CHAPTER 1

UNDERSTANDING COMPOSITION

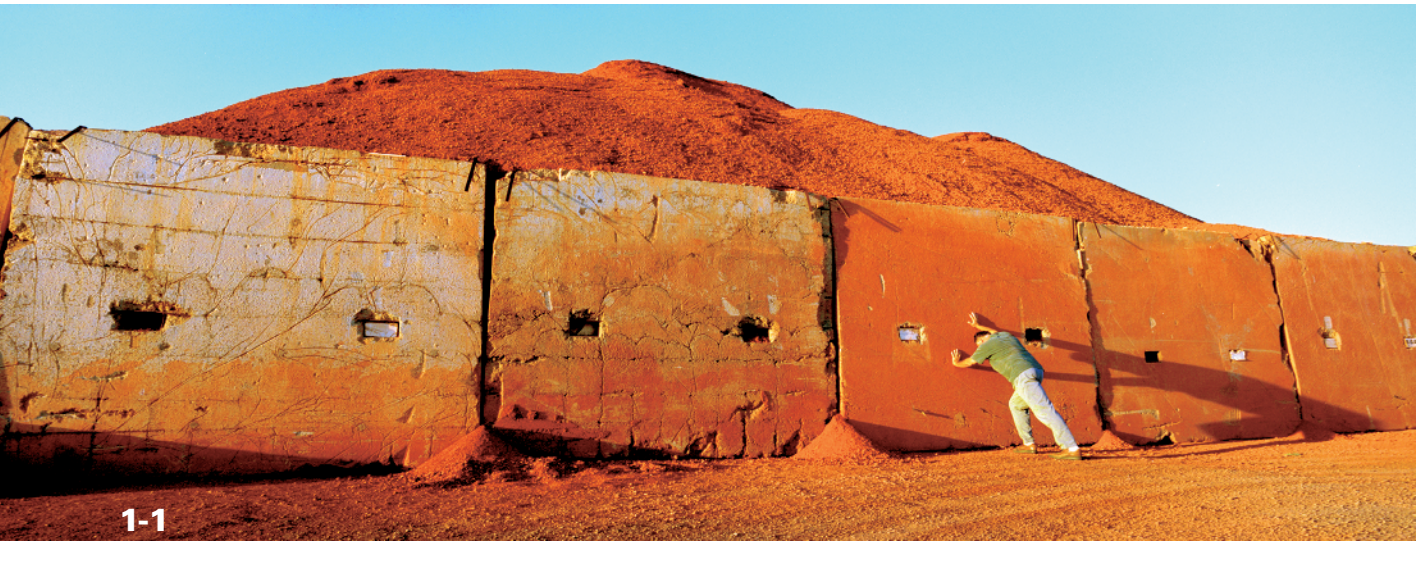
Have you ever studied a snapshot and wondered why it looked amateurish compared to a photograph taken by a more experienced photographer? Even when the subject matter is the same — say, for example, that both photographs depict a shoreline — the difference between them is clear. The master's image is more captivating, more vital, more powerful than the snapshot. But why? What is it about the more skilled photographer's image that makes it so compelling? What is it about the skilled photographer's photograph that promotes it from a snapshot to a work of art?

Many factors can affect a photographic image. Lighting, for one, can greatly influence the outcome of a photographic shoot. So, too, can the camera's settings — the f-stop, shutter speed, and ISO. The quality of the camera's lenses can be a factor, as can the use of additional equipment such as a tripod and filters. But more than these is the photo's *composition*, that is, the arrangement of the elements within the image. Indeed, composition is the unifying element behind all visual art, from painting to photography and beyond.

Taking a snapshot is a simple matter of picking up a camera and photographing whatever is in front of you. Little, if any, thought process is involved. In contrast, when you compose a photograph, you consciously choose what visual elements to leave in and what to omit from your photos (see 1-1). When a picture is well-composed, the message the image is meant to convey is clearly and effectively communicated, inviting the viewer to appreciate and examine the work.

APPROACHES TO COMPOSITION

Although it's true that composition is about choosing which elements your photograph contains, that's not to say that everyone makes those choices in the same way. Some people carefully position themselves for just the right shot;



1-1

ABOUT THIS PHOTO *Notice how the person leaning against the wall adds scale to the image (105mm, 100 ISO, center-weighted neutral-density filter, f/32.5 at 1/4 second).*

others painstakingly arrange their subjects, creating their compositions just so. Still others wing it — waiting for the elements of a photograph to naturally coalesce. For example, nineteenth-century photographer Carleton Watkins, famous for his photographs of the American West (particularly Yosemite), didn't bother setting up his camera until after he had walked around a site, waiting for all the elements in the scene to align in a way that pleased him (see 1-2). Watkins understood how a slight shift in position could change how the components in an image came together, yielding what he called "the best view."

Similarly, Edward Weston, known for his beautiful close-up images of fruits, vegetables, and nudes, carefully arranged his subjects before photographing them, whether they were in the studio or outdoors (see 1-3). In contrast, Henri Cartier-Bresson, renowned for his superb images of people and places (see 1-4), relied more on intuition than planning. He developed a knack for recognizing in a split second, even as the world swirled around him, when a photograph was perfectly composed — what he called "the decisive moment."

ABOUT THIS PHOTO

Best General View, Mariposa Trail, ca. 1860's. Photograph by Carleton Watkins. Courtesy Center for Creative Photography, University of Arizona

1-2

ABOUT THIS PHOTO *Nude, 1936. Photograph by Edward Weston. Collection Center for Creative Photography. ©1981 Arizona Board of Regents*

1-3

HOW YOU SEE

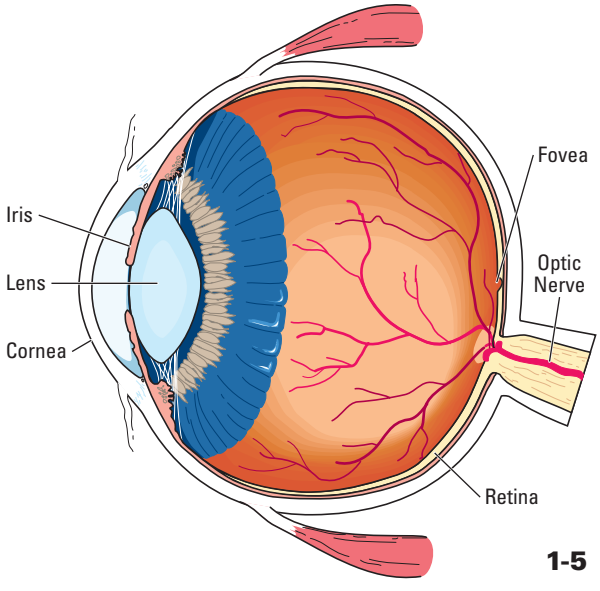
Why does the way in which a photograph — or other piece of visual art — is composed affect how effectively that piece communicates its meaning? Why do some compositions provoke the viewer to linger on an image, and others barely garner a glance? One answer relates to how you see.

THE PHYSIOLOGY OF THE EYE

When you perceive something visually, it's because that object is either emitting or reflecting light, which enters the eye in the form of waves. These waves pass through the eye's pupil, lens, and cornea to the retina to stimulate visual receptors called *rods* and *cones* (see 1-5). Rods enable you to see the general outlines of objects, even in dim light — although without color. In contrast, cones detect color and enable you to discern an object's details. Cones are concentrated in the

1-4

ABOUT THIS PHOTO *FRANCE: The Var department. Hydres. 1932. © Henri Cartier-Bresson, 1932. Magnum Photos*



1-5

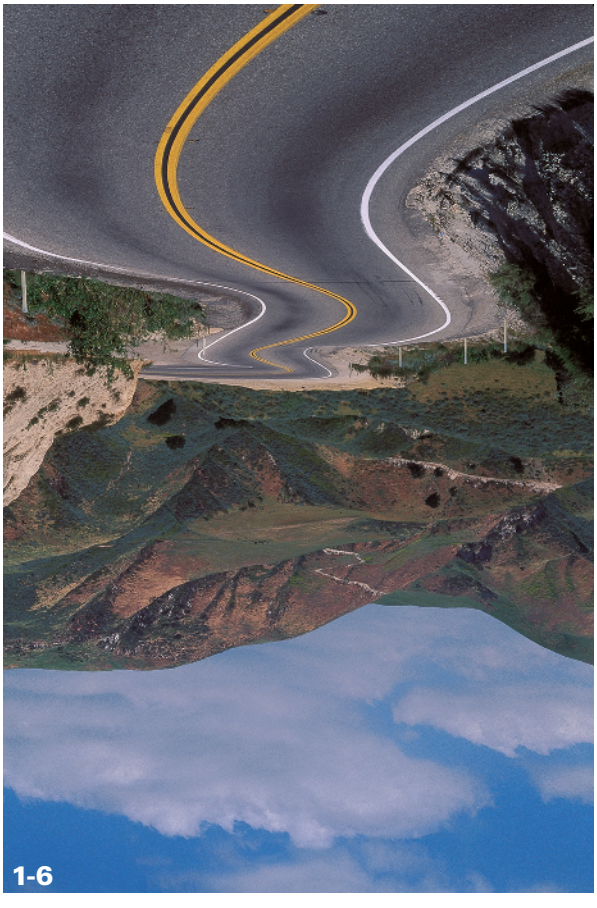
ABOUT THIS FIGURE *An eye in cross-section.*

fovea centralis — a depressed area in the center of the retina. In contrast, rods are spread around the outer portion of the retina. Rods and cones, when activated by light, transmit nerve impulses to the optic nerve behind the retina, which ushers these impulses to the brain's visual cortex for processing. To visualize this effect, imagine walking into a dark movie theater when you just came from a brightly lit room. Your eyes can barely make out the seats or what's in front of you...that is your rods working first, then as more light is gathered, you begin to see more details...that is your cones working.

note

Light that strikes the depressed area at the center of the retina (called the *fovea centralis*) is perceived more sharply than light that falls outside the depression. The result is an image that appears focused at the center but blurred around the edges. A camera, however, can generate a photograph that is sharp from foreground to background and edge to edge. This explains why a photograph of a scene can be evenly focused throughout, even though your eye didn't perceive the scene that way.

Because humans have two eyes, with pupils roughly 2.5 inches apart, people view the world *stereoscopically*. That is, each eye sees an object slightly differently. To form a single, 3-D image that conveys depth, dimension, distance, height, and width, the brain merges the image registered by one eye with the image registered by the other. (Note that this applies primarily when the object is fewer than 18 feet away. For objects that are farther out, the brain uses relative size and motion to determine its depth.) The brain also flips the image as in figure 1-6, which is originally upside down due to the way light is refracted through the lenses of the eyes, right side up.



1-6

ABOUT THIS PHOTO *This is how your brain actually sees the image, upside down, and then flips it right side up (105mm, 50 ISO, f/16 at 1/40 second).*

SELECTIVE VISION

Although roughly one-third of the brain busies itself with various aspects of seeing, the brain cannot respond to each and every signal sent to it via the optic nerve. The volume of information is simply too great and would quickly overwhelm the brain's resources. For this reason, your vision is selective. So, rather than processing each bit of data it receives from the optic nerve, the brain processes differences in this data — a slight movement, an alteration in color, a shift in light or shadow. To facilitate this, the eye continually scans the scene before it. Even if your environment is static, you continue to unconsciously scan for changes. The eye also moves to bring different portions of the scene into focus.

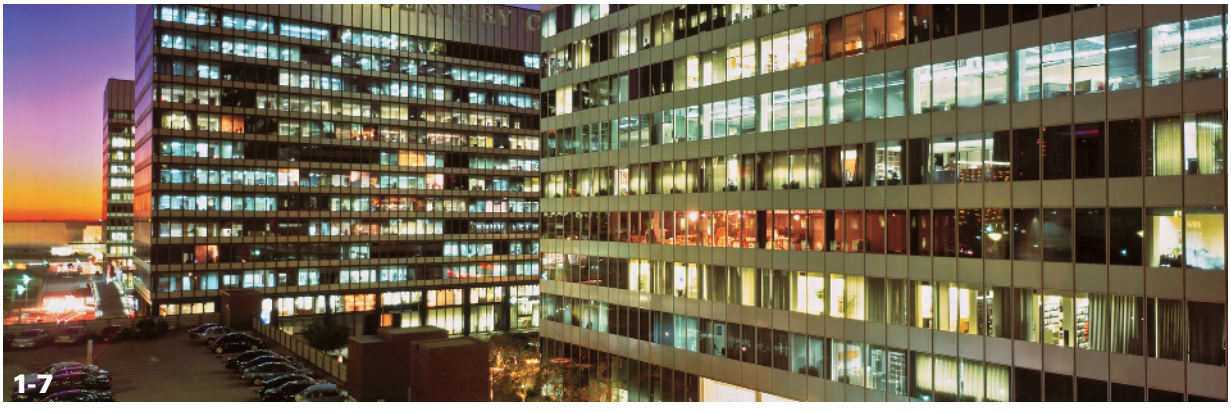
Just as you continuously scan your environment, so, too, do your eyes move about when you examine a photograph or other still image. The difference is, a still image is, by definition, static. There are no changes to detect. Even so, as a photographer, you can take advantage of the eye's impulse to scan by carefully placing the objects in your scene — composing the photograph (see 1-7). When a photograph is well-composed, the eye is naturally drawn to the center of interest, typically comprised of contrasting objects that stand out from their surroundings, before scanning the rest of the photograph (see 1-8).

tip

You can use the way people normally react to visual stimuli to mix up your compositions, thereby challenging the viewer to get involved for longer periods of time with your photographs. In a complex composition of textures, lighting, and objects, so much is going on when your eye scans the picture; it notices different elements upon its first look and second and third readings of the image. For example, you know that people's eyes seek change, so looking for contrasts in texture, shape, line direction, light, and color in what you are photographing enhances your image's composition, thereby strengthening its ability to convey your message.

SELECTIVE VISION AND NATURAL SELECTION To stay alive, early humans had to quickly detect danger and determine how to react. Selective vision enabled them to do just that. By restricting the volume of information processed by the brain, selective vision prevented over-stimulation — a condition that rendered the brain less able to swiftly and correctly evaluate one's surroundings. Although these early humans certainly used all five of their senses — touch, taste, smell, hearing, and sight — to assess their environment, vision was the most active and dynamic and, as such, particularly critical to their survival. Indeed, vision is so central to the human experience that people often think and even reason using visual images and their brains create full-color images even when they are asleep or sensory deprived. Put another way, the sense of sight is so powerful, so much a component of the human experience, it can function even without stimulation.

ABOUT THESE PHOTOS *Even rectangles can be organized in such a way that your eye moves about the picture, as shown in figure 1-7 (30mm, ISO 100, f/5.6 at 1 second, with FL-D filter to compensate for the fluorescent lighting). In figure 1-8, you see dinosaurs that are located off of California's Highway 10. Notice how the smaller dinosaur counterbalances the larger one, keeping your attention anchored in the picture (24mm, ISO 50, f/16 at 1/60 second).*



1-7

1-8

THE ORIGINS OF COMPOSITION

The origins of the compositional tricks that enable a photographer to generate interest in a photo lie in the very beginning of art itself. After all, even the arrangement of picture elements on a cave wall were concerned with communicating a message as effectively as possible. Over time, the more effective arrangements evolved into simple compositional rules that were passed down from each generation of artists to the next.

That said, compositional rules do vary by culture — primarily because of the way people in various cultures are trained to read and write. People in Western cultures read and write from left to right, starting at the top of the page and working downward line by line. In contrast, although most Arabic languages are similarly line-oriented, each line is read from right to left; and many Asian languages, such as Chinese and Japanese, are column-oriented rather than line-oriented, meaning they're read from top to bottom, starting on the left side of the page and working rightward. As a result, most Westerners naturally look first at the top-left area of an image, scan to the right, and then move downward as in 1-9. In contrast, Arabic people tend to look first at the top-right area of an image and scan to the left before moving downward;

ABOUT THIS PHOTO *A typical Western composition in which the viewer starts looking on the left and moves to the right as if he or she is reading (24mm, ISO 100, f/16 at 1/125 second).*

note

Two of the most common methods for learning compositional rules were — and remain — copying the works of the Old Masters, such as Da Vinci, Michelangelo, Raphael, Caravaggio, Albrecht Dürer, Rubens, and Rembrandt, and discussing famous works of art in student forums.

Asian people generally begin at the top-left area but scan downward before looking to the right. These ingrained tendencies greatly affect the way in which you see and how you organize your compositions. This book focuses on the rules of design and composition as they apply to Westerners; however, the beauty of knowing how to compose your photographs lies in being able to guide the viewer to look exactly where you want them to go in your image, regardless of cultural background.

UNDERSTANDING LINEAR PERSPECTIVE

Although early painters often attempted to compose images that depicted reality, their efforts were hampered by the fact that *linear perspective* — that is, the technique used to create the illusion of three dimensionality, distance, and depth on a two-dimensional surface, be it a cave, a wall, or a canvas — was not yet understood. Indeed, the only way these artists knew to denote distance in their compositions was by simply overlapping the characters and objects on the picture plane. Compounding the problem was that artists often sized the subjects of their paintings according to their importance, spiritual or otherwise, further skewing their attempts at representational compositions.

THE CAMERA OBSCURA One tool artists used to create images that mirrored reality was the *camera obscura*. Early versions of the camera obscura consisted of a small, dark room with a single, tiny aperture in one wall through which light was admitted, casting an inverted image of the outside scene on the wall opposite the hole (a convex lens would later be used to correct the inverted image).

Mentions of the camera obscura, which is Latin for "dark room," appear in literature at least as early as the tenth century A.D., by Arabian scholar Hassan ibn Hassan, although Aristotle is known to have observed and understood the science behind the camera obscura more than a millennium earlier. Subsequent mentions of the device occur in works by Francis Bacon and Leonardo Da Vinci — but it's believed that Venetian nobleman Daniel Barbaro (1528–1569) first suggested using the camera obscura as a drawing aid.

In time, artisans crafted portable models of the camera obscura — first in the form of a tent and later a wooden box with a lens to focus the image. The image was then projected onto a slab of ground glass over which a piece of transparent paper could be laid, enabling the artist to trace the scene in front of the lens. Although amateur artists comprised the majority of camera obscura enthusiasts, the device was sometimes used by even the most skilled artists, possibly including Jan Vermeer (1632–75), Canaletto (1697–1768), Joshua Reynolds (1723–1792), and Paul Sandby (1725–1809), and served as the basis for the cameras used by Louis Daguerre, Nicéphore Niépce, and William Fox Talbot to create the first photographs between 1826 and 1839.

All that changed when the Italian painter Giotto painted a fresco cycle in the Cappella degli Scrovegni in Padua between 1303 and 1305. Giotto used a mathematical method to determine the composition of characters and objects within their setting, resulting in a sense of depth and dimensionality that, though imperfect to modern eyes, was entirely new. In the early 1400s, Filippo Brunelleschi perfected Giotto's attempts at perspective, demonstrating the linear perspective still practiced today.

Key to linear perspective are foreshortening, the horizon line, and vanishing points (see figures 1-10 and 1-11). *Foreshortening* involves enlarging the parts of an object or character nearest the viewer such that the rest of the object or character appears to recede. The horizon line runs across the image plane directly opposite the viewer's eye and represents (either explicitly or implicitly) the line where the sky in the image meets the ground. *Vanishing points* are points in an image,

ABOUT THESE PHOTOS *There is nothing manmade in the Death Valley landscape of Zabrenski Point shown in figure 1-10 where no parallel lines exist (105mm, ISO 100, center-weighted neutral-density filter, f/22.5 at 1/8 second). The interior courtyard shown in figure 1-11 shows the one point perspective of the camera, parallel lines, and orthogonal rays used in perspective drawings (105mm, ISO 50, center-weighted neutral-density filter, f/32 at 1/4 second).*

1-10

1-11

often on the horizon line, where parallel lines appear to converge. An image can contain any number of vanishing points, depending on how many sets of parallel lines are featured (or none at all, as is the case in some natural scenes such as those depicting mountain ranges in which no parallel lines exist). *Orthogonal lines* visually connect points around the edges of the image to each vanishing point; the artist uses these to correctly position objects in three-dimensional space, such as tiles on the floor or chairs and tables in a room.

Ultimately, artists' further understanding and use of linear perspective enabled them to align rendered characters and objects on a two-dimensional plane in such a way to suggest space, overlap, and scale, making objects look more like how you see with your eyes — or like a photograph. Not only that, artists developed an understanding of *atmospheric perspective* (that is, how objects appear fainter and fuzzier the farther away they are), resulting in scenes that resembled reality even more. To exploit these new techniques, artists began composing paintings that depicted a single, unified scene (think Jan Vermeer's *The Art of Painting*), rather than a combination of several (think Hieronymous Bosch's *Garden of Earthly Delight*).

COMPOSITION AND PHOTOGRAPHY

When composing a photograph, the photographer must keep a few key considerations in mind — considerations that are unique to photography:

- **Detail.** Have you ever shot a portrait outdoors and noticed upon examination of the finished photo that your subject appears to have electrical wires, tree limbs, and street lamps projecting from his head? That's because the camera processes an incredible amount of detail — much more than you, with your selective vision, can manage. Because the camera is so precise, because it misses nothing, you, as a photographer, must train yourself to pay close attention to every detail in a scene and to create order out of chaos. One way is to try to simplify your surroundings, which explains why so many photographers work in a studio setting. Another way is to simply organize your picture around the chaos, as shown in 1-12. Notice that even though it depicts a disorderly environment, the light from the single skylight above points your eye toward the tools near the top of the picture.

1-12

ABOUT THIS PHOTO *Notice all the details. A photograph enables you to slow down and relish all the details and objects, which you might not observe as closely in person (105mm, ISO 400, f/22 at 30 seconds).*

■ **Time.** Although a painting can attempt to depict a moment in time, it cannot serve strictly documentary purposes. By necessity, it is limited in its portrayal by what details the artist perceived (or failed to perceive). In contrast, a photograph can serve as a historical document. In a fraction of a second, the camera accurately captures a moment that will never happen again, stopping time to preserve the present for the future. In addition to stopping time as shown in 1-13 and 1-14, the camera can also appear to manipulate it. That is, the shutter can be used to show the effects of motion in ways your eyes cannot record. Your composition might freeze a falling drop of water mid-air or create a slow-motion record of a river flowing over rocks over the course of several minutes. By choosing how you want to capture time — slicing it up into thousandths of a second or capturing events over the course of several hours — your composition can make the invisible visible.


1-13

ABOUT THIS PHOTO
The water is frozen in time, something your eye cannot see, but the camera can record (50mm, 100 ISO, f/4 at 1/2000 second).

■ **Monocular vision.** As mentioned previously, you see stereoscopically, which enables you to perceive the world in three dimensions. In contrast, the camera has *monocular vision*. That is, it sees with one eye only and from one point of view. Part of composition is learning to see as the camera sees so you can predict in your mind's eye how the finished image will look. This is called *previsualization*, and it takes time and practice to perfect.

ABOUT THIS PHOTO *This photo's composition draws your eye to the woman, around to the clouds, the boulders, and the mountains, and back to the woman (30mm, 100 ISO, center-weighted neutral-density filter, f/5.6 at 1/250 second).*

Assignment

egrees

gnment is a great beginning exercise meant to loosen up your shooting techniques. an object at least as large as a car. You should be able to walk around the entire object. oot a minimum of 30 images of this object. Get down low, hold your camera up high, close, back up, change lenses, and play with investigating this object in as many differ- s possible, including shooting it at different times of the day. The purpose of this assign- to get you moving in directions you would not normally seek out.

making each image different and unique. Push yourself to really look for different views. rget to change the orientation of the camera from vertical to horizontal and in between. a way you've never shot before. Have fun and surprise yourself!

ou choose your image to upload to the Web site, think about your composition. One way g it is to turn your image 90 degrees and upside down, looking at it by turning it 360 If the composition works in all directions, you've got a definite winner!

lete this assignment, I chose the Italian city of Portofino, adjacent to the French Riviera. I rwhelmed by the sheer beauty of the little harbor and colored buildings. Although it is a ject, it is confined to a relatively small area. I walked the area first and shot from ground king down along the buildings and from across the harbor with boats in the foreground... ssic postcard shots. I shot with every lens I had, wide angle, telephoto, and different atios: 35mm and panorama. I made verticals and horizontals. I couldn't shoot enough. realized I needed to get a different view and noticed an observation area up on a hill ing the scene. It was quite a trek to get up there. As a little fog started to come down the view from up top told a different story, one you could not get from down below.