

Short-focal-length, long-focal-length, and middle-focal-length lenses all have a fixed focal length and are known as **prime lenses**, but zoom lenses are in their own category. Both prime and zoom lenses have their specific optical qualities, and because they are thought to produce sharper images, prime lenses are generally used more than zoom lenses. In the hands of an accomplished cinematographer, the zoom lens can produce striking effects, but when it is used indiscriminately, as it often is by less skilled filmmakers, it not only feels artificial to an audience but can unintentionally disorient viewers. As with all other aspects of cinematography, the lens used must be appropriate for the story being told.

**Depth of field** is a property of the lens that permits the cinematographer to decide what **planes**, or areas of the image, will be in focus. As a result, depth of field helps create emphasis, either on one or more selected planes or figures, or on the whole image. The term *depth of field* refers to the distances in front of a camera and its lens in which the subjects are in apparent sharp focus. The short-focal-length lens offers a nearly complete depth of field, rendering almost all objects in the frame in focus. The depth of field of the long-focal-length lens is generally a very narrow range, and it leaves the background and foreground of the in-focus objects dramatically out of focus. In the middle-focal-length lens, the depth of field keeps all subjects in a “normal” sense of focus.

In virtually all shooting, cinematographers keep the main subject of each shot in sharp focus to maintain clear spatial and perspectival relations within frames. One option available to cinematographers, however, is a **rack focus** (also known as *select focus*, *shift focus*, or *pull focus*)—a change of the point of focus from one subject to another. This technique guides our attention to a new clearly focused point of interest while blurring the previous subject in the frame.

Rack focus is used in Jonathan Demme’s *Philadelphia* (1993; cinematographer: Tak Fujimoto) to show us within one shot both the face of a lawyer, Belinda Conine (Mary Steenburgen), as she makes her aggressively supercilious opening statement to the jury, and, behind her, the reaction of

the plaintiff, Andrew Beckett (Tom Hanks), and his lawyer, Joe Miller (Denzel Washington), to her words. After she attempts to denigrate Beckett’s competence by telling the jury the “fact” that Beckett was “oftentimes mediocre” ([1] in the illustration on page 228), there is a cut. The camera reframes, putting Conine out of focus on the right side of the image as she adds “sometimes flagrantly incompetent,” and revealing Beckett’s and Miller’s reactions clearly in focus at their table [2]. Conventionally, when a director keeps characters in focus, we typically assume that they are truthful; putting them out of focus raises questions in the viewer’s mind. The result of this maneuver in *Philadelphia* is to make Conine appear as foolish as her line of argument will eventually turn out to be, record the reactions of her adversaries, and establish a pattern—repeated many times during the trial—of the director’s empathy with Beckett’s case.

### Focal Length

The images you see on the screen are produced by a complex interaction of optical properties associated with the camera lens. Table 6.1 provides a ready reference on how the different lenses discussed here produce different images.

## Framing of the Shot

**Framing** is the process by which the cinematographer determines what will appear within the borders of the image during a shot. Framing turns the comparatively infinite sight of the human eye into a finite movie image, an unlimited view into a limited view. This process requires decisions about each of the following elements: the proximity to the camera of main subjects, the depth of the composition, camera angle and height, the scale of various objects in relation to each other, and the type of camera movement, if any.

At least one decision about framing is out of the cinematographer’s hands: although a painter can choose any size of canvas as the area in which to create a picture—large or small, square or rectangular, oval or round, flat or three-dimensional—cinematographers find that their choices for a

**FIGURE 6.2** Basic Aspect Ratios



1.33:1



1.85:1



2.35:1

“canvas” are limited to a small number of dimensional variations on a rectangle. This rectangle results from the historical development of photographic technology. Nothing absolutely dictates that our experience of moving images must occur within a rectangle; however, because of the standardization of equipment and technology within the motion-picture industry, we have come to know this rectangle as the shape of movies.

The relationship between the frame’s two dimensions is known as its **aspect ratio** (Fig. 6.2), the ratio of the width of the image to its height. Each movie is made to be shown in one aspect ratio from beginning to end. The most common aspect ratios are

- 1.33:1 Academy (35mm flat)
- 1.66:1 European widescreen (35mm flat)



**Iris-out** In this shot from Charles Laughton's *The Night of the Hunter* (1955; cinematographer: Stanley Cortez), Harry Powell (Robert Mitchum) makes his way nonchalantly toward the house in which his stepchildren are hiding from him. Although he acts as though he cannot see them, the iris-out that follows his progress toward the house (a technique that eventually frames the children's fearful faces peering out of the basement window) makes clear to us that he knows exactly where they are hiding.

- 1.85:1 American widescreen (35mm flat)
- 2.2:1 Super Panavision and Todd-AO (70mm flat)
- 2.35:1 Panavision and CinemaScope (35mm anamorphic)
- 2.75:1 Ultra Panavision (70mm anamorphic)

Feature-length widescreen movies were made as early as 1927—the most notable being Abel Gance's spectacular *Napoléon* (1927)—and, in Hollywood, the Fox Grandeur 70mm process very effectively enhanced the epic composition and sweep of Raoul Walsh's *The Big Trail* (1930; cinematographer: Arthur Edeson). Until the 1950s, when the widescreen image became popular, the standard aspect ratio for a flat film was the Academy ratio of 1.33:1, meaning that the frame is 33 percent wider than it is high—a ratio corresponding to the dimensions of a single frame of 35mm film stock. Today's more familiar widescreen variations provide wider horizontal and shorter vertical dimensions. Most commercial releases are shown in the 1.85:1 aspect ratio, which is almost twice as wide as it is high.

Other widescreen variations include a 2.2:1 or 2.35:1 ratio when projected.

From the earliest days, movie directors have experimented with alternative shapes to the rectangle. To do so, they have often used a **mask**—an opaque sheet of metal, paper, or plastic with a cutout (known as an **iris** when circular) that is placed in front of the camera and admits light to a specific area of the frame—to create a frame within the frame. The obvious function of the mask is to draw our eyes to that particular place, thus emphasizing what we see there. In *The Night of the Hunter* (1955; cinematographer: Stanley Cortez), Charles Laughton uses an **iris-out**—a transitional effect in which the iris contracts from larger to smaller—in which we see Harry Powell (Robert Mitchum) walking toward a ground-level window behind which his stepchildren are hiding from him.<sup>5</sup> Masks can also be created by lighting, as when Laughton isolates a stripper within the frame by accentuating the spotlight in which she is performing.

Architectural details are frequently used to mask a frame, and a person placed between the camera and its subject can also mask the frame. In Mike Nichols's *The Graduate* (1967; cinematographer: Robert Surtees), during her initial seduction scene of Ben Braddock (Dustin Hoffman), Mrs. Robinson (Anne Bancroft) sits at the bar in her house and raises one leg onto the stool next to her, forming a triangle through which Ben is framed or, perhaps, trapped. Despite these modest attempts to break up the rectangular movie frame into other shapes through frames within the frame, movies continue to come to us as four-sided images that are wider than they are tall.

<sup>5</sup> We define the *iris-out* as beginning with a large circle and closing in around the subject and the *iris-in* as beginning with a small circle and expanding to a partial or full image (see the Glossary). However, you may find that some published and online sources reverse these definitions, suggesting that the *iris-in* shot closes in around the subject and the *iris-out* expands from the subject. Since this represents a fairly rare disagreement over cinematic terminology, you should consult your instructor to avoid confusion.