5 Space

Key Vocabulary

positive space
negative space
picture plane
composition
vanishing point
perspective
linear perspective
abstract
nonrepresentational

SPACE—SOMETIMES CROWDED, SOMETIMES OPEN—is all around you. It may be full of trees or water, clouds or clear air. It can be contained by walls or open to the horizon. When you swim in a pool, stand on a bridge, or ride through a tunnel, you are located or moving in space. The words *above, below, around, behind, into,* and *through* all indicate position or action in space.

In art, space refers to the three-dimensionality of sculpture and architecture. It might also refer to the sense of depth in a two-dimensional artwork. In this chapter, you'll explore these aspects of space, as well as the unusual sense of space in some modern and abstract art.

5–1 An artist consciously selects the angle from which we view a scene. This Renaissance artist chose to give us a "worm's-eye view."
Andrea Mantegna (1431–1506). *St. James Led to Martyrdom,* c. 1455. Fresco, Ovetari Chapel, Church of the Eremitani, Padua, Italy (destroyed in 1944). Photo Art Resource.

5–2 The only way to appreciate this artwork fully is to walk through the space that is an integral part of the piece.
Isamu Noguchi (1904–88). *California Scenario,* 1980–82, Costa Mesa, California. Courtesy of the South Coast Plaza Alliance, Costa Mesa, California. Photo by Stan Klimek.

5–3 Though you cannot walk through the space in Barbara Hepworth's sculpture, as you would with Noguchi's work (fig.5–2), consider how your eye "walks" through *Pelagos*.

Dame Barbara Hepworth (1903–75). *Pelagos,* 1946. Wood and mixed media, 14 ½" x 15 ¼" x 13" (36.8 x 38.7 x 33 cm). Tate Gallery, London/Art Resource, NY. ©Alan Bowness, Hepworth Estate.

5–4 There are two different sensations of space in this work. Can you describe them?

Terry Shoffner (b. 1947). *Train on Zipper,* 1981. Opaque watercolor, 19 ¾" x 23 ⅝" (50 x 60 cm). ©Terry Shoffner/SIS. Photo Prentice-Hall Canada.

Three-dimensional Space

An object that has three-dimensional space has height, width, and depth. In art, architects and sculptors are those most likely to work with such space. Both a cabin beside a lake and a sculpture of a horse are three-dimensional structures: they have spaces that you can walk *inside of* or *around.*

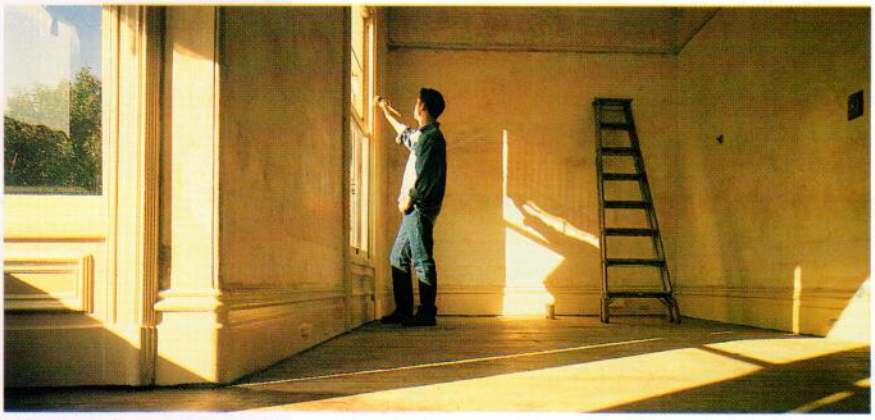
Positive and Negative Space

In today's world, you are probably more aware of space that is filled with something than of space that seems empty. City spaces are crowded with buildings and people. Roads and highways are choked with automobiles. Your living spaces are filled with furniture. And your wall spaces are likely decorated with posters and memorabilia.

When a sculptor or architect creates a three-dimensional design, he or she must be concerned with both positive and negative spaces. The ***positive space*** is the object or structure itself, such as the statue of Andrew Jackson (fig.5–6). The ***negative space*** is the area surrounding the object or structure, such as the blue sky and clouds around this statue. In a building, the negative space is also the area inside the structure.

5–5 The overcrowding of cities is often broken by empty, or negative, space in the form of plazas and spacious building entryways.
Viljo Revell (1910–64). *Ontario Civic Center* (New City Hall), 1961–65. Toronto, Canada.

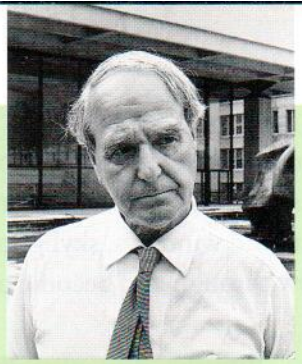
5–6 What does the placement of this sculpture have to do with the idea of negative and positive space? Where are large monuments such as this generally placed?
Clark Mills (1815–83). *Andrew Jackson,* 1855. Bronze. Lafayette Park, Washington, DC.



5–7 How would the relationship between negative and positive space change if this room were filled with furniture?
Man painting an empty room. Photo by Jim Erickson. ©Stock Market, 1996.

About the Artist

Henry Moore



Born in 1898 and raised in Castleford, England, Henry Moore was the son of a coal miner. His surroundings as a child were those of a grim industrial area; yet, his curiosity led him to explore artistic possibilities. At the age of ten, he learned about Michelangelo and decided to become a sculptor. As a teenager, Moore practiced drawing and most likely would have become a schoolteacher except that World War I caused him to join the army instead. He was fortunate: he not only survived combat (most of the men in his regiment were killed or seriously wounded) but also received a military grant to attend the Leeds School of Art.

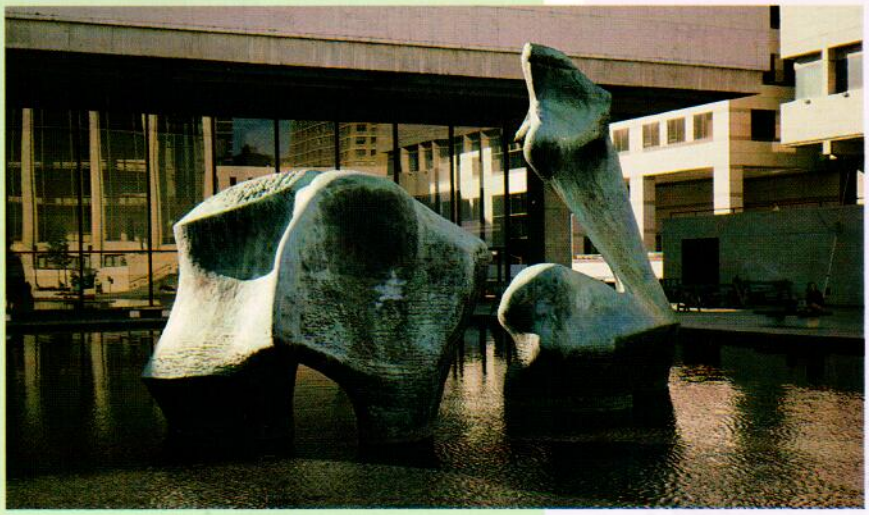
Moore's talent became evident at Leeds: after two years, he won a scholarship to the Royal College of Art. Living in London gave him access to the British Museum, which housed sculptures from around the world. These diverse artworks inspired Moore's sculptures throughout the rest of his life. Moore also enjoyed the Museum of Natural History, where he became intrigued by the forms of natural objects such as pebbles and bones.

Sculpture was not a popular art form when Moore began practicing it seriously. In fact, there were so few sculpture students at the Royal College that he had a large studio all to himself. This situation provided Moore with a sense of freedom that he might not otherwise have felt.

Drawing remained a vital part of Moore's creative work, even as he turned his attention to sculpting. For many years, his materials of choice were stone and wood, but by 1935, he began sketching ideas for metal sculpture. Moore originally approached sculpting primarily as a carver would, chipping away pieces to "reveal" the sculpture inside. Later, though, he turned to modeling—an additive process—for its relative speed. He chose to model with plaster, however, so that he could subtract areas by cutting away the material. Eventually, he worked in bronze, even building a foundry so that he could better understand the process of casting. Many of his bronze works include "carving marks"—final touches made to the plaster just before casting—as part of the sculpture.

During World War II, Moore spent an entire year creating a powerful series of drawings of people who took refuge from air raids in the London Underground. Moore's observation of these people—the feeling of enclosed space, and the relation of bodies to the space and to one another—had an enormous impact on him. The bomb shelter drawings, which typically showed rows of sleeping people, brought him recognition as an artist, and also gave direction to his future sculpting: many of his sculptures are of reclining figures.

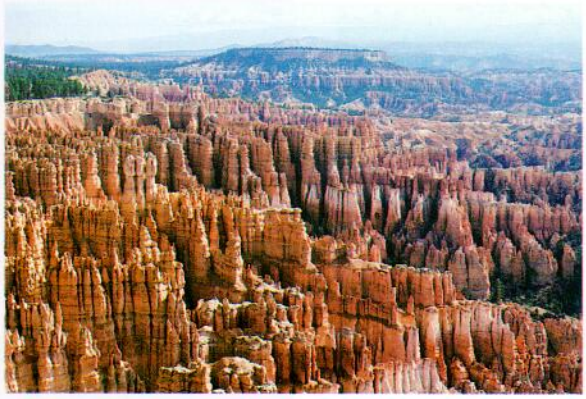
Henry Moore became well-known for his innovative use of negative space. In *Lincoln Center Reclining Figure* (fig.5–8), the three-dimensional form of a figure is cut by negative space. The outside space flows around and through the form. In certain sections, the negative space even takes the place of the figure, which is characteristic of much of Moore's work.



5–8 Compare the negative space in this sculpture with that in fig.5–6. How do they differ? In which one is the negative space a vital part of the artwork?
Henry Moore (1898–1986). *Lincoln Center Reclining Figure*, 1963–64. Bronze, 28' long (8.5 m). Photo by H. Ronan.

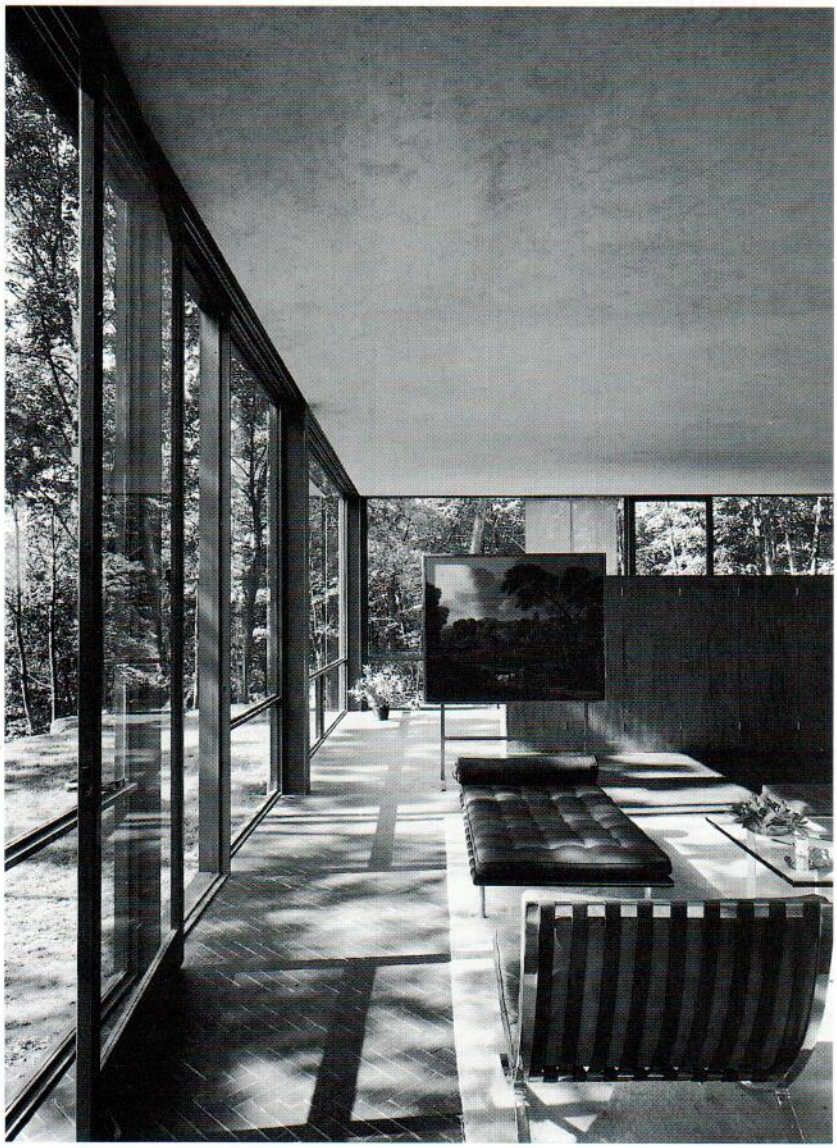
Flowing Space

The division between outside and inside space is not always clear. We are all aware of the different feelings created by a room that has many large windows and one that has no windows at all. Architects add windows, skylights, and other devices to buildings to help make the exterior space flow through and become part of the interior.



5–9 When walking in this canyon, a visitor is very aware of how space flows through the rock formations.

Bryce Canyon. Photo by H. Ronan.

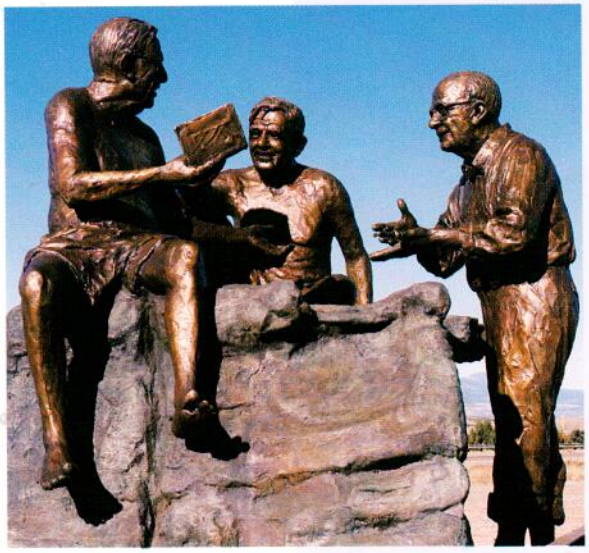


5–10 Imagine standing inside this house. How would your relationship with outdoor space differ from that which you experience in your classroom?

Philip Johnson (b. 1906). *Glass House,* 1949. New Canaan, Connecticut. Photo by Ezra Stroller, ©Esto.

Sculptures and other three-dimensional forms constructed with wire or glass or pierced with holes are other examples of flowing space. Such works tend to break the boundaries between positive and negative space. Our eyes move into, around, and through the form. Holes connect one side with another. Instead of simply surrounding a structure, air or sky might play a part in occupying or creating interior spaces.

5–11 Judy Pfaff incorporated the space of the gallery into her installation.
Judy Pfaff (b. 1946). *Kabuki*, 1981. Courtesy of the Holly Solomon Gallery, New York, NY.

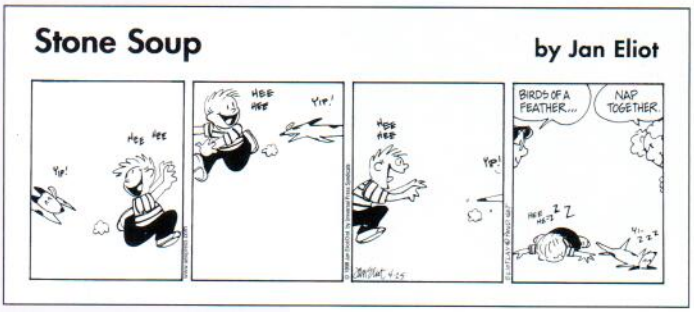


5–12 Compare and contrast the use of space here with that in fig.5–11. Notice how this artist contained the interior space of her sculpture.
Glenna Goodacre (b. 1939). *Philosopher's Rock,* Bronze, 8' high (2.43 m). Located at Barton Springs, Zilker Park, Austin, Texas. Photo by Daniel R. Anthony. Courtesy of Glenna Goodacre Ltd., Santa Fe.

Two-dimensional Space

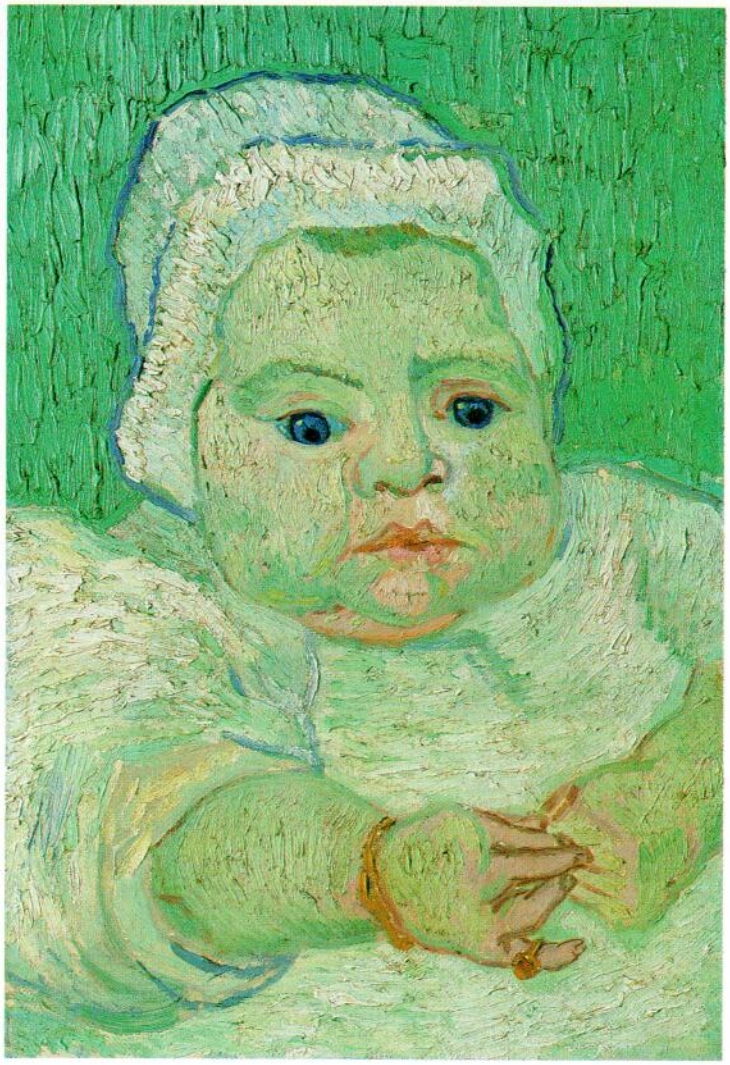
The *surface* of a floor, a tabletop, a sheet of cardboard, or a piece of paper can be described in terms of two dimensions: height and width. The surface has no depth.

In art, examples of two-dimensional space are a quilt design of geometric shapes and a pencil sketch of a tree. In the quilt, a red square may be sewn above a yellow one. In the drawing, the tree may be in front of a house. However, both works are physically flat.



5–13 Cartoonists often prefer not to create any sense of depth beyond the surface of the picture plane.

Stone Soup ©1998 Jan Elliot. Reprinted with permission of Universal Press Syndicate. All rights reserved.



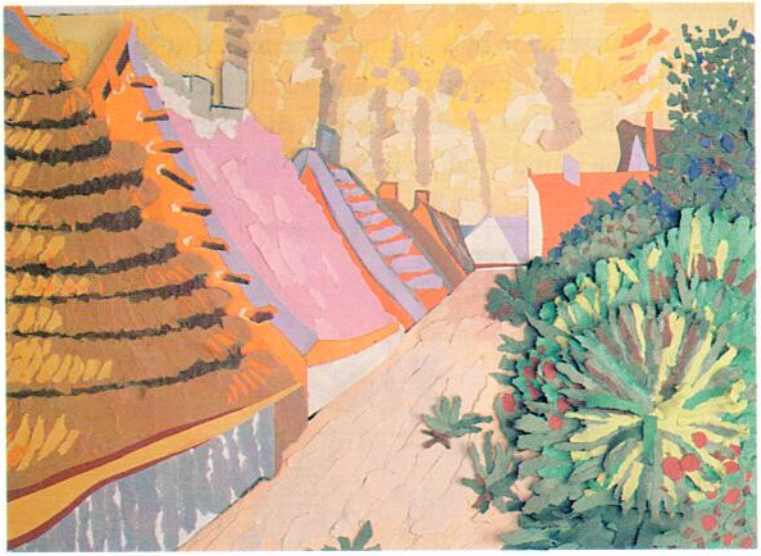
5–14 In many of his works, the Dutch painter Vincent van Gogh created surface depth on the canvas. He used thick applications of oil paint, called *impasto.*

Vincent van Gogh (1853–90). *Roulin's Baby,* 1888. Canvas, 13 ¾" x 9 ⅜" (35 x 23.9 cm). Chester Dale Collection, ©1988 Board of Trustees, National Gallery of Art, Washington, DC.

The Picture Plane

The flat surface on which an artist works—whether it be paper, canvas, or a wall—is called the ***picture plane***. Most artists do not attempt to create much physical depth on the picture plane. Some may apply oil paint thickly to a canvas to create surface depth. Collage artists might build up a flat surface with fabric, sand, or bits of wood. Other artists sometimes cut or tear the canvas or paper as part of their working method. But most drawings and paintings are basically two-dimensional.

An artist might choose to create an illusion of depth by manipulating line, color, value, and shape. The image created by painting or drawing can have a sense of depth which causes the viewer to momentarily forget that the surface is flat. Notice how in *Mystic Seaport in Fog* (fig.5–16) your eye is drawn "into" the scene and "beyond" the picture plane.



5–15 This student gives physical depth to the surface of her image by using cut paper.
Alicia Smith (age 16). *Monet in Paper*, 1998. Paper relief, 13" x 18" (33 x 46 cm). Nashoba Regional High School, Bolton, Massachusetts.

5–16 In this photograph, the fog and soft light have transformed the sky, water, and buildings into a single flat surface.
Alfred Eisenstaedt (1898–1995). *Mystic Seaport in Fog*, 1969. Photo. Alfred Eisenstaedt, *Life* magazine.

Try it

Choose a full-page photograph, such as a cityscape or landscape, from a magazine. Cut it into equal-size squares or rectangles. Rearrange the pieces until you are pleased with the design. Glue your new arrangement onto another sheet of paper. Explain what happened to the space.

Composition

Like the relationship between positive and negative spaces in a sculpture or building, there is a relationship between shapes in two-dimensional art. The organization of elements and their placement on the picture plane is called ***composition***.

When you place a black square on a piece of white paper, you create a new space. The surface is still two-dimensional, but it is now divided in two. The black square has become the positive space, and the white background area is the negative space. If you add a few more black shapes, the composition will change again. You will see several black positive spaces and an encompassing white negative space.

The shapes in a two-dimensional work also have a relationship to the edges or shape of the paper or canvas. A square shape placed in the lower right corner of a piece of white paper creates a space quite different from that made by a square shape placed at the center. Similarly, the feeling of space can be altered by changing the shape of the picture plane, whether it is paper or canvas. Although most artists create drawings and paintings within a rectangular shape, they will sometimes use a round, oval, or irregular shape.

5–17 How does the addition of black shapes change the negative space from the original composition? Does the black square also seem to change?

5–18 The fan shape is a traditional format in Chinese painting. Compare the space on the right side of the painting with that on the left. How does it differ?

Attributed to Wei Zhujing (16th century, China). *The Elegant Gathering in the Western Garden,* 16th century. Fan painting, ink and colors on gold-flecked paper. 6 ½" x 20" (16.9 x 51.6 cm). Avery Brundage Collection, Asian Art Museum of San Francisco.

Point of View

A building appears different from the street than from the roof next door because the angle or point of view determines how the structure appears in space. A car looks different on a grease rack because we are not used to looking up at the car's underside. A baseball field looks different when you are standing on the pitcher's mound than when you are looking down on the field from the stands. A mountain looks huge when you are at its base, but the valley surrounding the mountain looks smaller when you are on top of the mountain.

Look around carefully, and see what happens to objects or people when you change your point of view. When you look down from a high window, for example, people walking on the street look quite different than they would if you were on the street with them. Spatial relationships change as your angle, or point of view, changes. Artists or photographers take advantage of point of view to produce dramatic spatial effects.

5–19 How would you describe the space in this scene? What is the observer's point of view?

Weegee (Arthur Fellig) (1899–1968). *Coney Island Crowd,* 1940. Gelatin silver print. Gruber Collection, Museum Ludwig, Cologne. 1977/839 Photo by Rheinisches Bildarchiv, Cologne. ©International Center of Photography, New York. Bequest of Wilma Wilcox.

Try it

When you look straight down at a round plate, it is circular. But when you look at it from the side, it is a flattened oval. Choose a familiar object, and draw it from above or below, or from any other unusual angle.

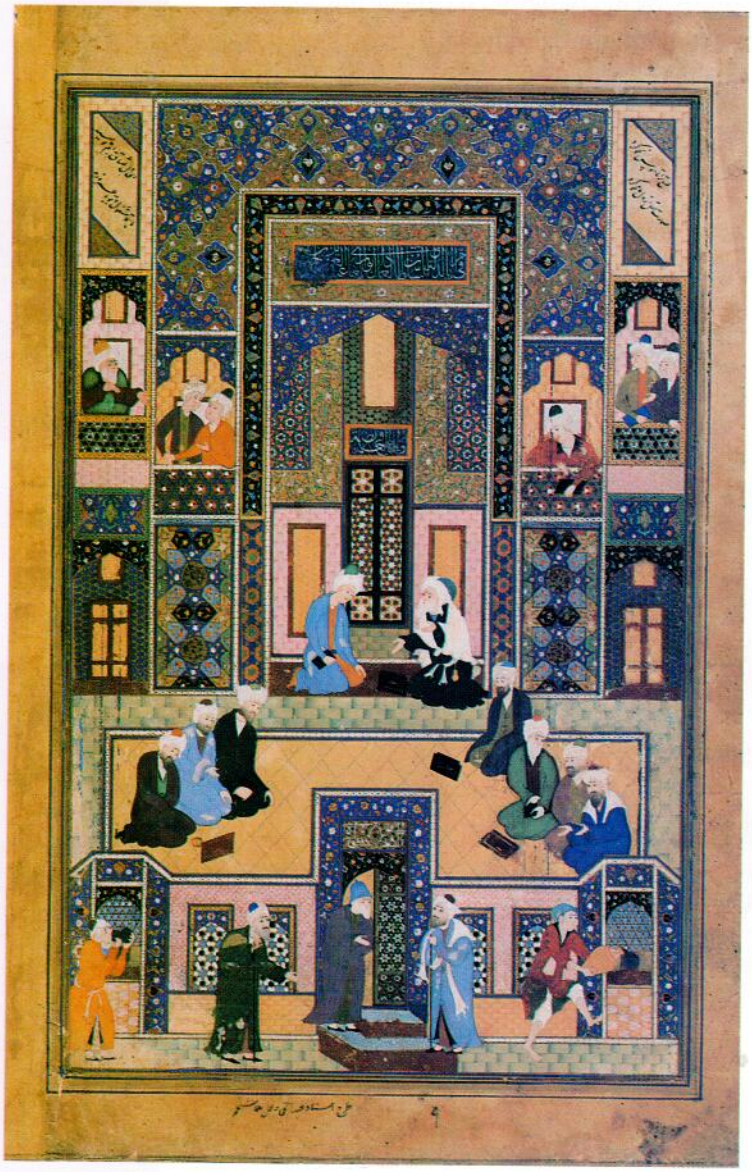
Discuss it

To get this photograph of a crowded beach (fig.5–19), Weegee used a high point of view. The surprising scene is very different from the one he would have captured had he been standing among the crowd. As you read through this chapter, watch for images with dramatic or unusual points of view. Why do you think the artists of these images chose not to use a straightforward point of view? How would their works be different if they had?

The Illusion of Depth

Although artists may paint or draw on a flat surface, they often create the illusion or appearance of depth. To achieve this effect, they may choose from a variety of both simple and complex devices. Historically, artists from different cultures have relied more heavily on some methods than on others. Artists today often employ a combination of methods to create the illusion of depth.

You already know that shading and shadows help make a shape appear to have roundness or three-dimensionality. The techniques described in the following pages can help you create a greater sense of depth on a flat picture plane.

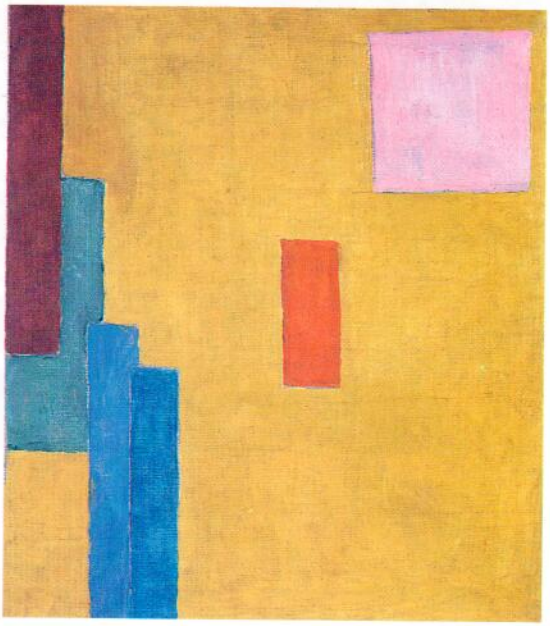


5–20 In this miniature, the artist worked with space in two different ways. The many patterns prevent an illusion of depth, so how is the viewer made to understand the arrangement of figures in space?

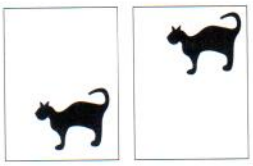
'Abd Allah Musawwir (active mid-16th century, Bukhara, Persia). *The Meeting of the Theologians,* 1540–50 (Uzbek Shaybanid Dynasty). Watercolor on paper, 11 ⅜" x 7 ½" (28.9 x 19 cm). Nelson Trust. Nelson Atkins Museum of Art, Kansas City, Missouri.

5–21 How is a sense of depth communicated in this purely abstract painting?

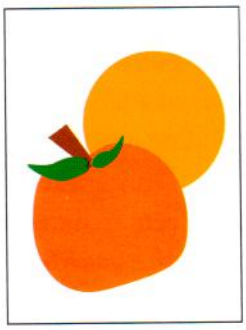
Vanessa Bell (1879–1961). *Abstract Painting,* c. 1914. Gouache on canvas, 17 ⅜" x 15 ¼" (44.1 x 38.7 cm). Tate Gallery, London. Photo Art Resource. ©Estate of Vanessa Bell.



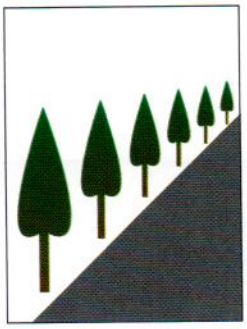
Nonlinear Methods



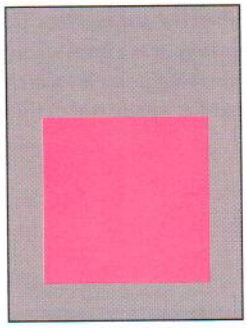
Position Place an object or shape higher on the page to make it seem farther away. In this diagram, the cat on the left seems closer.



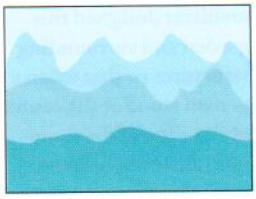
Overlapping Place one shape on top of another to produce a feeling of depth. In this diagram, the apple (the top shape) appears to be in front of the orange.



Size Variation Combine similar objects of different sizes. The smaller objects will seem farther away than the larger ones. For example, trees in nature seem to become smaller as they recede into the distance.



Color Use color to create a sense of depth. A shape of bold color on a more neutral-colored background appears to move forward.



Value Use different values. Lighter values tend to recede behind darker ones. In a landscape, you might use increasingly lighter shades of blue to create the illusion of a hazy atmosphere in the distance.

Try it

Choose one object with a distinct shape—such as an apple, leaf, or butterfly—and draw the shape on colored paper seven or eight times, but in different sizes. Cut out the shapes, and place them on a neutral sheet of paper. Arrange some of the shapes so that they don't touch. Place some higher and some lower. Overlap others. Notice the various three-dimensional effects that occur. When you find an arrangement that you like, glue down the shapes.

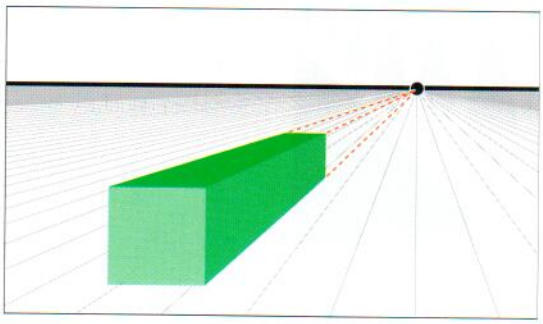
Linear Perspective

The method of depicting three-dimensional space on a two-dimensional surface is called ***perspective***. When artists use lines to create depth, they are using ***linear perspective***. Linear perspective is a much-used art technique, and is one of the best ways to create the illusion of depth in a drawing or painting.

One-point Outside your school or on your way home, close one eye and look up at the sides of a tall building or along the length of a street. You will notice that the sides of the building or the street appear to converge, or come together, in the distance.

During the Renaissance, Italian artists discovered that when straight lines are parallel, they seem to move away from the viewer and meet at a point in the distance. This point is called the ***vanishing point***, because it is where the objects seem to disappear. When artists use linear perspective in combination with a single vanishing point, they are using ***one-point perspective.***

5–22 Diagram of one-point perspective. The line drawn parallel to the top edge of the composition is called the *horizon line*. It is an imaginary line that represents your eye level when you look straight ahead. The vanishing point is located on the horizon line. Notice that the square end of the object faces the viewer directly.



5–23 This museum is a replica of an ancient Roman villa. The original architect designed this garden and surrounding structures so that when a person stood at the center of the edge of the fountain, all of the architectural elements visually converged to a focal point, which is the central opening of the façade.
Main peristyle garden and façade, *Getty Villa*, Malibu, California. Photo by Julius Shulman.

5–24 As evident in the student painting, one-point perspective is an excellent device for "pulling" the viewer into a scene.

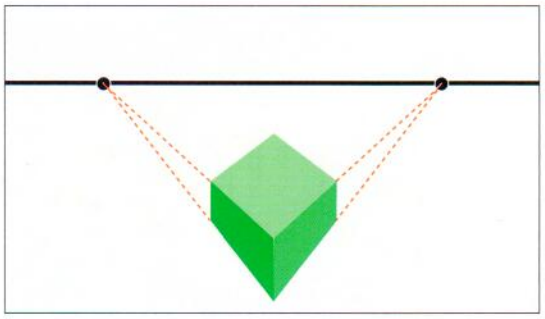
Marion Bolognesi (age 15). *Bonaire*, 1997. Oil, 12" x 16" (30.5 x 40.6 cm). Quabbin Regional High School, Barre, Massachusetts.

5–25 Compare your eye movement when viewing this image and fig.5–20.

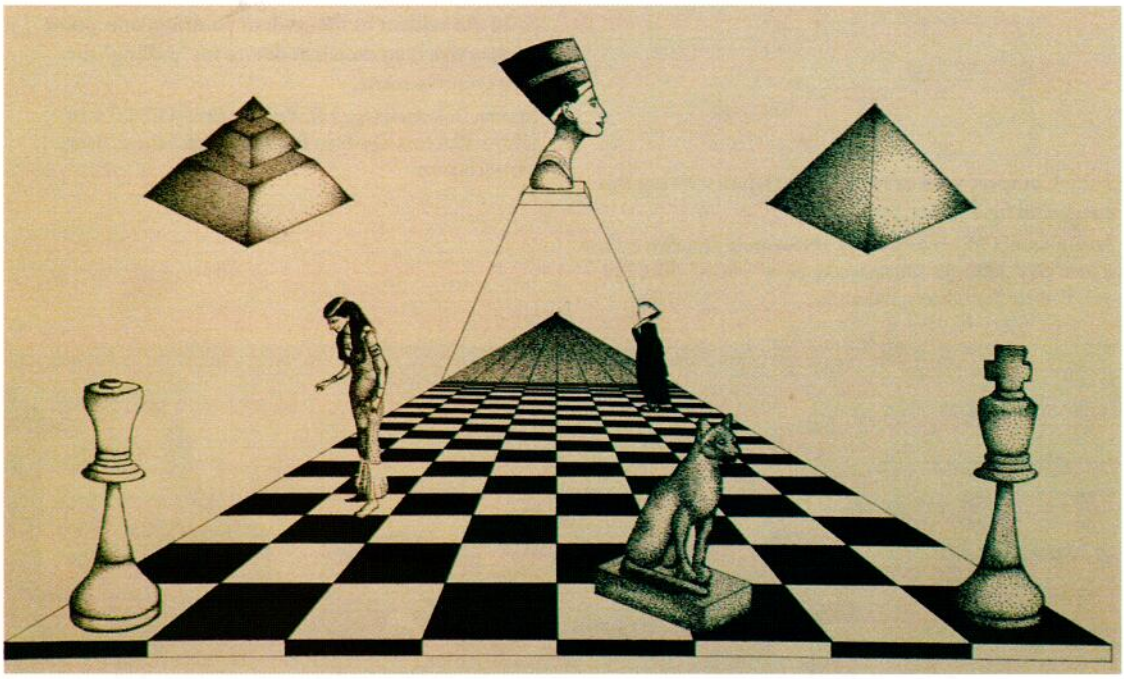
Anonymous (15th century, Italy). *Architectural Perspective: View of Ideal City,* 1490–95. Oil on wood, 32 ¾" x 86 ⅝" (83 x 220 cm). Walters Art Gallery, Baltimore.

Two-point One-point perspective uses lines that lead to a single vanishing point. To create the appearance of three-dimensionality for objects placed at an angle to the viewer's line of sight, you must use two-point perspective. ***Two-point perspective*** uses parallel lines that seem to lead to two different vanishing points set far apart.

The different ways of depicting space and depth can be quite complicated—especially when artists combine several in one artwork. When you paint or draw, notice how edges and lines slant as they get farther away—and don't forget the simple methods of overlapping and size variation! Careful observation and use of these cues will help you create the illusion of three-dimensional space.



5–26 Books, boxes, and buildings that are at an angle to your line of sight can be shown by using two-point perspective. Notice that none of the three surfaces shown faces the viewer directly. The two vanishing points are on the horizon line.



5–27 How has this student used one-point and two-point perspective to make this surrealist composition more effective?

Jeffrey T. Metter (age 17). *Egypt*. Pen and ink, 18" x 12" (45.7 x 30.5 cm). Palisades High School, Kintnersville, Pennsylvania.

Try it

Choose a magazine photograph or graphic design that depicts objects in deep space. Draw in the vanishing point where you think it belongs. Then use a ruler and a marker to draw converging lines from any objects back to the vanishing point.

5–28 Allow your eye to follow the two imaginary perspective lines that begin at the corner of the building at the right. The line that moves to the right is quickly stopped by the edge of the painting. The line that extends to the left goes deeper into space, but is stopped by the building in the distance whose façade is parallel to the picture plane. Why do you think Canaletto used these devices? Where did he want you to focus your attention?

Canaletto (1697–1786, Italy). *The Molo, Venice,* c. 1735. Oil on canvas, 24 ½" x 39 ⅞" (62.3 x 101.3 cm). Kimbell Art Museum, Fort Worth, Texas. Photo by Michael Bodycomb, 1987.

5–29 Douglass Crockwell used two-point perspective to depict a number of the objects in this painting. Can you name at least three?

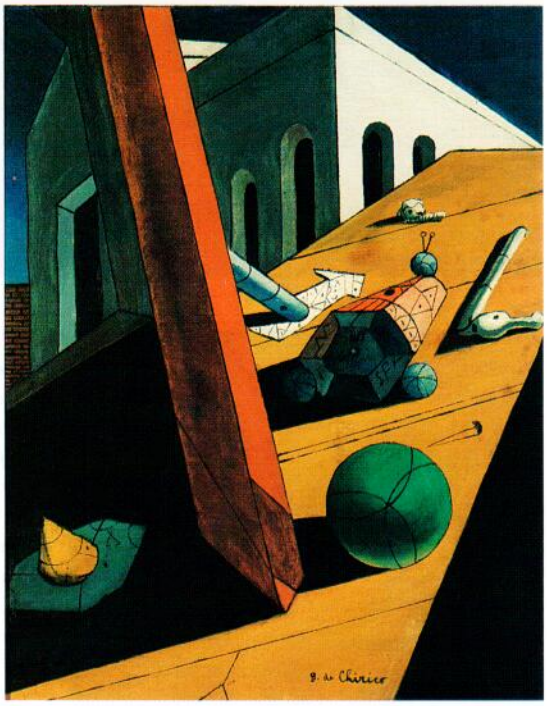
Douglass Crockwell (1904–68). *Paperworkers,* 1934. Oil on canvas, 36 ¼" x 48 ⅛" (92 x 122 cm). National Museum of American Art, Smithsonian Institution, Washington, DC/Art Resource, New York.

Subjective Space

A device like linear perspective helps artists depict scenes and objects as they appear in nature or in photographs. The subjects seem accurate and realistic to us. But artists are often interested in altering the world that we see with our eyes. Using their imagination and emotions, they manipulate and transform space and reality, creating subjective spaces that bear little resemblance to the real world.

5–30 For many centuries, artists have been fascinated with the depiction of reflected space. Here, the photographer momentarily confuses us because he captured both real and reflected space, and we must work hard to solve the puzzle of their relationship to each other.

André Kertész (1894–1985). *Untitled*, 1929. Gelatin silver print. ©1986 San Francisco Museum of Modern Art.

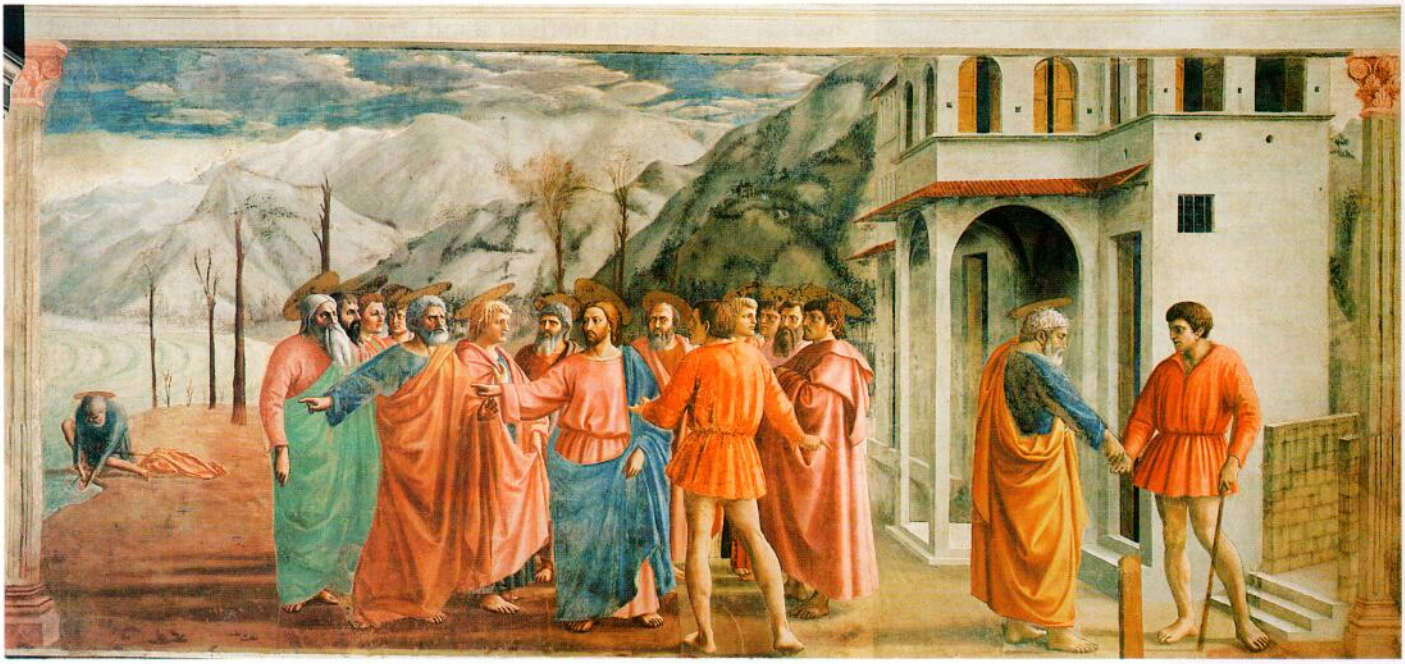


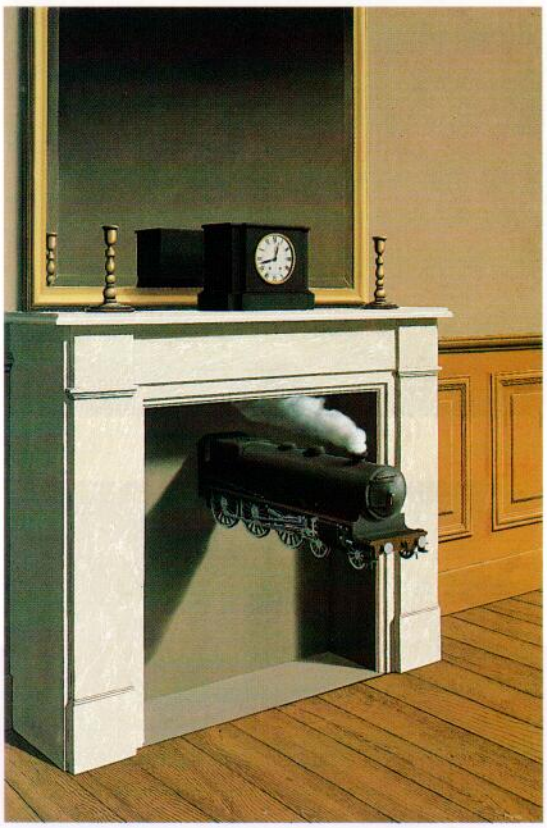
5–31 Compare this painting with the logical way that Canaletto constructed space in *The Molo, Venice* (fig.5–28). Use this comparison to help you see how Giorgio de Chirico created a space that makes the viewer very uneasy.

Giorgio de Chirico (1888–1978). *The Evil Genius of a King*, 1914–15. Oil on canvas, 24" x 19 ¾" (61 x 50.2 cm). The Museum of Modern Art, New York. Purchase. Photo ©1998 The Museum of Modern Art, New York. ©Foundation Giorgio de Chirico/Licensed by VAGA, New York, NY.

Space That Deceives

Look carefully at reflections in mirrors, water, and glass and metal surfaces. How are spaces distorted and deceptive? Artists today and in the past have used unusual spaces to confuse, surprise, and educate their viewers. Their works may cause you to question whether the space depicted is flat or three-dimensional, or whether the composition could actually occur in space and time as we know it. Sometimes, such optical illusions are purely entertaining. At other times, they can be the basis of serious art.





5–32 In this fresco, the early Renaissance artist Masaccio showed a series of three events happening at the same time. Other artists throughout history have made similar adjustments, seeming to go beyond the limits of the traditional concepts of space and time.

Masaccio (1401–c. 1428). *The Tribute Money,* c. 1427. Fresco. Brancacci Chapel, Santa Maria del Carmine, Florence. Photo Art Resource.

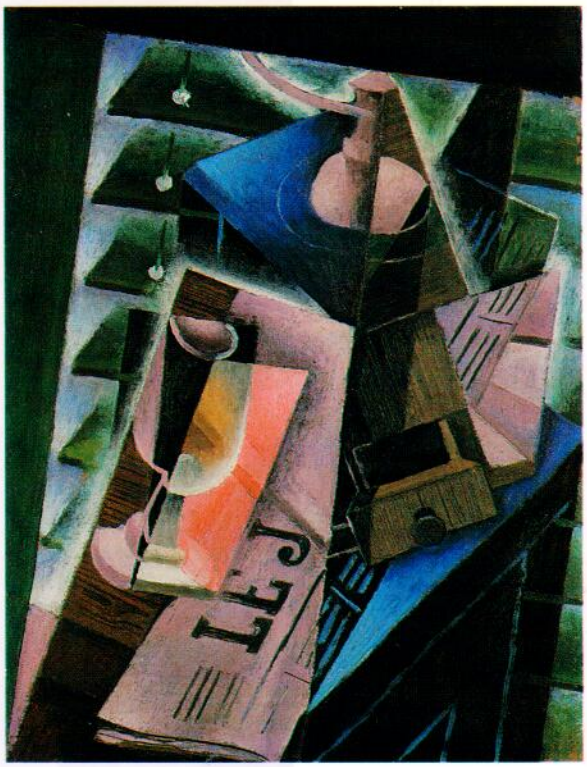
5–33 Surrealist artists attempt to create a deep space in which their personal dreamlike worlds exist. At first glance, their works may appear to imitate nature. But often—after careful examination—you'll notice that they bear little relationship to reality. In this fantastic creation, as in others by René Magritte, objects are combined in impossible ways.

René Magritte (1898–1967). *Time Transfixed,* 1938. Oil on canvas, 57 ⅞" x 38 ⅞" (147 x 98.7 cm). Joseph Winterbotham Collection, 1970.426. Photograph ©1998 The Art Institute of Chicago. All rights reserved. ©1999 C. Herscovici, Brussels/ARS, New York, NY.

Cubism

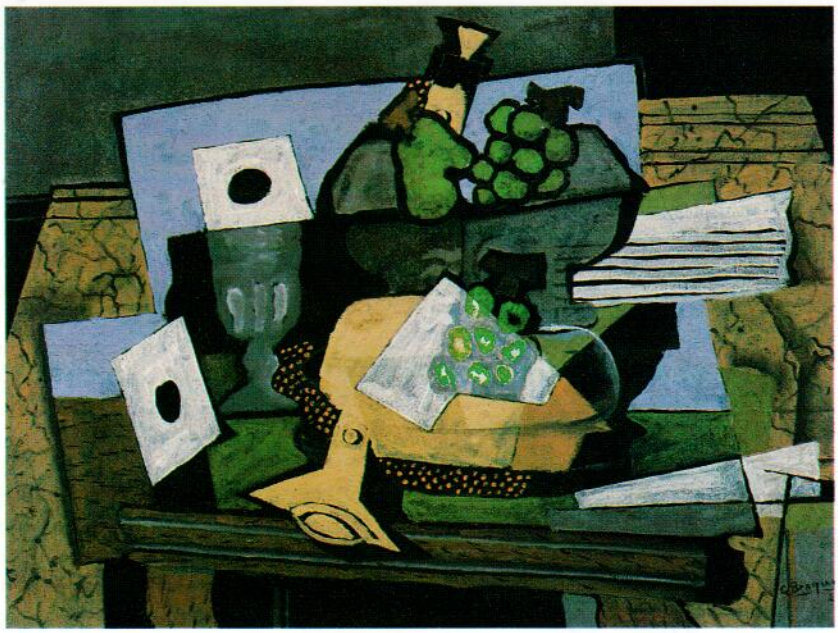
One group of subjective artists, called Cubists, depicted space in a new way. In their works, objects and figures might be recognizable, but their shapes and the spaces they inhabit do not resemble those in the real world.

The Cubists flattened space, fractured forms, experimented with color, and added lines where none really exist. Because the objects they depicted usually resembled squares, or cubes, their method of working came to be called *Cubism*. In many Cubist works, objects seem both to stand straight up *and* to slant toward the viewer. Such treatment of space is contrary to nature and the camera lens, but it allows an artist to share his or her imagination and creative energy.



5–34 Do you think Juan Gris was working from a traditional still-life arrangement when he created this piece? If so, describe or sketch what it might have looked like.

Juan Gris (1887–1927). *Coffee Grinder and Glass,* 1915. Oil on paperboard, 15 ⅛" x 11 ½" (38.5 x 29.2 cm). Gift of Earle Grant in memory of Gerald T. Parker, Nelson Atkins Museum of Art, Kansas City, Missouri.



5–35 Review the description of Cubism in the text. In what ways does this painting fit that description?

Georges Braque (1882–1963). *Still Life with Grapes and Clarinet,* 1927. Oil on canvas, 24 ¼" x 28 ¾" (54 x 73 cm). The Phillips Collection, Washington, DC. ©1999 ARS, New York/ADAGP, Paris.

Try it

Choose a simple object, such as a chair, a desk, or a lamp. Create three drawings of the object from different angles: perhaps a view from the side, from the top, and from below. Then combine parts of the three drawings into one to create your own Cubist composition.

About the Artwork

Pablo Picasso

Guitar

Sometimes, a single work of art will cause long-held ideas to collapse. The twentieth century saw a steady stream of important artworks that changed the way we think about time, space, and form.

Working collaboratively in the spring of 1912, both the Spanish artist Pablo Picasso and the Frenchman Georges Braque experimented with breaking the boundaries of traditional ideas about space and form. Their creative minds challenged the age-old concept that art must consist of paint on canvas.

Picasso and Braque introduced real items to their canvases, items such as newspaper clippings, known as *papiers collés* ("glued-on papers"). This new art form was the beginning of collage as we know it. At the same time, both artists carried their Cubist ideas into three dimensions. Braque made paper reliefs, whereas Picasso used wood, sheet metal, and wire. Picasso's more durable materials survived, but Braque's studies did not. Picasso began to transform his Cubist still lifes from the canvas plane into the sculptural realm.

At first, Picasso used cardboard and string to construct *Guitar* (the restored maquette, or model, is also in the MOMA collection). He made his final version of more-permanent sheet metal and wire, and this became the first sculpture that had been created neither by carving nor modeling. This new art form was called *constructed sculpture*.

New ideas, however, are not always seen as successes in the beginning. In 1913, an art magazine called *Les Soirées de Paris* published four photographs of Picasso's Cubist constructions, similar in style to *Guitar*. Thirty-nine of the journal's forty subscribers so strongly disapproved of Picasso's sculptures that they canceled their subscription. The subscribers did not realize that constructed sculpture would become a widely accepted art form.

5–36 In this early Cubist sculpture, a projecting cylinder indicates the sound hole. Pablo Picasso, Georges Braque, and Juan Gris were the leading supporters of the Cubist style.

Pablo Picasso (1881–1973). *Guitar,* 1912. Sheet metal and wire, 30 ½" x 13 ¾" x 7 ⅝" (77.5 x 35 x 19.3 cm). The Museum of Modern Art, New York. Gift of the artist. Photo ©1998 The Museum of Modern Art, New York. ©Estate of Pablo Picasso/ARS, NY.

Try it

To achieve a flattening effect of the picture plane, draw some simple still-life objects. With a pencil, draw the outside edges of each object, allowing the lines to overlap the other objects and continue off the page. Notice the unity and flatness of the objects and background that result. Compare your drawing with Gris's *Coffee Grinder and Glass* (fig.5–34).

Abstract and Nonrepresentational Art

Beginning with Cubism in the early years of the twentieth century, artists began to alter their depictions of space. Objects and figures, if depicted at all, were difficult to recognize in their paintings, drawings, sculptures, and other creations—works that are generally called ***abstract art***. Works in which no objects or figures appear are referred to as ***nonrepresentational art***.

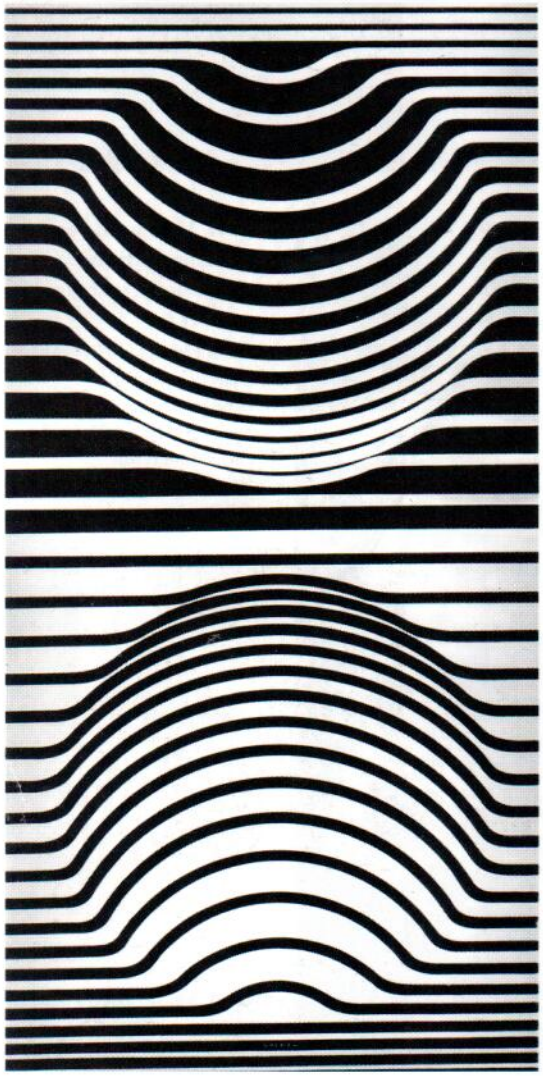
5–37 A composition of contrasting lights and darks will appear to have depth. Warmer and brighter colors also seem to come forward. In this painting, the blue shapes recede; the red and yellow shapes move forward.

Arthur Dove (1880–1946). *Thunder Shower,* 1939–40. Oil and wax emulsion on canvas, 20 ¼" x 32" (51.2 81.3 cm). Amon Carter Museum, Fort Worth, Texas.

Try it

Choose three sheets of paper whose colors are closely related. Cut out similar shapes, perhaps squares or rectangles, from each color. Paste the shapes on another surface, completely covering it. Notice that the related colors make the picture seem relatively flat. Now choose a contrasting color. Cut out a few similar shapes. Place those on top of your design. What happened to the sense of space?

Although an abstract work may not depict anything recognizable, it still may have depth. Principles about position, overlapping, size, color, value, and linear perspective also apply to abstraction. Just as in more realistic art, these principles may be combined to create space that appears flat, shallow, or deep.

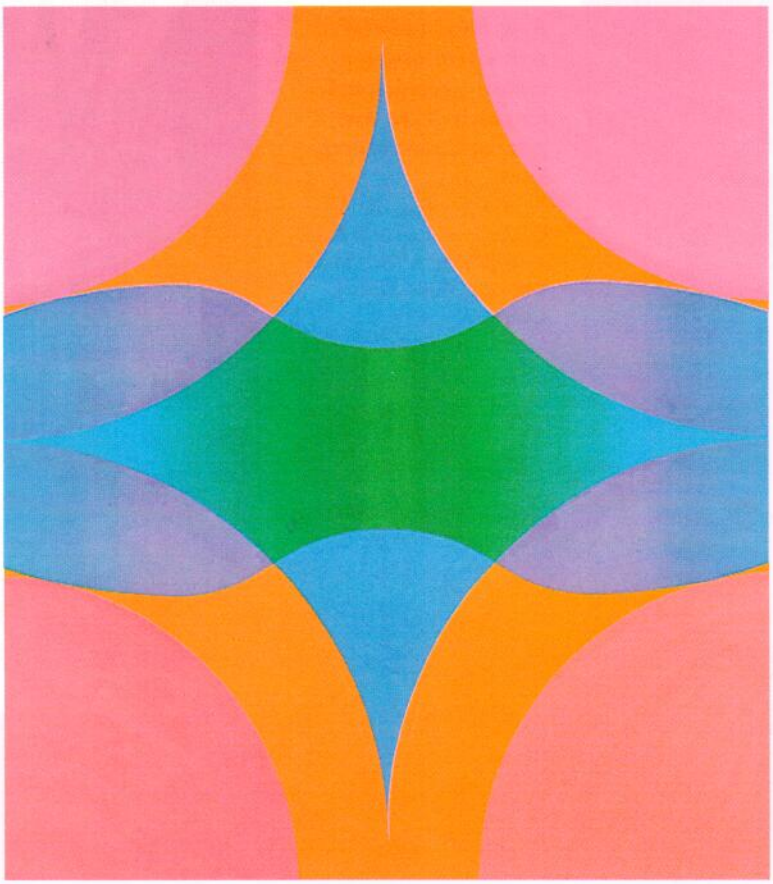


5–38 Notice how the top section of this work seems caved in, whereas the lower section seems to bulge forward.

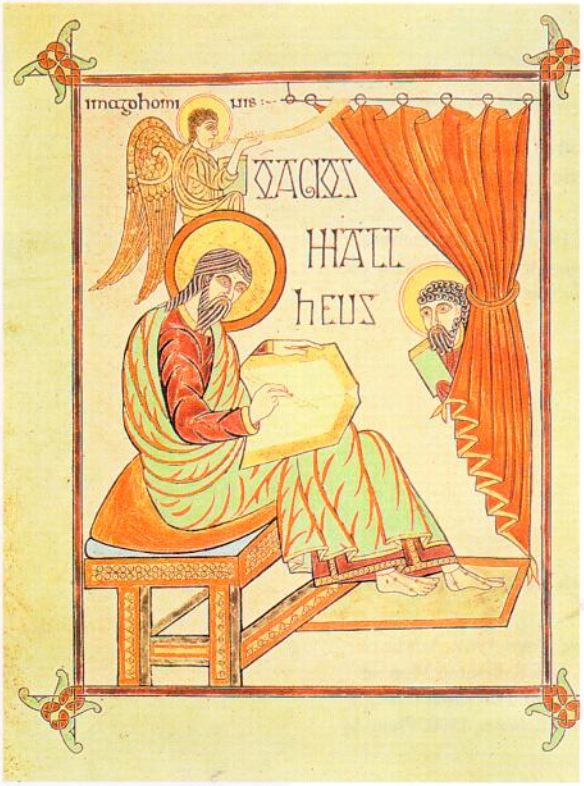
Victor Vasarely (1908–97). *Sir-Ris,* 1952–62. Oil on canvas, 6' 6" x 3' 3" (198 x 99 cm) Reproduced with permission by the Janus Pannonius Múzeum, Pécs, Hungary. ©1999 ARS, New York, NY/ADAGP, Paris.

5–39 How is an illusion of depth created in this abstract painting?

John Ferren (1905–70). *Orange, Blue, Green,* 1969. Acrylic on canvas, 45 ⅛" x 50" (115 x 127 cm). Jack S. Blanton Museum of Art, The University of Texas at Austin. Purchased through the generosity of Mari and James A. Michener, 1970. Photo by Rick Hall.

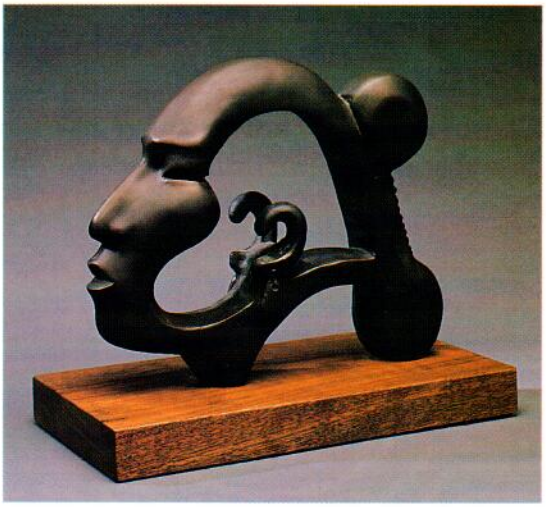


Another Look at Space



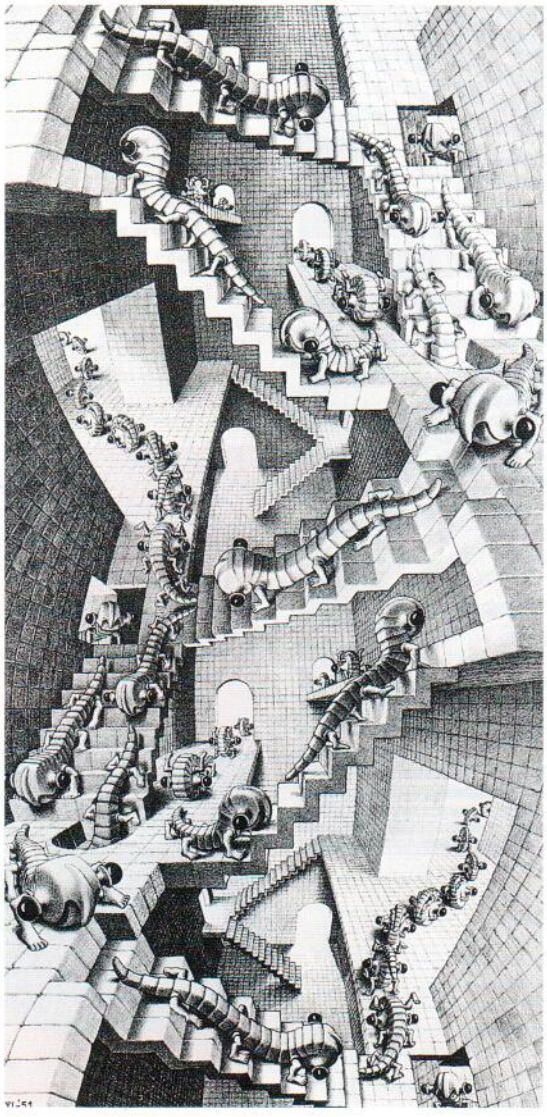
5–40 Early medieval artists were masters of surface decoration and purposely did little to give the illusion of deep space.

St. Matthew, from the Lindisfarne Gospels, before AD 698. 13 ½" x 9 ¾" (34.3 x 24.8 cm). British Library, London.



5–41 How would you describe the three-dimensional space in this artwork?

Allan Houser (1914–94). *Desert Dweller,* 1990. Bronze, edition of 18, 7 ¼"x 8 ½" x 3" (18.4 x 21.6 x 7.6 cm). Mongerson Wunderlich, Chicago. ©Allan Houser, Inc.



5–42 Many artists use space to create an element of surprise in their work. What makes our eyes do a double take here?

M. C. Escher (1898–1972). *House of Stairs,* 1951. Lithograph, 18 ⅝ x 9 ⅜" (47 x 23.9 cm). ©1998 Cordon Art B. V., Baarn, Holland. All rights reserved.

Career Portfolio

Interview with an Architect

Space is a major consideration for architects, both in and around the buildings they design. Planning must include streets, sidewalks, and parks as part of the greater picture. Born in Seoul, South Korea, **Susie Kim** has degrees in architecture and urban design. She has worked on several large-scale projects in London, Boston, Beirut, Vietnam, and China.

Please describe what you do.

Susie We do architecture and urban design—designing cities.

When you design a city, is the city already there?

Susie Sometimes and sometimes not. Planning a new piece of a city within the old city is like an orchestration. Maybe you already have a violin section and a cello section, but you don't have the flute section or the woodwind section.

What makes a good city?

Susie It depends on the culture and some of the drawbacks of the culture. Generally, a good city with good pieces benefits other pieces, benefits the whole. Let's pull an example: Manhattan, Central Park. Can you imagine anyone putting in Central Park? Most developers would say that's stupid. But what that did was to bring value, which was a benefit to the city and its people. My partner and I don't believe in single-use cities. People need different experiences in a city.

When did it click for you that architecture was a possibility?

Susie I wanted to go into a profession which was, at that time, not necessarily right for girls. I wanted to be either an architect or a pilot. Don't ask me why a pilot, other than I figured there weren't a lot of women in this profession. In a song in *The Fantasticks* [a long-running play in New York City], a girl says "Oh, please God, don't make me normal." That was one of my images.

Are there different kinds of architects?

Susie There are a lot of different things you can do with an architecture degree. One is practice: residential, commercial, institutional, a mixture, urban design. I also have a lot of friends who are teaching, which is incredibly valuable. You can also go into aspects of setting up public policy; policy-making jobs are more administrative and political.

What advice would you give to young people who are interested in architecture?

Susie A project in this profession is a very long process. To put up a building or to make a city takes a tremendous amount of patience. Tremendous. If you can count on your fingers ten important projects, that's probably five more than Michelangelo did. Think about it. How many buildings can you put up that are of a certain quality? It's a long process. It's not a profession for people who want instant gratification.

What is your role in a project?

Susie I'm a medium for creating something much larger than myself. That is the most rewarding thing about a project or a building, when it really has a life of its own that goes beyond yourself. But it's always amazing to me how much of a stranger it can seem. After five, ten years, you go back and look at it, and the building has its own life. That's when you know it's successful. It's no longer yours. It's somebody else's; it's part of the city, part of the fabric.

Acting as a huge skylight, a garden space ensures that no desk in the 250,000-square-foot building is more than twenty feet away from daylight.
Susie Kim, *Atrium*. Photograph ©Steve Rosenthal, Auburndale, Massachusetts.

5–43 Analyze the use of flowing space in this student work.

Lonnie Nimke (age 13). *Do-do Bird*, 1994. Metal and found object welding, 36" x 24" (91.4 x 61 cm). Manson Northwest Webster Community School, Barnum, Iowa.

5–44 In reality, the view from this bridge must extend quite far. How does Caillebotte's use of color prevent the illusion of deep space?

Gustave Caillebotte (1848–94). *On the Europe Bridge,* c. 1876–77. Oil on canvas, 41 ⅝" x 51 ½" (105.3 x 129.9 cm). Kimbell Art Museum, Fort Worth, Texas. Photo by Michael Bodycomb.

5–45 How does the Mayan sculptor of this ceramic piece contain the space and focus our attention?

Mayan. *Model of a ball game.* Pottery, 6 ½" x 14 ½" x 10 ⅝" (16.5 x 36.8 x 27 cm). Worcester Art Museum, Worcester, Massachusetts. Gift of Mr. and Mrs. Aldus Chapin Higgins. Photo ©Worcester Art Museum.

Review Questions

1. Define the art element *space*.
2. List five means that artists use to create an illusion of depth on a flat surface.
3. In a linear-perspective drawing, what happens at the vanishing point? What does the horizon line represent?
4. Select a Cubist image from this chapter and describe how the artist abstracted space and forms.
5. Select an abstract or nonrepresentational image from this chapter, and explain how the artist indicated depth.
6. What is innovative in Henry Moore's sculptures?
7. Which two artists worked together in developing the art of collage?