

the course of film history, a wide range of possibilities has emerged. Dreyer's *La Passion de Jeanne d'Arc* was famous for its complete avoidance of makeup (4.44). This film relied on close-ups and tiny facial changes to create an intense religious drama. On the other hand, Nikolai Cherkasov did not look particularly like Eisenstein's conception of Czar Ivan IV, so he wore a wig and false beard, nose, and eyebrows for *Ivan the Terrible* (4.45). Changing actors to look like historical personages has been one common function of makeup.

Today makeup usually tries to pass unnoticed, but it also accentuates expressive qualities of the actor's face. Since the camera may record cruel details that would pass unnoticed in ordinary life, any unsuitable blemishes, wrinkles, and sagging skin will have to be hidden. The makeup artist can sculpt the face, making it seem narrower or broader by applying blush and shadow. Viewers expect that female performers will wear lipstick and other cosmetics, but the male actors are often wearing makeup, too (4.46, 4.47).

Film actors rely on their eyes to a very great extent (see box, p. 134), and makeup artists can often enhance eye behavior. Eyeliner and mascara can draw attention to the eyes and emphasize the direction of a glance. Nearly every actor will also have expressively shaped eyebrows. Lengthened eyebrows can enlarge the face, while shorter brows make it seem more compact. Eyebrows plucked in a slightly rising curve add gaiety to the face, while slightly sloping ones hint at sadness. Thick, straight brows, commonly applied to men, reinforce the impression of a hard, serious gaze. Thus eye makeup can assist the actor's performance (4.48, 4.49).

In recent decades, the craft of makeup has developed in response to the popularity of horror and science fiction genres. Rubber and plasticine compounds create bumps, bulges, extra organs, and layers of artificial skin in such films as David Cronenberg's *The Fly* (4.50). In such contexts, makeup, like costume, becomes important in creating character traits or motivating plot action.

Lighting

Much of the impact of an image comes from its manipulation of lighting. In cinema, lighting is more than just illumination that permits us to see the action. Lighter and darker areas within the frame help create the overall composition of each shot and thus guide our attention to certain objects and actions. A brightly illuminated patch may draw our eye to a key gesture, while a shadow may conceal a detail or build up suspense about what may be present. Lighting can also articulate textures: the curve of a face, the grain of a piece of wood, the tracery of a spider's web, the sheen of glass, the sparkle of a gem.



4.46 In *Heat*, Al Pacino's makeup gives him slightly rounded eyebrows and, with the help of the lighting, minimizes the bags under his eyes.



4.47 In *The Godfather Part III*, made five years before *Heat*, Pacino looks older. Not only has his hair been whitened, but the makeup, again assisted by the lighting, gives him more sunken and baggy eyes, more hollow cheeks, and a longer, flatter chin.



4.48 In *Speed*, Sandra Bullock's eyeliner, shadow, and arched brows make her eyes vivid and give her an alert expression.



4.50 Jeff Goldblum, nearly unrecognizable under grotesque makeup, during his transformation into *The Fly*.



4.51 In *The Cheat*, Cecil B. DeMille suggested a jail cell by casting a bright light on a man's face and body through unseen bars.



4.49 For the same scene, the eyeliner on Keanu Reeves makes the upper edges of his eyes stand out. Note also the somewhat fierce curve of the eyebrows, accentuating his slight frown.



4.52 Robert Bresson's *Pickpocket*.

Lighting shapes objects by creating highlights and shadows. A highlight is a patch of relative brightness on a surface. The man's face in **4.51** and the edge of the fingers in **4.52** display highlights. Highlights provide important cues to the texture of the surface. If the surface is smooth, like glass or chrome, the highlights tend to gleam or sparkle; a rougher surface, like a coarse stone facing, yields more diffuse highlights.

There are two basic types of shadows, each of which is important in film composition: *attached* shadows, or *shading*, and *cast* shadows. An attached shadow occurs when light fails to illuminate part of an object because of the object's shape or surface features. If a person sits by a candle in a darkened room, patches of the face and body will fall into darkness. Most obviously, the nose often creates a patch of darkness on an adjoining cheek. This phenomenon is shading, or attached shadow. But the candle also projects a shadow on the wall behind. This is a cast shadow, because the body blocks out the light. The shadows in **4.51**, for example, are cast shadows, made by bars between the actor and the light source. But in **4.52**, the small, dark patches on the hand are attached shadows, for they are caused by the three-dimensional curves and ridges of the hand itself.

"Light is everything. It expresses ideology, emotion, colour, depth, style. It can efface, narrate, describe. With the right lighting, the ugliest face, the most idiotic expression can radiate with beauty or intelligence."

— Federico Fellini, director



4.53 Attached shadows on faces create a dramatic composition in John Huston's *Asphalt Jungle*.

As these examples suggest, highlights and shadows help create our sense of a scene's space. In 4.51, a few shadows imply an entire prison cell. Lighting also shapes a shot's overall composition. One shot from John Huston's *Asphalt Jungle* welds the gang members into a unit by the pool of light cast by a hanging lamp (4.53). At the same time, it sets up a scale of importance, emphasizing the protagonist by making him the most frontal and clearly lit figure.

A shot's lighting affects our sense of the shape and texture of the objects depicted. If a ball is lit straight on from the front, it appears round. If the same ball is lit from the side, we see it as a half-circle. Hollis Frampton's short film *Lemon* consists primarily of light moving around a lemon, and the shifting shadows create dramatically changing patterns of yellow and black. This film almost seems designed to prove the truth of a remark made by Josef von Sternberg, one of the cinema's masters of film lighting: "The proper use of light can embellish and dramatize every object."

For our purposes, we can isolate four major features of film lighting: its quality, direction, source, and color.

Lighting *quality* refers to the relative intensity of the illumination. *Hard* lighting creates clearly defined shadows, crisp textures, and sharp edges, whereas *soft* lighting creates a diffused illumination. In nature, the noonday sun creates hard light, while an overcast sky creates soft light. The terms are relative, and many lighting situations will fall between the extremes, but we can usually recognize the differences (4.54, 4.55).

The *direction* of lighting in a shot refers to the path of light from its source or sources to the object lit. "Every light," wrote von Sternberg, "has a point where it is brightest and a point toward which it wanders to lose itself completely. . . . The journey of rays from that central core to the outposts of blackness is the adventure and drama of light." For convenience we can distinguish among frontal lighting, sidelighting, backlighting, underlighting, and top lighting.

Frontal lighting can be recognized by its tendency to eliminate shadows. In 4.56, from Jean-Luc Godard's *La Chinoise*, the result of such frontal lighting is a fairly flat-looking image. Contrast 4.57, from *Touch of Evil*, in which Orson Welles uses a hard **sidelight** (also called a *crosslight*) to sculpt the character's features.

Backlighting, as the name suggests, comes from behind the subject filmed. It can be positioned at many angles: high above the figure, at various angles off to the side, pointing straight at the camera, or from below. Used with no other sources of light, backlighting tends to create silhouettes, as in 4.58. Combined with more frontal sources of light, the technique can create an unobtrusively illuminated contour. This use of backlighting is called *edge lighting* or *rim lighting* (4.59).

As its name implies, **underlighting** suggests that the light comes from below the subject. In 4.60, the underlighting suggests an offscreen flashlight. Since



4.54 In this shot from Satyajit Ray's *Aparajito*, Apu's mother and the globe she holds are emphasized by hard lighting, while . . .



4.55 . . . in another shot from the same film, softer lighting blurs contours and textures and makes for more diffusion and gentler contrasts between light and shade.



4.56 In *La Chinoise*, frontal lighting makes the actress's shadow fall directly behind her, where we cannot see it.



4.57 In *Touch of Evil*, sidelight creates sharp attached shadows by the character's nose, cheek, and lips, while long cast shadows appear on the file cabinets at the left.



4.58 In Godard's *Passion*, the lamp and window provide backlighting that presents the woman almost entirely in silhouette.



4.59 In *Wings*, a narrow line of light makes each actor's body stand out from the background.



4.60 In *The Sixth Sense*, a flashlight lights the boy's face from below, enhancing our empathy with his fright as he feels the presence of a ghost.



4.61 Top lighting in Josef von Sternberg's *Shanghai Express*.



4.62 Apparent and hidden light sources in *The Miracle Worker*.

underlighting tends to distort features, it is often used to create dramatic horror effects, but it may also simply indicate a realistic light source, such as a fireplace. As usual, a particular technique can function differently according to context.

Top lighting is exemplified by **4.61**, where the spotlight shines down from almost directly above Marlene Dietrich's face. Von Sternberg frequently used such a high frontal light to bring out the line of his star's cheekbones. (Our earlier example from *Asphalt Jungle* in Figure 4.53 provides a less glamorous instance of top lighting.)

Lighting can also be characterized by its *source*. In making a documentary, the filmmaker may be obliged to shoot with the light available in the actual surroundings. Most fictional films, however, use extra light sources to obtain greater control of the image's look. In most fictional films, the table lamps and streetlights you see in the mise-en-scene are not the principal sources of illumination for the filming. But these visible sources of light will motivate the lighting decisions made in production. The filmmaker will usually strive to create a lighting design that is consistent with the sources in the setting. In **4.62**, from *The Miracle Worker*, the window in the rear and the lantern in the right foreground are purportedly the sources of illumination, but you can see the many studio lights used in this shot reflected as tiny white dots in the glass lantern.

Directors and cinematographers manipulating the lighting of the scene will start from the assumption that any subject normally requires two light sources:



4.63 Strong key and soft fill light combined in *The Bodyguard*.



4.64 *Bezhin Meadow*.

a **key light** and a **fill light**. The key light is the primary source, providing the dominant illumination and casting the strongest shadows. The key light is the most directional light, and it usually corresponds to the motivating light source in the setting. A fill is a less intense illumination that “fills in,” softening or eliminating shadows cast by the key light. By combining key and fill, and by adding other sources, lighting can be controlled quite exactly.

The key lighting source may be aimed at the subject from any angle, as our examples of lighting direction have indicated. As one shot from *Ivan the Terrible* shows (4.77), underlighting may be the key source, while a softer and dimmer fill falls on the setting behind the figure.

Lights from various directions can be combined in any way. A shot may use key and fill lights without backlighting. In the frame from *The Bodyguard* (4.63), a strong key light from offscreen left throws a dramatic shadow on the wall at the right. The dim fill light inconspicuously shows the back wall and ceiling of the set, but leaves the right side of the actor’s head dark.

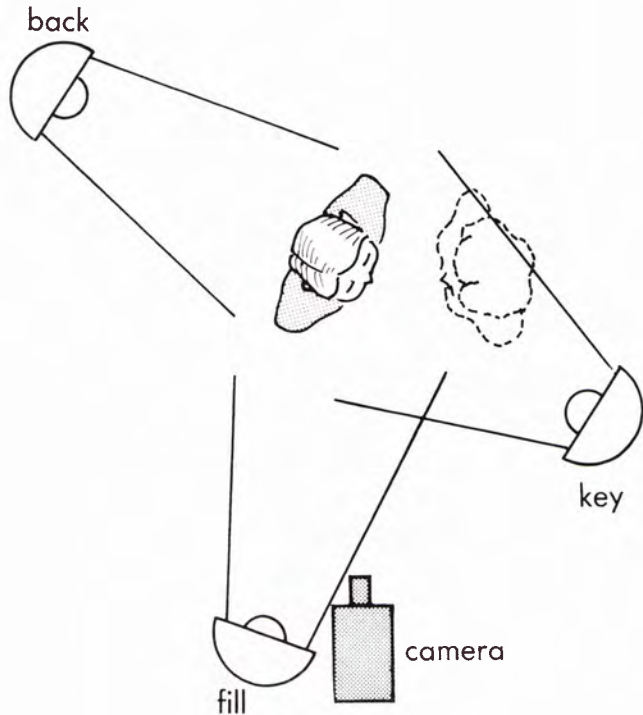
In 4.64, from *Bezhin Meadow*, Eisenstein uses a number of light sources and directions. The key light falling on the figures comes from the left side, but it is hard on the face of the old woman in the foreground and softened on the face of the man because a fill light comes in from the right. This fill light falls on the woman’s forehead and nose.

Classical Hollywood filmmaking developed the custom of using at least three light sources per shot: key light, fill light, and backlight. The most basic arrangement of these lights on a single figure is shown in 4.65. The *backlight* comes from behind and above the figure, the *key light* comes diagonally from the front, and a *fill light* comes from a position near the camera. The key will usually be closer to the figure or brighter than the fill. Typically, each major character in a scene will have his or her own key, fill, and backlight. If another actor is added (as in the dotted figure in 4.65), the key light for one can be altered slightly to form the backlight for the other, and vice versa, with a fill light on either side of the camera.

In 4.66, the Bette Davis character in *Jezebel* is the most important figure, and the **three-point lighting** centers attention on her: a bright backlight from the rear upper right highlights her hair and edge-lights her left arm. The key light is off left, making her right arm brightly illuminated. A fill light comes from just to the right of the camera. It is less bright than the key. This balanced lighting creates mild shading, modeling Davis’s face to suggest volume rather than flatness. (Note the slight shadow cast by her nose.) Davis’s backlight and key light serve to illuminate the woman behind her at the right, but less prominently. Other fill lights, called *background* or *set lighting*, fall on the setting and on the crowd at the left rear. Three-point lighting emerged during the studio era of Hollywood filmmaking, and it is still widely used, as in 4.67, from Steven Spielberg’s *Catch Me If You Can*.

“When taking close-ups in a colour picture, there is too much visual information in the background, which tends to draw attention away from the face. That is why the faces of the actresses in the old black and white pictures are so vividly remembered. Even now, movie fans nostalgically recall Dietrich . . . Garbo . . . Lamarr . . . Why? Filmed in black and white, those figures looked as if they were lit from within. When a face appeared on the screen over-exposed—the high-key technique, which also erased imperfections—it was as if a bright object was emerging from the screen.”

— Nestor Almendros, cinematographer



4.65 Three-point lighting, one of the basic techniques of Hollywood cinema.



4.66 The three-point system's effect as it looks on the screen in *Jezebel*.



4.67 In *Catch Me If You Can*, the ne'er-do-well father can't suppress a grin at his son's impersonation, and the high-key lighting accentuates the upbeat tone of the scene.



4.68 *Back to the Future*: day . . .



4.69 . . . versus night.

You may have already noticed that this three-point lighting system demands that the lamps be rearranged virtually every time the camera shifts to a new framing of the scene. In spite of the great cost involved, most Hollywood films have a different lighting arrangement for each camera position. Such variations in the light sources do not conform to reality, but they do enable filmmakers to create clear compositions for each shot.

Three-point lighting was particularly well suited for the high-key lighting used in classical Hollywood cinema and other filmmaking traditions. **High-key lighting** refers to an overall lighting design that uses fill light and backlight to create low contrast between brighter and darker areas. Usually, the light quality is soft, making shadow areas fairly transparent. The frames from *Jezebel* (4.66) and from *Catch Me If You Can* (4.67) exemplify high-key lighting. Hollywood directors and cinematographers have relied on this for comedies, adventure films, and most dramas.



4.70 In *Kanal*, low-key lighting creates a harsh highlight on one side of the woman's face, a deep shadow on the other.

"When I started watching films in the 1940s and 1950s, Indian cinematography was completely under the influence of Hollywood aesthetics, which mostly insisted on the 'ideal light' for the face, using heavy diffusion and strong backlight. I came to resent the complete disregard of the actual source of light and the clichéd use of backlight. Using backlight all the time is like using chili powder in whatever you cook."

— Subrata Mitra, cinematographer

High-key lighting is not used simply to render a brightly lit situation, such as a dazzling ballroom or a sunny afternoon. High-key lighting is an overall approach to illumination that can suggest different lighting conditions or times of day. Consider, for example, two frames from *Back to the Future*. The first shot (4.68) uses high-key illumination matched to daylight and a brightly lit malt shop. The second frame (4.69) is from a scene set in a room at night, but it still uses the high-key approach, as can be seen from the lighting's softness, its low contrast, and its detail in shadow areas.

Low-key illumination creates stronger contrasts and sharper, darker shadows. Often the lighting is hard, and fill light is lessened or eliminated altogether. The effect is of *chiaroscuro*, or extremely dark and light regions within the image. An example is 4.70, from Andrzej Wajda's *Kanal*. Here the fill light and background light are significantly less intense than in high-key technique. As a result, shadow areas on the left third of the screen remain hard and opaque. In 4.71, a low-key shot from Leos Carax's *Mauvais sang*, the key light is hard and comes from the side. Carax eliminates both fill and background illumination, creating very sharp shadows and a dark void around the characters.

As our examples indicate, low-key lighting has usually been applied to somber or mysterious scenes. It was common in horror films of the 1930s and films noirs (dark films) of the 1940s and 1950s. The low-key approach was revived in the 1980s in such films as *Blade Runner* and *Rumble Fish* and continued in the 1990s in films noirs like *Se7en* and *The Usual Suspects*. In *El Sur* (4.72), Victor Erice's low-key lighting yields dramatic chiaroscuro effects that portray the adult world as a child imagines it.

When the actors move, the director must decide whether to alter the lighting. By overlapping several different key lights, the filmmaker can maintain a constant intensity as actors move around the set. Although constant lighting is not particularly realistic, it has advantages, the main one being that distracting shadows and highlights do not move across actors. At the end of Fellini's *Nights of Cabiria*, for example, the heroine moves diagonally toward us, accompanied by a band of singing young people (4.73, 4.74). Alternatively, the filmmaker may have his or her figures move through patches of light and shadow. The sword fight in *Rashomon* is intensified by the contrast between the ferocious combat and the cheerfully dappled lighting pouring into the glade (4.75).

We tend to think of film lighting as limited to two colors—the white of sunlight or the soft yellow of incandescent interior lamps. In practice, filmmakers who choose to control lighting typically work with as purely white a light as they can. By use of filters placed in front of the light source, the filmmaker can color the onscreen illumination in any fashion. There may be a realistic source in the scene



4.71 In *Mauvais sang*, a single key light without any fill on the actress's face leaves her expression nearly invisible.



4.72 Low-key lighting in *El Sur* suggests a child's view of the adult world as full of mystery and danger.



4.73 In *Nights of Cabiria*, the heroine is surrounded by a band young street musicians.



4.74 As she walks, the lighting on her face does not change, enabling us to notice slight changes in her expression.



4.75 Dappled lighting in *Rashomon*.



4.76 An orange filter suggests that all the light in this scene from *The Green Room* comes from candles.



4.77 In *Ivan the Terrible*, a character's fear registers on his face . . .



4.78 . . . but a blue light also suddenly and briefly shines on it until it disappears and the scene continues.

to motivate the hue of the light. For example, cinematographers often use filters over lighting equipment to suggest the orange tint of candlelight, as in François Truffaut's *The Green Room* (4.76). But colored light can also be unrealistic in its motivation. Eisenstein's *Ivan the Terrible*, Part 2, uses a blue light suddenly cast on an actor, nondiegetically, to suggest the character's terror and uncertainty (4.77, 4.78). Such a shift in stylistic function—using colored light to perform a function usually confined to acting—is all the more effective because it is so unexpected.

Most film lighting is applied during shooting, but computer-generated imagery allows filmmakers to create virtual lighting designs. Powerful 3D programs enable filmmakers to add broad overall illumination or strongly directional effects. Spotlights can sprinkle highlights on shiny metal, while “shader” tools model objects with attached shadows. In normal filming, filmmakers must reduce the vast amount of visual information in front of the camera, using lighting to clarify and simplify the space. In contrast, digital lighting is built up little by little from simple elements. For this reason, it is very time-consuming; a program may need a day and a night to render moving cast shadows in a single shot. Still, new software and faster computers are likely to accelerate the work process.

We are used to ignoring the illumination of our everyday surroundings, so film lighting is also easy to take for granted. Yet the look of a shot is centrally controlled by light quality, direction, source, and color. The filmmaker can manipulate and combine these factors to shape the viewer's experience in a great many ways. No component of mise-en-scene is more important than “the drama and adventure of light.”