



UNIVERSITY
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Colour Theory

Advanced Programming

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Colour theory

- ♦ Colour psychology – be wary
 - ♦ Individuals have unique interpretations
 - ♦ So do different cultures
 - ♦ No universals
- ♦ Colours elicit emotional responses
 - ♦ and the production of some chemicals in the body.
- ♦ Colours are culturally related to aspects of our lives
 - ♦ Birth, union, death, power.
 - ♦ White (not a colour as such) for birth/union in western cultures, in China white is for death.

Base colours

As you look at each of the following colours jot down what images, thoughts or emotions they trigger.

Red

Orange

Yellow

Green

Blue

Purple

White

Black

Emotional Colours

- ◆ **Red**: from passion(bright) to indulgence (dark), reputation for stimulation.
- ◆ **Orange**: active, energetic, stimulating and highly visible, less formal than red.
- ◆ **Yellow**: active, highly visible, happiness, can be over powering.
- ◆ **Green**: nature, soothing, growth and freshness, the colour of money
- ◆ **Blue**: openness, calming, not a food stimulant, can be melancholy
- ◆ **Purple**: royalty, prestigious, wealth balances with red and blue, “least used in web sites” (McNeil, 2008 cited in Beaird and George,2014).
- ◆ **White**: clean, perfection, purity.
- ◆ **Black**: elegance, power, strength.

Temperature

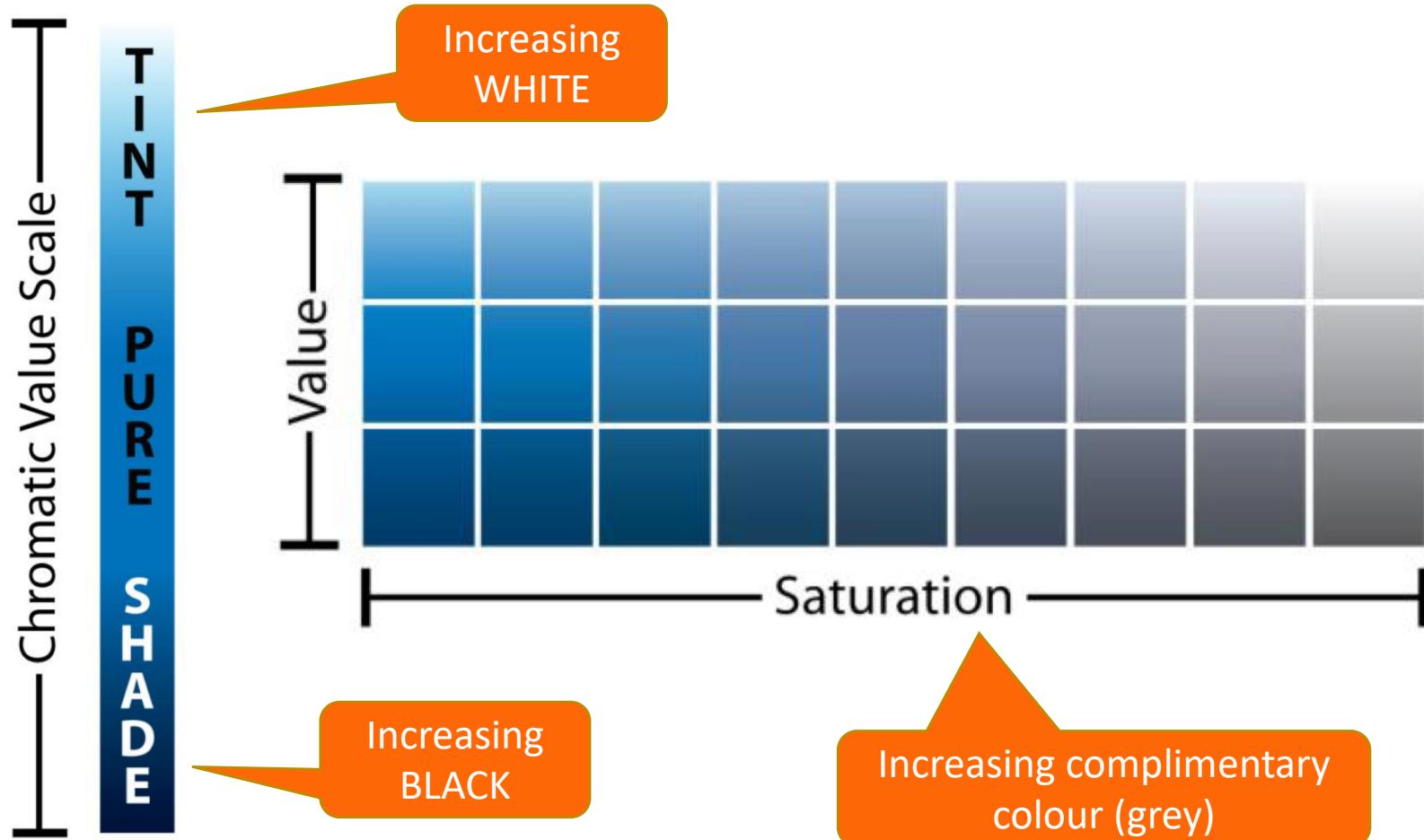


Warm Colors



Cool Colors

Tint, shade, saturation



Tint, shade, saturation

- ◆ Tint
 - ◆ Daylight, springtime, sunrise and childhood (pastel colours)
- ◆ Shade
 - ◆ Night, winter, autumn, dusk, adult, sophisticated
- ◆ Saturation/Intensity
 - ◆ Pure/Bright = intensity, excitement, stand out
 - ◆ Muted, meditative, dreamy, reduce tension.

Which is stronger?



RGB and CMYK

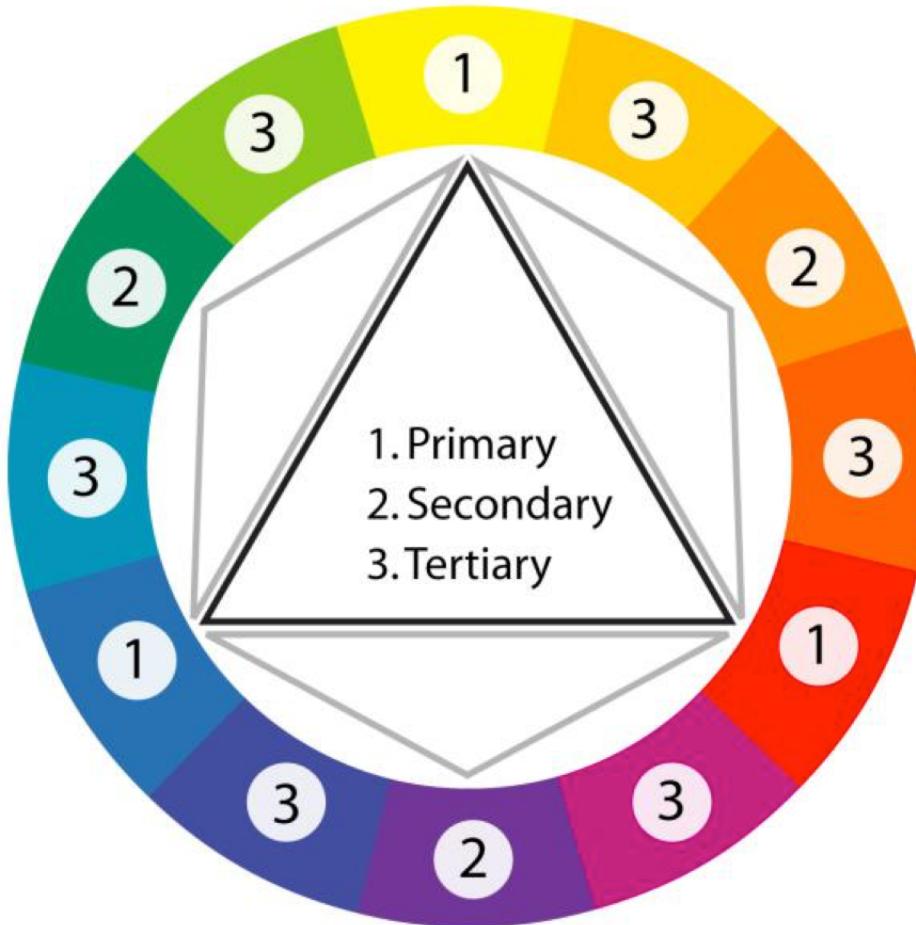


Additive (Red, Green & Blue)

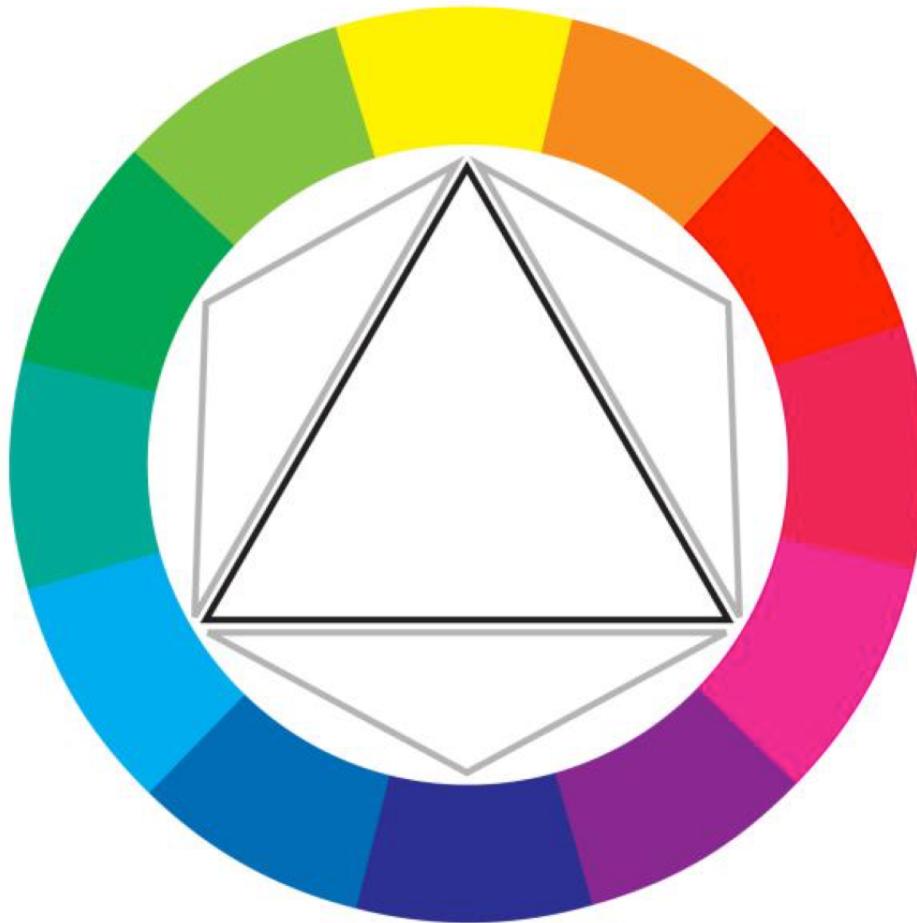


Subtractive (Cyan, Magenta, yellow & Black)

RGB Colour Wheel



CMYK Colour Wheel



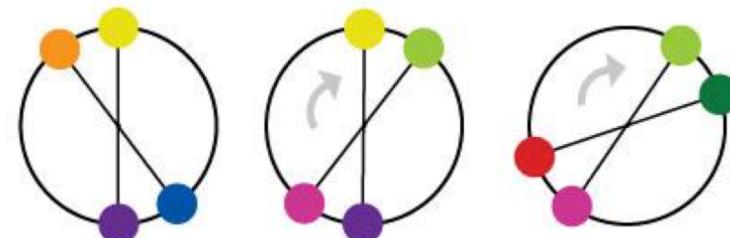
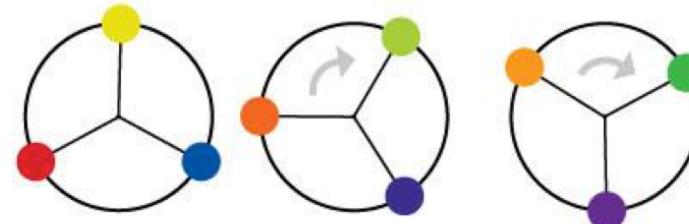
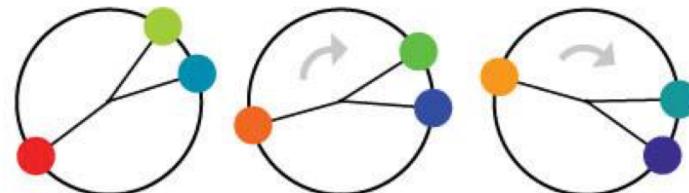
Colour Schemes

- ◆ Monochromatic
 - ◆ Single base colour, with tints and shades
- ◆ Analogous
 - ◆ Adjacent on the colour wheel
 - ◆ A slice one/third is big enough
- ◆ Complementary
 - ◆ Colours opposite on the colour wheel
 - ◆ Issue of vibration, “simultaneous contrast”

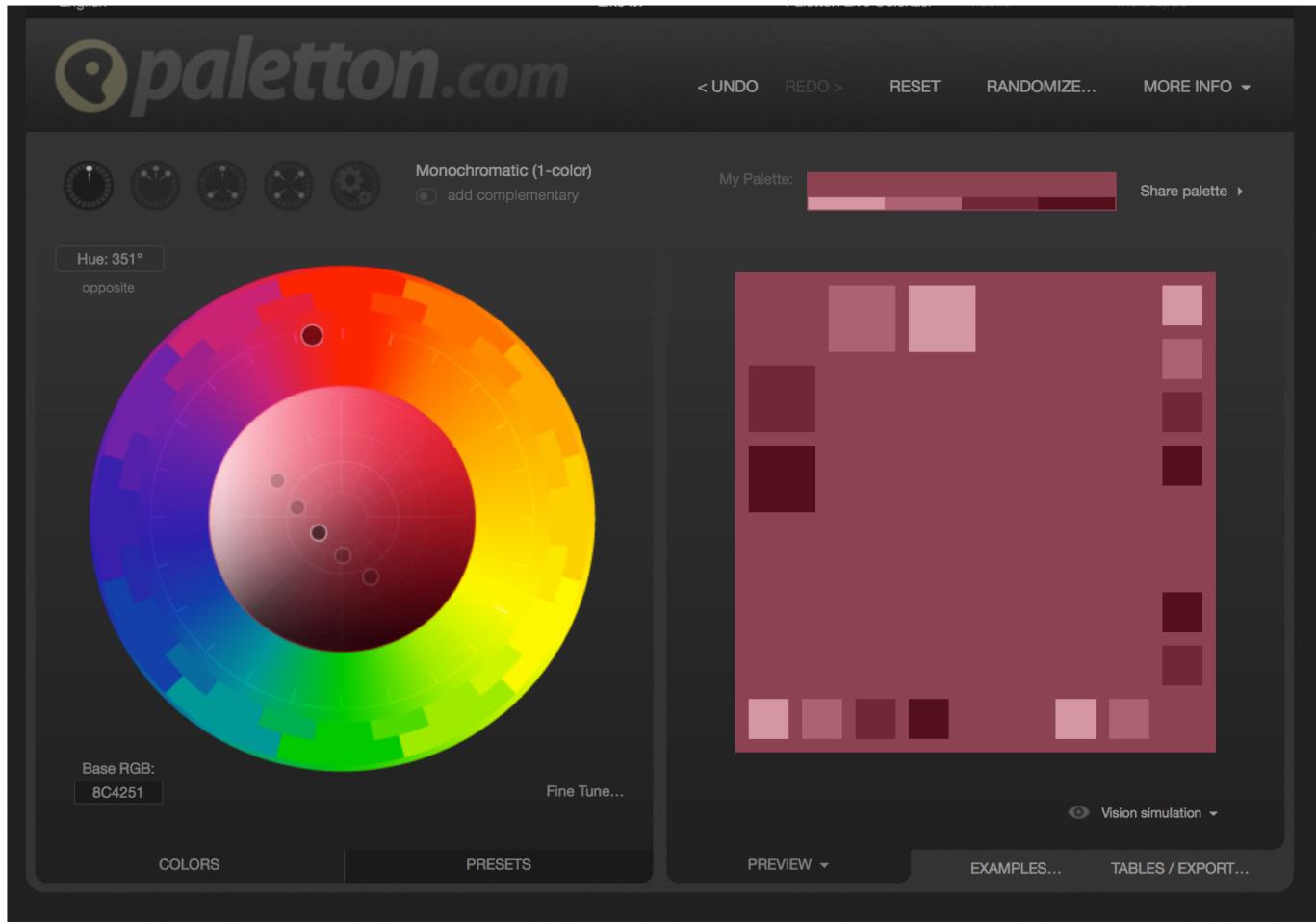
vibrating Text!

Colour Schemes

- ◆ Split Complementary
 - ◆ Two adjacent colours to bases compliment.
- ◆ Triadic
 - ◆ The thirds around the wheel
- ◆ Tetradic (double complementary)
 - ◆ Pairs of compliments



Paletton.com



Recap

- ◆ An initial understanding of the meanings and cultural associations that colour generates in individuals
- ◆ An awareness that some colours can generate unpleasant and uncomfortable feelings and eye strain
- ◆ Introduction to:
 - ◆ Tints
 - ◆ Shades
 - ◆ And saturation
- ◆ Introduction to how the colour wheel can be used to create pleasing colour combinations
 - ◆ Monochromatic
 - ◆ Analogous
 - ◆ Complementary effects
 - ◆ Of which there are a number depending on how many colours you want to combine

Thank you

Advance Programming
Colour Theory

References

- ◆ Baird and George, (2014) The principles of beautiful web design. Sitepoint.

Resources:

- ◆ Paletton.com – interactive colour picker based on colour theory