

Media and techniques.

Notes on colour theory.

Introduction

Applying colour without a little knowledge and forethought is frustrating and can sometimes show in artwork. The term, 'a good use of colour', for the most part refers to work whose calculated use of colour is either purposefully harmonious or discordant. Poor use of colour can leave an impression of indifference. The following principles are given to provide you with basic objective colour foundations.

Basic Principles

There are three primary colours: Yellow, Red and Blue - These cannot be mixed from other colours
There are also three secondary colours: Violet, Green and Orange - These can be mixed from primaries
Colours that are composed of a mixture of primary and secondary colours are known as Tertiary colours.
There are many.

Colours as Paints

Generally, two red paints, two blue paints and two yellow paints are needed to create a full spectrum of colour such as that displayed on a colour wheel:

An Orange-Red such as **Cadmium Red** and a Blue-Red such as **Alizarin Crimson**

A Red-Blue such as a **Ultramarine Blue** and a Green-Blue such as a **Cerulean Blue**

A Red-Yellow such as **Cadmium Yellow** and **Lemon Yellow** which lacks red pigment.

There are three main paint groups:

- | | | | |
|------|---------------------|---|---|
| i) | Traditional colours | - | cobalts, cadmiums, titanium, ultramarines |
| ii) | Earth colours | - | ochres, siennas, umbers, Mars colours |
| iii) | Modern colours | - | phthalocyanines, quinacridones, perylenes, pyrroles |

Basic Colour Terms

Hue	Actual Colour
Tint or Chroma or Saturation	Strength, purity or intensity of colour
Shade or Contrast or Value	Tonal shades of colour from light to dark or black

Interpretations of Colour

- | | |
|-----------------|---|
| Impressional: | Purely visual representation of colour i.e. <i>Actual colour of Poppy is Red</i> |
| Expressional: | Emotional/ Abstract representation of colour i.e. <i>Red representing Anger or Lust</i> |
| Constructional: | Symbolic representation of colour i.e. <i>Red as a symbol for Danger</i> |

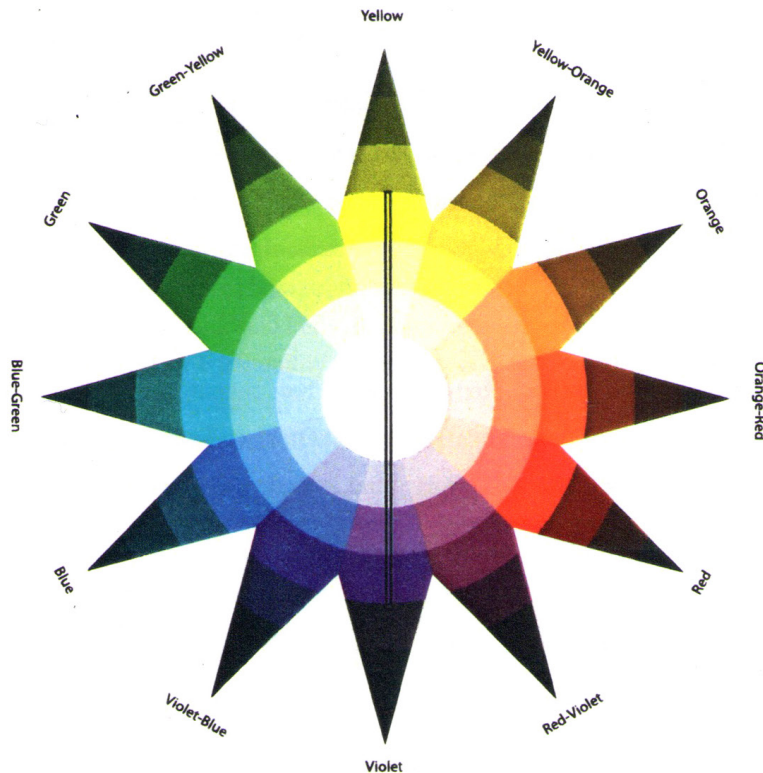
Colour Contrasts

There are various types of contrasts:
i.e. Contrast of hue, contrast of tone, contrast of saturation, contrast of cold and warm, and simultaneous contrast.

Simultaneous Contrast

Simultaneous contrast occurs when opposing colors are placed in close proximity to each other.

The greatest opposition of colours is between two colours that are opposite and at equal distance from each other on the colour wheel. These are called **Complimentary Colours**

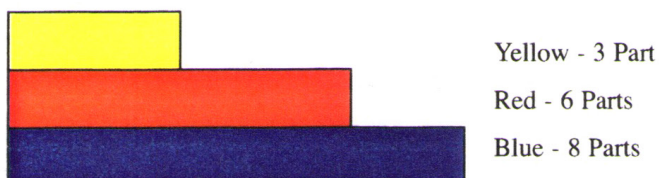


Complimentary Colours

As an example, Red's complimentary colour is Green. Red is a primary; Green is a secondary. Green is made up of everything that isn't red. i.e. Blue and Yellow, hence it's exact opposite and complement.

Weighting of Colours

Balancing complimentary colours isn't a simple case of blocking equally sized areas of two opposing hues. Because yellow is a much lighter colour tonally than red or blue, generally less yellow is needed for a harmonious balance with its complimentary. As a guide here is the quantitative relationship of the primary colours, from which secondary and tertiary relationships can be estimated. Knowing this rule, allows you to consciously tip or hold the colour balance of an image.



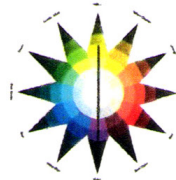
Neutral Greys

When complimentary colours are mixed together in correct proportion, they create a neutral grey. This is handy to know when you want to tone down a colour without using black. The eye's after-image of red is green. Neutral grey is produced when the correct green and red are mixed, for example **Crimson** and **Viridian**. Interestingly, there is no complimentary after-image of neutral grey, which is the eye's natural state of harmony.

Colour Chords and Combinations

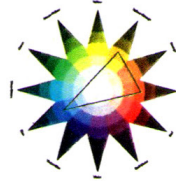
Colour chords are colours arranged of two or three or more complimentary.

Dyad chords (Complimentary) are consist of two colours diametrically opposite each other on the colour wheel.

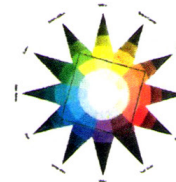


Triad Chords are made up by splitting a primary colour's complimentary colour into its pre-mixed colour. For example, blue and orange becomes blue, and an equal mix of red and yellow, giving three colours.

This can be better shown on the colour wheel with an equilateral or isosceles triangle point to any three components



Tetrad Chords are made up to two pairs of complimentary opposite each other on the colour wheel..This can be better shown using a square with each corner pointing to two pairs of complimentary colours



Analogous Colour Chords

Analogue colours are composed of a series similar colours in a painting. For example, a combination of blue-greens, greens and green-blues are analogous.

Colour as Meaning

Reds

Red is the colour of fire and blood, so it is associated with energy, war, danger, strength, power, determination as well as passion, desire and love. Red is a very emotionally intense colour. It enhances human metabolism, increases respiration rate, and raise blood pressure. It has very high visibility, which is why stop signs, stoplights and fire equipment are usually painted red. Red is used to indicate courage.

Light red represents joy, sexuality, passion, sensitivity and love. Pink signifies romance, love, and friendship. It denotes feminine qualities and passiveness. Dark red is associated with vigour, will power, rage, anger, leadership, courage, longing, malice, and wrath.

Brown suggest stability and denotes masculine qualities.

Reddish-brown is associated with harvest and Autumn.

Oranges

Orange combines the energy of red and the happiness of yellow. It is associated with joy, sunshine, and the tropics. Orange represents enthusiasm, fascination, happiness, creativity, determination, attraction, success, encouragement and stimulation. To the human eye, orange is a very hot colour, so it gives the sensation of heat. Nevertheless, orange is not as aggressive as red. Orange increases oxygen supply to the brain, produces an invigorating effect and stimulates mental activity. It is highly accepted among young people. As a citrus colour, orange is associated with healthy food and stimulates the appetite. Orange is the colour of harvest and Autumn. Orange is symbolic of strength and endurance.

Orange has very high visibility, so you can use it to catch attention and highlight the most important elements. Dark orange can mean deceit and distrust. Red-Orange corresponds to desire, sexual passion, pleasure, domination, aggression, and thirst for action. Gold evokes the feeling of prestige. The meaning of gold is illumination, wisdom, and wealth. Gold often symbolises high quality.

Yellows

Yellow is the colour of sunshine. It's associated with joy, happiness, intellect and energy. Dull yellow represents caution, decay, sickness and jealousy.

Light yellow is associated with intellect, freshness and joy.

Greens

Green is the colour of nature. It symbolises growth, harmony, freshness and fertility. Green has strong emotional correspondence with safety. Dark green is also commonly associated with money. Green has great healing power. It is the most restful colour for the human eye; it can improve vision. Green suggests stability and endurance. Sometimes green denotes lack of experience. Green indicates growth and hope. Green, as opposed to red, means safety; it is the colour of free passage in road traffic.

Dark green is associated with ambition, greed and jealousy.

Yellow-green can indicate sickness, cowardice, discord and jealousy.

Aqua is associated with emotional healing and protection.

Olive green is the traditional colour of peace.

Blues

Blue is the colour of the sky and the sea. It is often associated with depth and stability. It symbolises trust, loyalty, wisdom, confidence, intelligence, faith, truth, and heaven.

Blue is considered beneficial to the mind and body. It slows human metabolism and produces a calming effect. Blue is strongly associated with tranquility and calmness. Blue is used to symbolise piety and sincerity.

Light Blue is associated with health, healing, tranquility, understanding and softness.

Dark Blue represents knowledge, power, integrity and seriousness.

Purples

Purple combines the stability of blue and the energy of red. Purple is associated with royalty. It symbolises power, nobility, luxury and ambition. It conveys wealth and extravagance. Purple is associated with wisdom, dignity, independence, creativity, mystery and magic.

Purple is a very rare colour in nature; some people consider it to be artificial.

Dark purple evokes gloom and sad feelings. It can cause frustration.

White

White is associated with light, goodness, innocence, purity, and virginity. It is considered to be the colour of perfection. White means safety, purity and cleanliness. As opposed to black, white usually has a positive connotation. White can represent a successful beginning.

Black

Black is associated with power, elegance, formality, death, evil and mystery. Black is a mysterious colour associated with fear and the unknown (black holes). It usually has a negative connotation (black list, black humour, black death.) Black denotes strength and authority; it is considered to be a very formal, elegant and prestigious colour.

Black gives the feeling of perspective and depth, but a black background diminishes readability. A black suit or dress can make you look thinner. When designing for a gallery or art or photography, you can use a black or grey background to make the other colour stand out. Black contrasts well with bright colour. Combined with red or orange- other powerful colours- black gives a very aggressive colour scheme.