

Topic 047

When you photograph indoors or out, the scene is illuminated by light that ranges from hard to soft. Hard light coming from a source that's small compared to the subject, casts hard shadows and has high contrast. Outdoors you see this light on a bright sunny day. The sun may be very large but it's also far away and small in the sky so it casts hard light on subjects.

Soft light falling on the subject from a source that's large compared to the subject, wraps light around the subject, filling shadows and lowering contrast. Outdoors you see this light on a cloudy bright day when the entire layer of clouds is the light source.

Whether light falling on a subject is hard or soft depends on one thing, the relative sizes of the light source and subject. A large source will wrap light around a small subject filling shadows and lowering contrast. A small source will direct light onto a large subject creating hard shadows and high contrast. To imagine this, think of the light falling on a landscape on a bright sunny day. The sun is small compared to the landscape, so the light is hard. Pictures have black shadows or burned out highlights. Now imagine a thin layer of clouds drifting across the sky from horizon to horizon. The sun hits the cloud layer from above, and it retransmits the light from all parts of the sky. The light source has gotten dramatically larger and its diffuse light softens shadows and lowers contrast.

There are two ways to soften light indoors in addition to moving a light closer to the subject—using reflectors and diffusers. To get harder light, move the light farther from the subject or use a bare bulb or bare bulb flash. When a bulb is mounted in a reflector, it's really the larger reflector that is the light source. A bare bulb has no reflector so the light source is much smaller. Since it's more of a point source, it casts a hard light on the subject. Because it lacks a reflector to focus the light, its range is shorter than other kinds of light.

Hard Light

► Light that is transmitted directly from a small point source results in relatively coherent (parallel) rays. This gives the light a hard, crisp, sharply defined appearance.



The light from a clear, unfrosted light bulb, a focused spotlight, or the noonday sun in a clear sky, all represent hard light sources.

Hard light casts a sharp, clearly defined shadow.

When hard light is used to illuminate a face, imperfections in the skin stand out. The result is less than flattering.

But in other applications, such as bringing out the texture in leather, or the engraving on a piece of jewelry, this can be an advantage.

Note in the photo on the left how the writing stands out. Also note the clearly defined shadow of the flower at the bottom of

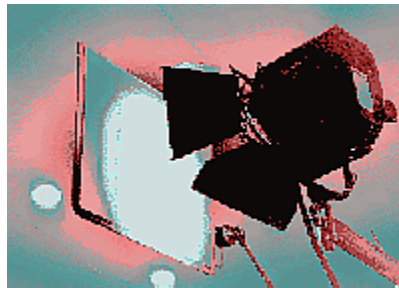
the photo.

Compare this photo with the one in the section below (with soft light) where the letters are hard to read and the shadow of the flower has all but disappeared.

Several types of lighting instruments are used in TV to create hard light, including the beam-spot projector and the ellipsoidal spotlight.

Soft Light

► Soft (diffused) light has the opposite effect. As shown in the photo on the left below, soft light tends to hide surface irregularities and detail.



Spun-glass diffusers (above) are used over the front of lights to soften and diffuse their beams. At the same time, diffusers also reduce the intensity of light.

► Soft light sources are used in production to create a broad, even area of light. In the field, videographers often rely on umbrella reflectors (on the right, below) to create a soft lighting effect. As you can see, this is simply a light bounced off the inside of a silver or white, umbrella-like reflector.

The illustration below on the left shows a LED softlight which consumes much less power and generates much less heat than incandescent versions.

The life span of LED lamps is rated at 100,000 hours and they can be readily switched from daylight to incandescent color temperatures (a topic taken up in the next module).

■ ■ Because of their many advantages, we are seeing a switch from incandescent to LED lamps in many professional lighting applications. ■ ■

Although in their basic form these LED lights are non-directional, the light output of some versions can be directionalized or focused, which means they are effective at greater distances.



► Because soft light tends to hide lines, wrinkles and blemishes, it's desirable in doing glamour work.

The photo of the model on the left was shot with soft light.

A soft light source placed close to the camera minimizes surface detail. The effect is commonly referred to as flat lighting.

Although, it has certain applications, especially in extreme close-ups of objects where shadows would obscure important details, flat lighting leaves subject matter somewhat "dimensionless." When used over a large area, it can impart an arid and sterile-looking appearance.

Differences:

Hard light makes distinct, hard-edged shadows. Soft light makes shadows that are barely visible. A sunny day is hard light. A cloudy day is soft light. It's that simple and that complicated.

When the sun is straight overhead the light is harsh and unflattering—think overhead lightbulb. When the sun is on the horizon it's golden and romantic—think the best pictures you've ever seen in National Geographic.