

## The Seven Contrasts of Color

There are seven types of color contrast. They are as follows:

1. Contrast of hue
2. Light - dark contrast
3. Cold - warm contrast
4. Complementary contrast
5. Simultaneous contrast
6. Contrast of saturation
7. Contrast of extension

When we speak of contrast as it pertains to color we mean the distinct differences that can be perceived between two compared effects, in other words, diametrical or polar opposites.

1. Contrast of hue: This is the simplest of the seven contrasts. It is based on undiluted colors in their most intense luminosity. Examples are yellow, red, blue; orange, green, violet. Just as black and white is the extreme of light - dark contrast, so yellow, red, blue is the extreme instance of contrast of hue. At least three clearly differentiated hues are required. Keep in mind that the intensity of contrast of hue is diminished as the colors are removed from the three primaries. If black or white are introduced, they will have a strong effect on the related colors (hues). White weakens the luminosity of adjacent hues and darkens them. Black causes them to appear lighter.

2. Light - dark contrast: The strongest expression of light and dark contrast are the colors black and white. The effects of black and white are in all respects opposite. There is only one maximal black and one maximal white, but an indefinitely large number of light and dark grays forming a continuous scale between white and black. The number of distinguishable shades of grey depends on the sensitivity of the eye of the observer, and can be increased through practice. Grey can be mixed from black and white or from yellow, red, blue and

white, or from any pair of complementary colors (chromatic grays).

3. Cold - warm contrast: The strongest examples of cold - warm contrast are blue - green versus red - orange. Generally the colors yellow, yellow-orange, red-orange, red and red-violet are considered warm while yellow-green, green, blue-green, blue, blue-violet and violet are considered cold, but this classification may be misleading. Although blue-green and red-orange (the cold and warm poles) are always considered cold and warm respectively, the intermediate colors on the color wheel maybe either cold or warm if contrasted with warmer or colder tones. Other terms used to describe this effect are:

shadow	sun
transparent	opaque
sedative	stimulant
rare	dense
airy	earthy
far	near
light	heavy
wet	dry

In landscapes distance and distant objects always seem colder in color. Warm colors will bring objects forward. When emphasizing composition based on warm - cold contrast it is best to avoid other forms of contrast.

4. Complementary contrast: We call two colors complementary if their pigments mixed together yield a neutral gray-black. Two such colors make a strange pair. They are opposite but they require each other. They excite each other to maximum vividness when adjacent and they annihilate each other (to gray-black) when mixed – like fire and water. Complimentary colors are always diametrically opposite each other on the color wheel.

For example:

yellow	violet
blue	orange
red	green

Each complimentary pair has its own peculiarities. Yellow - violet for example represents the extreme in light - dark contrast. Red-orange, blue-green is extreme in cold - warm contrast. Red and green have the same brilliance. Complementary colors can be used to make beautiful chromatic grays.

5. Simultaneous contrast: Simultaneous contrast results from the fact that for any given color the eye simultaneously requires the complementary color and generates it spontaneously if it is not already present. The simultaneously generated complimentary occurs as a sensation in the eye of the beholder and is not objectively present.

6. Contrast of saturation: Saturation relates to the degree of purity of a color. Contrast of saturation is the contrast between pure, intense colors and dull, diluted colors. Colors may be diluted in four different ways with very different results.

- A pure color may be diluted with white.
- Color may be diluted with black.
- A saturated color can be diluted by mixing it with gray (white and black).
- Pure colors can be diluted by adding mixtures of the corresponding colors.

7. Contrast of extension: Extension is the contrast between much and little and between large and small.