

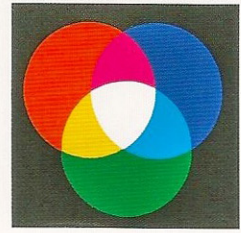
## ACHROMATIC GRAYS

Achromatic means “without color”. The term applies to black, white, and grays made by combining black and white. Achromatic grays, like black and white, have no hue and no saturation: only value.



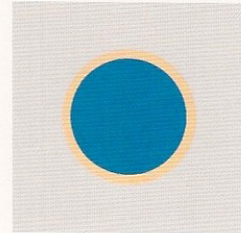
## ADDITIVE COLOR

Color seen as light: additive color primaries are red, green, and blue. When they are combined the result is white light.



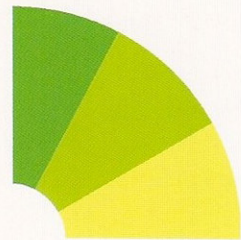
## AFTERIMAGE

A common optical effect in which an additional color seems to appear at the edge of an observed color. When a color is placed against an achromatic background, its afterimage will be the color’s complement.



## ANALOGOUS

Analogous hues lie adjacent to each other on the spectrum.



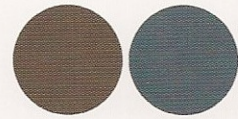
## BRIDGE TONES

Bridge tones provide a transition between disparate colors. In the example on the right, the stark difference between a prismatic red at one end and a chromatic gray-green at the other is softened by a sequence of bridge tones that contain properties of both the red and the green.



## CHROMATIC DARKS

These are dark chromatic grays that have discernible temperature and hue.



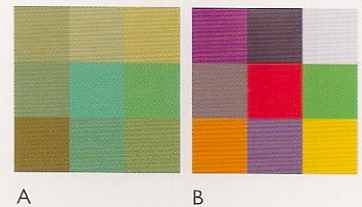
## CHROMATIC GRAYS

Chromatic grays have relatively low saturation but still have discernible hue and temperature.



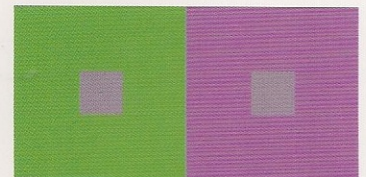
## COLOR HARMONY

Color harmony is the character of the interrelationships in a group of colors. As with musical harmonies, color harmonies can be concordant or discordant, depending upon the relative cohesiveness of the color grouping. In the illustration on the right, the colors in (A) are in concord (highly unified), and in (B) they are in discord (disagreement).



## COLOR INTERACTION

A color's quality is dependent upon its context because colors interact with each other where they meet. (See "simultaneous contrast".) In the example on the right, the color in the center of each square is physically identical, but it appears different in each context.



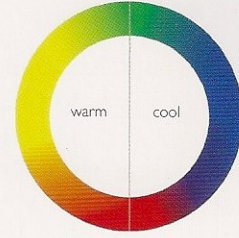
## COLOR SYMBOLISM

Color symbolism is based upon automatic associations attached to particular colors or color combinations that are learned and largely culturally determined. In this way colors are linked to abstract ideas, e.g., love, mortality, authority, or nationhood, as shown on the right.



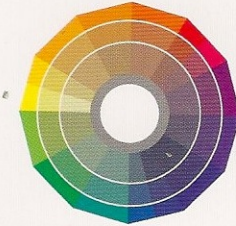
## COLOR TEMPERATURE

When the hue continuum is represented as a circle, colors can be divided into cool and warm zones. The association of yellows, reds, oranges and yellow-greens with warmth, and violets, blues, and blue-greens with coolness is probably based on our physical experience in a world of fire and ice. Color temperature, like all aspects of color, is relative and contingent upon visual context.



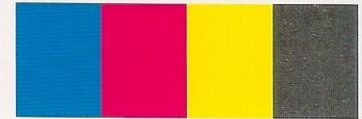
## COLOR WHEEL

The color wheel is any circular depiction of the the hue continuum and has been used for centuries by color theorists. This version is divided into 12 major hues that include primary, secondary, and tertiary colors. (Primary hues are each subdivided into two “co-primaries”.) In addition, the wheel is separated into four rings that indicate four levels of saturation: prismatic color, muted color, chromatic gray, and achromatic gray.



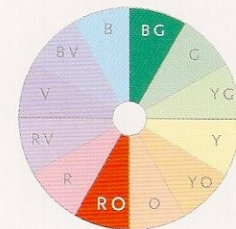
## CMYK

CMYK refers to the colors used in four-color printing: cyan, magenta, yellow, and black (K).



## COMPLEMENTARY HUES

Complements are any two hues that lie directly opposite each other on a color wheel. All hues have a complementary partner. When complements are intermixed, the resulting color is darker and duller than both of the two parent colors. When placed next to each other, their extreme difference makes for a strong contrast.



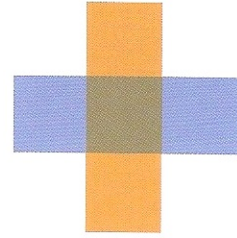
## CO-PRIMARIES

Co-primaries expand the primary triad of red, yellow, and blue into three pairs that include warm and cool versions of each primary color. The use of co-primaries greatly extends the potential range of color achieved through their intermixture.



## DARK TRANSPARENCY

Dark transparency is an illusionistic transparency wherein the color at the “overlap” is darker in value than both of the intersecting colors. The hue of the central color should blend that of each parent color equally. Dark transparency is effective when the two colors that appear to overlap are close in value.



## EARTH TONE PRIMARY

An earth tone primary is a triad of earth tones, e.g. burnt sienna, yellow ocher, and Payne’s gray.



## GAMUT

In computer terminology, a gamut is the range of hues available to a particular mode. The diagram on the right represents three color gamuts. The visible spectrum is represented by the large, solid shape, RGB by the pink triangle and CMYK by the area bound in yellow.



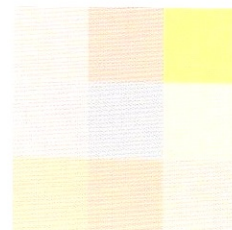
## GRAYSCALE

The grayscale is a representation of the value continuum broken down into a finite number of steps. It usually consists of ten or so distinct and evenly progressing achromatic grays.



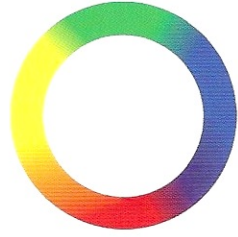
## HIGH KEY

When colors in an image are “keyed” by value and the values are predominantly light, it is said to be in a high key.



## HUE

One of the three structural factors of color (along with value and saturation), hue is the name given to a color to describe its location on the color spectrum owing to its particular wavelength.



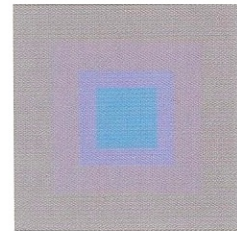
## HUE CONTINUUM

The hue continuum is a graphic representation of the full color spectrum from infrared to ultraviolet.



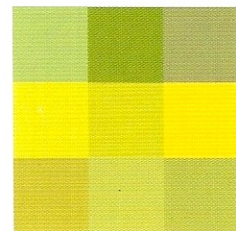
## INHERENT LIGHT

Unlike luminosity, which is based on value and is measurable, inherent light is a visual quality that depends upon relative saturation and context. In the example on the right, the colors gain saturation as they move toward the center of the square, demonstrating a build up of inherent light at its nexus.



## KEYED

Color groupings are keyed when they are brought together in either hue, value, saturation, or combinations thereof. In the illustration shown here, the colors are keyed by hue (they cluster around green and yellow-green) and by saturation (they are all muted colors).



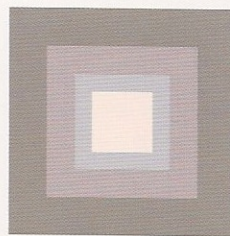
## LOW KEY

When colors in an image are “keyed” by value and the values are predominantly dark, it is said to be in a low key.



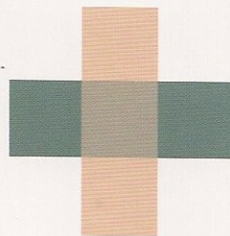
## LUMINOSITY

Luminosity is light reflected from a surface; in color, it is tied to value. The lighter the color, the more luminous it is. This can be measured with a light sensor. In the example on the right, luminosity builds as the colors progress toward the center of the square.



## MEDIAN TRANSPARENCY

Median transparency is an illusion of transparency wherein the value of the color at the “overlap” is midway between that of each parent color. The hue at the overlapping area should also appear to be an equal blend of the two outer colors. Median transparencies are most effective when the two colors that appear to overlap are diverse in value.



## MONOCHROMATIC

Monochromatic color schemes are limited to one hue and variations thereof. They can have a broad range of values or saturation levels, as shown here.



## MUTED COLORS

Muted colors constitute a zone in the saturation continuum that falls between chromatic grays and prismatic colors. Muted colors can be characterized as softer than prismatic colors, but they still display a clear sense of hue identity.



## NONPROPORTIONAL COLOR INVENTORY

This is a selection of colors drawn from an object or image, usually one that has an uncountable number of colors. The inventory should be a summation of the color in the source that expresses its entire chromatic range as well as possible in a few tones.



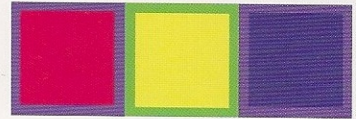
## OPTICAL MIXING

Optical mixing occurs when small color fragments are fused by the eye to appear as seamless tonal transitions. As employed in tapestries and mosaics, the phenomenon relies upon the systematic progression of discrete tones. The optical mixture of myriad tiny dots of color is also the basis of four-color photo printing.



## OVERTONE

Overtone is a term borrowed from music that describes the secondary hue bias or leaning of a primary hue. For example, alizarin crimson is a red that leans toward violet; it has violet overtones. Scarlet, another red, has orange overtones. An awareness of overtone is helpful in color mixing. The illustration on the right shows cool primary hues (crimson, lemon yellow, and ultramarine) surrounded by their overtone colors.



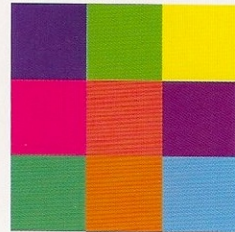
## PRIMARY TRIAD

The primary triad is so called because it is indivisible and, in theory, all other colors (which are compound colors) can be mixed from it. The primary triad forms an equilateral triangle on the color spectrum when it is depicted as a circle.



## PRISMATIC COLORS

Prismatic colors represent the hues of the spectrum. However, since pigment can never be as pure as light, prismatic colors are only an approximation of spectral color. They are, categorically, at the highest level of saturation.



## PROPORTIONAL COLOR INVENTORY

The proportional color inventory is based on an object or image that has a countable number of colors. It represents all the colors present in their relative proportions.



## RETINAL PAINTING

Retinal painting focuses on the accurate rendition of the colored shapes that comprise a visual field and mimics the way the retina of the eye receives visual information. It emphasizes color over drawing and can be seen as an outgrowth of Impressionism and the ideas about optics that engaged artists like Monet, Pissarro, and others of their generation.



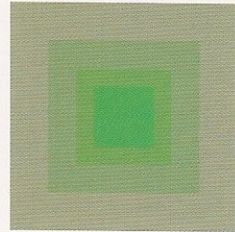
## RGB

In additive or light color theory, red, green, and blue are considered the primary colors: RGB.



## SATURATION

Saturation is the relative purity of hue present in a color. Highly saturated colors are very rich and have a strong hue presence. Colors that are low in saturation are dull and have a weak discernible hue. In this course we recognize three levels of saturation: prismatic color, muted color, and chromatic gray. In the image on the right, the colors of the square become more saturated as they move toward the center. Saturation is sometimes also called “intensity” or “chroma.”



## SATURATION CONTINUUM

The saturation continuum represents the infinite levels of saturation that exist between any two intermixed complementary colors.



## SECONDARY TRIAD

The secondary triad consists of green, orange, and violet. Each of these colors can be mixed by combining two primary colors.





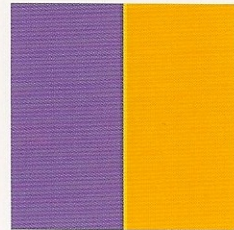
## SHADE

A shade is the result of mixing any color with black.



## SIMULTANEOUS CONTRAST

Simultaneous contrast is the optical effect that two neighboring colors have upon each other as their afterimages interact along a shared border. The image on the right illustrates the afterimages a violet and yellow-orange would project upon each other where they meet.



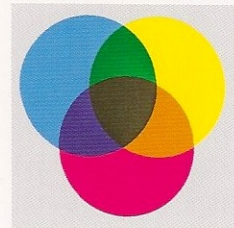
## SPECTRUM

The spectrum is a phenomenon of light and can be seen in a rainbow or in the colors a prism casts upon a wall. It contains the full range of hues present in sunlight. See hue continuum.



## SUBTRACTIVE COLOR

Subtractive color theory engages color as manifested by reflected, rather than direct light. The subtractive color primaries are red, yellow, and blue which, when intermixed, produce a dark, dull tone.



## TERTIARY COLORS

These are also called “intermediate colors” and are yellow-orange, red-orange, blue-green, yellow-green, blue-violet and red-violet. In the illustration on the right, the tertiary colors at the top and bottom of the grid surround the three secondary colors that they are related to.



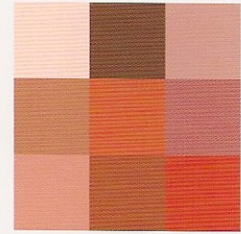
## TINT

A tint results when any color is mixed with white.



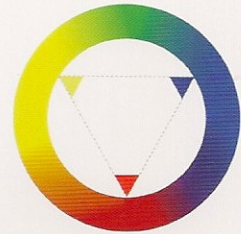
## TONES

Tone is a somewhat generic term that can refer to any color but a prismatic color. All muted colors and chromatic grays are tones, as are all tints and shades.



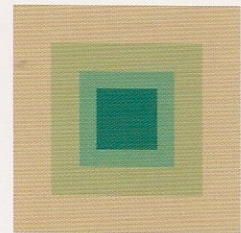
## TRIADIC

Triadic color relationships are comprised of any three equidistant hues on the color wheel. The two named triads are the primary and secondary triads. The illustration on the right shows the location of the primary triad on the hue spectrum.



## VALUE

Value is the relative quality of lightness or darkness in a color. It is the only structural factor of color visible in achromatic settings, as in black and white photography. Value means luminosity. In the image on the right, the colors become progressively darker in value (and less luminous) as they approach the center of the square.



## VALUE CONTINUUM

The value continuum is a graphic representation which suggests the infinite values that exist between black and white.

