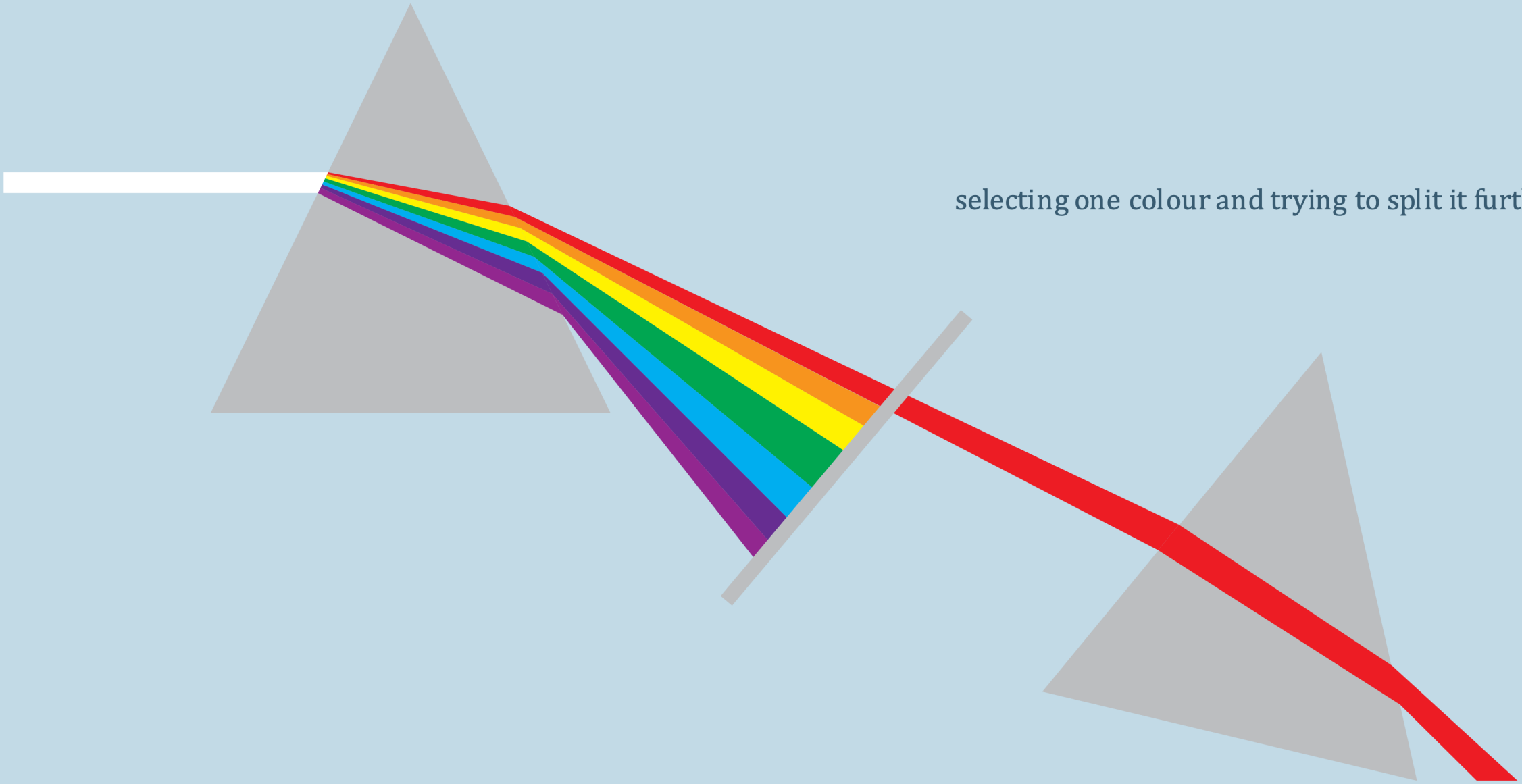
Color Theory (and Practice)

Mary Fran Miklitsch

Isaac Newton Identifies the Spectrum



selecting one colour and trying to split it further

Color Models

CMYK

RGB

MAN OF THE HOUSE
RAF SIMONS MOVES TO DIOR
VOGUE
DEC
HOLIDAY STYLE NOW
BOLD IN BLACK AND WHITE
DAZZLING IN ALL-OUT BRIGHTS
+
FESTIVE ACCESSORIES
THE PERFECT FINISHING TOUCHES
KATIE HOLMES
HER SECOND ACT
NEWLYWED
ANNE HATHAWAY
HER SECRET MARRIAGE AND THE ROLE OF A LIFETIME
PLUS
THE GROUNDBREAKING A-LIST CAST OF LES MIS
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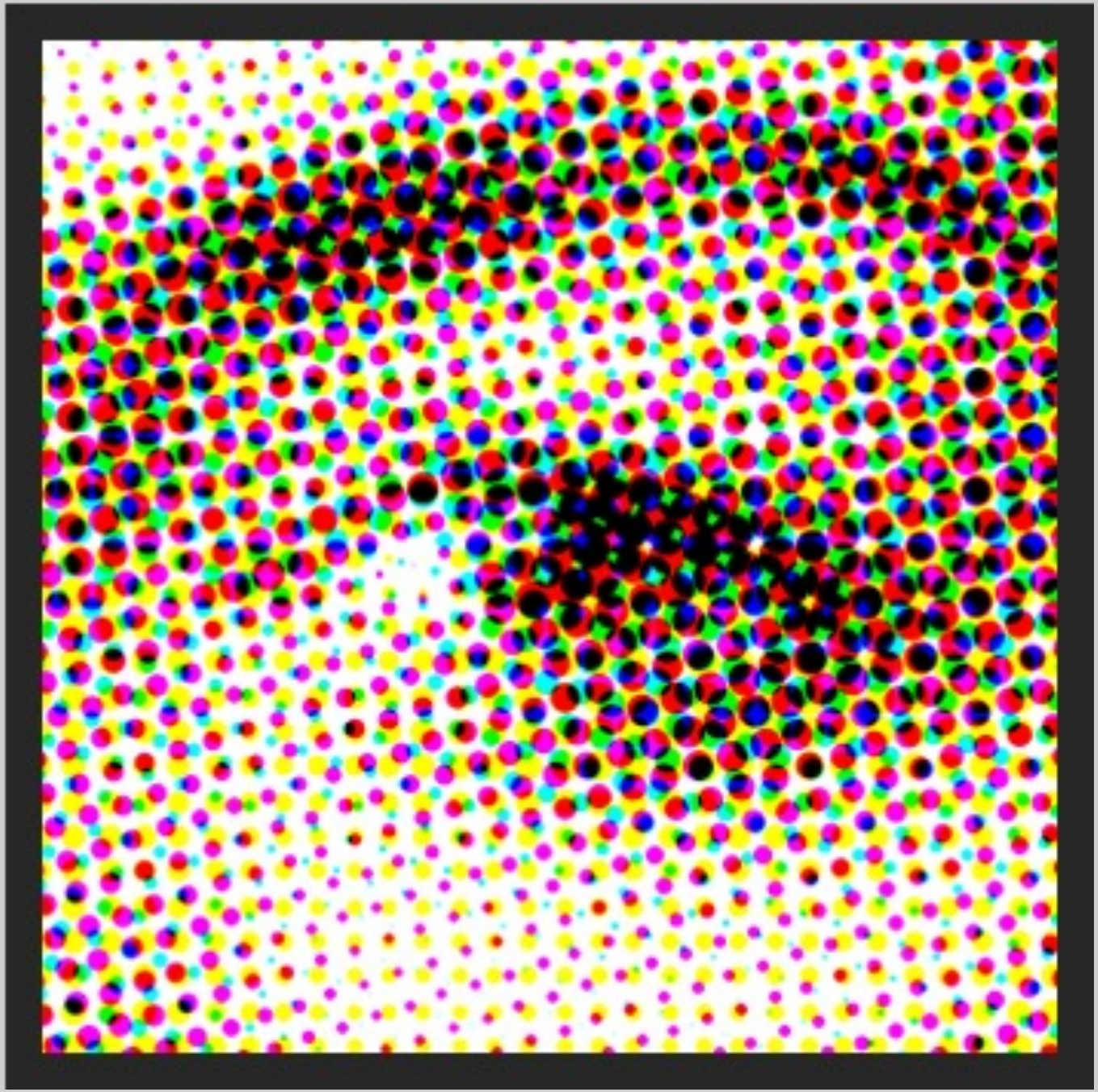
COURAGE UNDER FIRE
A TV WAR REPORTER SHARES HER STORY



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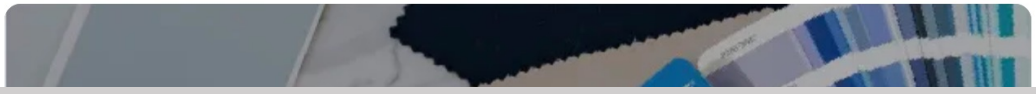
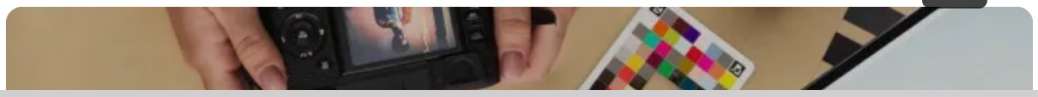
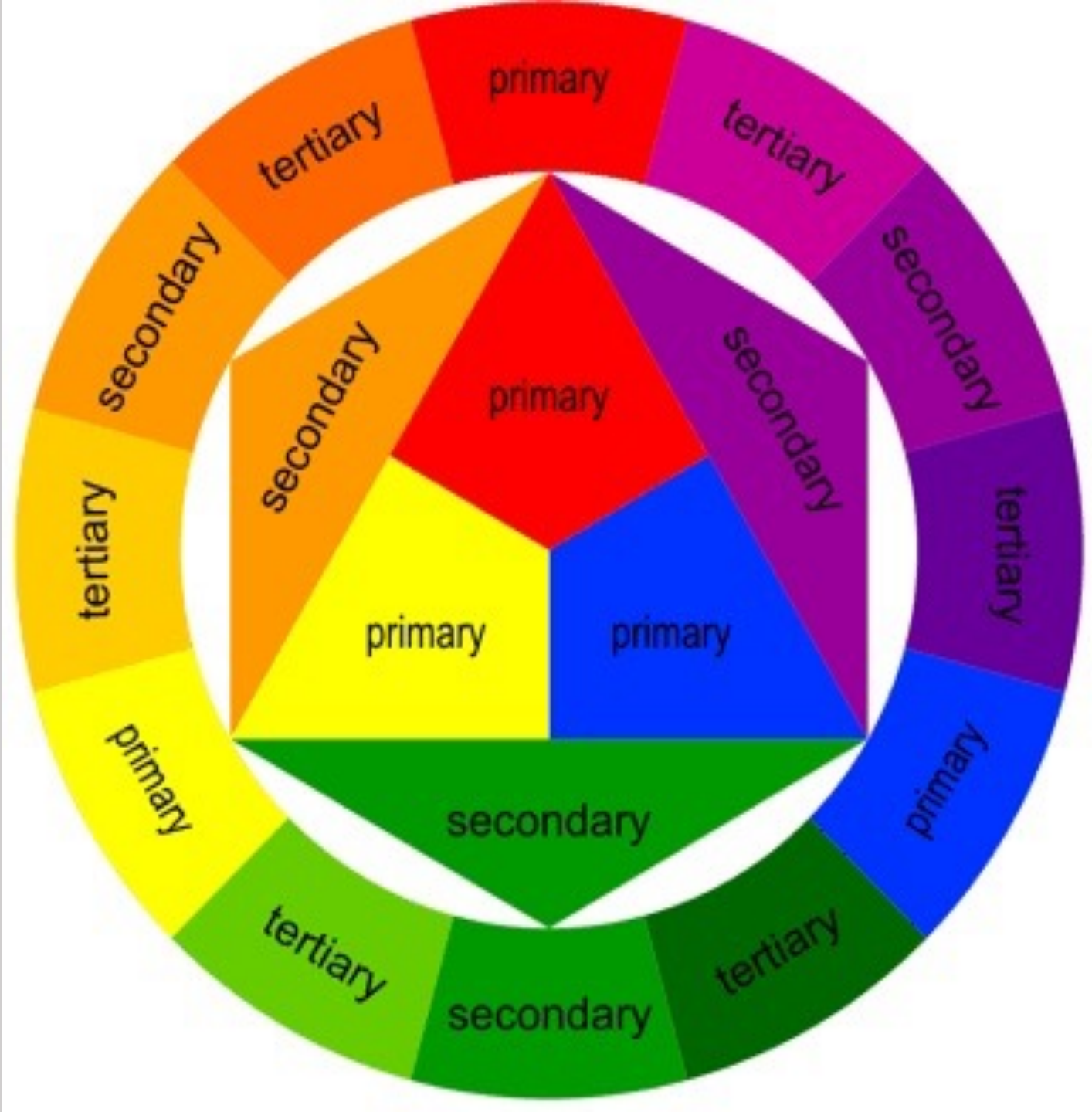
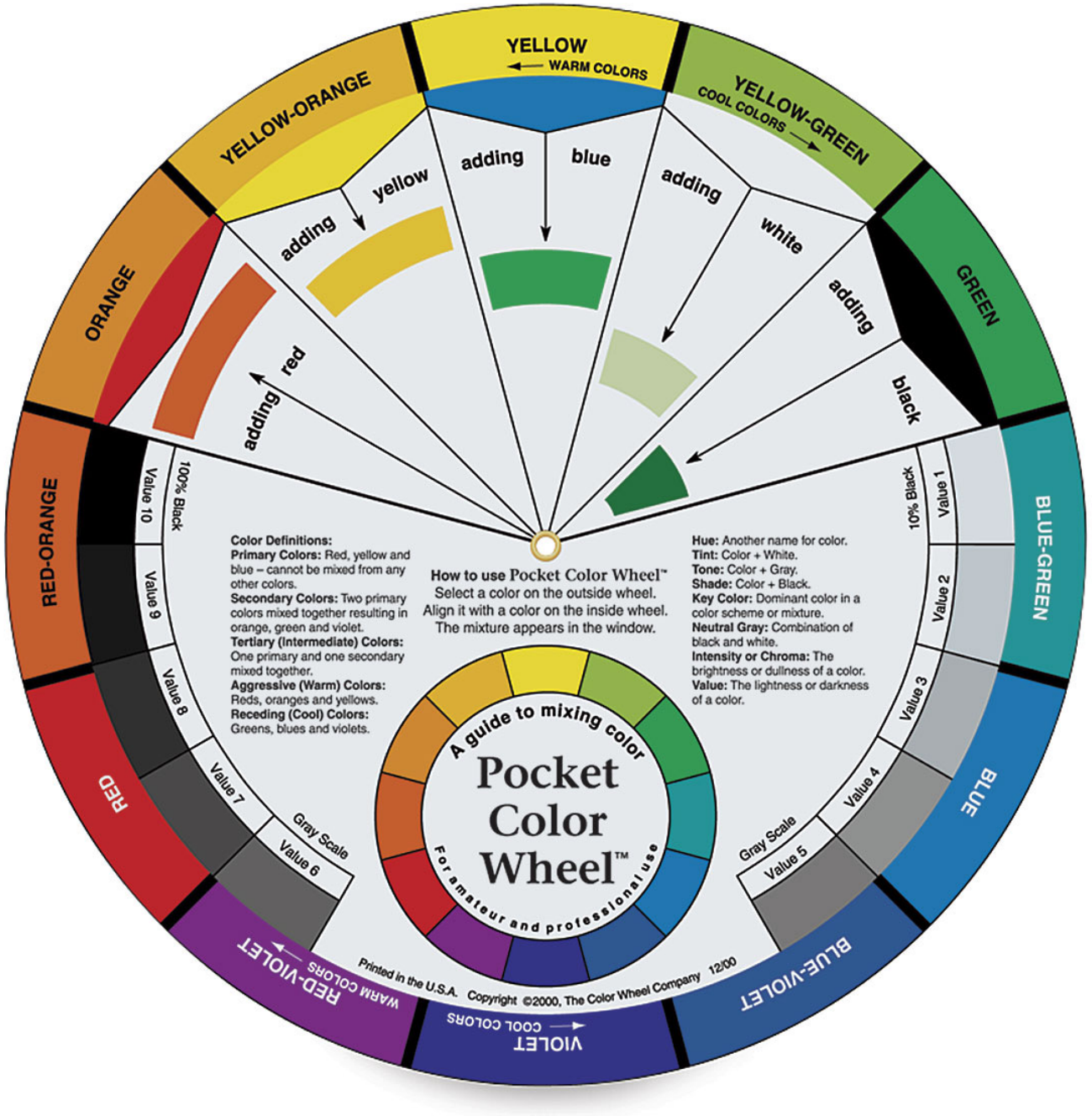




Color Theory:
The Color Wheel


primary
tertiary
secondary
tertiary
secondary
tertiary
primary
tertiary
secondary
primary
secondary
primary
primary
secondary
tertiary
secondary
tertiary
primary


YELLOW
WARM COLORS
YELLOW-ORANGE
YELLOW-GREEN
COOL COLORS
ORANGE
GREEN
adding
yellow
adding
blue
adding
white
adding
black
adding
red
RED-ORANGE
BLUE-GREEN
100% Black
Value 10
Value 9
Value 8
Value 7
Gray Scale
Value 6
10% Black
Value 1
Value 2
Value 3
Value 4
Gray Scale
Value 5
RED
BLUE
RED-VIOLET
VIOLET
BLUE-VIOLET
WARM COLORS
COOL COLORS
Color Definitions:
Primary Colors: Red, yellow and blue – cannot be mixed from any other colors.
Secondary Colors: Two primary colors mixed together resulting in orange, green and violet.
Tertiary (Intermediate) Colors: One primary and one secondary mixed together.
Aggressive (Warm) Colors: Reds, oranges and yellows.
Receding (Cool) Colors: Greens, blues and violets.
How to use Pocket Color Wheel™
Select a color on the outside wheel.
Align it with a color on the inside wheel.
The mixture appears in the window.
Hue: Another name for color.
Tint: Color + White.
Tone: Color + Gray.
Shade: Color + Black.
Key Color: Dominant color in a color scheme or mixture.
Neutral Gray: Combination of black and white.
Intensity or Chroma: The brightness or dullness of a color.
Value: The lightness or darkness of a color.
A guide to mixing color
Pocket Color Wheel™
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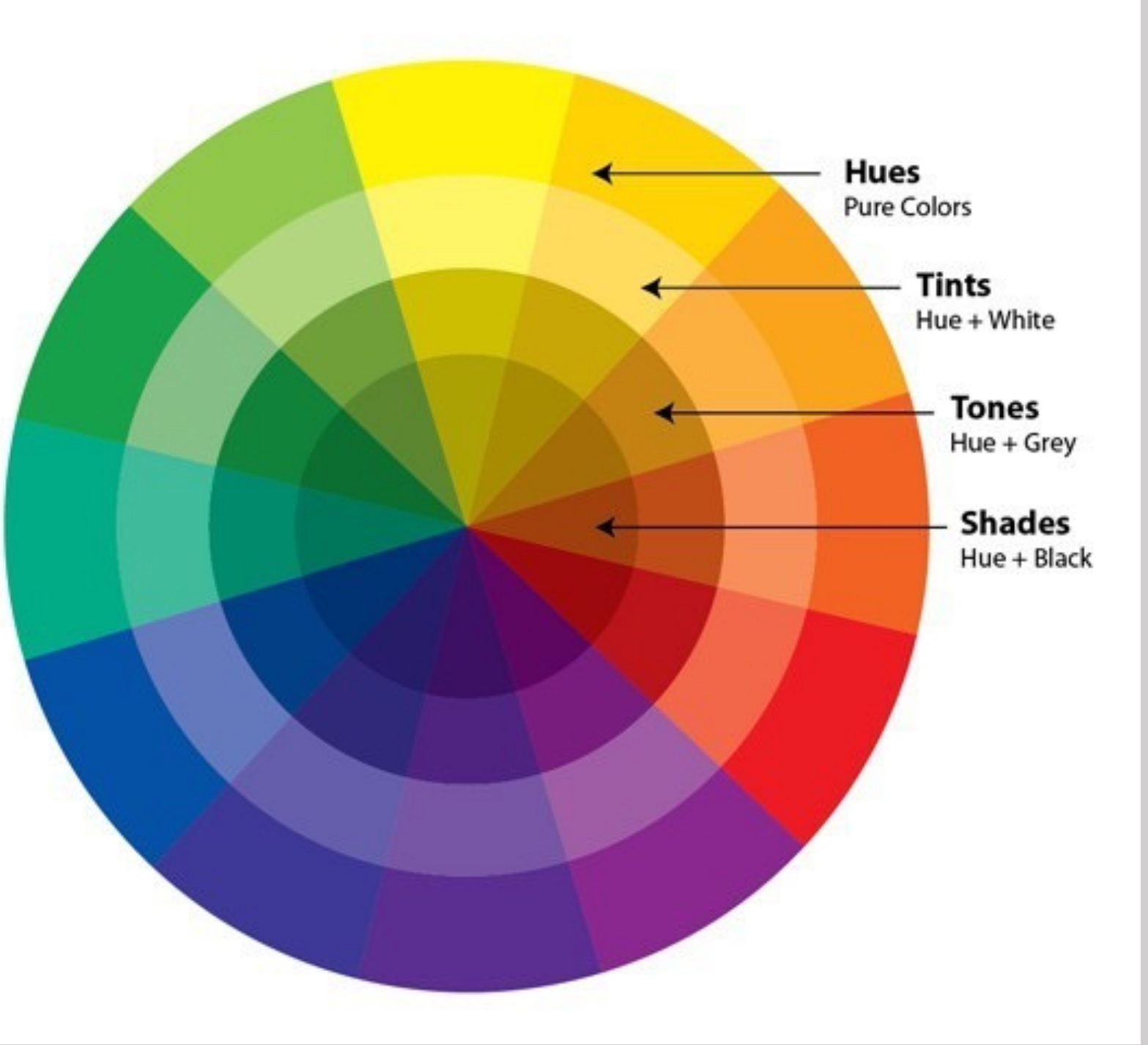
Color Theory:
Hue Saturation Value


Hues
Pure Colors
Tints
Hue + White
Tones
Hue + Grey
Shades
Hue + Black

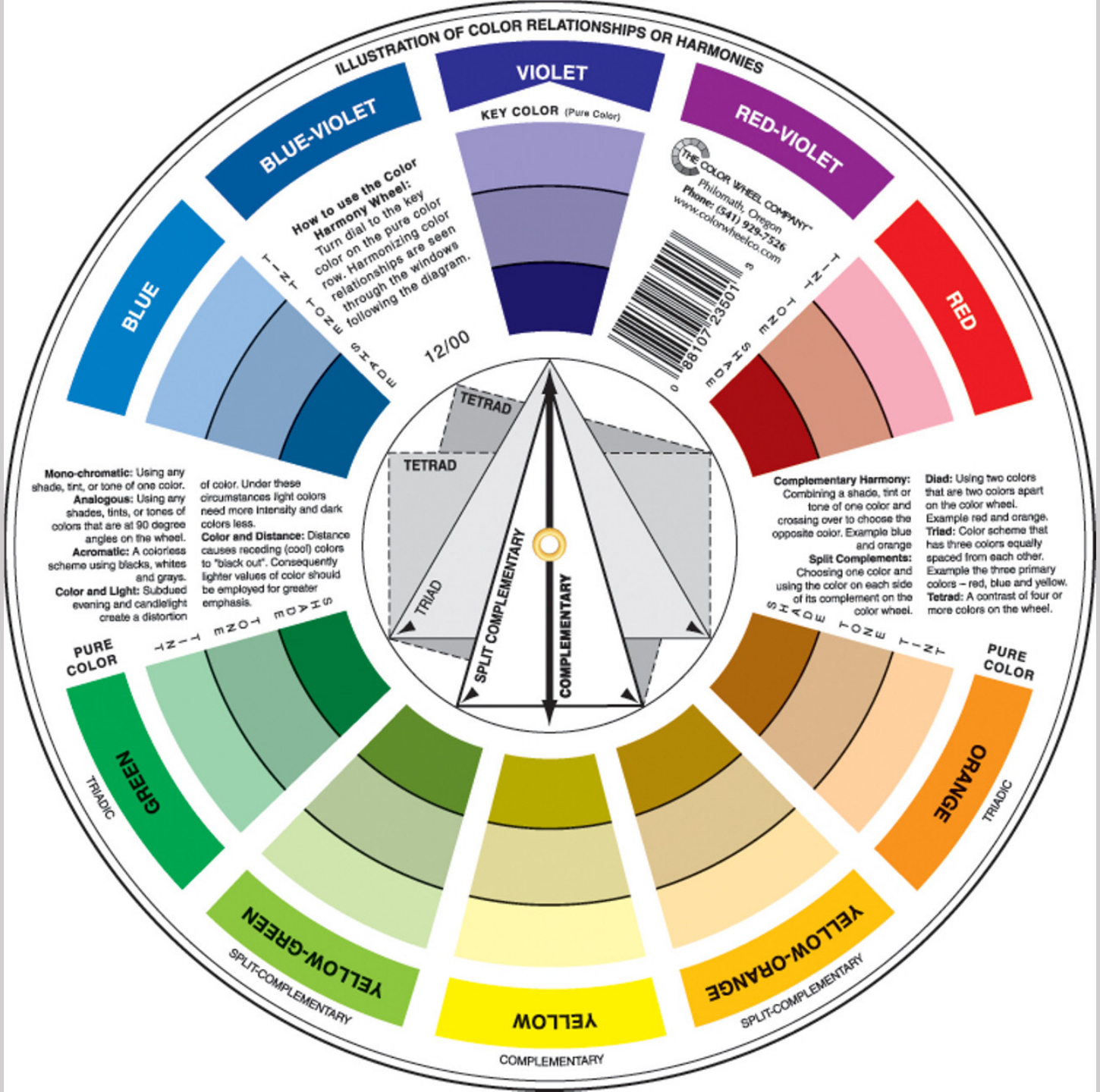


ILLUSTRATION OF COLOR RELATIONSHIPS OR HARMONIES
VIOLET
KEY COLOR (Pure Color)
BLUE-VIOLET
RED-VIOLET
BLUE
RED
How to use the Color Harmony Wheel:
Turn dial to the key color on the pure color row. Harmonizing color relationships are seen through the windows following the diagram.
12/00
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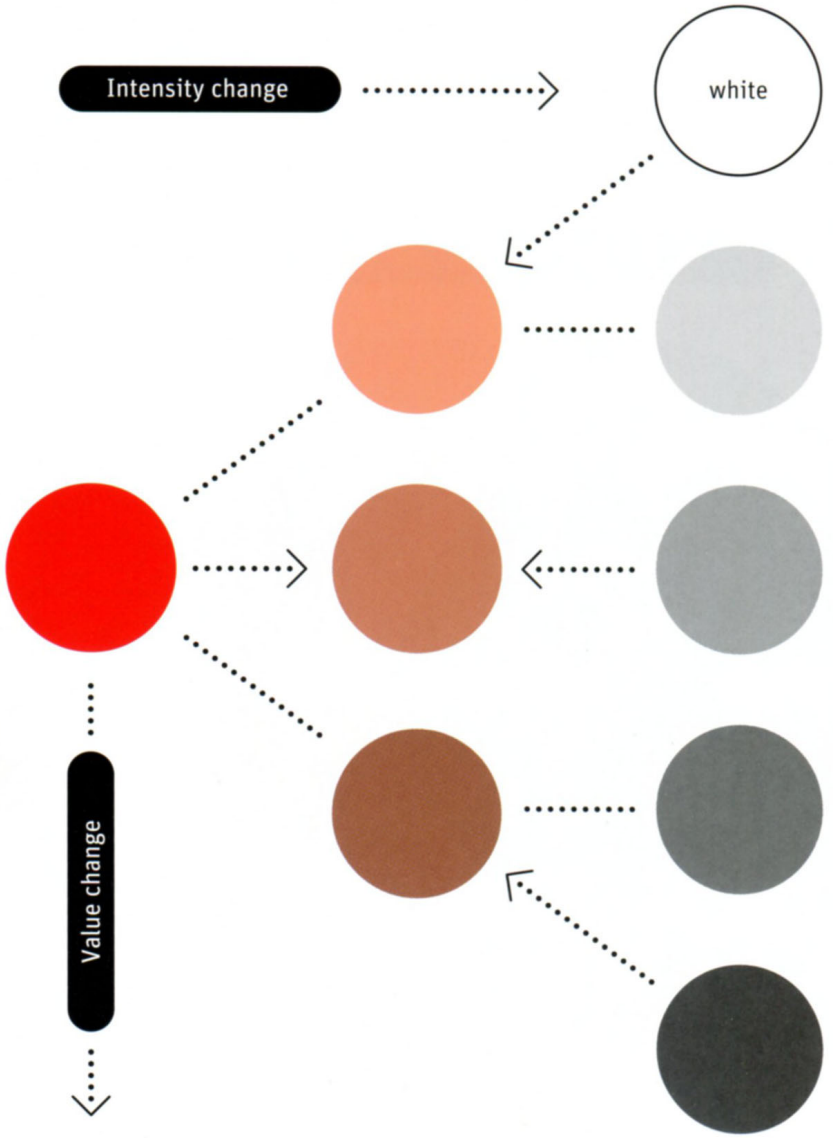
Philomath, Oregon
Phone: (541) 929-7526
www.colorwheelco.com
88107 23501
TETRAD
TETRAD
TRIAD
SPLIT COMPLEMENTARY
COMPLEMENTARY
Mono-chromatic: Using any shade, tint, or tone of one color.
Analogous: Using any shades, tints, or tones of colors that are at 90 degree angles on the wheel.
Acromatic: A colorless scheme using blacks, whites and grays.
Color and Light: Subdued evening and candlelight create a distortion of color. Under these circumstances light colors need more intensity and dark colors less.
Color and Distance: Distance causes receding (cool) colors to "black out". Consequently lighter values of color should be employed for greater emphasis.
Complementary Harmony: Combining a shade, tint or tone of one color and crossing over to choose the opposite color. Example blue and orange
Split Complements: Choosing one color and using the color on each side of its complement on the color wheel.
Diad: Using two colors that are two colors apart on the color wheel. Example red and orange.
Triad: Color scheme that has three colors equally spaced from each other. Example the three primary colors – red, blue and yellow.
Tetrad: A contrast of four or more colors on the wheel.
PURE COLOR
GREEN
TRIADIC
ORANGE
TRIADIC
YELLOW-GREEN
SPLIT-COMPLEMENTARY
YELLOW
COMPLEMENTARY
YELLOW-ORANGE
SPLIT-COMPLEMENTARY

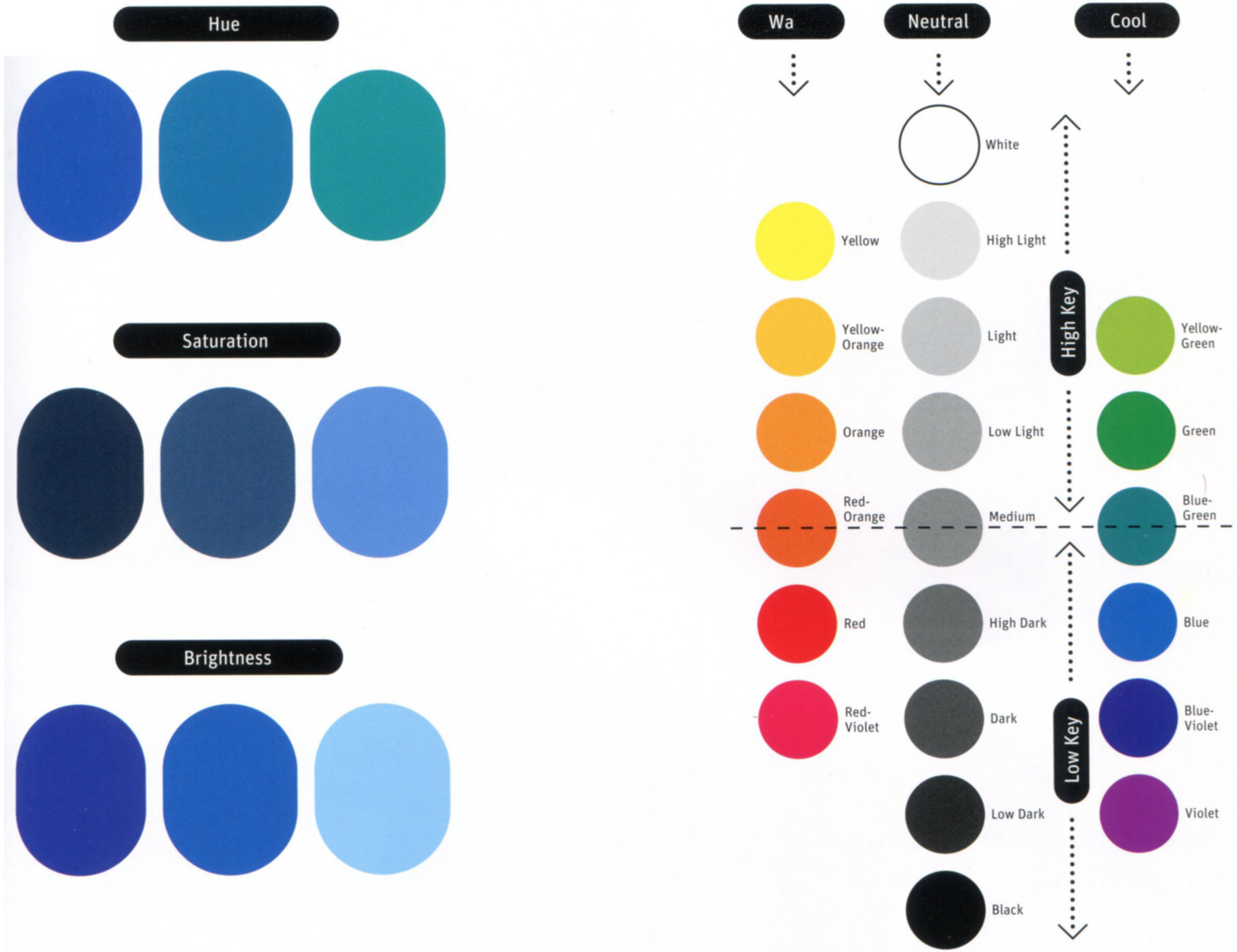
The Properties of Color

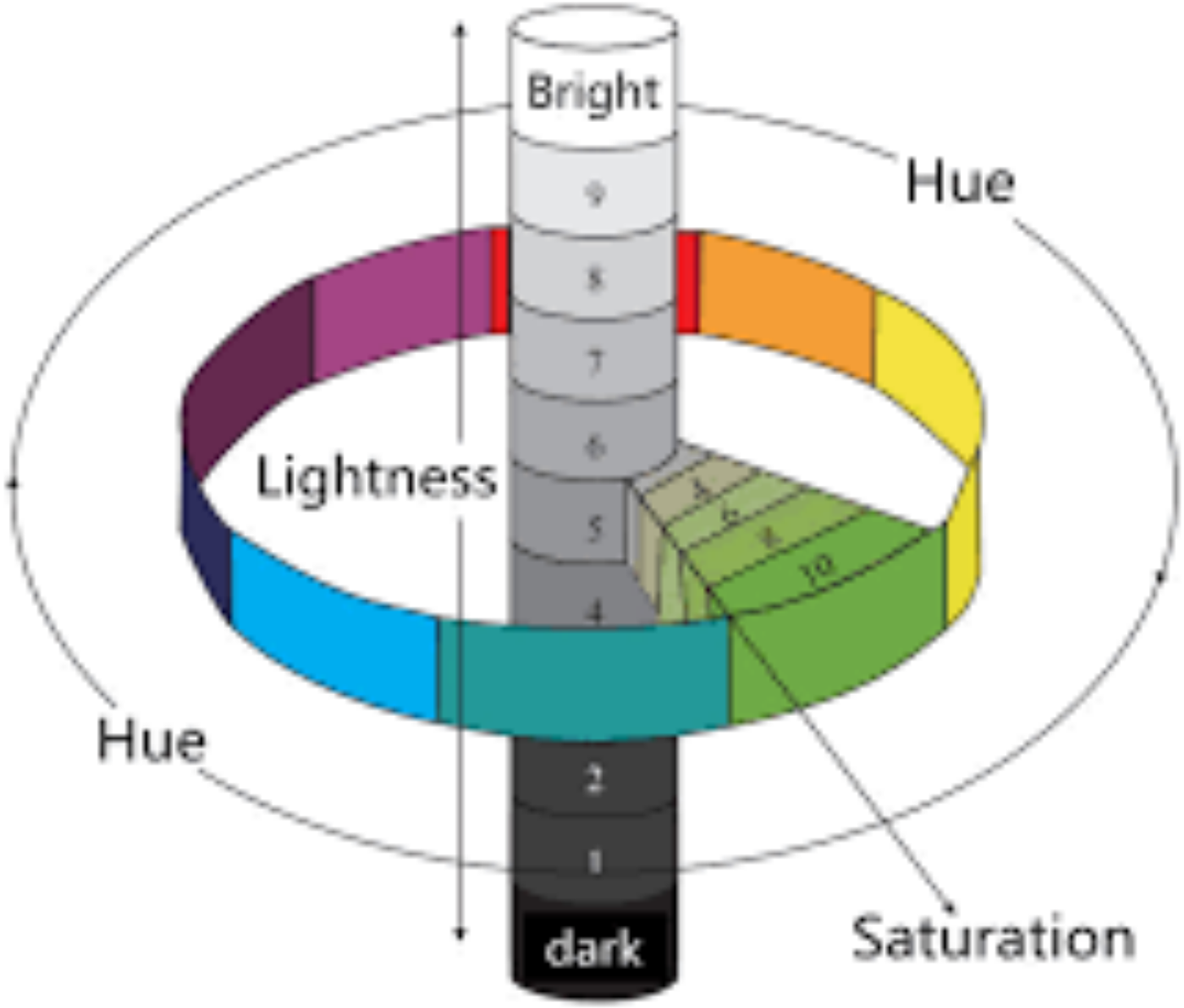
Whether using the additive or subtractive primaries, each color must be described in terms of its physical properties. These properties are independent of each other, and each one must be measured or defined in order to fully describe the color. Scientific descriptions of color, or *colorimetry*, involve the specification of these color properties in either a subjective or objective system of measurement. The subjective system describes color in terms of hue, saturation, and brightness (HSB), while the objective system measures the dominant wavelength, purity, and luminance of colors.

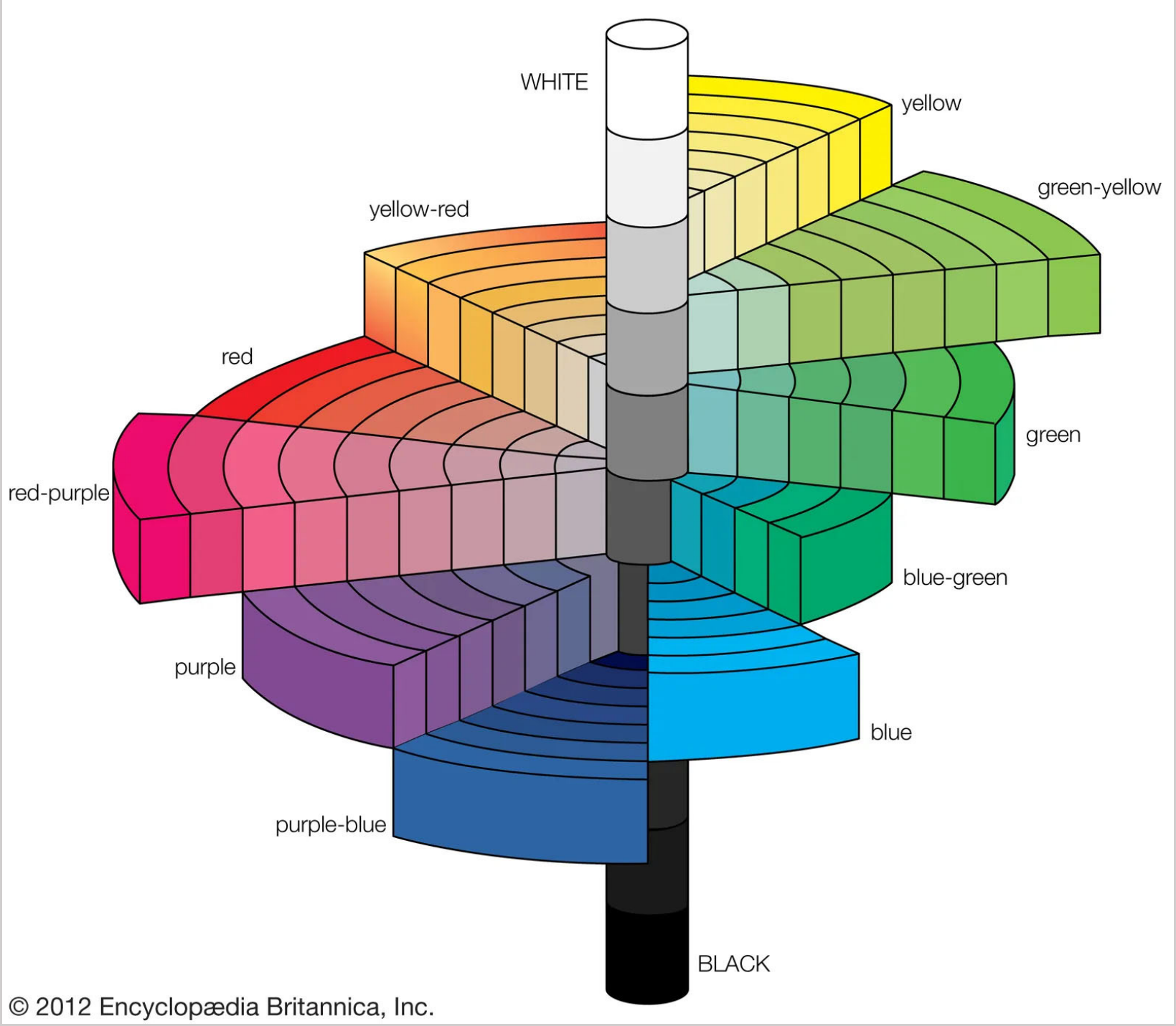
Hue is the common name of a color that indicates its position in the visible spectrum or on the color wheel. Hue is determined by the specific wavelength of the color in a ray of light. The description of a hue can be made more precise in comparison to the next hue (e.g., a certain blue might be more accurately called blue-green). *Saturation* refers to the intensity, strength, purity, or chroma—the absence of black, white, or gray—in a color. A vivid color has high or full saturation, whereas a dull one is de-saturated. Saturation is a measure of the richness of a color. *Brightness*, or value, is the relative degree of lightness or darkness of a color, or its reflective quality or brilliance. A color can be more narrowly described as either light or dark (e.g., light blue or dark blue). The brightness of a color is changed by mixing it with white (to form a *tint*) or with black (to form a *shade*) in varying proportions. Graphic design software programs have tools for varying the HSB of colors.

Objective color notation was developed by the Commission Internationale de l'Eclairage (CIE) to provide a mathematical model for describing color. The CIE (in English, the International Commission on Illumination) is an international technical, scientific, and cultural nonprofit organization that sets standards on the science and art of lighting, vision, and colorimetry. Though CIE notation is not used by designers, it underpins color management in modern digital devices.




Hue
Saturation
Brightness
Wa
Neutral
Cool
White
Yellow
High Light
Yellow-
Orange
Light
Yellow-
Green
High Key
Orange
Low Light
Green
Red-
Orange
Medium
Blue-
Green
Red
High Dark
Blue
Red-
Violet
Dark
Blue-
Violet
Low Key
Low Dark
Violet
Black


Bright
9
8
7
6
5
4
2
1
dark
Lightness
Hue
Hue
Saturation



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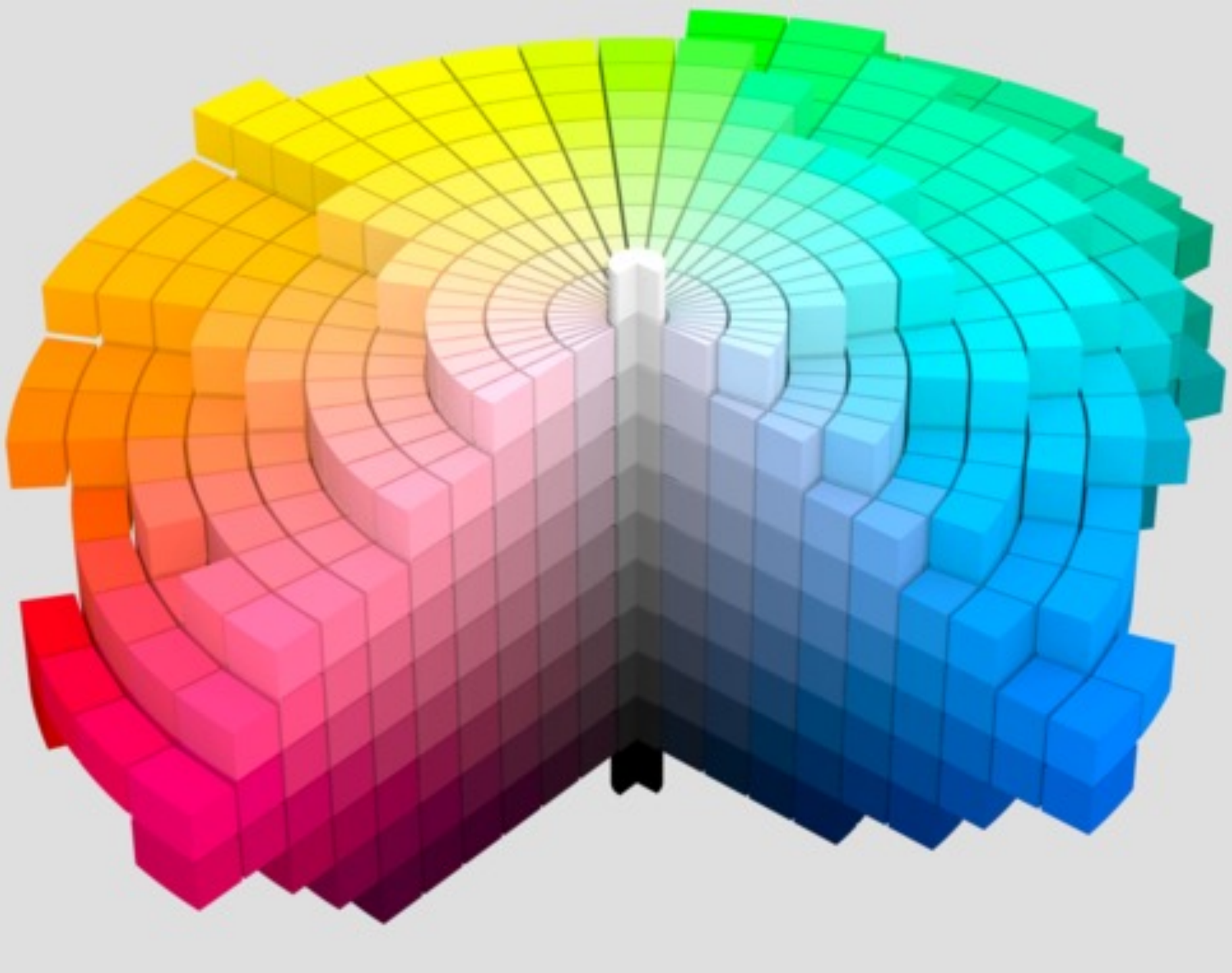
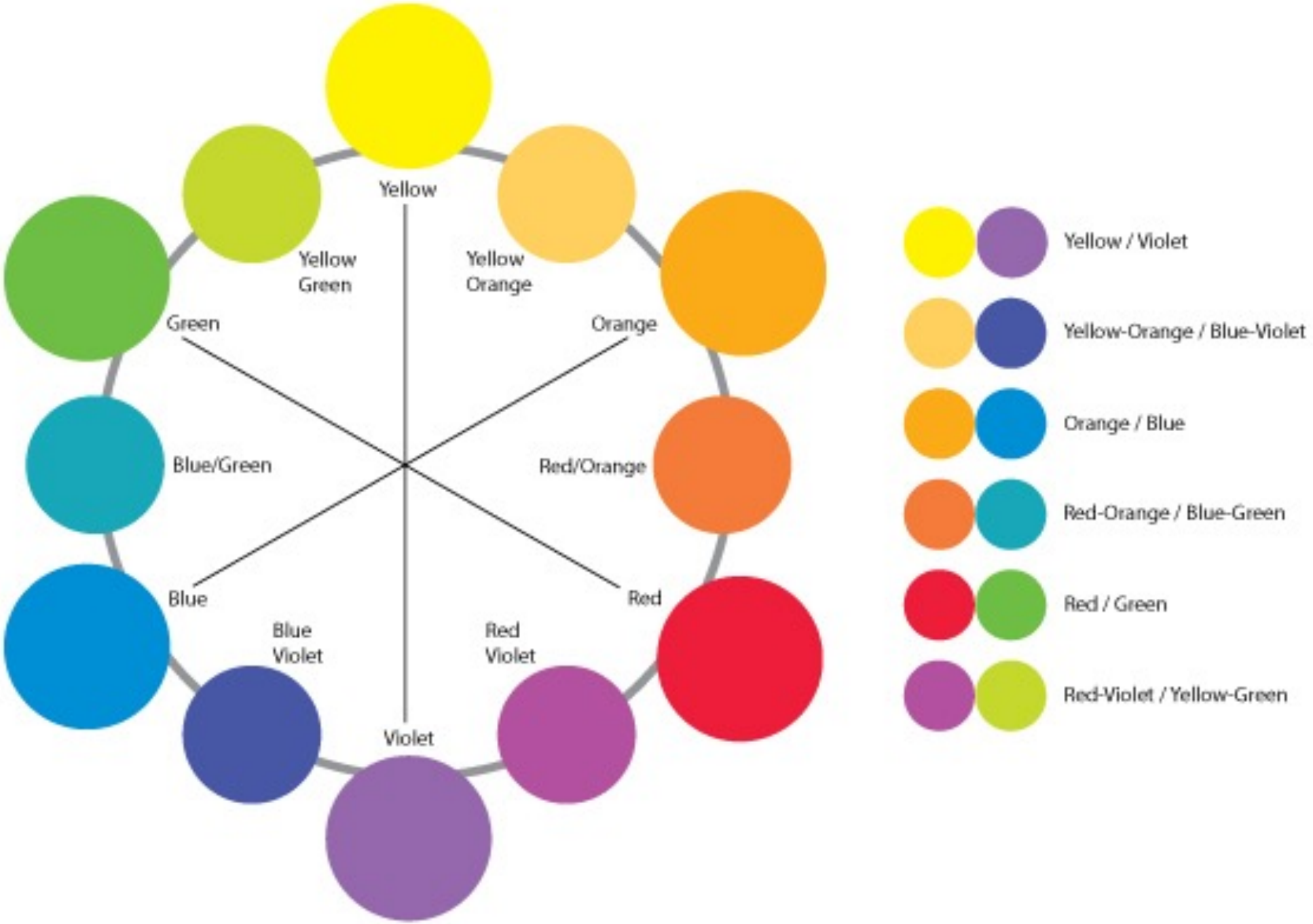
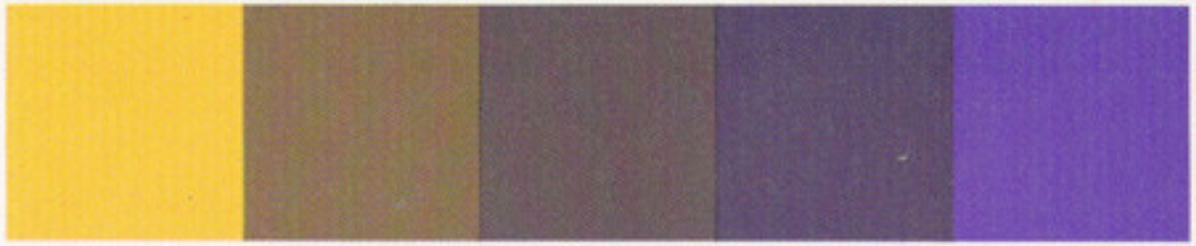


Color Theory: Complementary Colors


Yellow
Yellow Green
Yellow Orange
Green
Orange
Blue/Green
Red/Orange
Blue
Red
Blue Violet
Red Violet
Violet
Yellow / Violet
Yellow-Orange / Blue-Violet
Orange / Blue
Red-Orange / Blue-Green
Red / Green
Red-Violet / Yellow-Green

COMPLEMENTARY COLORS
ANALOGOUS COLORS
TRIADIC COLORS
SPLIT-COMPLEMENTARY COLORS
TETRADIC COLORS
IMAGE BY SARAHRENAECLARK.COM



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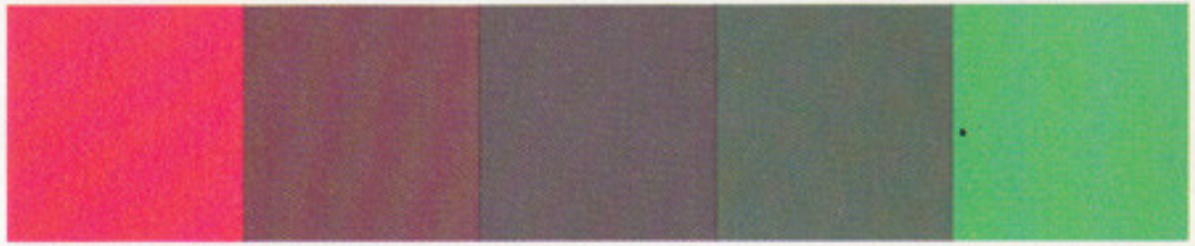

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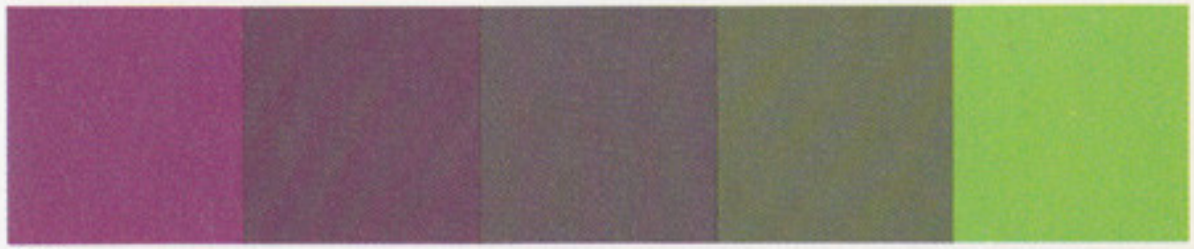

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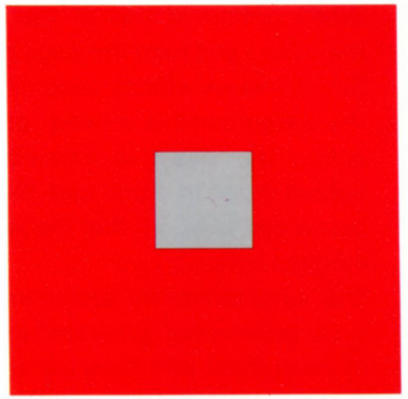
Albers: Color Studies
Color Deceives

31

32



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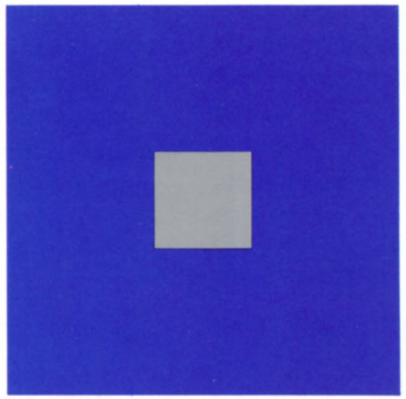

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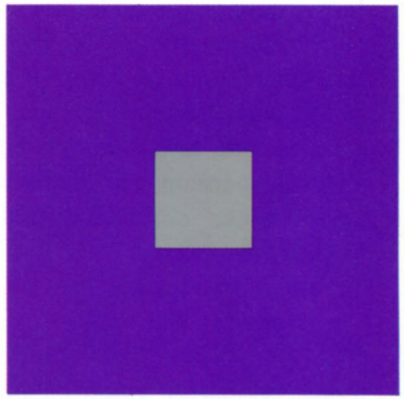

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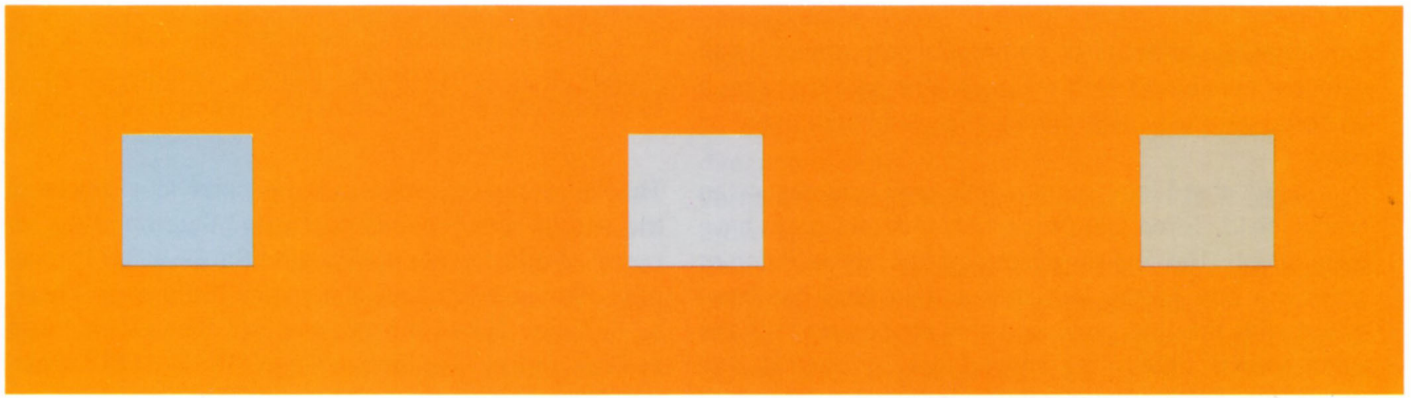

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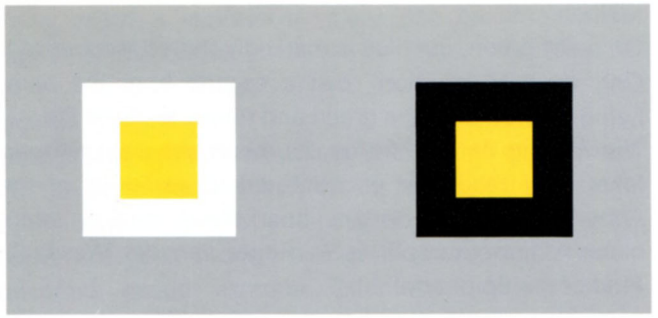
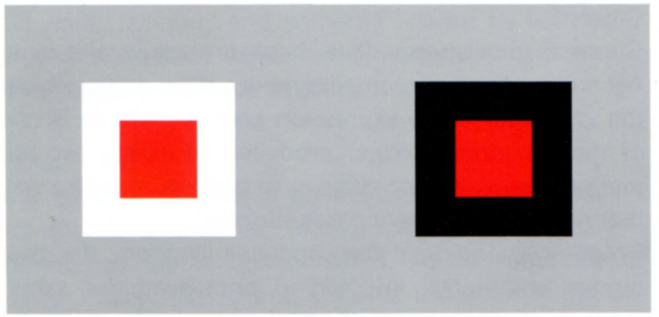
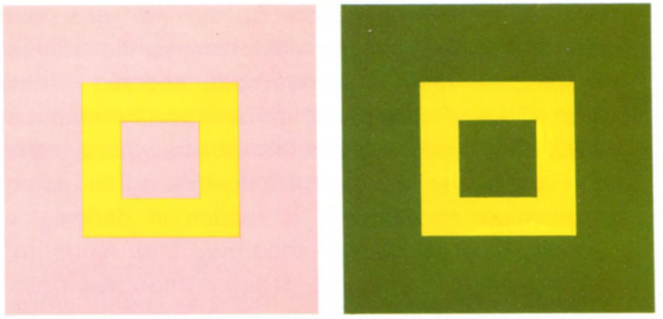
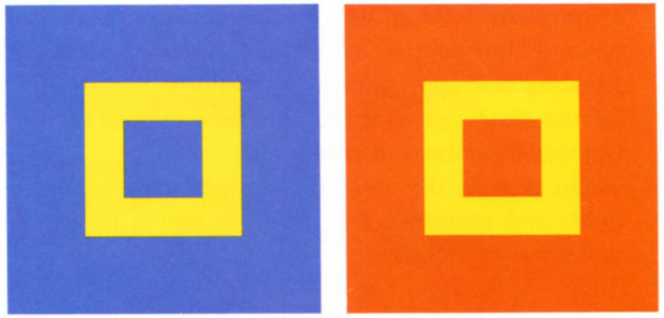




58–59





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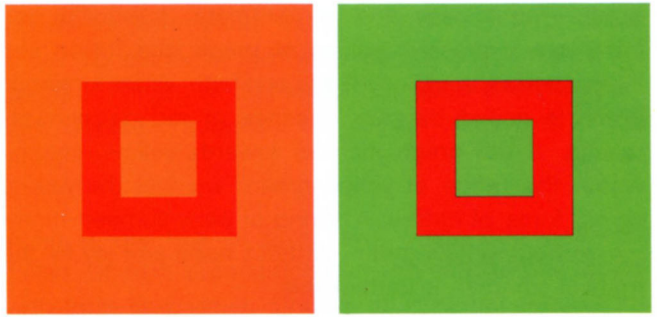

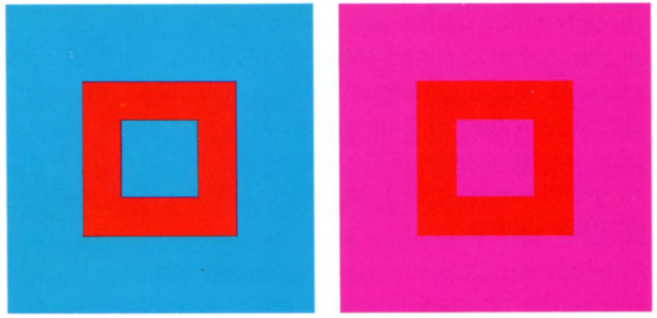

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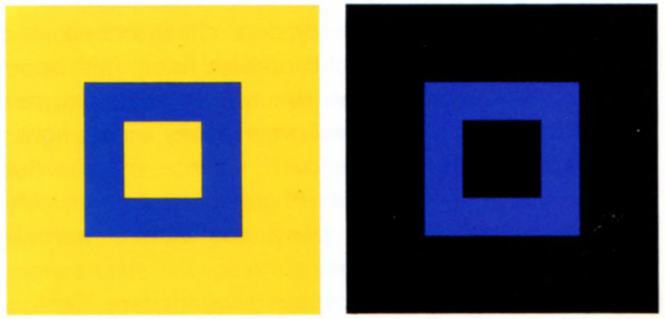

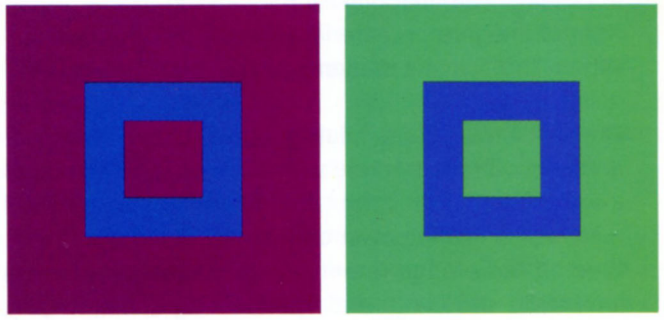

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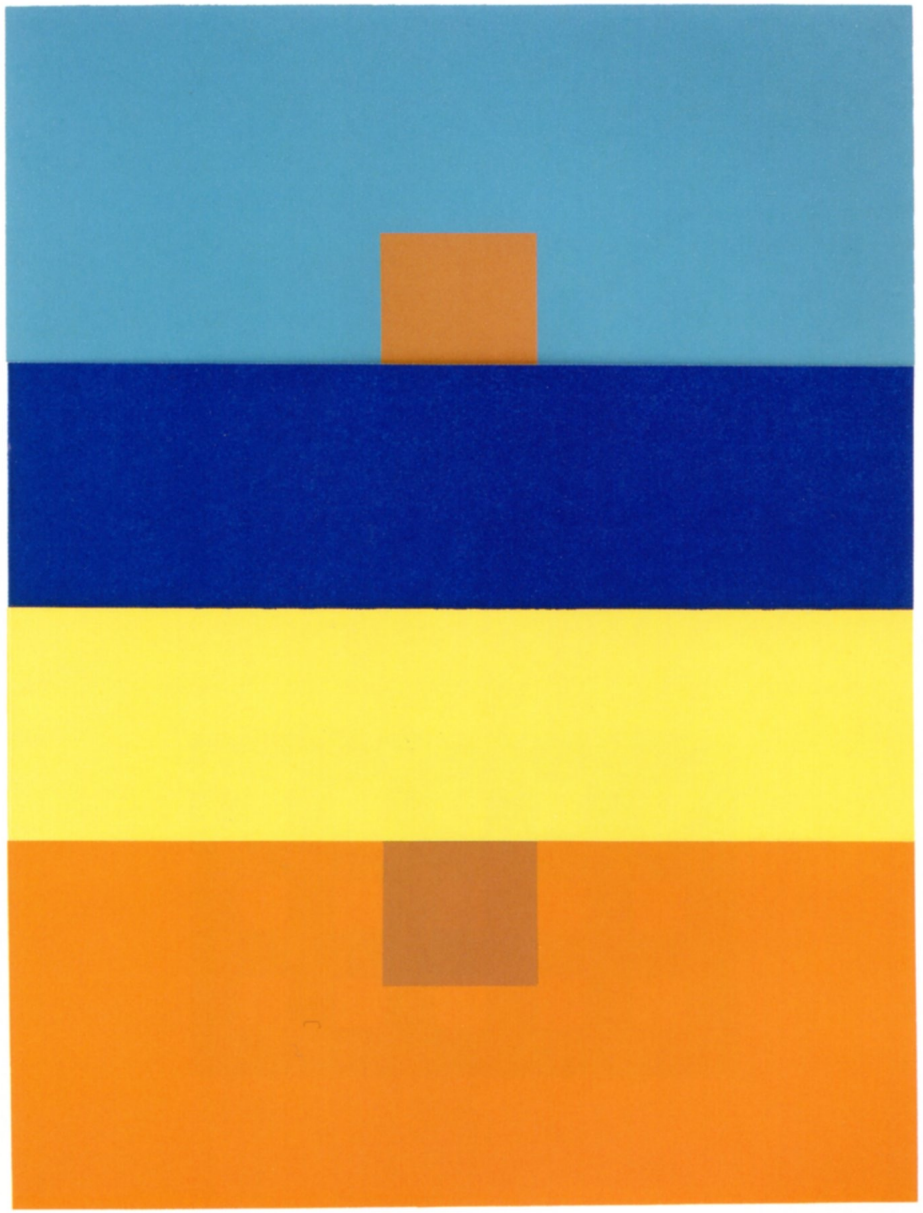
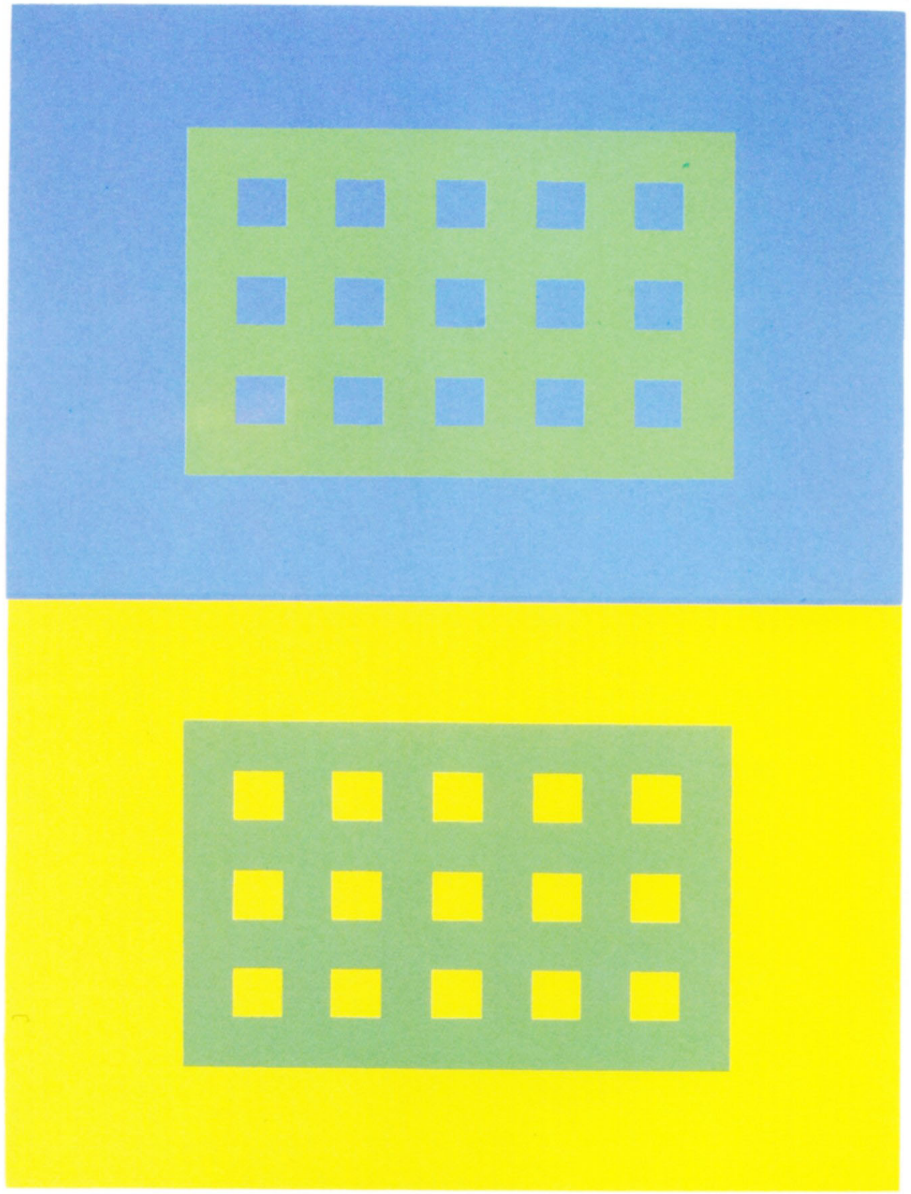
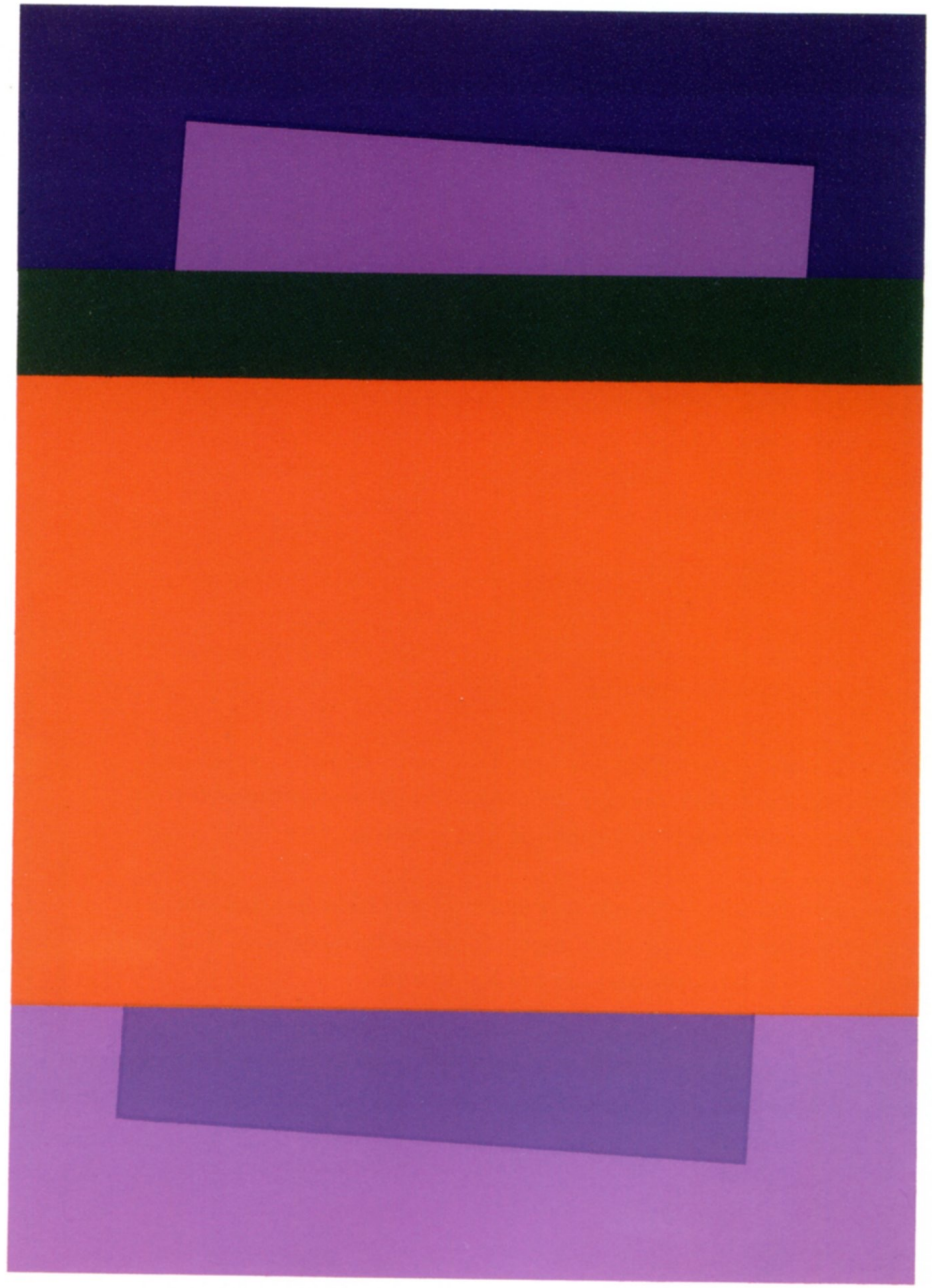
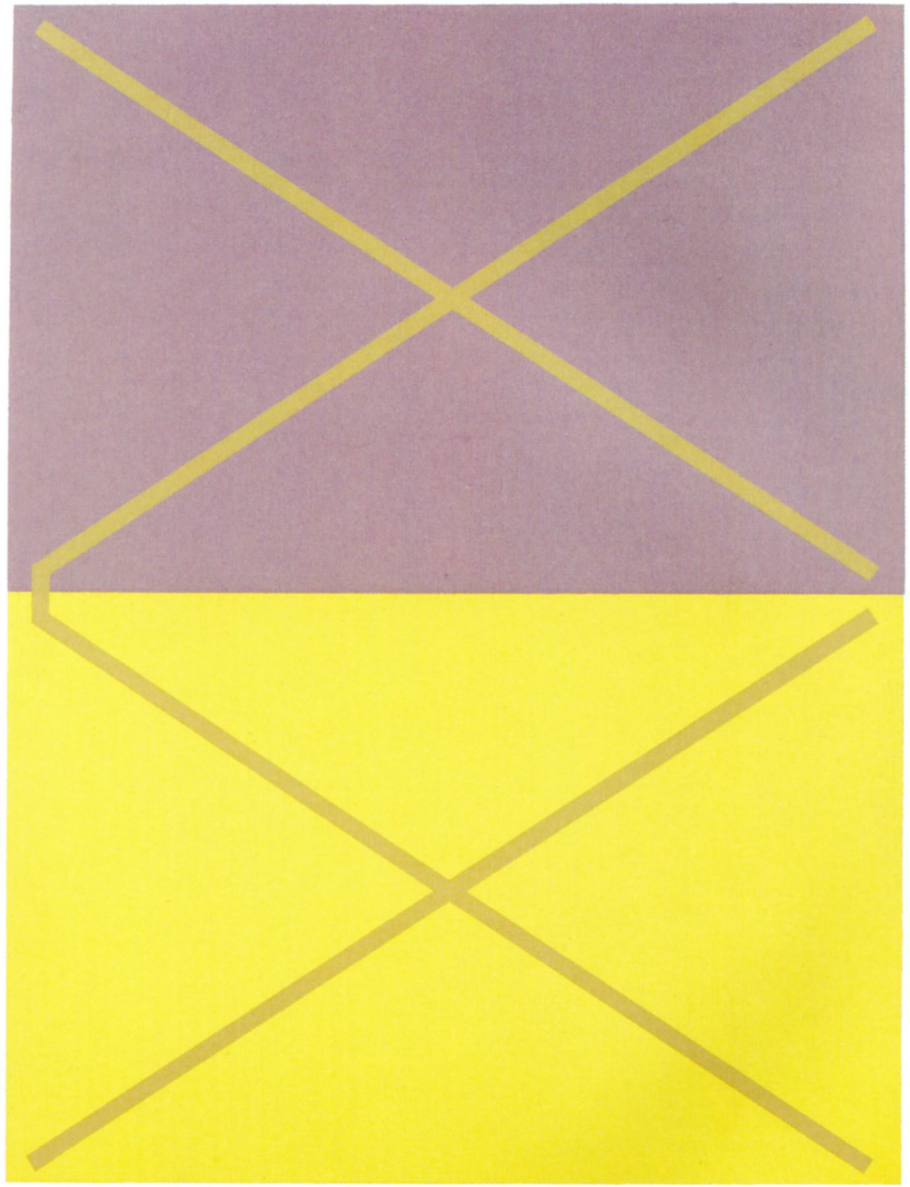
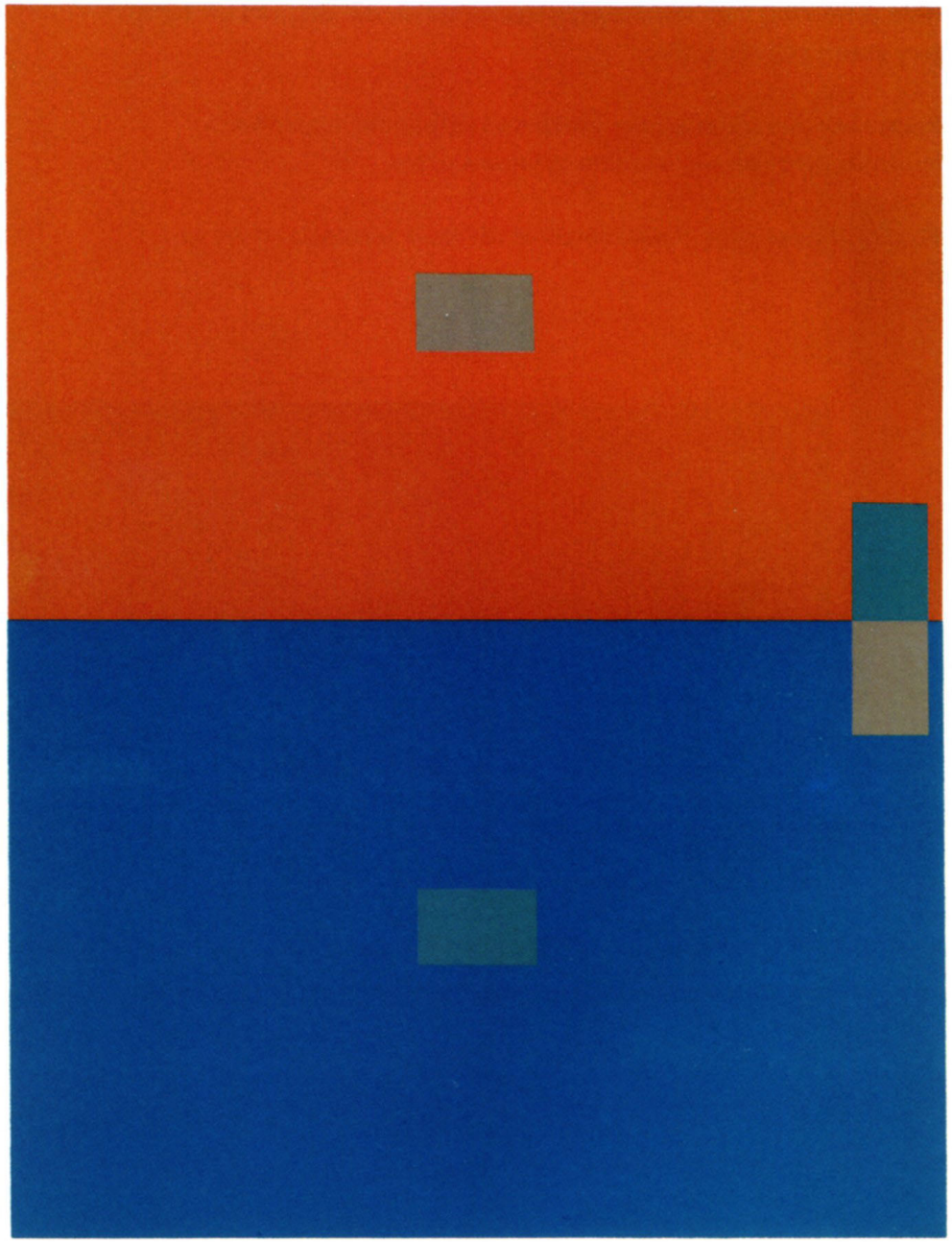
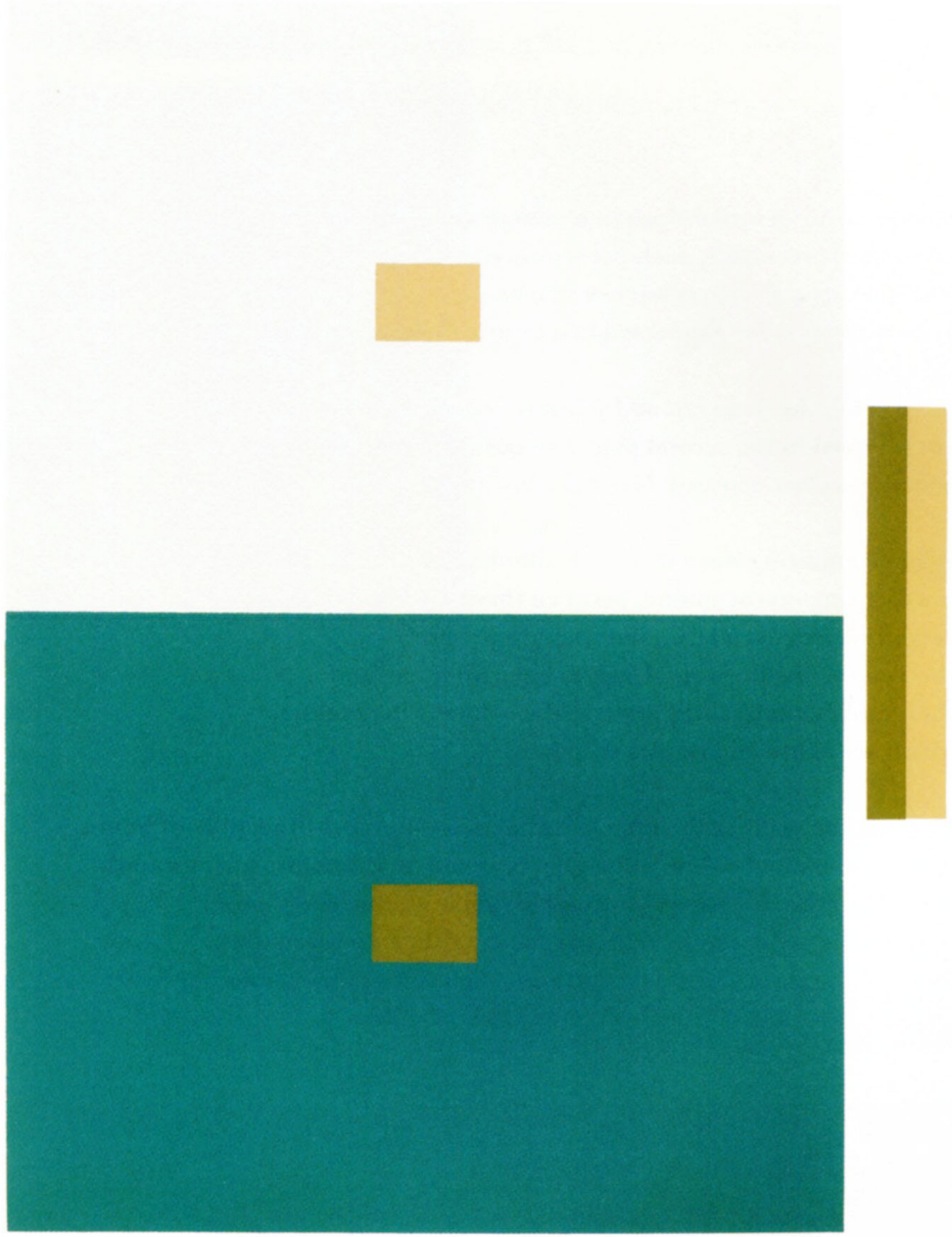


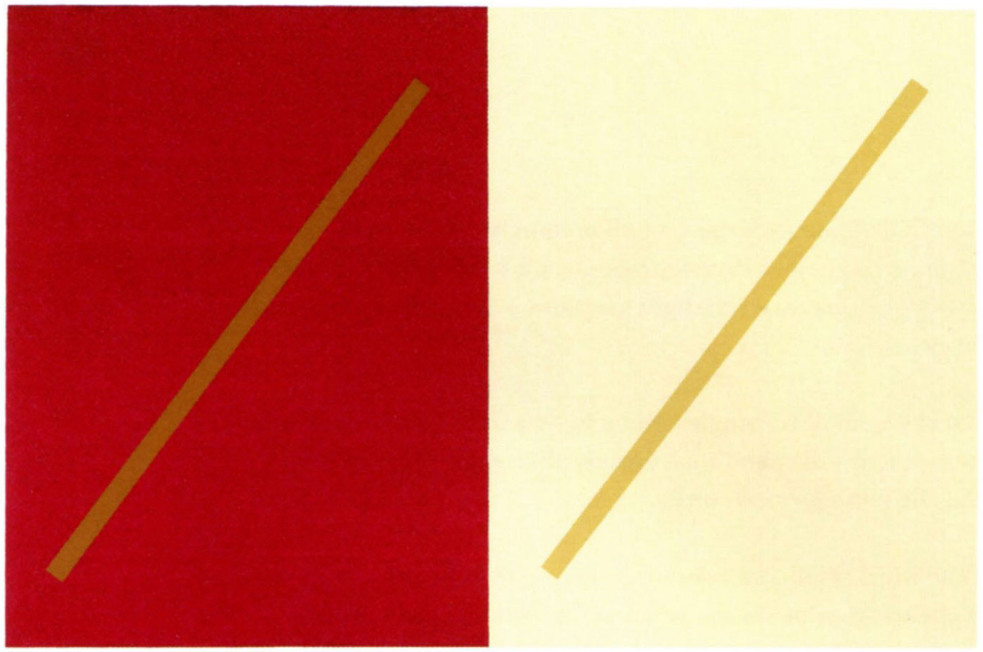


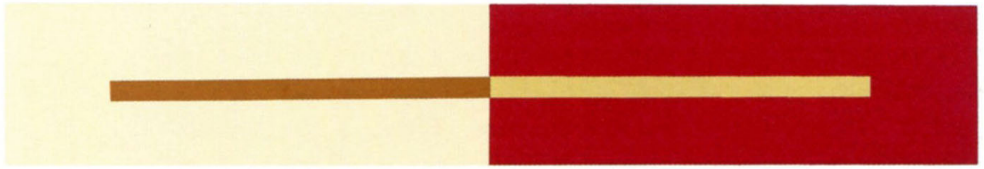


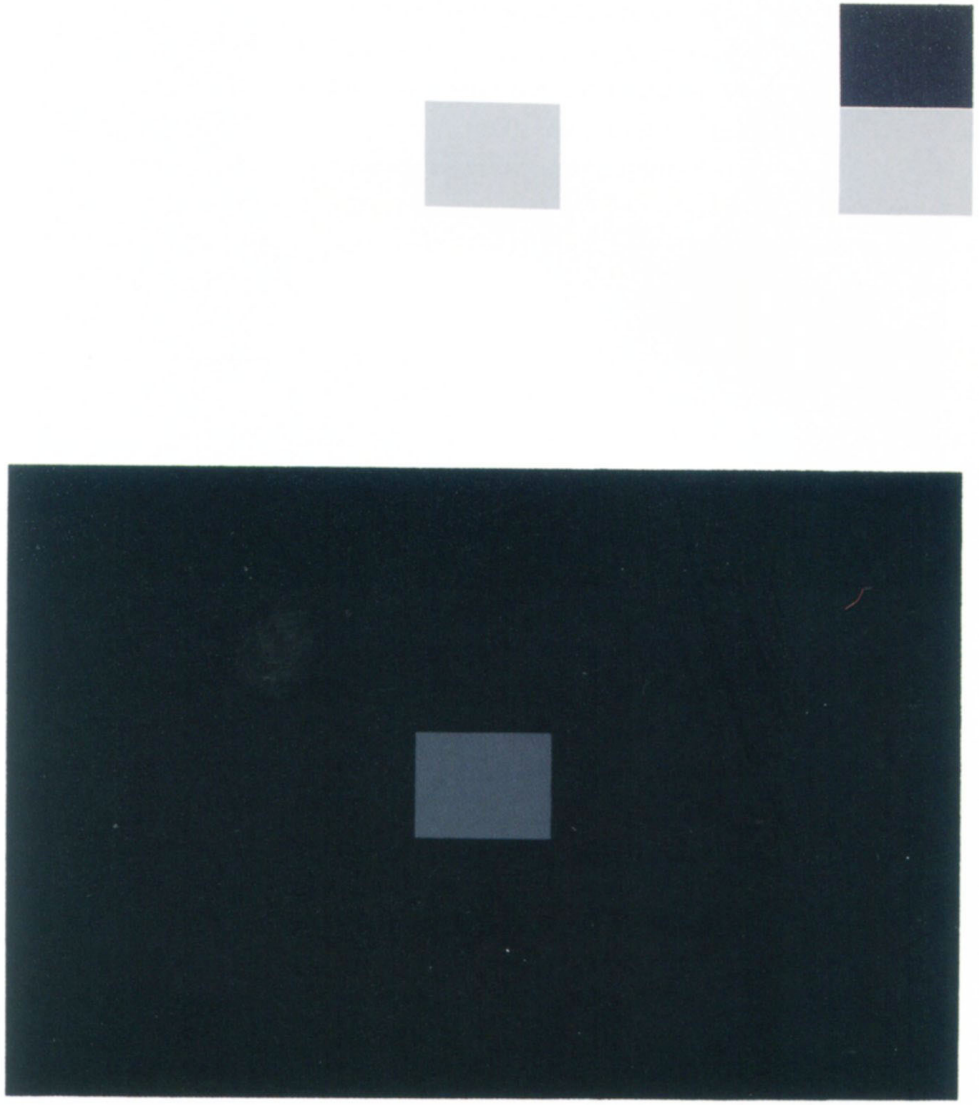




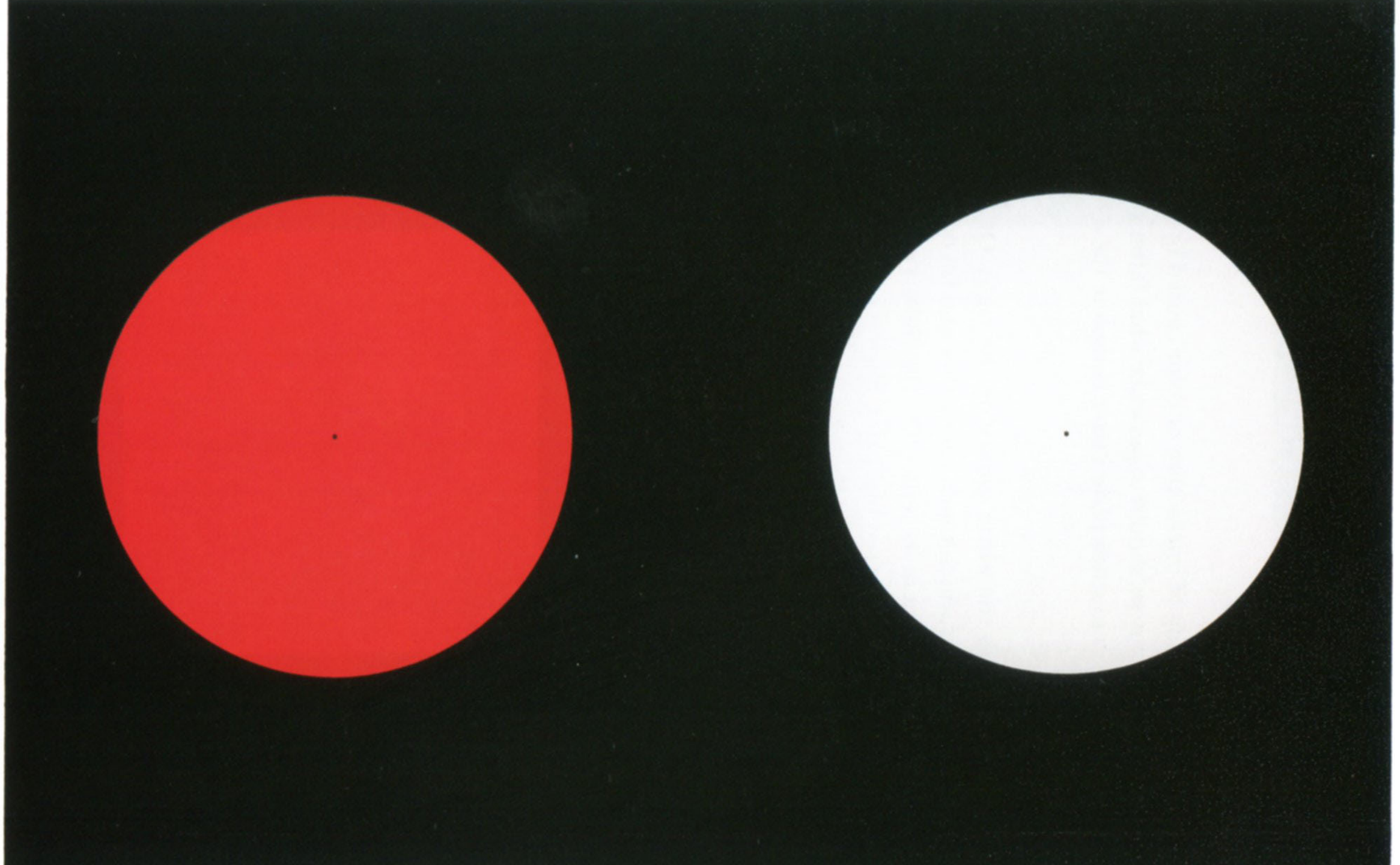


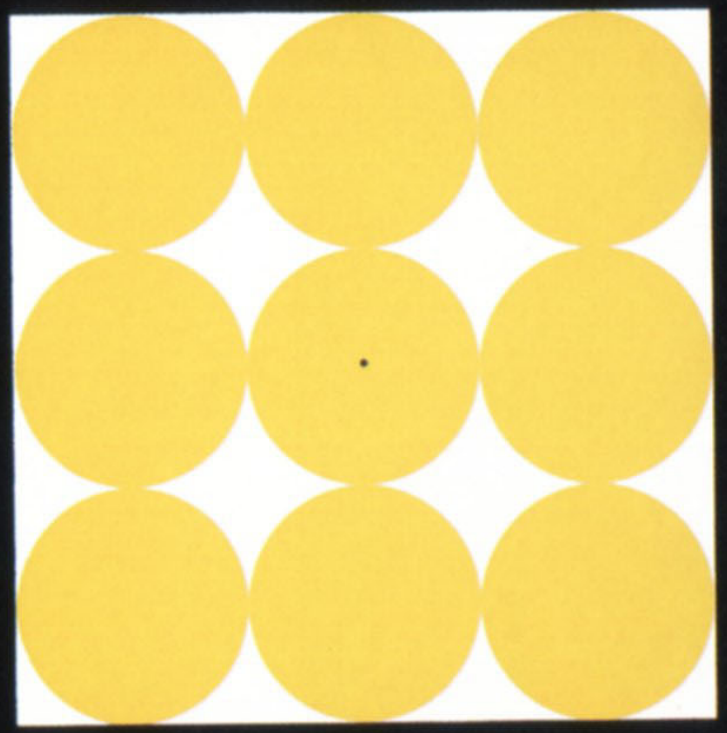


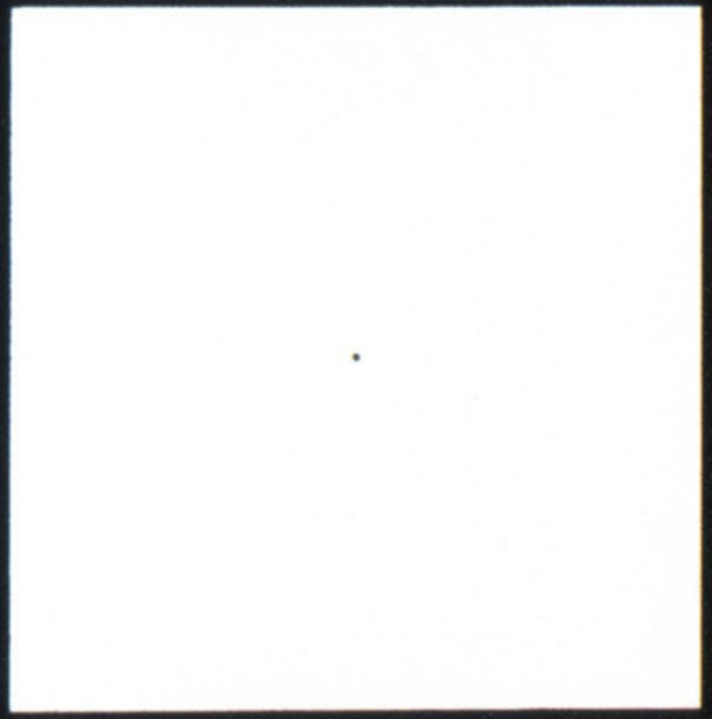




Albers: Color Studies
After Effects







Color is the most relative medium in art. Experience is the best teacher of color.

Josef Albers (1888-1976)