Chapter Seven: Light and Color

CHAPTER OVERVIEW

- Atmospheric Perspective
- Chiaroscuro
- Hatching and Cross-Hatching
- Key
- Basic Color Vocabulary
- Color Schemes
- Color in Representational Art
- Symbolic Uses of Color

Works in Progress
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Chuck Close’s *Stanley*
Sonia Delaunay’s *Electric Prism*

The Critical Process
Thinking about Light and Color: Tony Cragg’s *Newton’s Tones/New Stones*

CHAPTER OBJECTIVES

This Chapter Will:
- identify and illustrate the artistic methods of using light to create space
- illustrate how artists achieve form through shading techniques
- discuss the significance of value (or key) in a work of art
- identify and define the vocabulary of color
- distinguish between traditional and modern color in the art world
- discuss and illustrate the variety of color schemes used by artists
- identify and define types of color
- discuss expression and color

KEY TERMS

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perceptual color
optical color mixing
arbitrary color
pointillism
divisionism
symbolic color
**LECTURE AND DISCUSSION TOPICS**

1. **Atmospheric Perspective**
   
   Since natural light helps to define spatial relationships, it stands to reason that artists are interested in manipulating it. For Leonardo da Vinci, light was at least as important to the rendering of space as perspective. The effect of atmosphere on the appearance of elements in a landscape was of prime concern to Leonardo, and through painting, he formulated the “rules” of atmospheric or aerial perspective. Atmospheric perspective takes into account the manner in which the quality of the atmosphere affects objects that are nearer or farther away. Objects farther away appear less distinct, cooler or bluer in color, with reduced contrast. Point out that in Leonardo’s *Madonna on the Rocks* (fig. 161) foreground objects are painted with clarity and definition, enabling us to separate them spatially from the hazier distant rock formations.

   The works of J.M.W. Turner, (as seen in figures 162, 175 and 176) represent movement, mechanized power, and the forces of nature, making them wonderful examples of atmospheric perspective. Turner used paint in a manner that draws attention to light and atmosphere, overwhelming any references to linear perspective. Turner felt that linear perspective could describe physical reality, but atmospheric perspective could reveal a greater spirituality. Ask students how they respond to Turner’s work.

2. **Chiaroscuro**

   A primary tool of the artists of the Renaissance was to render the effects of light using a technique known as chiaroscuro. In Italian, the word *chiaro* means light, and *oscur" means dark. Modeling forms using this light/dark combination produces the effect three-dimensional objects on two-dimensional surfaces.

   *Judith and Her Maidservant with the Head of Holofernes* by Artemesia Gentileschi (fig. 167) shows the artist’s mastery of the technique of chiaroscuro. Her dramatic use of lights and darks is called tenebrism, from the Italian *tenebroso*, meaning “murky.” This is illustrated by dramatic areas of light that appear against the deep shadows of the painting. The impact is heightened through the modeled source of light, which seems almost as if it is from a spotlight, emphasizing the theatrical aspect characteristic of its Baroque style.

3. **Value and Key**

   The lighter an area or color is in value, the higher its key. Subsequently, the darker the color is in value, the lower its key. A change in key can heighten an artwork’s expressive impact. Pat Steir’s *Pink Chrysanthemum* (fig. 172) and *Night Chrysanthemum* (fig. 173) are clear representations of how value change can affect the appearance and interpretation of an image.
4. **Color Theories and Color Schemes**

Color theorists such as Goethe and Munsell, mentioned in the text, have constructed elaborate systems of color relationships for use by artists and other industries, such as the textile industry. Goethe measured colors and their effectiveness rather symbolically, equating moral and religious significance to specific colors. In 1905, Albert Munsell created a color wheel based on five primary hues with the premise of identifying more intensive complementary color relationships. However, the conventional color wheel (fig. 181) based upon Newton’s identification of the color spectrum in 1666 remains a constant in measuring color schemes and identifying color relationships.

Discuss how colors can be employed in different ways to achieve a wide variety of effects. Analogous color schemes are those composed of hues that neighbor each other on the color wheel. Such color schemes are also organized on the principle of color temperature. The colors yellow through orange and red are usually considered warm colors, and greens through blue to violet are considered cooler in temperature. Sanford Gifford’s *October in the Catskills* (fig. 186) employs yellows and oranges to invoke the feeling of warmth. Just as warm or cool palettes can elicit the physiological sensation of warm or cool, combining both palettes can create contrasting physical sensations. Illustrate this idea using Leon Golub’s *Mercenaries III* (fig. 188) to show how the clashing of complementary colors green and red intensifies the explosiveness of the scene.

5. **What was Michelangelo’s Palette?**

Remind students that early films were made in black-and-white, yet in the last decades, there has been an interest of adding color to early films. Ask students if they feel this is an improvement or simply a bad idea? Does color enhance early black-and-white films, or deplete some element of their original impact? Now have them consider the restoration of the ceiling of the Sistine Chapel, which changed our notion of Michelangelo’s palette? Ask students if they think the “recolorization” of the restoration process heightens or lessens the impact? Why? Have them visit the link found on the companion website to learn more about the restoration process and view more before and after pictures.

6. **Local Color versus Perceptual Color**

Illustrate *plein air* painting, also known as painting in the open air, with Monet's *Grainstack (Sunset)* (fig. 196). Emphasize to students that the shadow of the grainstack is filled with cool blue and green colors, the top of the stack has deep blue and brown colors framed by a hazed red and orange outline. Monet has even provided color clues throughout the work to inform us of the time of day. His use of color is considered perceptual, because he painted the colors *he perceived*, as they were observed at a certain time of day. Compare Monet’s work to that of Stuart Davis’s *Summer Landscape* (fig. 192), who used what we refer to as local color, or the use of a color that describes an object by the color we know it to be, such as the green leaves on the tree, or the red of the red bricks. Which is more realistic?
7. Optical Mixing
In *Sunday Afternoon on the Island of the Grande Jatte* (fig. 189), Georges Seurat has attempted to harmonize complementary colors. Seurat painted thousands of tiny dots on the canvas in a process that became known as Pointillism. Point out that his paints were not mixed on the palette, instead, he relied on the viewer to optically mix the colors. Seurat felt that by placing the complements orange and blue next to each other, the saturation of both would be enhanced.

Part of the Permanent Collection at the Art Institute of Chicago, this description of *Sunday Afternoon on the Island of the Grande Jatte* is provided by museum educators: "Bedlam," "scandal," and "hilarity" were among the epithets used to describe what is now considered Georges Seurat's greatest work, and one of the most remarkable paintings of the 19th century. Seurat labored extensively over *A Sunday on La Grande Jatte—1884*, reworking the original as well as completing numerous preliminary drawings and oil sketches (the Art Institute has one such sketch and two drawings). With what resembles scientific precision, he tackled the issues of color, light, and form. Inspired by research in optical and color theory, he juxtaposed tiny dots of colors that, through optical blending, form a single and, Seurat believed, more brilliantly luminous hue in the viewer's eye. To make the experience of the painting even more intense, he surrounded it with a frame of painted dots, which in turn he enclosed with a pure white, wooden frame, which is how the painting is exhibited today.

From a contemporary standpoint, this method of composing colors is similar to the commercial printing processes exemplified in billboards, art reproductions in books, or the pixels of a computer screen. The work of contemporary artist Chuck Close is described by the author as *layered* pointillism. As seen in *Stanley* (fig. 192), Close abstracts a realistic image by meticulously painting concentric rings in a grid pattern to form a finished work that looks realistic when viewed from afar...just like Seurat’s optical color mixing.

8. Symbolic Use of Color
Read Vincent van Gogh's statement on page 142 of the text regarding *The Night Café* (fig. 202) while students examine the painting. Ask students if Vincent van Gogh succeeded at expressing "the terrible passions of humanity" through careful color choice and arrangement? When artists choose colors to represent emotions, such as van Gogh, we call this subjective color. Blue, for example, may represent one emotion to one person, and represent another to someone else. Show Wassily Kandinsky’s *Black Lines* (fig. 203), a lively composition with a range of colors, to illustrate a different kind of color symbolism. For Kandinsky, blue was the color of heaven, yellow the color of the earth, and red stimulated the heart. “In the open air,” he stated, “the harmony of red and green is very charming.” This statement is in direct contrast to van Gogh, who saw the combination of red and green as a potential reference to the “powers of darkness.”
CRITICAL THINKING: More Opportunities to Think About Art
Several artworks are detailed in the Critical Thinking and Works in Progress features found in this chapter. In addition, diverse opportunities for studying these works are located on the Companion Website and Companion CD-ROM.

1. Works in Progress: Chuck Close’s Stanley
Chuck Close is identified as an American Photorealist specializing in close-up portraits and self-portraits. Close is one of the very few modern realists or Photorealists who focus on the human face. As Chuck Close states in Realists at Work, “There is a tradition of emphasizing those key areas of the face which control likeness, while the skin, neck, hair and background are not considered of primary importance in the reading of a portrait. I wanted to make those areas almost as interesting and important as the more symbolic areas of the face.” Stress to students the scale of Close's paintings. His portraits are typically enormous, and immensely powerful in person. Even though Close is often associated with Photorealism, his systematic approach to a gridded format links him to the concepts of minimal and process artists. According to Close, "Some people wonder whether what I do is inspired by a computer and whether or not that kind of imaging is a part of what makes this work contemporary. I absolutely hate technology, and I'm computer illiterate, and I never use any labor-saving devices although I'm not convinced that a computer is a labor-saving device." In 1988, in mid-career, Close was paralyzed due to a blood clot in his spinal column. He regained partial use of his arms, and was able to return to painting after developing techniques that allowed him to work from a wheelchair.

2. Works in Progress: Sonia Delaunay, Electric Prism
In 1913, Delaunay began to make what she called “simultaneous dresses” (fig. 200), reflecting her observations of electric streetlight haloes and their color effects. Her dresses were soon lauded for their dynamic use of colors that “moved as the body moved.” Based upon a study of complementary color schemes, Delaunay relied upon the simultaneous contrast of colors to provide the illusion of movement (see fig. 201). Delaunay is quoted as saying: “colors can heighten our sense of ourselves, or our union with the universe.”

3. Works in Progress: Mary Cassatt’s In the Loge
Mary Cassatt’s painting, In the Loge (fig. 169-170) is a study in the contrast between light and dark, as becomes evident when we compare the final work to a tiny sketch, a study perhaps made at the scene itself. In the sketch, Cassatt divides the work diagonally into two broad zones, the top left bathes in light, the lower right dominated by the woman’s black dress. This diagonal design is softened by Cassatt’s decision to fit her figure into the architectural curve of the loge itself, so that the line running along the railing, then up her arm, continues around the line created by her hat and its strap in a giant compositional arch. Thus, the woman’s face falls into the zone of light, highlighted by her single diamond earring, and cradled, as it were, in black. In the final painting, the strict division between light and dark has been modified by the revelation of the woman’s neck and her collar, creating two strong light and dark diagonals. This angularity emphasizes the horizontal quality of her profile and gaze as she stares out at the other
loges through her binoculars. Have students discuss how Cassatt defines male and female gazing in her compositional use of placement and light.

4. **Thinking about Tony Cragg’s *Newton’s Tones/New Stones***
Chapter 7 ends with *The Critical Process*, an analysis of Tony Cragg’s mixed media plastic floor construction *Newton’s Tones/New Stones* (fig. 204). In this analysis, the author has identified how the artist employed the color spectrum as a tool to unify the composition, and a conceptual homage to one of the leaders in scientific discovery of color properties, Sir Issac Newton. Be sure to refer to the detailed analysis of this work, which answers many of the questions posed, found in the back of the textbook.

**WRITING ASSIGNMENTS**
*Direct students to their Student Study Guide when assigning Writing Assignments as the following assignments are written as instruction for the student and are contained in the guide as they are here.*

1. **Color Facts**
Direct students to the Color Theory website (linked from the companion website) to investigate some aspect of color that they might find fascinating. For example, how is color interpreted throughout the world? How and why do colors affect our behavior? What are some of the scientific aspects of color? In an essay, have students relate the information they gather from the website to their own experiences with color.

2. **Interior Design Choices**
Assign students to visit several public buildings and evaluate their interior design. Have them document color choices and flow in space that provides the overall feel of the interior and reflects the purpose of that building. Direct them to the Color Matters website: www.colormatters.com to discover whether these color choices were appropriate for the purpose of the building.

3. **How did Vincent van Gogh Use Color?**
In Chapter 5, the text considered Vincent van Gogh’s *The Sower* (fig. 108) in terms of line, but also mentioned some of the difficulties that van Gogh was having with color in the painting. In an essay, have students compare and contrast van Gogh’s use of complementary color schemes in *The Sower* and in *The Night Café* (fig. 202). What possibilities for complementary color schemes does this comparison reveal?

**HANDS-ON PROJECTS**
*Direct students to their Student Study Guide when assigning Hands-On Projects as the following assignments are written as instruction for the student and are contained in the guide as they are here. For additional project ideas, remember to investigate the Hands-On Projects found on the Companion Website.*
1. Seeing Music, Hearing Color
Have students play several different kinds of music and describe the compositions with lines that are spontaneous but contemplative of the sounds. The lines should interact with one another and may connect to form shapes. Next, have them find various shapes in their doodle and color them in their choice of color. Shapes will be identified as organic or geometric and a description of visual implications of the colors they used. Direct them to works by Wassily Kandinsky who described how he could "see" music and "hear" color at this link: www.artchive.com/artchive/fiptoc/kandinsky_ext.html.

2. Chiaroscuro Self-Portrait
Have students take photographs of someone with varying directions of light source to dramatically change the feeling of the photograph. Direct them to use a flashlight, candlelight, spotlight, or colored lights, then act out a scene from history, or a film, that uses chiaroscuro for emphasis.

3. Mixing and Matching Colors
One of the most difficult jobs of the artist is to mix colors to the hue and intensity they desire from the primary colors. Assign students this challenging activity. Make a collage out of images from magazines and fancy papers. Randomly cut out chunks of the collage. Next, glue the collage to a heavier paper, such as Bristol board and begin mixing colors. Using the removed chunks as your guide, duplicate the imagery by painting with acrylics.

4. Finding a Value Scale
Using old magazines, have students see how many different varieties of blue they can find in print. Have them cut out small rectangles of each color and arrange them in as close an approximation as they can to the gray scale, from lightest to darkest. This exercise not only will increase their awareness of the wide variety of colors in print, but also will give them practical knowledge of the relationship between key and color.

RESOURCES

A World of Art CD-ROM:

Color and Key Activity
Enter the Hands-On Exercises room found in the World of Art Companion CD-ROM and complete both the Color and Key activities. These visual demonstrations will further your understanding of color and light properties, and how both are powerful elements in the design of both two- and three-dimensional artwork.

Color Mixing
You may also wish to experience the Oil Painting: Pigment and Color demonstration found in the Visual Demonstrations room to see hands-on color mixing on a palette and direct mixing on a canvas.
World of Art Companion Website:
Remember to direct students to A World of Art companion website (www.prenhall.com/sayre) to help further their understanding of the materials discussed in this chapter with ideas for completing hands-on projects and exercises. Self-testing materials are also available and offer students the opportunity to evaluate their understanding of the chapter materials in a variety of formats. In addition, links to websites featuring contemporary artists, and museum and gallery exhibitions related to this chapter will enhance discussion and comprehension. Links for this chapter include:

CONTEMPORARY ARTISTS: Dream Screens is a site produced especially for the web by artist Susan Hiller. The work is located at the DIA Foundation in New York, and it consists of pure color screens accompanied by a soundtrack that reveals dream "dialogs." This site may require that you download additional sound plug-ins in order to experience the work properly. Turn off the lights and click on the work, it is well worth it.

GALLERIES AND MUSEUMS: The Sistine Chapel allows you to see Michelangelo's complete ceiling, as well as all the other walls in the Chapel. The main image of the Chapel interior was taken before the restoration, but all of Michelangelo's frescoes are shown individually in their restored condition.

Other Suggested Websites:

Color Matters is a great website that explores colors and how they affect our mind, our behavior, our vision, the planet and life in general. Visit this fun site at www.colormatters.com


Wassily Kandinsky claimed he could “hear” color and “see” music. For more information about this artist, visit www.artchive.com/artchive/ftptoc/kandinsky_ext.html

Chuck Close’s photorealistic portraits are exhibited in numerous online venues at www.artcyclopedia.com/artists/close_chuck.html or www.artchive.com

George Seurat’s A Sunday Afternoon at the Island of the Grand Jatte is exhibited at the Art Institute in Chicago or at their website www.artic.edu/aic/collections/eurptg/28mac_seurat.html.

Michelangelo’s Sistine Chapel Ceiling images and information about the restoration is online at the following sites: http://gallery.euroweb.hu/tours/sistina/ceiling.html and
Mary Cassatt’s paintings, drawings and prints are exhibited online at www.nmwa.org and www.boston.com/mfa/cassatt/

**Suggested Videos:**
*Videos and other resources are available for purchase through any of the distributors listed in the Resources section of this manual.*

- Elements of Design overview (30 Minutes)
- Color overview (16 minutes)
- Color Perceptions (33 minutes)
- The Impressionists: Seurat
- Monet: Legacy of Light, 1990
- Kandinsky
- Mary Cassatt: American Impressionist, 1999
- Michelangelo and The Sistine Chapel, 1996
- Saving the Sistine Chapel, (Nova Special)
- Chuck Close: A Portrait in Progress, 1996