

## Direction of Light

from *Photography* by Barbara London Upton with John Upton.  
Fourth Edition, Harper Collins Publishers, 1989.

Paradoxically, the direction of light is important because of—**shadows**, specifically those that are visible from camera position. Light, except for the most diffuse sources, casts shadows that can emphasize texture and volume or can diminish them. The main source of light—the sun, a bright window in a dark room, a flash unit—illuminates the side of the subject nearest the light and casts shadows on the opposite side.

When looking at the lighting on a scene, you need to take into account not only the direction of the light (and the shadows it casts), but also the position of the camera (will those shadows be visible in the picture). Snapshooters are sometimes advised to “stand with the light over your shoulder.” This creates safe but often uninteresting front lighting in which the entire subject is evenly lit, with few shadows visible because they are all cast behind the subject. Compare front lighting with side or back lighting in which shadows are visible from camera position (*photographs, this page and opposite*).

There is nothing necessarily wrong with front lighting; you may want it for some subjects. Nor does side or back lighting enhance every scene. But before you shoot, take a moment to consider your alternatives. Will moving to another position show the scene in a more interesting light? Can you move the subject relative to the light, or maybe move the light to another position? Outdoors, you have little control over the direction of light, except for waiting for the sun to move across the sky or in some cases by moving the subject. If you set up lights indoors, you have many more options.

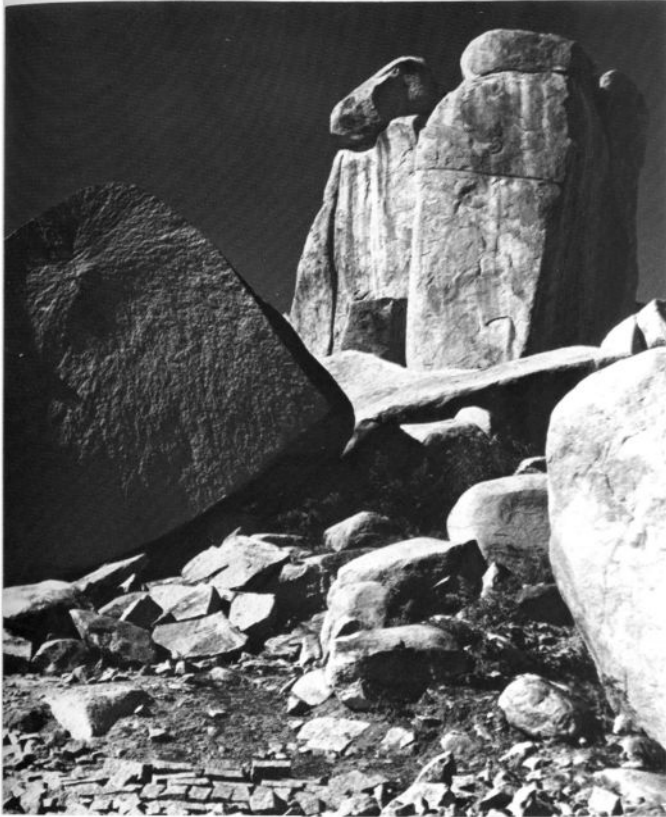
### back lighting



RAY McSAVANEY: Yosemite National Park, 1983

*Back lighting comes toward the camera from behind the subject (or behind some part of the subject). Shadows are cast toward the camera and so are prominent, with the front of the subject in shadow. Back lighting can make translucent objects seem to glow (see the back-lit flower on page 258) and can create rim lighting, a bright outline around the subject (see the last photo on page 267).*

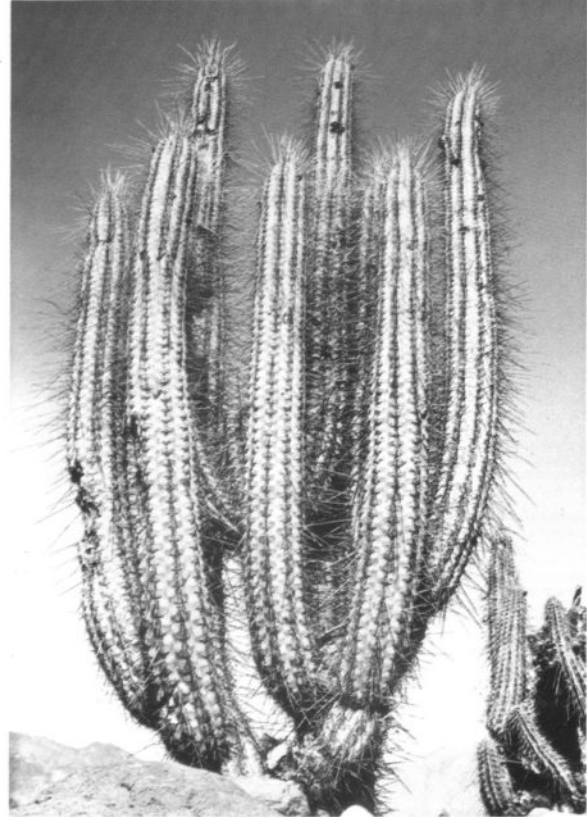
**side lighting**



WERNER BISCHOF: *Rocky Landscape*

*Side lighting comes toward the side of the subject and camera. Shadows are prominent, cast at the side of the subject, which tends to emphasize texture and volume. Early morning and late afternoon are favorite times for photographers to work outdoors, because the low position of the sun in the sky produces side lighting and back lighting.*

**front lighting**

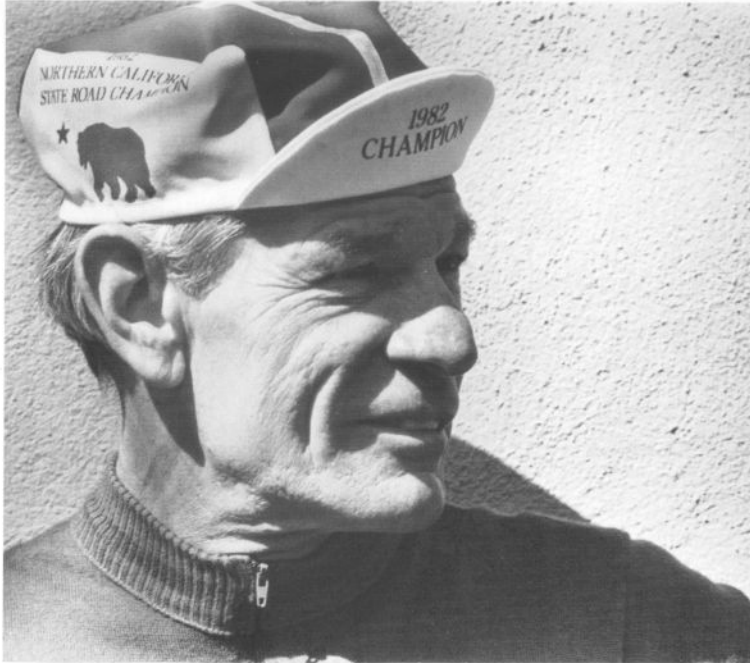


SERGIO LARRAIN: *Cactus*

*Front lighting comes from behind the camera toward the subject. The front of the subject is evenly lit with minimal shadows visible. Surface details are seen clearly, but volume and textures are less pronounced than they would be in side lighting where shadows are more prominent. Flash used on camera is a common source of front lighting.*

## Degree of Diffusion: From Hard to Soft Light

direct light



ETTA CLARK: *Bicycle Champion*, 1985

directional-diffused light



FREDRIK D. BODIN: *Young Girl*, Norway, 1975

Next to its direction, the most important characteristic of lighting is its degree of diffusion, which can range from contrasty and hard-edged to soft and evenly diffused. When people refer to the “quality” of light, they usually mean its degree of diffusion.

**Direct light** creates hard-edged, dark shadows. It is specular: its rays are parallel (or nearly so), striking the subject all from one direction. The smaller the light (relative to the size of the subject) or the farther the light is from the subject, the sharper and darker the shadows will be. The sharpest shadows are

created by a point source, a light small enough or far away enough that its physical size is irrelevant.

A spotlight is one source of direct light. Its diameter is small, and it often has a built-in lens to focus the light even more directly. If you think of a performer on stage in a single spotlight, you can imagine an extreme case of direct light: lit areas very light, shadows hard-edged and black unless there are reflective areas near the subject to bounce fill light into the shadows (*more about fill light on pages 268–269*).

The sun on a clear day is another

source of direct light. Although the sun is large in actual size, it is so far away that it occupies only a small area of the sky and casts sharp, dark shadows. It does not cast direct light when its rays are scattered in many directions by clouds or other atmospheric matter: then its light is directional-diffused or even fully diffused.

**Diffused light** scatters onto the subject from many directions. It shows little or no directionality. Shadows, if they are present at all, are relatively light. Shadow edges are indistinct, and subjects seem surrounded by light.

Direct light (opposite page, left), with its dark, hard-edged shadows, illuminates subjects that are in the sun on a clear day. Directional-diffused light (opposite page, right) combines qualities of direct and diffused light: shadows are visible, but not as prominent as in direct light. Here, the girl was indoors with the main light coming from a large window to her right, but with other windows bouncing light into the shadows.

Fully diffused light (this page) provides an even, soft illumination. Here, the light is coming from above, as can be seen from the somewhat brighter foreheads, noses, and cheekbones, but light is also bouncing in from both sides and to some extent from below. An overcast day or a shaded area commonly has diffused light.

diffused light



DANNY LYON: Sparky and Cowboy (Gary Rogues), 1965

Sources of diffused light are broad compared to the size of the subject—a heavily overcast sky, for example, where the sun's rays are completely scattered and the entire sky becomes the source of light. Fully diffused light indoors would require a very large, diffused light source close to the subject plus reflectors or fill lights to further open the shadows. Tenting (page 275) is one way of fully diffusing light.

**Directional-diffused light** is partially direct with some diffused or scattered rays. It appears to come from a definite direction and creates distinct shadows,

but with edges that are softer than those of direct light. The shadow edges change smoothly from light to medium-dark to dark, and the shadows tend to have visible detail.

Sources of directional-diffused light are relatively broad. Indoors, windows or doorways are sources when sunlight is bouncing in from outdoors rather than shining directly into the room. Floodlights used relatively close to the subject are also sources; their light is even more diffused if directed first at a reflector and bounced onto the subject (like the umbrella light on page 259) or

if partially scattered by a diffusion screen placed in front of the light. Outdoors, the usually direct light from the sun is broadened on a slightly hazy day, when the sun's rays are partially scattered and the surrounding sky becomes a more important part of the light source. Bright sunlight can also produce directional-diffused light when it shines on a reflective surface such as concrete and then bounces onto a subject shaded from direct rays by a tree or building.

## Light as You Find It—Outdoors

### directional



HENRI CARTIER-BRESSON: *Edith Piaf*, 1946

Because direct light outdoors can produce prominent shadows (this page, top), it is important to notice how such light is striking a subject. In diffused light outdoors, such as in the shade of a building, light is soft and revealing (this page, bottom). Outdoors, if the light isn't right, sometimes you can wait for the sun to change position. Sometimes you can move the subject or add fill light. You can't change light outdoors, but you can at least observe it and work with it.

What kind of light will you find when you photograph outdoors? It may be any of the lighting situations shown on the preceding pages, so it is important to stop for a moment to look at the light and see how it affects the photograph.

A clear, sunny day creates bright highlights and dark, hard-edged shadows (this page, top). On a sunny day, take a look at the direction the light is coming from. You might want to move the subject or move around it yourself so the light better reveals the subject's shape or texture as seen by the camera. If you are relatively close to your subject—for example, when making a portrait—you might want to lighten the shadows by adding fill light or by taking the person out of the sun and into the

shade where the light is not so contrasty.

On an overcast day, at dusk, or in the shade (this page, bottom), the light will be diffused and soft. This is a revealing light that illuminates all parts of the scene. It can be a beautiful light for portraits, gently modeling the planes of the face.

The light changes as the time of day changes. The sun gets higher and then lower in the sky, affecting the direction in which shadows fall. If the day is sunny, many photographers prefer to work in the early morning or late afternoon; when the sun is close to the horizon, it casts long shadows and rakes across the surface of objects, increasing the sense of texture and volume.

### diffused



WALKER EVANS: *Sharecropper's Daughter*, Hale County, Alabama, 1935

## Light as You Find It—Indoors

**directional**

Shooting toward a bright window indoors will back light a subject so that the side facing the window is much brighter than the side facing the camera (this page, top). Diffused light indoors occurs when light comes from several different directions, such as from windows on more than one side of a room or from numerous light fixtures (this page, bottom).



JEB (JOAN E. BIREN): *Darqulta and Denyeta*, Alexandria, Virginia, 1979

**diffused**

Light indoors can be contrasty or flat, depending on the source of light. Near a lighting fixture or window, especially if there are not many in the room, the light is directional and contrasty, with bright areas fading off quickly into shadow (this page, top). The contrast between light and dark is often so great that you can keep details in highlights or shadows, but not in both. If, however, there are many light fixtures, the light can be diffused and flat, illuminating all parts of the scene evenly (this page, bottom).

When shooting indoors, it is important to meter carefully and expose for the most important parts of the picture. The eye adapts easily to variations in

light; it can glance at a light area then quickly see detail in a nearby dark area. But there will often be a greater range of contrast indoors than film can record.

Light indoors is often relatively dim. If you want to use the existing light and not add flash or other light to a scene, you may have to use a slow shutter speed and/or a wide aperture. Use a tripod at slow shutter speeds or brace your camera against a table or other object so that camera motion during the exposure does not blur the picture. Focus carefully, because there is very little depth of field if your lens is set to a wide aperture.



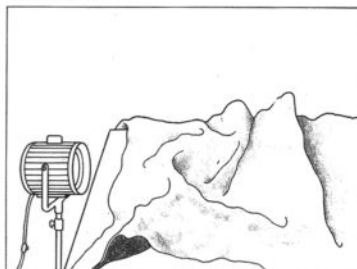
BOB ADELMAN: *Mrs. Mattie Ross*, Alberta, Alabama, 1970

## Lighting Textured Objects

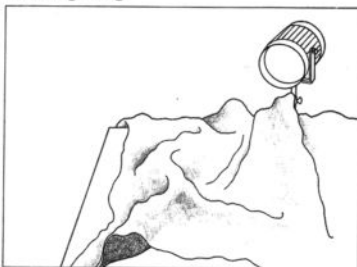
Lighting for a textured object depends on whether you want to emphasize texture. Every paint stroke shows in the photograph at right because the light is raking across the object at a low angle to the surface, creating shadows that underline every bump and ripple. The same principle can be put to work with any textured object, such as rocks, textured fabrics, or facial wrinkles. Simply aim a source of direct light so it skims across the surface, choose a time of day when the sun is at a low angle in relation to the object, or arrange the object so light strikes it from the desired direction.

Shadows must be seen if the texture is to be prominent, which is why side or back lighting is used when a pronounced texture is desired; the shadows cast will be visible from camera position. A light pointed at an object from the same direction as the lens, called **axis light**, may also produce shadows, but they will be just barely visible from camera position, if at all. Axis light tends to produce the least sense of texture (see first photograph, page 266, and diagrams at right). If you want to minimize textures in a portrait because your subject is self-conscious about facial wrinkles, place the main light close to the lens so the subject is in axis light.

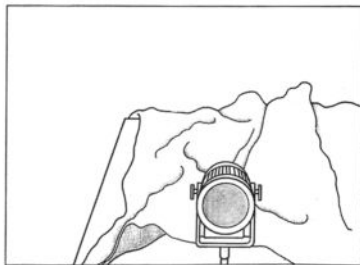
**side lighting**



**back lighting**



**axis lighting**



SEBASTIAN MILITO: Door knob, 1970

*Texture is emphasized in a photograph when light skims across the surface at a low angle and produces shadows that are visible from camera position. For most objects this requires side or back lighting. Axis lighting, which comes from the camera direction, produces the least texture.*