the Russian army anticipating the attack of the German knights. The shots are of moderate length, and they contain very little movement. The music is comparably slow, consisting of short, distinctly separated chords. Then, as the German army rides into sight over the horizon, both the visual movement and the tempo of the music increase quickly, and the battle begins. At the end of the battle, Eisenstein creates another contrast: A long passage of slow, lamenting music accompanies majestic tracking shots with little figure movement.

Fidelity

By *fidelity,* we don't mean the quality of recording. In our sense, fidelity refers to the extent to which the sound is faithful to the source as we conceive it. If a film shows us a barking dog and we hear a barking noise, that sound is faithful to its source; the sound maintains fidelity. But if the image of the barking dog is accompanied by the sound of a cat meowing, there enters a disparity between sound and image—a lack of fidelity.

From the filmmaker's standpoint, fidelity has nothing to do with what originally made the sound in production. Even if our dog emits a bark onscreen, perhaps in production the bark came from a different dog or was electronically synthesized. We do not know what light sabers really sound like, but we accept the whang they make in *Return of the Jedi* as plausible. (In production, their sound was made by hammering guy wires that anchored a radio tower.) You can make a dog meow as easily as making it bark. If the viewer takes the sound to be coming from its source in the diegetic world of the film, then it is faithful, regardless of its actual source in production. Fidelity is thus purely a matter of expectation.

When we're led to notice that a sound is unfaithful to its source, that awareness is usually used for comic effect, as with our meowing dog. In Jacques Tati's *Mr. Hulot's Holiday,* much humor arises from the opening and closing of a dining room door. Instead of recording a real door, Tati inserts a twanging sound like a plucked cello string each time the door swings. Aside from being amusing in itself, this sound functions to emphasize the rhythmic patterns created by waiters and diners passing through the door. Because many gags in Tati films are based on quirkily unrealistic noises, his films are good specimens for the study of fidelity.

Lack of fidelity yields both humor and subjectivity in Jerry Lewis's *The Nutty Professor* (1963). After a night of binge drinking, Professor Kelp returns to the classroom with a severe hangover. He's sensitive to every noise. When he closes the door,

7.40 Fun with fidelity. After several exaggerated noises indicating Kelp's hangover, drops in a test tube are heard as a reverberating snare drum played over fragmentary sounds of ocean waves.

it slams behind him with a hollow boom, sounding more like a metal drum. When he bumps into his desk and a book falls over, the noise echoes for several seconds and finishes with an electronic shimmering. There follows a string of closely miked, highly reverbed noises: the squeak of a chalk on the blackboard, the wet crackle of gum being chewed, and a blast from a student blowing her nose. The most flagrant manipulation of fidelity comes as drops from an eyedropper trickle into a test tube **(7.40).** Throughout, the comic manipulation of fidelity is motivated by Kelp's state of mind.

Still, not every play with fidelity is comic. In Alfred Hitchcock's *The Thirty-Nine Steps*, a landlady discovers a corpse in an apartment. We see her scream but hear a train whistle; then the scene shifts to action on a train. The whistle isn't faithful to its apparent source, but it provides a swift, vivid transition.

> "[Sound] doesn't have to be in-your-face, traditional, big sound effects. You can especially say a lot about the film with ambiences—the sounds for things you don't see. You can say a lot about where they are geographically, what time of day it is, what part of the city they're in, what kind of country they're in, the season it is. If you're going to choose a cricket, you can choose a cricket not for strictly geographic reasons. If there's a certain cricket that has a beat and a rhythm to it, it adds to the tension of a scene."
> —Gary Rydstrom, sound editor, *Toy Story*

Space

Sound has a spatial dimension because it comes from a *source*. Our beliefs about that source have a powerful effect on how we understand the sound.

Diegetic Versus Nondiegetic Sound

When we considered narrative form back in Chapter 3, we described events taking place in the story world as *diegetic* (p. 76). Accordingly, **diegetic sound** is sound that has a source in the story world. The words spoken by the characters, sounds made by objects in the story, and music represented as coming from instruments in the story space are all diegetic sound.

Diegetic sound is often hard to notice as such. It may seem to come naturally from the world of the film. But as we saw when the Ping-Pong game in *Mr. Hulot's Holiday* becomes abruptly quiet to allow us to hear action in the foreground, the filmmaker may manipulate diegetic sound in ways that aren't at all realistic.

Alternatively, there is **nondiegetic sound,** which is represented as coming from a source outside the story world. Music added to enhance the film's action is the most common type of nondiegetic sound. When Roger Thornhill is climbing Mount Rushmore in *North by Northwest* and tense music comes up, we don't expect to see an orchestra perched on the side of the mountain. Viewers understand that movie music is a convention and does not issue from the world of the story. The same holds true for the so-called omniscient narrator, the disembodied voice that gives us information but doesn't belong to any of the characters in the film. An example is *The Magnificent Ambersons,* in which the director, Orson Welles, speaks the nondiegetic narration.

7.41 Nondiegetic sound effects. As characters in *Le Million* toss the coat around, director René Clair fades in the sounds of a football game. Because the maneuvers of the chase do look like a scrimmage, this enhances the comedy of the sequence by creating a sort of audio-visual pun.

Nondiegetic sound effects are also possible. In *Le Million,* various characters pursue an old coat with a winning lottery ticket in the pocket. The chase converges backstage at the opera, where the characters race and dodge around one another, tossing the coat to their accomplices. What we hear, however, are the sounds of a football game, including a cheering crowd and a referee's whistle **(7.41).**

Nondiegetic sound effects have become common in contemporary Hollywood. Whooshing sounds are synchronized with rapid camera movements. In Tony Scott's remake of *The Taking of Pelham 123*, after the ransom has been gathered at the Brooklyn Federal Reserve, a nondiegetic whoosh accompanies a rapid zoom out to a satellite view showing the money's destination in midtown Manhattan. Similarly, nondiegetic "needle scratches," imitating a phonograph needle scraping across an LP record, are used for comic effect. Whooshes and needle scratches have become so common that online sound effects libraries offer them to aspiring filmmakers. A film's soundtrack can be completely nondiegetic. Bruce Conner's *A Movie,* Kenneth Anger's *Scorpio Rising,* and Derek Jarman's *War Requiem* use only nondiegetic music. Similarly, many compilation documentaries include no diegetic sound; instead, omniscient voice-over commentary and orchestral music guide our response to the images.

As with fidelity, the distinction between diegetic and nondiegetic sound reflects the conventions of film viewing. Viewers understand that certain sounds seem to come from the story world, while others come from outside the space of the story events. We've learned these conventions so thoroughly that we usually don't have to think about which type of sound we're hearing at any moment. At many times, though, a film's narration deliberately blurs boundaries between different spatial categories. A play with the conventions can be used to puzzle or surprise the audience, to create humor or ambiguity, or to suggest thematic implications. We'll give some examples shortly.

Resources of Diegetic Sound: Offscreen Sound We know that the space of the narrative action isn't limited to what we can see onscreen at any one moment. The same thing holds true for sound. In the last shot of our *The Hunt for Red October* scene, we hear the officer speaking while we see a shot of just Captain Ramius, listening (7.22). Early in the attack on the village in *The Seven Samurai,* we, along with the samurai, hear the hoof beats of the bandits' horses before we see a shot of them. These instances remind us that diegetic sound can be either *onscreen* or *offscreen,* depending on whether its source is inside the frame or outside the frame.

Offscreen sound is crucial to our experience of a film, and filmmakers know that it can save time and money. A shot may show only a couple sitting together in airplane seats, but if we hear a throbbing engine, other passengers chatting, and the creak of a beverage cart, we'll conjure up a plane in flight. Offscreen sound can create the illusion of a bigger space than we actually see, as in the cavernous prison sequences of *The Silence of the Lambs.* As with our creaking-door example (p. 265), offscreen sounds can shape our expectations of how a scene will develop **(7.42–7.44).**

7.42

7.43

7.44

7.42–7.44 Offscreen sound implies space. In *His Girl Friday,* Hildy goes into the pressroom to write her final story. As she chats with the other reporters, a loud clunk comes from an offscreen source, and they glance to the left (7.42). Hildy and another reporter walk to the window (7.43) and see a gallows being prepared for a hanging (7.44).

A CLOSER LOOK

Offscreen Sound and Optical Point of View

The Money Exchange in Jackie Brown

Optical point-of-view cutting can be very powerful, as we saw in examining *Rear Window* (p. 241). Now we're in a position to see—and hear—how it can be coordinated with onscreen and offscreen sound. Quentin Tarantino's *Jackie Brown* offers an illuminating example because, like our sequence from *Letter from Siberia* (pp. 265–266), it runs the same sequence of actions three times, with varying sound tracks. Unlike Chris Marker's film, however, *Jackie Brown* presents the scene as different characters experience it.

Jackie is supposed to deliver over half a million dollars in cash to the dangerous arms dealer Ordell. Ordell has sent his girlfriend, Melanie, and his partner, Louis, to pick up the money from a fitting room in a dress shop. Jackie, however, is playing her own game. She's agreed to help federal agents arrest Ordell, but she has also recruited the bail bondsman Max Cherry to help her switch shopping bags and leave Ordell empty-handed.

This story action is presented three times in the plot, each time adding a layer to our understanding of what's really happening. It would be worthwhile to study the careful auditory touches in these three sequences, such as the replay of the shop's Muzak and the delicate Foley work on footsteps, fabric, and other noises. Here we'll concentrate on optical subjectivity and offscreen sound, because these techniques are crucial in making the triple play clear to the audience. They also serve to contrast Ordell's squabbling, inept partners and the self-possessed Jackie and Max.

The first run-through confines us to Jackie's range of knowledge. She tries on a pantsuit, and the saleswoman says, "Wow, you look really cool!" **(7.45).** Jackie goes back to the fitting rooms and waits for Melanie. We hear Melanie arrive offscreen, and Tarantino shows us her shoes from Jackie's viewpoint. After Melanie has left, Jackie repacks the money in a shopping bag she leaves in the cubicle and hurries out. She hastily pays the sales clerk, who calls after her, "Wait, your change!" and waves her bills **(7.46).** Jackie rushes out to the mall and summons the federal agents, shouting that Melanie stole the bag from her.

Tarantino flashes back to an earlier phase of the action, with Louis and Melanie arriving at the shop. As the camera follows them **(7.47, 7.48),** we hear the saleswoman say from offscreen, "Wow, you look really cool!" The camera pans to Jackie and the clerk **(7.49).** The offscreen sound has motivated showing this dialogue again, and its unnatural loudness assures that we understand that we're entering the scene at a point we've already witnessed. Louis and Melanie try to look inconspicuous. When Melanie teases Louis about his nervousness, he angrily twists her arm, and she blurts out, "Hey, would you let go!" **(7.50).**

Tarantino now uses offscreen sound to test Louis's dull wits. Louis looks down at the shirts he's riffling through **(7.51),** and we hear an offscreen phone ring. Louis doesn't look up, but we are given a shot of the clerk answering **(7.52).** What does get Louis's attention is Melanie, who abruptly departs for the fitting rooms. Looking uneasily this way and that, Louis sees Max, whom he dimly recognizes, and the two men exchange glances in shot/reverse shot. Then Melanie hustles out of the fitting rooms, and Louis catches up with her. They leave quarreling about who should carry the bag.

7.45 The sales clerk tells Jackie, "Wow, you look really cool!"

7.46 After Jackie has left the money in the fitting room, she hurries away, pretending to be distraught. The clerk calls after her, "Wait, your change!"

7.45–7.46 *Jackie Brown*: The first run-through

A CLOSER LOOK

Continued

7.47 As Melanie and Louis head toward the shop, the camera tracks rightward with them, passing Max Cherry in the foreground.

7.48 As Melanie and Louis approach, we hear, "Wow, you look really cool!" fairly softly.

7.49 The camera pans to pick up Jackie and the clerk, as Jackie says she'll buy the outfit. Sound perspective makes the dialogue louder and clearer, emphasizing that this is a repetition of the scene we've just witnessed. (Compare 7.45.)

7.50 Quarreling at the garment racks, Louis grabs Melanie's arm and she snaps, "Hey, would you let go!"

7.51 Louis browses through shirts. At the end of the shot, a telephone rings offscreen.

7.52 The clerk answers the phone, but this isn't Louis's point of view; it's close to what he might have seen if he *had* looked up.

7.47–7.52 The second version

The scene runs a third time, now attaching us to Max's range of knowledge. The second version hinted at his presence early, when the tracking shot following Melanie and Louis glided past him in the foreground (7.47, 7.48). We see him enter and browse, waiting calmly for the scam to begin. Once more Jackie comes out wearing the outfit, and the sales clerk says, "Wow, you look really cool!" But now the exchange is observed from Max's point of view **(7.53, 7.54).** The sound track fades out the dialogue between the clerk and Jackie and fades up the quarrel between Melanie and Louis. Max turns his attention to them and then back to Jackie and the clerk. Here the sound mixing is quite subjective, conveying Max's shifting attention between the two conversations.

While Max is watching the action at the counter, we hear Louis and Melanie quarreling, and this motivates another switch in Max's attention, in time for him to observe her exclaiming, "Hey, would you let go!" **(7.55, 7.56).** The ringing phone drives his eyes back to the clerk **(7.57, 7.58),** but he keeps Melanie in mind too. A little before Louis notices, Max sees Melanie set off on her mission. Louis clumsily scans the shop, but Max is calm and purposeful. Each offscreen sound snaps his attention to what is crucial to the plan. After Melanie and Louis leave, it's through Max's eyes that we see Jackie's departure, with the shop woman calling, "Wait, your change!" **(7.59).** Max pauses, then heads for the fitting room to retrieve the shopping bag and the fortune.

By repeating key actions, noises, and lines of dialogue, the replays lay out the mechanics of the exchange cogently. The variations between the second and third sequences allow Tarantino to characterize the thieves. Max is more alert than Louis and Melanie, and offscreen sounds prompt him to shift his attention precisely. Moreover, each version of story events is nested neatly inside the next one: Jackie and the clerk, then Jackie and the clerk watched by Melanie and Louis, then all the others watched by Max, who completes the money exchange. Sound and image work together to peel back each layer and expand our appreciation of Jackie's intricate double-cross.

7.53 Pretending to be killing time in the shop, Max turns his attention to Jackie . . .

7.54 . . . just as the clerk exclaims, "Wow, you look really cool!" The repeated line anchors us in action we remember. The framing from Max's optical point of view varies what we saw in 7.45 and 7.49.

7.55 After Jackie leaves for the changing room, Max shifts his attention to Melanie and Louis, in time to hear her say, "Hey, would you let go!"

A CLOSER LOOK

Continued

7.56 His switch in attention is conveyed through a point-of-view shot. Compare 7.50.

7.57 Max has been studying the couple, but the sound of a ringing phone offscreen makes him shift his glance. Unlike Louis, he notices.

7.58 The clerk answers the phone. (Compare 7.52.) This diversion impels Melanie to seize the moment and stride into the changing room, watched by Max and, eventually, Louis.

7.59 After the bogus switch has been made, Jackie comes out and hurries to the counter. Max watches the transaction, and from his point of view we see Jackie rush off, with the clerk calling after, "Wait, your change!" (Compare 7.46.) Now Max walks to the counter. His approach will be presented, in keeping with the rest of the sequence, as his optical point-of-view.

7.53–7.59 The third run-through

Offscreen sound can fill in information very economically. In *Zodiac,* we see the alcoholic reporter Avery wake up after sleeping in his car. As he abruptly sits up, we hear the clink of bottles on the floor. The sound confirms our suspicion that he has spent another night drinking.

Used with optical point-of-view shots, offscreen sound can create restricted narration, guiding us toward what a character is noticing. In *No Country for Old Men,* Llewelyn Moss is holed up in a hotel room with a bag of cash, hiding from his implacable pursuer Anton Chigurh. When he realizes that a tracking device has been hidden among the bills, the narration is limited solely to what Moss sees and hears. He tries calling the downstairs desk. We dimly hear the distant phone ringing unanswered, so like him we infer that Chigurh has killed the clerk.

The sonic texture is very detailed, highlighting the slight noises of Moss shifting on the bed and switching off the lamp. Then, against a muted background of wind, we hear steadily approaching footsteps in the hall, accompanied by rapid pinging on a homing device. Moss's optical point-of-view confirms Chigurh's

arrival: We see the shadows of his feet in the crack under the door. Moss cocks his shotgun, creating a click that seems abnormally loud and close. The shadows move away, and we hear the slight creaking of a light bulb being unscrewed in the hall, eliminating the streak of illumination under the door. The auditory climax of the scene is the metallic burst of the door lock rocketing into the room. *No Country*'s narration has created suspense by restricting both vision and sound to Moss's range of knowledge. For another instance of sound controlled by narration, see "A Closer Look."

Resources of Diegetic Sound: Subjectivity Diegetic sound harbors other possibilities. It can give us perceptual subjectivity, in a way parallel to an optical POV shot (p. 241). In *The King's Speech,* a therapist treats a man with a bad stammer. He directs the patient to read a text into a microphone while listening to music on headphones **(7.60).** But we hear only the music that the patient hears. The therapist says the reading went well, while the patient believes he did badly. Who's right? We can't know until a later scene, when the patient's recorded reading is presented. The sound track here creates a restricted range of knowledge, building up suspense until we hear the recording.

Just as dreams, memories, and fantasies can be shown on the image track, mental subjectivity (p. 91) can be presented on the sound track too. We may hear a character's thoughts even though the character's lips don't move; presumably, other characters cannot hear these thoughts. Here the narration uses sound to achieve subjectivity, giving us information about the mental state of the character. Such spoken thoughts are comparable to mental images on the visual track. A character may also remember words, snatches of music, or events as represented by sound effects. In this case, the technique is comparable to a visual flashback.

Again, we can set out some of the choices a filmmaker faces. Does the sound have a physical source in the scene? It's diegetic, so let's call this **external diegetic sound.** Does the sound come from inside the mind of the character? That is also diegetic, but rather **internal diegetic sound.** Our example of the dripping sound during the Nutty Professor's hangover is an example. More explicitly, Laurence Olivier's version of *Hamlet* presents Hamlet's famous soliloquies as inner monologues. Hamlet is the source of the thoughts we hear represented as speech, but the words are only in his mind, not in his objective surroundings. Gus Van Sant employs a similar tactic in *Paranoid Park.* A teenage boy fleeing from a horrific accident is plagued by inner voices, some of them auditory flashbacks. By having snatches of dialogue burst in from different stereo channels and with different degrees of clarity, Van Sant presents the boy as engulfed by confusion about what to do next.

A filmmaker may cross the internal/external border for expressive purposes. *The Snake Pit* begins with close views of Virginia on a bench. We hear voices questioning her, and she makes replies, looking left and right **(7.61).** We also hear Virginia's inner monologue wondering why people keep asking these things. We might take the voices to be offscreen, particularly since their sound quality differs from the texture of her thoughts. Eventually, though, the camera pulls back to reveal that no one is around her. Everything except her spoken replies has been internal. But the filmmakers have subtly adjusted the timbre and volume of the questions to distinguish them from her thoughts. This choice suggests that they are real to Virginia—a woman institutionalized with hallucinations.

7.60 In this shot from *The King's Speech*, we don't see the patient's optical POV. In fact, we are viewing him from the opposite side of the microphone. We expect to hear his voice as he reads. The only sound, however, is subjective—the music coming through the headphones. We hear what the patient does, and only the therapist hears the voice reading.

7.61 Internal or external? In *The Snake Pit,* Virginia replies to one of her questioners. Differences in timbre and volume differentiate her speech from two layers of internal sound: her private thoughts and her hallucinations of people's voices questioning her.

Multiple-channel theater sound has reshaped the conventions of internal diegetic sound even more. *The Iron Lady* presents an aged Margaret Thatcher hallucinating that her dead husband is still alive and talking with her. Some scenes present close framings on her face, as in *The Snake Pit,* with the husband's voice offscreen. We might expect that his subjective dialogue should come from the center channel, where Mrs. Thatcher's head is. But in those moments, director Phyllida Lloyd chooses to let his voice issue only from the left or right channel. By suggesting that he hovers just outside the frame, the sound captures Mrs. Thatcher's sense that he solidly exists in offscreen space.

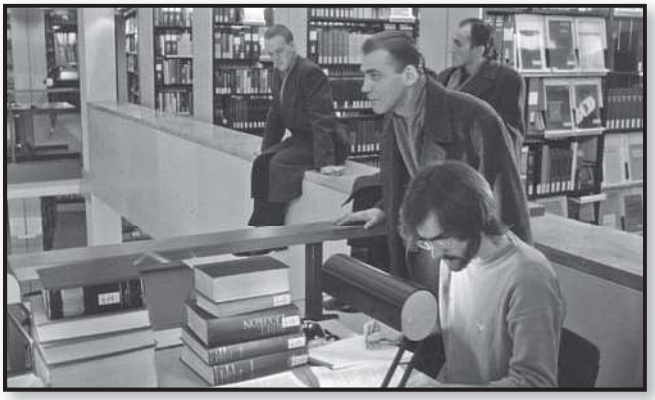
More drastically, in today's films an inner monologue may not be signaled by close shots of a character who's thinking, as in *Hamlet* and *The Snake Pit.* Wong Kar-wai and Terrence Malick will sometimes inject a character's voiced thoughts into scenes in which the character isn't prominent, or even visible. When the voice of a paid killer reflects on his job in Wong's *Fallen Angels,* we see distant shots of him mixed with several shots of the woman who arranges his contracts. In Malick's *The Thin Red Line* and *The New World,* characters are heard musing during lengthy montage sequences in which they don't even appear. These floating monologues come to resemble a more traditional voice-over narration. This impression is reinforced when the inner monologue uses the past tense, as if the action we're seeing onscreen is being recalled from a later time.

A different sort of internal diegetic sound occurs in Wim Wenders's *Wings of Desire.* Dozens of people are reading in a large public library **(7.62).** Incidentally, this sequence also constitutes an interesting exception to the general rule that one character cannot hear another's internal diegetic sound. The film's premise is that Berlin is patrolled by invisible angels who *can* tune in to humans' thoughts. This is a good example of how the conventions of a genre (here, the fantasy film) and the film's specific narrative context can modify a traditional device.

To summarize: Sound may be diegetic (in the story world) or nondiegetic (outside the story world). If it's diegetic, it may be internal (subjective) or external (objective). If it's external, it may be onscreen or offscreen.

Playing with the Diegetic/Nondiegetic Distinction In most sequences, the sources of the sounds are clearly diegetic or nondiegetic. But some films blur the distinction. Since we're used to identifying a sound's source easily, a film may try to cheat our expectations.

In Mel Brooks's *Blazing Saddles,* we hear what we think is nondiegetic musical accompaniment for a cowboy's ride across the prairie—until he rides past Count Basie and his orchestra **(7.63, 7.64).** This joke depends on a reversal of our expectations about the convention of nondiegetic music. A more elaborate example is the 1986 musical version of *Little Shop of Horrors.* There a trio of female singers strolls through many scenes, providing musical commentary on the action without any of the characters noticing them. To complicate matters, the three singers also appear in minor diegetic roles, and then they do interact with the main characters.



7.62 Angels overhearing. As the camera tracks past the readers in *Wings of Desire,* we hear their thoughts as a throbbing murmur of many voices in many languages.

In one scene of John Ford's *Stagecoach,* a diegetic sound slowly emerges out of a nondiegetic score. The stagecoach is desperately fleeing from a band of Indians. The ammunition is running out, and all seems lost until a troop of cavalry suddenly arrives. But instead of showing the cavalry riding to the rescue, the film's narration confines us to what happens inside the coach. First,

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7.64

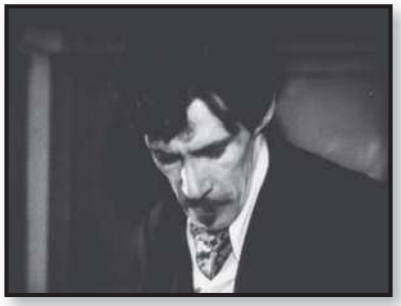
7.63–7.64 Nondiegetic sound becomes diegetic: Comedy. The hero of *Blazing Saddles* rides jauntily through the desert accompanied by apparently nondiegetic music (7.63) until he passes Count Basie's orchestra, which makes the music (implausibly) diegetic (7.64).

offscreen sound shows one passenger killed, but then a bugle call signals that the coach is being rescued **(7.65–7.69).**

More complicated is a moment in *The Magnificent Ambersons* when Orson Welles creates an unusual interplay between the diegetic and nondiegetic sounds. A prologue to the film outlines the background of the Amberson family and the birth of the son, George. A nondiegetic narrator, who isn't a character in the story, explains the Amberson family history. At one point, a woman replies to the narrator's comment **(7.70–7.72).** Welles playfully departs from conventional usage to emphasize the arrival of the story's main character and the hostility of the townspeople to him.

This passage from *The Magnificent Ambersons* juxtaposes diegetic and nondiegetic sounds in a disconcerting way. In other films, a single sound may be ambiguous because it could fall into either category. In *Vicki Cristina Barcelona* (2008), Vicki becomes quite moved by a Spanish guitar performance to which Juan Antonio takes her. This same music returns in the next scene when Juan Antonio seduces Vicki and later when they bump into each other at a social gathering. The recurring guitar music might be taken as nondiegetic, a recurring musical motif like "Moon River" in *Breakfast at Tiffany's*. But since it isn't changed in rhythm or instrumentation, it might represent the characters' shared memory of the performance.

Similarly, at a major point in Paul Thomas Anderson's *Magnolia,* several characters are shown in different locations, each singing softly along to the Aimee Mann



7.65

7.66

7.67

7.68

7.69

7.65–7.69 Nondiegetic sound becomes diegetic: Drama. In *Stagecoach,* Ford shows a medium close-up of one of the passengers, Hatfield, who has just discovered that he is down to his last bullet (7.65). He glances off right and raises his pistol (7.66). The camera pans right to Lucy, praying. During all this, orchestral music, including bugles, plays nondiegetically. Unseen by Lucy, the gun comes into the frame from the left as Hatfield prepares to shoot her to prevent her from being captured by the Indians (7.67). But before he shoots, an offscreen gunshot is heard, and Hatfield's hand and gun drop down out of the frame (7.68). Then bugle music becomes somewhat more prominent. Lucy's expression changes as she says, "Can you hear it? Can you hear it? It's a bugle. They're blowing the charge" (7.69). Only then does Ford cut to the cavalry itself racing toward the coach.

7.70

7.71

7.72

7.70–7.72 A character replies to the narrator. We see a group of townswomen gossiping about the marriage of Isabel Amberson, and one predicts that she will have "the worst spoiled lot of children this town will ever see" (7.70). The nondiegetic narrator resumes his description of the family history: "The prophetess proved to be mistaken in a single detail merely; Wilbur and Isabel did not have *children.* They had only one." But at this point, over the shot of the street, we hear the gossiper's voice again: "Only one! But I'd like to know if he isn't spoiled enough for a whole carload" (7.71). The narrator goes on, "Again, she found none to challenge her. George Amberson Minafer, the Major's one grandchild, was a princely terror." While they're talking, a pony cart comes up the street, and we see George for the first time (7.72). In this exchange, the woman seems to reply to the narrator, even though we must assume that she can't hear what he says. (After all, she's a character in the story and he isn't.)

song "Wise Up." When the sequence begins in Claudia's apartment, the song might be taken as diegetic and offscreen, since she has been listening to Aimee Mann tunes in an earlier scene. But then Anderson cuts to other characters elsewhere singing along, even though they cannot be hearing the music in Claudia's apartment. It would seem that the sound is now nondiegetic, with the characters accompanying it as they might do in a musical. The sequence underlines the parallels among several suffering characters and conveys an eerie sense of disparate people for once on the same emotional wavelength. The sound also works with the crosscutting to pull the characters together before the climax, when many will meet face to face.

> "I like to think that I not only record a sound but the space between me and the sound: The subject that generates the sound is merely what causes the surrounding space to resonate."
> —Walter Murch, sound designer, *American Graffiti* and *Apocalypse Now*

A more disturbing uncertainty about whether a sound is diegetic often crops up in the films of Jean-Luc Godard. He narrates some of his films in nondiegetic voice-over, but in other films, such as *2 or 3 Things I Know About Her,* he seems also to be in the story space, whispering questions or comments whose sound perspective makes them seem close to the camera. Godard does not claim to be a character in the action, yet the characters onscreen sometimes behave as though they hear him. This uncertainty as to diegetic or nondiegetic sound sources enables Godard to stress the conventionality of traditional sound usage.

Sound Perspective

Throughout this chapter we've referred to sound perspective—the way a film suggests the placement of the sound in the story world. Sound perspective operates in a way similar to the cues for depth that we get with visual perspective.

Our earlier examples have shown that sound perspective is often indicated by volume. Volume varied with distance in the canyon scene of *127 Hours* (p. 269), and increasing loudness signaled the approach of the bandits in *The Seven Samurai* (pp. 276–277). Timbre helps create sound perspective too. If you combine directly recorded sounds with sounds reflected from the environment, you'll create reverberations suggesting a particular distance. Timbre is most evident with echoes. In *The Magnificent Ambersons*, the conversations that take place on the baroque staircase have a distinct echo, giving the impression of huge, empty spaces around the characters. A small room wouldn't yield the same timbre.

Sound perspective is important in cinematic narration because it can ease us from one point of view to another, as we saw in the *Jackie Brown* example (pp. 287–290). A similar shift occurs in Robert Altman's *Gosford Park*. A music-hall star performs a song for guests at a country estate. At the start, the sound

perspective places us in the drawing room, where guests gossip and play bridge. When Altman cuts to two servants listening in another room, the song's softer volume and a touch of reverberation indicate greater distance from the performance.

Point of View and Expressiveness As the camera follows a character, the filmmaker may use changes in sound perspective to suggest the character's movement through space, a sort of sonic point of view. But many uses of sound perspective don't try to be realistic. In a long shot, a character's voice will usually be clearer than if we were the same distance from her or him in reality, and when we cut to a close-up, that character's voice will not be significantly louder or crisper. In a conversation with sound overlaps, like the one in *The Hunt for Red October* (pp. 273–274), the speaker's voice doesn't change perspective when the camera shifts to show the listener.

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We consider how minutely filmmakers can adjust the telephone split in "Little things mean a lot: Micro-stylistics."

In our hypothetical example presenting Jim and Amanda talking on the phone, one option would involve sound perspective. If we stayed with Jim and only heard Amanda's replies, her voice would be given a different perspective. Generally, when the person on camera is speaking, the lines are clear and enhanced by natural ambient sounds. A voice heard over the receiver is usually more coarsely rendered and more reverberant, carrying lower pitches and providing little ambient sound. Sound editors call this disparity the *telephone split.* It represents the fact that the listener is hearing a voice on the line, but it seldom matches what a phone call sounds like in reality.

Like all conventions, the telephone split can be adjusted for expressive possibilities. In *Phone Booth,* a publicist is trapped in a booth, pinned down by an unseen sniper who keeps him talking on the phone. Here the telephone split takes an unusual form. The publicist is heard normally, with ambient sound, but we don't hear the sniper as a crackling telephone voice. Instead, we hear soft, closely miked speech in a dry sound envelope. It does not change when the camera moves toward or away from the booth. The voice has a slight electronic twang, so it doesn't sound as neutral as a narrator's voice-over, but it remains closer to our perspective than to the protagonist's. Whispering, laughing, making rude remarks about what's happening around the booth, the sniper's voice hovers in a realm somewhere between us and the street. It enhances the sense that the protagonist is being watched by a distant, somewhat ghostly threat.

"She first hears the music at a bit of a distance, coming from the house, and as she walks in—the music is getting closer, step-by-step—she goes from the entrance way up the stairs—the music is still growing—and she finally passes by a guitarist on the stairs."
—Tony Volante, re-recording mixer, *Rachel Getting Married*

Sound Perspective in the Theater Space In daily life, a sound reaches one ear a few thousandths of a second before it reaches the other. Slight as the difference is, the proportion of direct and reflected sound gives us information about where the source is. Thanks to multichannel playback, modern theater design can mimic these disparities with great accuracy.

In the typical Dolby 5.1 setup (p. 45), the three speakers behind the screen transmit most dialogue, effects, and music. These channels can suggest regions of sound within the frame, as in *Lawrence of Arabia* when airplanes bombing a camp swoop overhead and the rumble of their engines slides from channel to channel. The front channels can evoke space offscreen as well. In farcical comedies such as *The Naked Gun*, left or right channels can suggest collisions and falls just outside the frame. During the climactic scene of *The Fugitive*, Richard Kimble is sneaking up on the friend who has betrayed him, and he reaches down past the lower frame line. As he slides his arm to the right, a rolling clank in the center channel tells us that there is an iron pipe at his feet.

With use of surround channels, a remarkably immersive sound environment can be created in the theater. The *Star Wars* series uses multiple-channel sound to suggest space vehicles whizzing all around the audience. As one sound designer puts it, surround effects allow the filmmaker to "hang" noises in the auditorium much as an interior designer might hang draperies on a wall. We've mentioned one example of the process in a scene from *Brave* (p. 45).

> "At the climax when the two snipers see each in their scopes, we focused on water drips only. The German's drip was a drum-like rhythm on the window where he's hiding, and then the metallic drip where the American is hiding. We cut to that drip, then that drip, in this case following the visuals. You don't always have to, because you can choose what you hear. Think like a director or DP, staging a scene with equivalent techniques like depth of field, and choose what the audience's ears are focused on."
>
> —Gary Rydstrom on shifting aural perspective in *Saving Private Ryan*

Like other techniques, sound localization in the theater needn't be used for realistic purposes. Most dialogue is placed in the center channel speakers, but as we've seen, *Paranoid Park* and *The Iron Lady* spread imaginary conversations to subsidiary channels (pp. 291, 292). In Terry Gilliam's *12 Monkeys*, James Cole is a convict volunteer sent from the future to discover the cause of a viral outbreak. The dialogue of onscreen characters comes from the front channels, but when the doctors from the future attempt to communicate with Cole, we hear their voices coming from every channel around the audience. Their disembodied quality evokes Cole's sound perspective and raises the possibility that he may be a delusional schizophrenic who "hears voices" and imagines being part of a future world.

Time

Sound also permits the filmmaker to represent time in various ways. Just as the sources we hear need not be in the space we see, the time represented on the sound track need not coincide with the time that the image presents. To capture all the choices the filmmaker faces, we'll need to make some distinctions that require a little patience.

Most often, the filmmaker decides to hear the sound at the same time as we see what makes it. Characters move their lips, and we hear the appropriate words. A gun fires and we hear a blast. These are instances of **synchronous sound.**

When the sound does go out of synchronization, through a mechanical error, the result is quite distracting. Would a filmmaker ever want to put such **asynchronous,** or out-of-sync, **sound** into the film itself? Yes, sometimes. It can spoof poorly dubbed films in other languages. *Wayne's World 2* features asynchronous sound in a fight scene between Wayne and his girlfriend's father, Mr. Wong.

More systematically, *Singin' in the Rain* creates gags based on asynchronous sound. In the early days of sound filming, a pair of silent screen actors have just made their first talking picture, *The Dueling Cavalier.* Their film company previews the film for an audience, but the technology fails and the picture gets out of synchronization. All the sounds come several seconds before their sources are seen in the image. A line of dialogue begins and *then* the actor's lips move. A woman's voice is heard when a man moves his lips, and vice versa. The humor of this disastrous preview in *Singin' in the Rain* depends on our realization that a film's synchronization of sound and image is simply a mechanical illusion.

A lengthier play with our expectations about synchronization comes in Woody Allen's *What's Up Tiger Lily?* Allen dubbed a new sound track on an Asian spy film, but the English-language dialogue isn't a translation of the original. Instead, it creates a new story. The movie's one-liners and non sequiturs are enhanced by our constant awareness that the words are barely synchronized with the actors' lips. Allen has turned the usual problems of the dubbing of foreign films into the basis of his comedy.

Matters of synchronization are fairly easy to spot. They relate to screen duration, or *viewing* time. As we saw in Chapter 3, though, narrative films can also present *story* and *plot* time. Story time consists of the order, duration, and frequency of all the events pertinent to the narrative, whether they are shown to us or not. Plot time consists of the order, duration, and frequency of the events actually represented in the film. Plot time shows us selected story events but skips over others.

Filmmakers have realized that sound can manipulate story and plot time in two basic ways. Does the sound take place at the same time as the image, in terms of the story events? If so, we can call it **simultaneous sound.** This is overwhelmingly the most common usage. We see and hear two characters speaking, or we see a truck driving down the street and hear the truck's sounds. The plot isn't manipulating the order of sound events.

But filmmakers also realize that the sound we hear can occur earlier or later in the story than the events we see in the image. This manipulation of story order

involves **nonsimultaneous sound.** The most common example of this is the sonic flashback. For instance, we might see characters chatting in the present but hear another character's voice from an earlier scene. Or, instead of hearing the truck's engine, we hear gunshots from an earlier scene. By means of nonsimultaneous sound, the film can present earlier story events without showing them.

So filmmakers have a wide range of options about sound and story time. To help to distinguish them, Table 7.2 sums up the possible temporal and spatial relationships that image and sound can display.

Diegetic Sound The first and third of these possibilities are rare, so let's start with the second and most common option:

1. *Sound simultaneous in story with image.* As we just mentioned, this is by far the most common temporal relation that sound displays in fiction films. Noise, music, or speech that comes from the space of the story almost invariably occurs at the same time as the image.

   Like any other sort of diegetic sound, simultaneous sound can be either external (objective) or internal (subjective). So instead of a character speaking, we might hear an inner monologue, with the character talking to oneself. But that monologue is still presumably simultaneous with the image onscreen.

2. *Sound earlier in story than image.* Here the sound comes from an earlier point in the story than the action we're seeing onscreen. A sonic flashback is one example.

   Usually sonic flashbacks are subjective, representing character memory. Recalling Obi-wan Kenobi's words, Luke Skywalker decides to trust the Force and turn off his ship's targeting computer. Many contemporary films use these mental "replays."

   On rare occasions, the sonic flashback isn't subjective. Sound from earlier in the story action may simply be laid over the current scene for emphasis. Joseph Losey's *Accident* opens with sound indicating an offscreen car crash (**7.73**). The plot goes on to present a long flashback tracing what led up to the accident. Back in the present, the film ends with a parallel image, accompanied by the noise of the fatal crash (**7.74**). There isn't another crash taking place nearby, and there's no evidence that the professor is remembering the original

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Today's films often replay scenes in order to give us new story information, but sometimes a film does this just on the auditory level. We look at two examples of sound from the story past rerun in the present in "Play it again, Joan."

TABLE 7.2 Temporal Relations of Sound in Cinema

	Space of Source	
Time	**Diegetic (Story Space)**	**Nondiegetic (Nonstory Space)**
1. Nonsimultaneous; sound from *earlier* in story than image	Sound flashback; image flashforward with sound continuing in present; sound bridge	Sound marked as past put over images (e.g., sound of John Kennedy speech put over images of United States today)
2. Sound simultaneous in story with image	*External:* dialogue, effects, music *Internal:* thoughts of character heard	Sound marked as simultaneous with images put over images (e.g., narrator describing events in present tense)
3. Nonsimultaneous; sound from *later* in story than image	Sound of flashforward; image flashback with sound continuing in present; character narrates earlier events; sound bridge	Sound marked as later put over images (e.g., reminiscing narrator of *The Magnificent Ambersons*)

7.73–7.74 Sound from earlier in the story. *Accident* begins on a long shot of a house and driveway at night. As the camera tracks forward, offscreen traffic noises give way to the sound of screeching tires and a crash. We see a figure, later to be identified as an Oxford professor, come to the doorway (7.73) and hurry to the crash site. At the end of the film, we see a similar image of the home in daylight, after the main action of the plot has concluded. As the camera tracks back, the professor and his sons go into the house (7.74). Offscreen traffic sounds increase in volume, and again we hear the initial crash.

7.73

7.74

7.75

7.76

7.75–7.76 A sound bridge between scenes. One scene of *The Silence of the Lambs* ends with Clarice Starling on the telephone, as she mentions a location called the "Your Self Storage facility . . ." (7.75). Her voice continues, ". . . right outside central Baltimore" over the first shot of the next scene, the sign for the Your Self warehouse (7.76).

incident. Instead, an unrestricted narration inserts this auditory flashback. Along with the repeated camera position, the sound reminds us of the opening situation and may imply that the tragedy will haunt the family's life.

Sound may belong to an earlier time than the image in another way. The sound from the previous scene may linger briefly while the image is already presenting the next scene. This common device is called a **sound bridge.** Sound bridges of this sort may create smooth transitions by setting up expectations that are quickly confirmed **(7.75, 7.76).**

Sound bridges can sometimes make our expectations more uncertain. In Tim Hunter's *The River's Edge,* three high school boys are standing outside school, and one of them confesses to having killed his girlfriend. When his pals scoff, he says, "They don't believe me." There is a cut to the dead girl lying in the grass by the river, while on the sound track we hear one of his friends call it a crazy story that no one will believe. There's a brief uncertainty. Is a new scene starting, with the friend's response an offscreen one? Or are we are seeing a cutaway to the corpse, which could be followed by a shot returning to the three boys at school? The shot dwells on the dead girl,

and after a pause, we hear, with a different sound ambience, "If you brought us . . ." Then there is a cut to a shot of the three youths walking through the woods to the river, as the same character continues, ". . . all the way out here for nothing. . . ." The friend's remark about the crazy story belongs to an earlier, somewhat indeterminate time than the shot of the corpse, and it becomes an unsettling sound bridge to the new scene.

3. *Sound later in story than image.* Sound may also occur at a time later than that depicted by the images. Here we usually tend to take the images as occurring in the past and the sound as occurring in the present or future.

   A simple prototype occurs in many trial dramas. The testimony of a witness in the present is heard on the sound track, while the image presents a flashback to an earlier event. The same effect occurs when the film employs a reminiscing narrator, as in John Ford's *How Green Was My Valley.* Aside from a glimpse at the beginning, we don't see the protagonist Huw as a man, only as a boy, but his grown-up voice-over accompanies the bulk of the plot, which is set in the distant past. Huw's present-time voice on the sound track creates a strong sense of nostalgia for the past and constantly reminds us of the pathetic decline that the characters will eventually suffer.

   Since the late 1960s, it has become somewhat common for the sound from the next scene to begin while the images of the last one are still on the screen. Like the instances in which the next scene begins when we're hearing sound from the previous one, this transitional device is called a *sound bridge.* In Wim Wenders's *American Friend,* a nighttime shot of a little boy riding in the back seat of a car is accompanied by a harsh clacking. There is a cut to a railroad station, where the timetable board flips through its metal cards listing times and destinations. Since the sound over the shot of the boy comes from the later scene, this portion is nonsimultaneous.

   In principle, one could also have a sound *flashforward.* The filmmaker could, say, use the sounds that belong with scene 5 to accompany the images in scene 2. In practice, such a technique is almost unknown. In Godard's *Contempt,* a husband and wife quarrel, and the scene ends with her swimming out to sea while he sits quietly on a rock formation. On the sound track, we hear her voice, closely miked, reciting a letter in which she tells him she has driven back to Rome with another man. Since the husband has not yet received the letter, and perhaps the wife has not yet written it, the letter and its recitation presumably come from a later point in the story. Here the sound flashforward sets up strong expectations that a later scene confirms: We see the wife and the husband's rival stopping for gas on the road to Rome. In fact, we never see a scene in which the husband receives the letter.

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Some films include voice-over narrators talking to us. Sometimes the narrator is a character in the story, sometimes he or she is an external voice of authority. But what do we do with the character narrator who happens to be dead? Posthumous voice-over has become a common convention in films, television, and graphic novels. We look at some early examples in "Dead man talking."

http://www.davidbordwell.net/blog/2015/08/24/dead-man-talking/

Nondiegetic Sound Most nondiegetic sound has no relevant temporal relationship to the story. When mood music comes up over a tense scene, it would be irrelevant to ask if it is happening at the same time as the images, since the music has no existence in the world of the action. But occasionally, the filmmaker uses a type of nondiegetic sound that does have a defined temporal relationship to the story. Welles's narration in *The Magnificent Ambersons,* for instance, speaks of the action as having happened in a long-vanished era of American history.

An Abundance of Choices As viewers watch a film, they don't mentally slot sounds into each of these spatial and temporal categories. We offer them here as a way of looking systematically at creative decisions filmmakers have made. Once we've done that, we can use the distinctions to help understand our viewing experience. Tracing out the choices explicitly offers us ways of noticing important aspects of films—especially films that play with our expectations about sounds. By

becoming aware of the rich range of possibilities, we're less likely to take a film's sound track for granted and more sensitive to unusual sound strategies.

Conversation Piece

Francis Ford Coppola's *The Conversation* makes fluent use of many of the options we've surveyed in this chapter—particularly the ways in which sound works in space and time. But instead of using sound to help us follow the action, the film's sound track creates ambiguities about the action, and eventually it helps us reflect on how we can *mis*understand what we thought we heard.

The plot centers on Harry Caul, a sound engineer specializing in surveillance. Harry is hired by a shadowy corporate executive to tape a conversation between a young man and woman in a noisy park. Harry cleans up the garbled tape, but he starts to suspect foul play and refuses to give the tape to his client. Harry obsessively replays, refilters, and remixes all his tapes of the conversation. Finally, Harry arrives at a good dub, and we hear the man say something extremely damaging.

The overall situation is quite mysterious. Harry does not know who the young couple is. (Is the woman his client's wife or daughter?) Still, he suspects that they are in danger from the executive. When the executive's hirelings steal Harry's tapes, he feels he is involved in a criminal plot. After a highly ambiguous series of events, including an overheard act of violence, Harry realizes that the basic situation was not as he had thought.

From the very start, *The Conversation* suggests that we can't trust what we hear. The problems are initially about space: What is the source of the sound on the track? As described in Chapter 5, the film begins with a long, slow zoom in on a bustling city square at lunchtime (5.41–5.43). Initially we hear a Dixieland combo playing "Bill Bailey," gradually increasing in volume as the camera enlarges the view. Almost immediately, the music starts to warp and distort. Is the interference part of the sound track? Is it a glitch in the theater's sound system?

The distortion returns periodically during the band's next number, "When the Red, Red Robin (Comes Bob, Bob, Bobbin' Along)." Eventually, the film's first cut reveals a man on a rooftop. He aims a shotgun microphone at the young couple who are the target of Caul's surveillance **(7.77, 7.78).** The sound we've been hearing is not that heard by the people on Union Square, but rather the audio picked up by this microphone. Our initial impression was that these sounds were external and objective. Now, however, we realize that at least some of them were the input to the unknown technician's headphones. This apparently objective, external sound is colored by subjectivity.

After an extreme long shot of the city square with the camera closer to ground level, a cut back to the musicians brings with it a jump in the volume of the music.

7.77

7.78

7.77–7.78 Blurring the boundaries between objective and subjective sounds. After the opening shot of the conversation, we're shown a man on a rooftop overlooking Union Square (7.77). He is aiming a microphone toward a strolling couple (7.78). The revelation suggests that the sounds heard in the first shot were transmitted to his headphones and hence subjective to a degree.

This implies a shift to a more objective narration, particularly as the camera picks up passersby as they cross the frame. Eventually, though, the scene's action returns to the couple, following them as they talk. The harsh distortion returns, suggesting that all this, too, has been audio picked up by a microphone.

We start to realize that Harry has other sound recordists planted in the square. One shadows the couple's movements, while another sits in a van monitoring all the audio inputs. Any of the sounds we've been hearing could be what one of these spies' microphones have picked up. This creates a continual play between offscreen and onscreen sound. Once we're shown that the surveillance team surrounds the couple, we often hear their conversation over shots in which they aren't present. Throughout the opening scene, the sound sources don't mesh comfortably with the images.

Coppola's spatial manipulation of sound departs from convention in other ways. As the scene develops, the couple walks toward a group of drummers playing in the park. The music's volume swells as they approach, creating a massive "foreground plane" of sound **(7.79).** When the man leans in to tell the woman something, his line is buried under the hammering of the drums. This is the line that Harry will devote himself to revealing.

As *The Conversation* develops from this opening, the play with sound space is accompanied by an indeterminate use of time. The narration tightly restricts our knowledge to Harry's. We are with him in nearly every scene, and we sometimes enter his mind. We see a haunting, apparently prophetic dream at one point, but at other moments the narration doesn't signal when it moves to subjectivity—when, that is, the sound is in Harry's head.

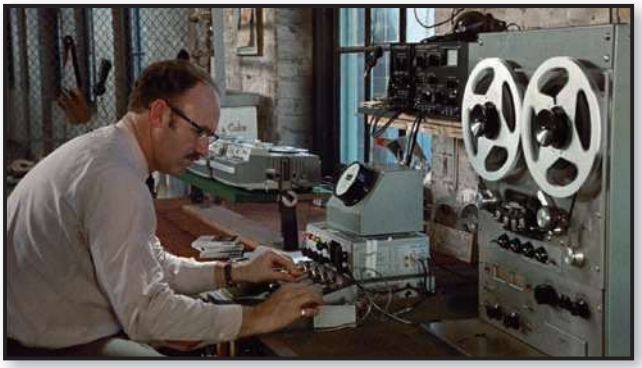
At a crucial point Harry employs equalizers and filters to uncover what the man said in the drumming scene. To some extent, his task is like that of Jack Terry in *Blow-Out*: reconstructing an event that isn't what it seems (p. 265). But Jack has access to photographic evidence he can sync up with his recording, whereas Harry has only the sounds. Here is where Coppola and sound designer Walter Murch start to manipulate auditory time.

As Harry obsessively replays his tapes, Coppola could have only shown shots of him working with his gear. Instead, the film's imagery returns us to the pivotal moment in the conversation **(7.80, 7.81).** We get a visual flashback, with the plot repeating action shown earlier in the story. Is it Harry's memory? Unlikely, since he didn't see this part of the conversation. Most likely, this passage is simply the narration's repetition of the moments in the city square. As an objective flashback to what occurred, it seems to be like those rearrangements of story chronology we find in *Pulp Fiction* (p. 80). Thanks to the repetition of actions and camera positions we saw earlier, *The Conversation*'s flashback to the first scene seems reliable.

That impression, however, is undercut by noise and hiss on the tape recording. If the image is supposedly in the past, then the sound is in the present, as Harry patiently cleans it up. There is a temporal split between image and sound. Still, both channels seem compatible. We're cued to assume that the present-time sound replays are, like the images, accurate and reliable—what others would hear if they were at Harry's workstation. And when Harry's tweaking makes the man's line intelligible, the sound seems to fit what we see. Later, however, we will find that the reconstruction we hear is open to misunderstanding.

The disjunctions between past and present, onscreen and offscreen sounds, and external and internal sounds run through the film. Although the opening has warned us to be on our guard, Coppola trusts that our habits will lead us to keep misinterpreting what we see and hear. The film's surprise climax and its lingering mysteries rely on sonic ambiguities operating in space and time.

7.79 Sound mixing as creative choice. As the couple approaches the drummers in the foreground, the music drowns out what they're saying. Normally dialogue takes precedence on the sound track, and music and ambient sounds soften to accommodate it (see 7.12). Coppola, however, uses a realistic soundscape to limit our access to the couple's talk. The man's key line of dialogue will be inaudible to us.



7.80

7.81

7.80–7.81 Blurring the boundaries between past and present. The recording process splits the time periods represented in the images and the sounds. Shots of the couple belong to the past, but what the man is apparently saying is played back on tape in the present. The imperfections in the recording force Harry, and the audience, to fill in what the conversation really means.

The Conversation shows that distinguishing different types of sound can help us analyze filmmakers' creative choices. The film, like the examples we've analyzed in this chapter, also suggests that our categories correspond pretty well to how viewers understand what they hear. We unconsciously distinguish between diegetic and nondiegetic, internal and external, simultaneous and nonsimultaneous sound. That's not surprising. Filmmakers have worked for nearly a century to establish those conventions.

Coppola, like other filmmakers we've considered, plays with those conventions. But he still counts on our knowing them. By surveying options for creating the sound track, we can make explicit what audiences and filmmakers take for granted. We can also analyze how more experimental films appeal to our assumptions about sound. By considering both the conventions and the ways they may be manipulated, we gain an understanding of how sound shapes our experience of a film.

SUMMARY

As usual, both wide viewing and focused attention will sharpen your awareness of this technique. You can get comfortable with the analytical tools we have suggested by asking several questions about a film's sound:

1. What sounds are present—music, speech, noise? How are loudness, pitch, and timbre used? Is the mixture sparse or dense? Modulated or abruptly changing?
2. Is the sound related rhythmically to the image? If so, how?
3. Is the sound faithful or unfaithful to its perceived source?
4. *Where* is the sound coming from? In the story's space or outside it? Onscreen or offscreen? If offscreen, how is it shaping your response to what you're seeing?
5. *When* is the sound occurring? Simultaneously with the onscreen story action? Before? After?
6. How are the various sorts of sounds organized across a sequence or the entire film? What patterns are formed, and how do they reinforce aspects of the film's overall form?
7. For each of questions 1–6, what *purposes* are fulfilled and what *effects* are achieved by the sonic manipulations?

Practice at answering such questions will familiarize you with the basic uses of film sound.

As always, it isn't enough to name and classify. These categories and terms are most useful when we take the next step and examine how the types of sound chosen by the filmmakers *function* in the total film.