



CHEAP JOE'S ARTQUIRER BITS & PIECES

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BOUNCE

Understanding how
reflected light works
by Christopher Schink

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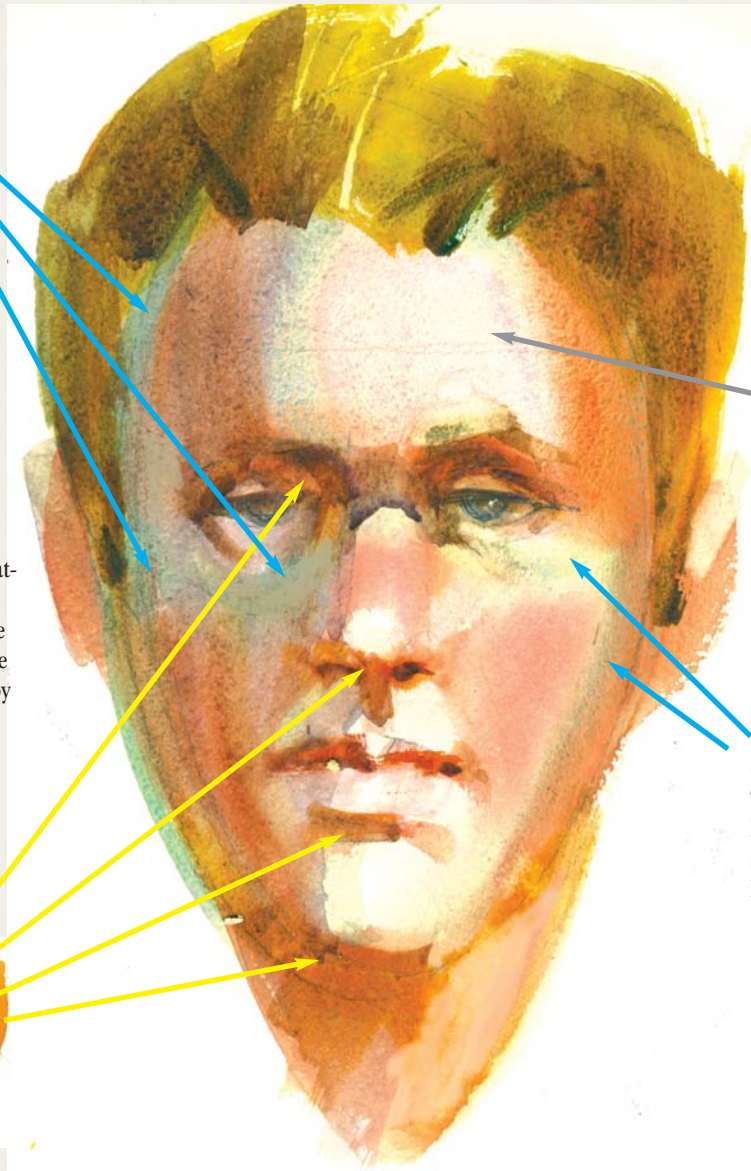
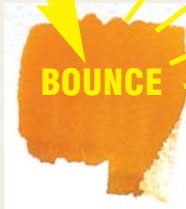


Cool

The shaded planes that face upward on an object will reflect the cool color of the sky.

Warm

The shaded areas that face downward on an object will be illuminated by warm reflected light. For example here, the underside of the chin, nose, lower lip and the inside of the eye socket will be warmed by reflected sunlight.



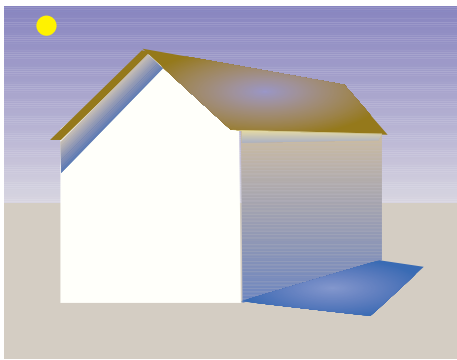
No bounce

Those planes of an object that are in direct sunlight will **not** be affected by light reflecting from any nearby surface.

Slightly cool

There is a slight cooling of local color in the areas that are facing upward or are not hit directly by sunlight.

If in order to create three-dimensionality, you paint the shaded side of an object dark, cool, and neutral and you paint the illuminated side light, warm, and bright, you'll produce something that looks fairly round; and that's the effect you want. But there are other things you can do to make the color more convincing and vibrant. By subtly modifying the color of the shaded area, you suggest the effects of reflected light—the colored light that bounces back into a shaded area and modifies its color. With practice, you will be able to observe these subtle color changes and reproduce (or even exaggerate) them to create a more believable and vibrant image. Let's look at how reflected light affects a shadow.

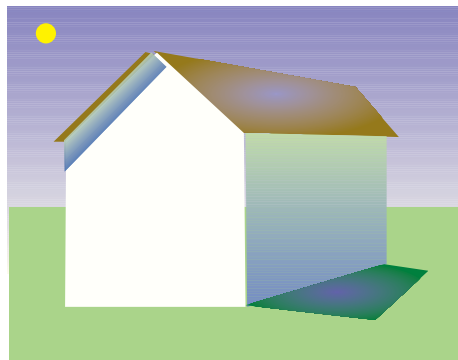


How reflected light works

To get a better understanding of how reflected light affects *shadows and shaded areas*,* let's look at three examples.

Skylight and sunlight

In the **top illustration** you can see how the color in a white building sitting on a fairly neutral surface is affected by sunlight and skylight. Sunlight is warm and will make any surface it hits appear slightly yellowish. This same warm light will reflect into the shaded area of an object. Skylight is cool and will affect any surface not hit by direct light and facing upward (the roof and shadow in this illustration).

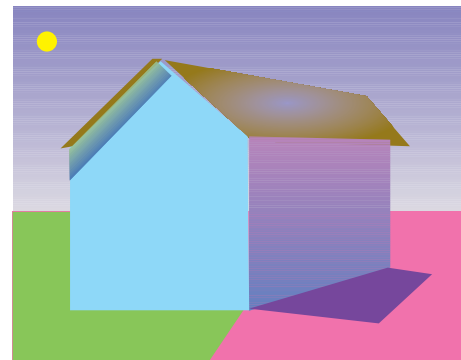


Surface reflections

In the **middle illustration** the white house sits on a bright green lawn. Light bounces off this surface and gives the shaded area a green cast. Reflected light will have **no** effect on a surface that is illuminated by **direct** sunlight. Although this building sits on a bright green lawn, no green is seen in the sunlit front of the building.

A colored object on a colored surface

The effect in the **bottom illustration** looks more complicated, but it isn't. The blue building sits on a magenta and green plane. The magenta color is reflected into the shaded area of the building; the green is reflected into the shadow under the front eave.



Where you can see this

You don't have to spend hours hunting for a sunlit white building sitting on a green lawn to observe the effects of reflected light. You can set up a brightly lit still-life with shiny green apples on a red tablecloth. And you'll find it easy to detect reflected light in the shaded areas of any smooth object—a wet rock, a smooth tree trunk or a polished wood table.

*Although we're accustomed to describing all areas not struck directly by light as being in **shadow**, the formal terms are *shaded* and *in shadow*. Thus, the right sides of the buildings above are *shaded* and the buildings cast a *shadow* on the ground.

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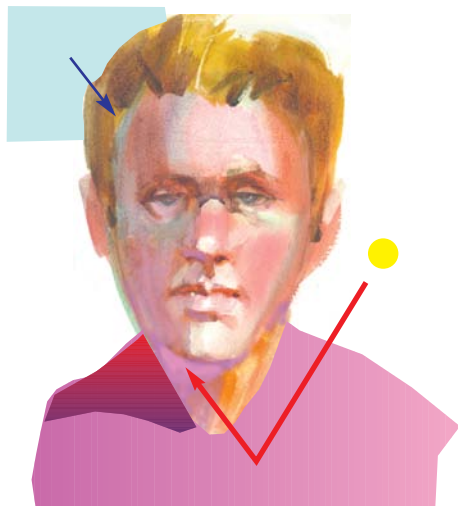


No bounce light

When the level of illumination on an object is very low, you see little or no reflected light in the shade areas. The shadows and shade appear dense and uniform in color. This is especially true at night, when there is no secondary illumination from the sky or other light sources. Nighttime shadows and shade are a solid and dense middle dark. In the example below the shaded area is dark, neutral, and uniform in color.

Light bouncing off colored objects

If you are a landscape painter, you've probably observed how light bouncing off a bright green lawn will affect the color of the shaded side of a house. Any colored object that is illuminated and close to the shaded area of an adjoining object will alter the color of the shaded area. For example, the shaded area on a figure standing close to a piece of blue wall (left) will take on a decided blue cast. If the subject is wearing a magenta shirt, strong sunlight will reflect that color into the shaded area of the figure (below right). Note on the next page how Dale Snyder captures the reflected light from the green awnings in the shade area above them.



Seeing color

For an inexperienced painter with a less practiced eye, all shadows and shade appear to be cold, dark, and neutral—something you could paint with Payne's gray. But with practice your eye gets better and you begin to detect the subtle color changes that occur in shadows.

Understanding why and where these color changes occur will give you confidence in inserting them in your painting. You can learn to exaggerate these color additions, dropping in reds and greens and yellows to make your painting more vibrant and give it an extra **bounce**.



“Walter” by William B. Lawrence

Watercolor, 18” x 24”

Putting these ideas into practice

You understand the illustrations of little white houses with the arrows, explanations, and footnotes, but how do you apply this understanding to your own painting? Here are two examples of artists using reflected light to enhance their paintings. (Without the colorful bounce light, Skip’s painting—see below—seems weak and cold.) When you have a subject that emphasizes a strong shadow pattern, look for the effects of reflected light. If you observe a little red or green or yellow in the shaded area of your subject, boldly add it to your painting. It will make your work more vibrant and convincing. ■



A closer look

In the six details below you can see how many different colors Snyder has used to capture the effect of reflected light in the shaded areas of the building.



Acrylic, 42” x 45”

“Corner of Second Street” by Dale Snyder



In this handsome painting, Washington state artist Dale Snyder relies on an active shadow shape and colorful variations of reflected light to enliven her painting. Note the variety of hues she employs.