

2.744



David Wallace

drwallac@mit.edu

Color



Woodie Flowers

flowers@mit.edu



Charles Dumont

dumont@mit.edu

Jacob Wronski

wronski@mit.edu

Color

The second part of form

Color mixing

Color dimensions

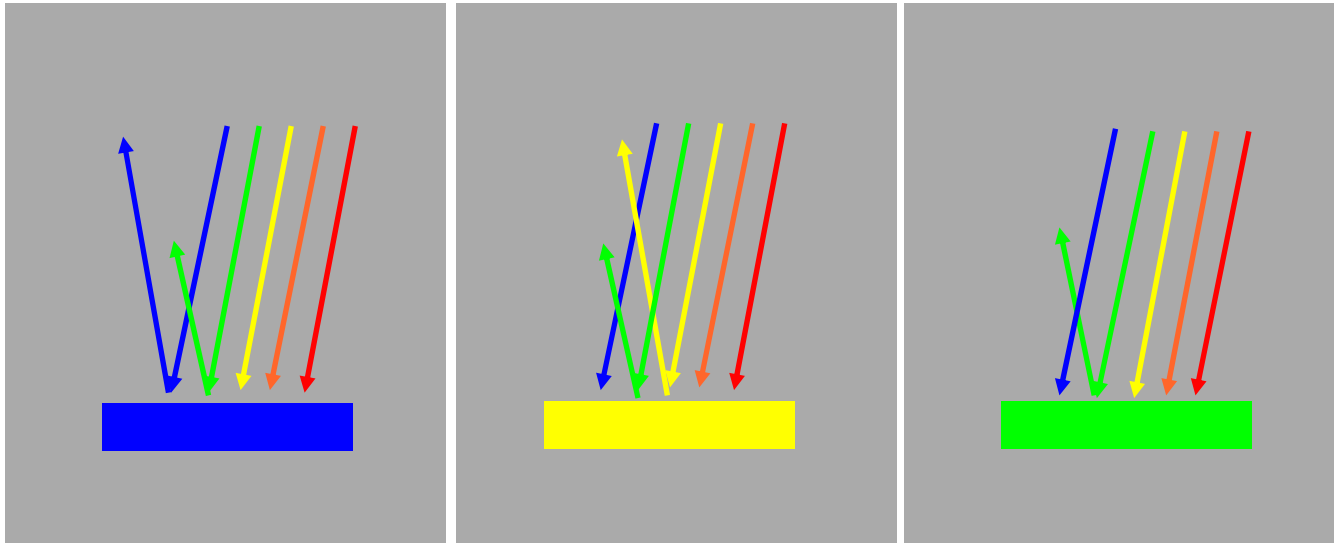
Color palettes

Emotion response to color

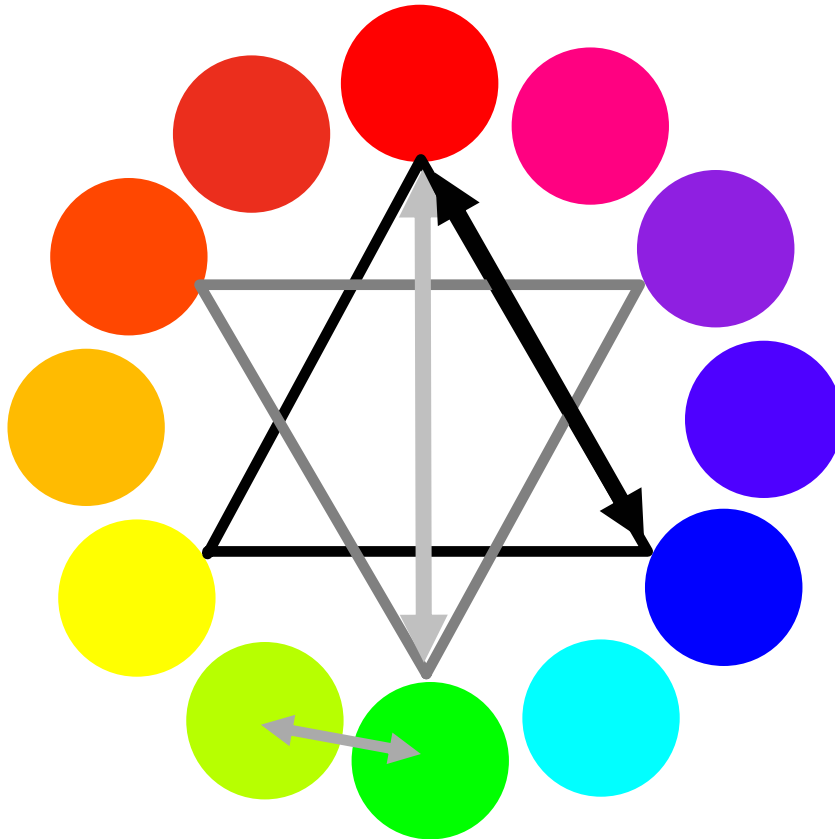
Color selection procedure

Subtractive Color

Mixing paints



Color Wheel



Primary colors

Secondary colors

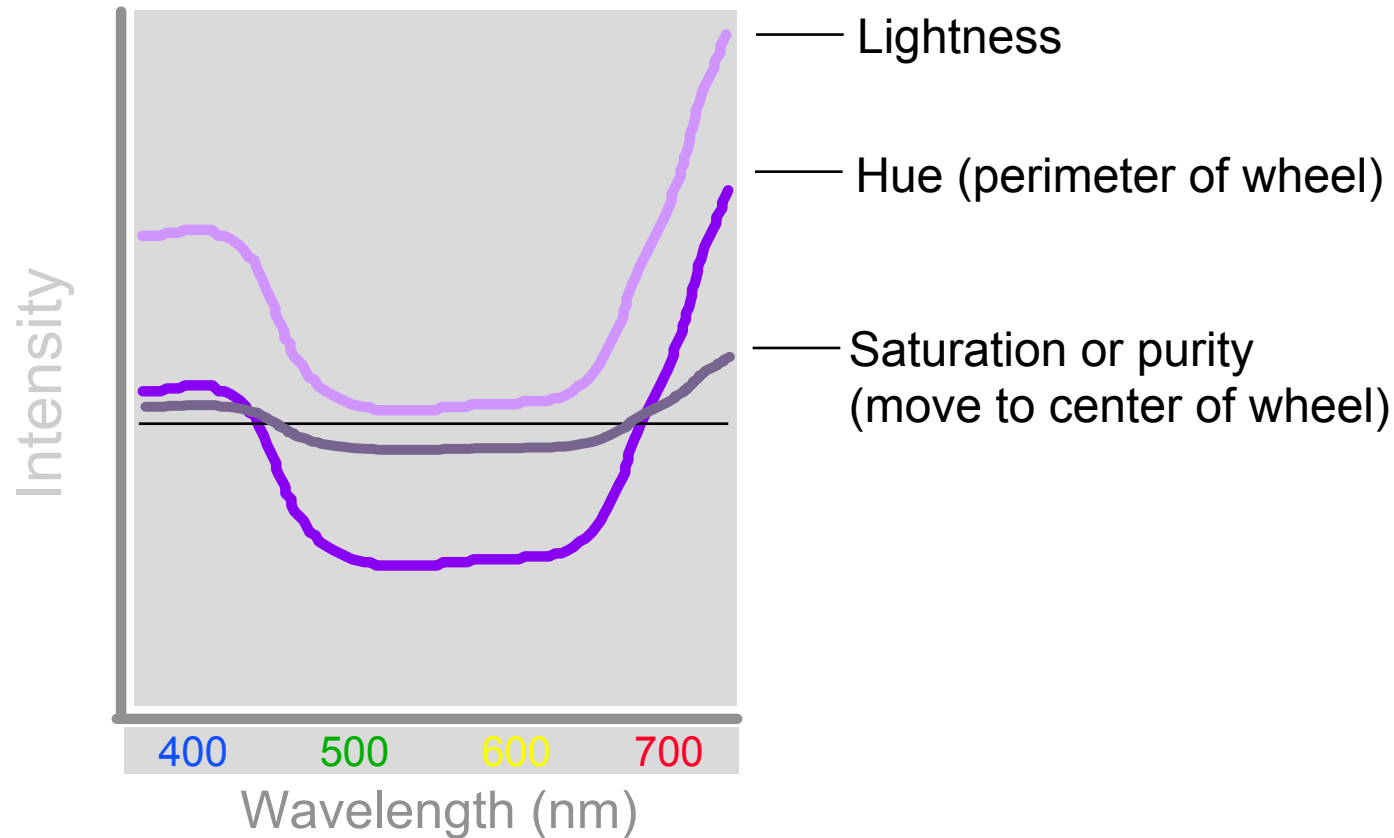
Complementary colors

Contrasting colors

Similar colors

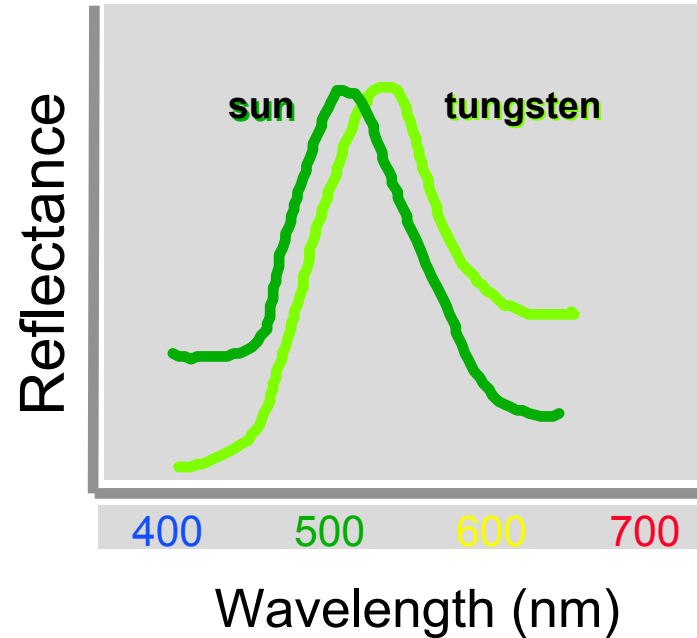
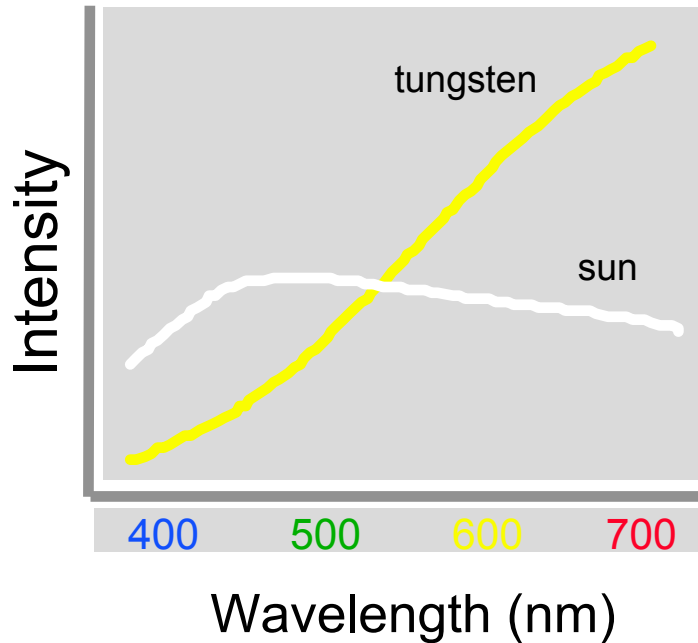
Color Dimensions

Hue, saturation and lightness



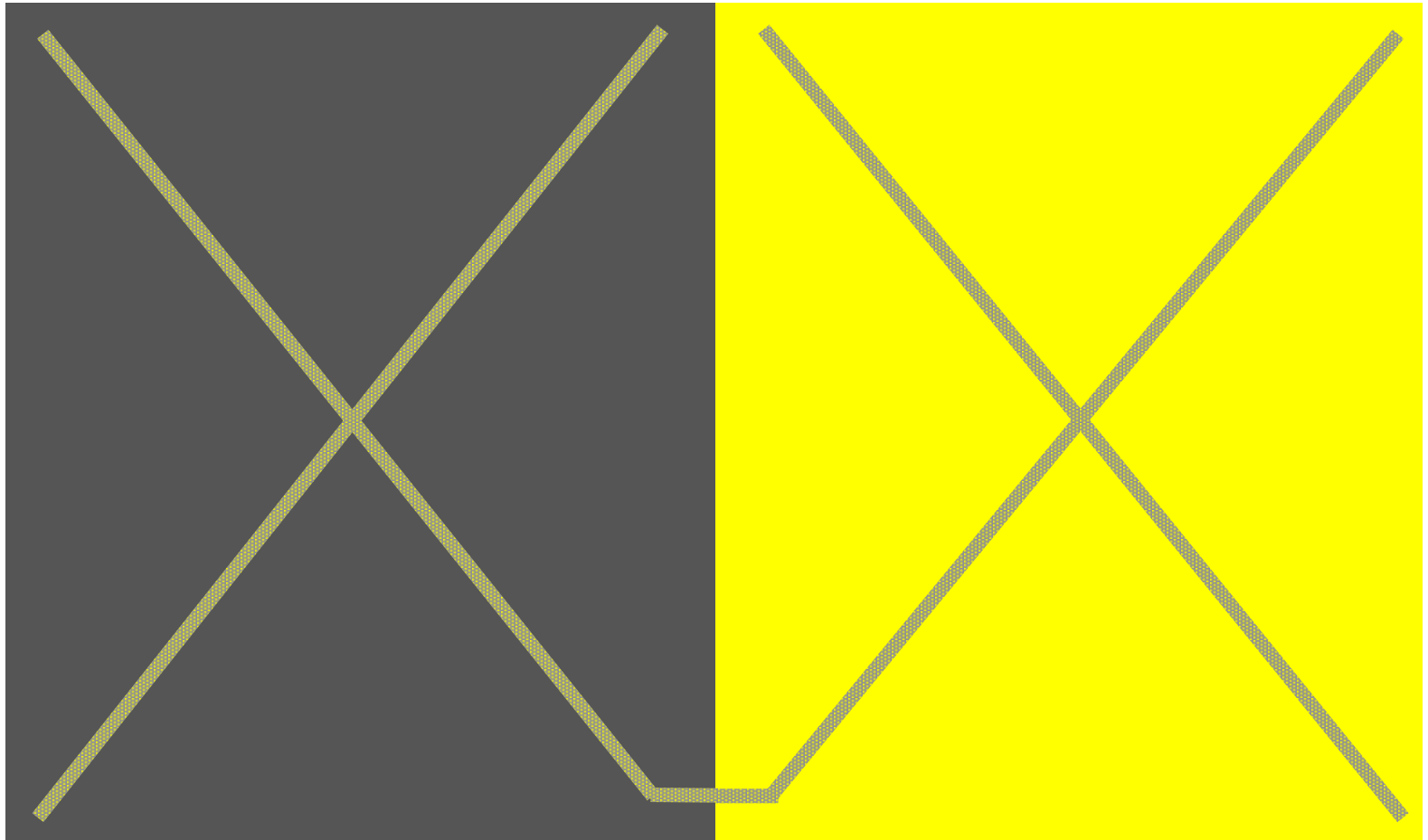
Light Source

Important effect on object color



Effect of Context

Simultaneous contrast



Color Blindness

An important design consideration

Monochromatism

0.001% of population

Dichromatism

Protanopia (can't see red/green)

1% males, 0.02% females

Dueteranopia (also can't see red/green)

1% males, 0.01% females

Tritanopia (can't see blue yellow)

0.002% males. 0.001% females

Types of Palettes

Creating color combinations

one point scheme

contrast scheme

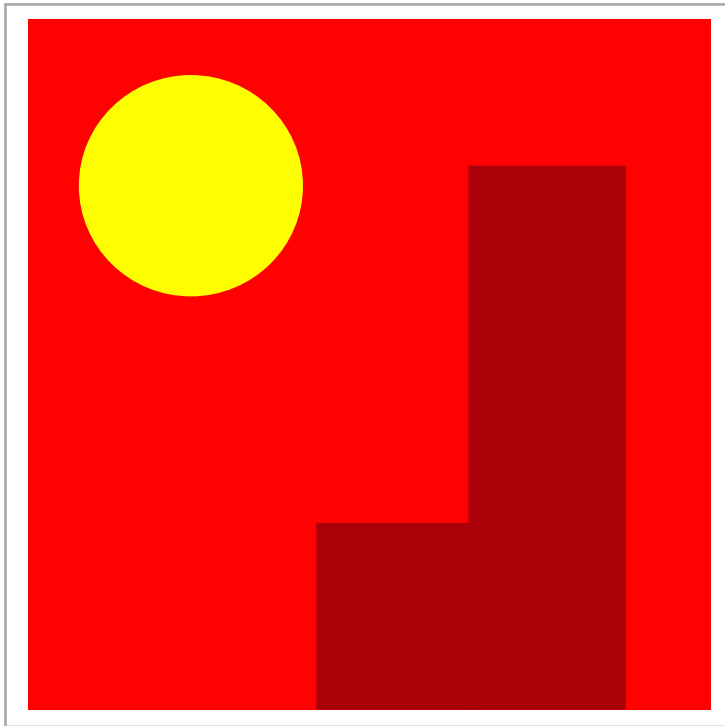
similar scheme

gradation scheme

separation scheme

One Point Scheme

Very common in products



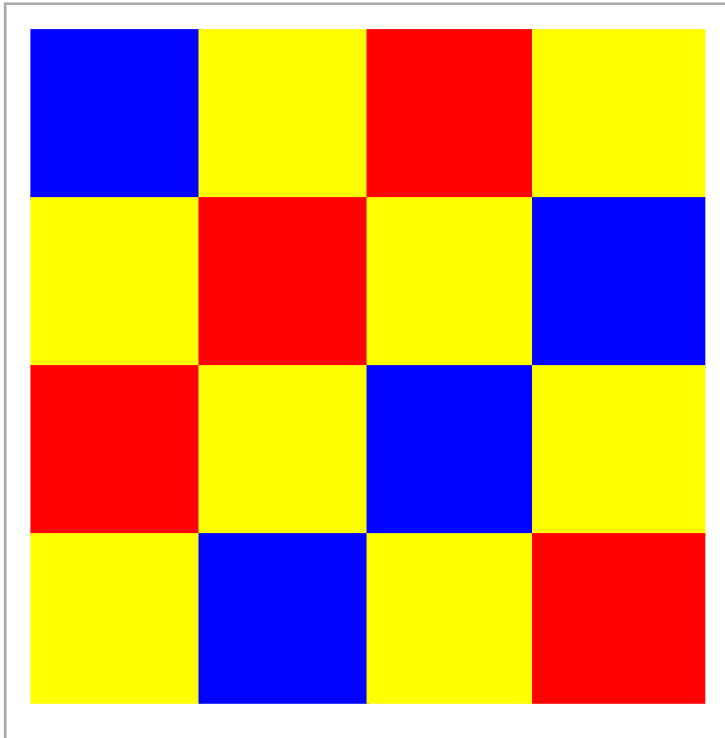
Contrasting hue

Background and focus

Vivid focus

Commonly used in products

Contrast Scheme



Contrasting hue, saturation or lightness

Creates strong patterns

One point is subset

Example using hue

Often used for children's goods

Similar Scheme

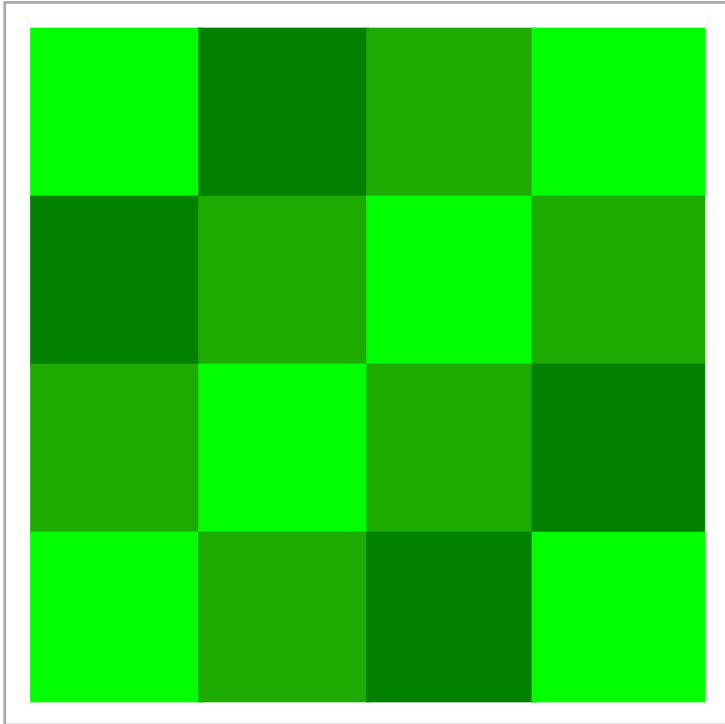


Close hue, saturation or lightness

Quiet effect

Example using similar hues

Gradation Scheme

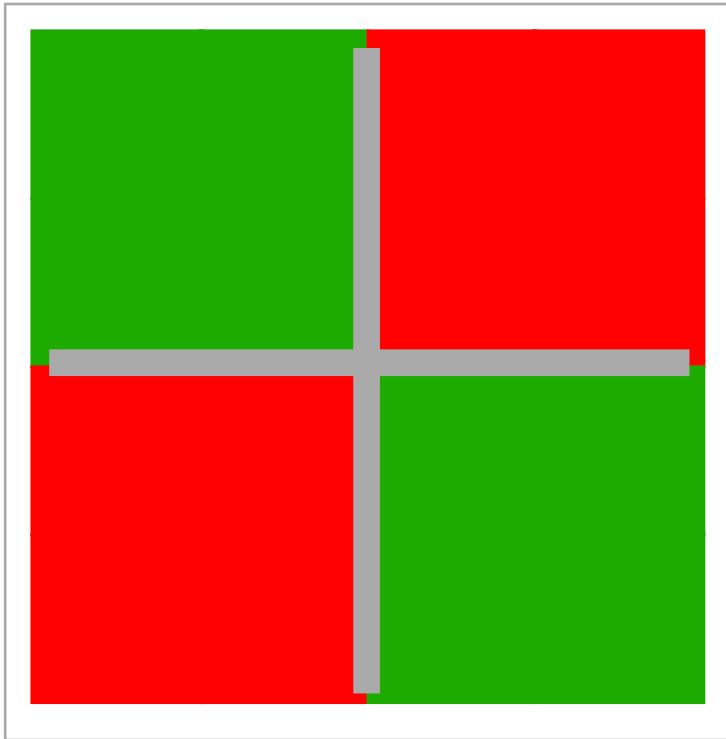


Rhythmic and progressive arrangement of hues or lightness

Subset of similar schemes

Example using lightness

Separation Scheme

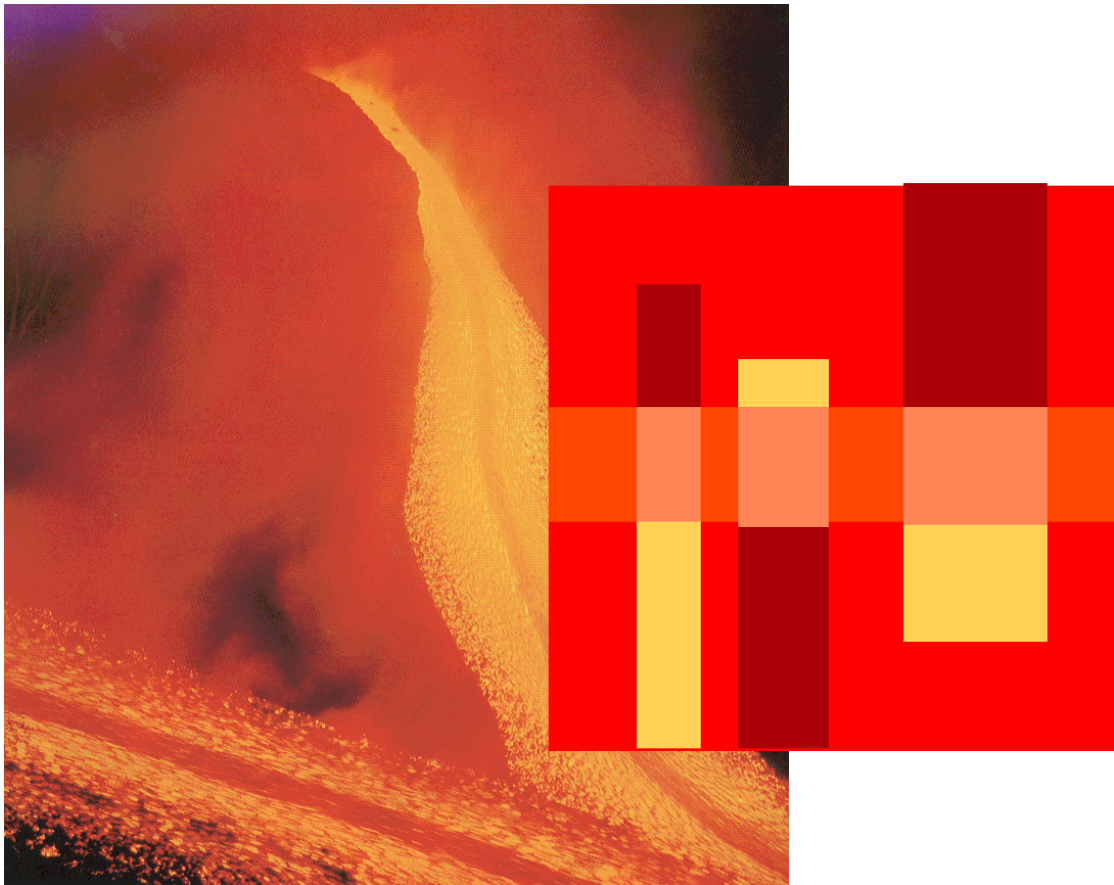


Neutral color between harsh or similar tones

Either accents or tones down differences

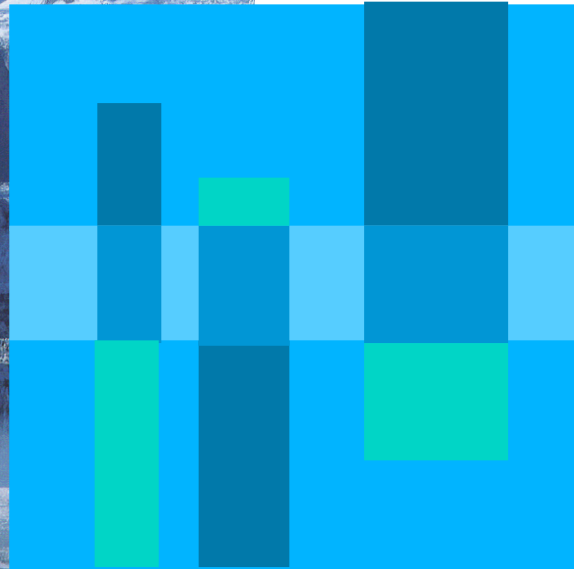
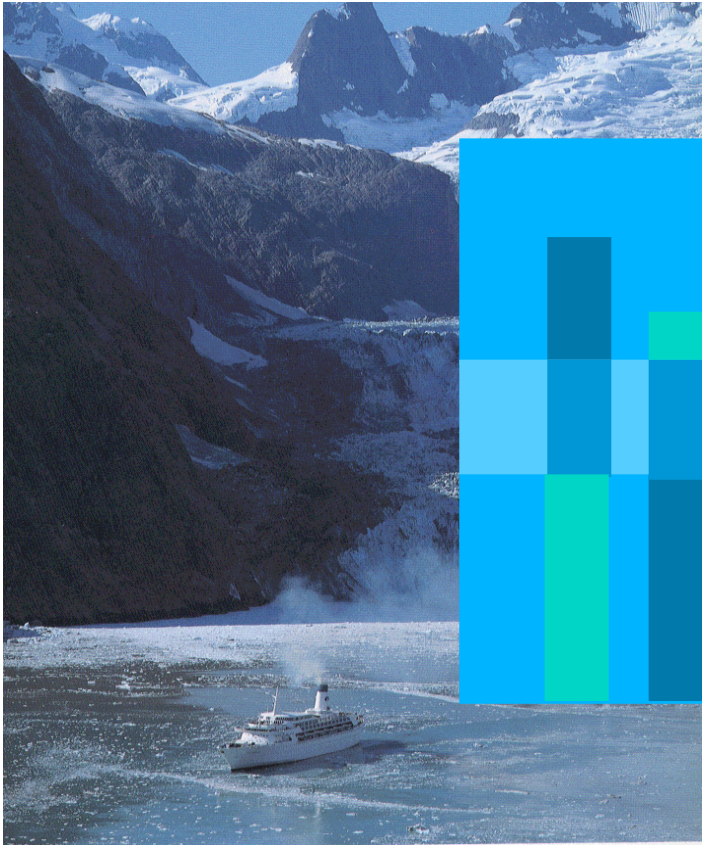
Emotions

Warm



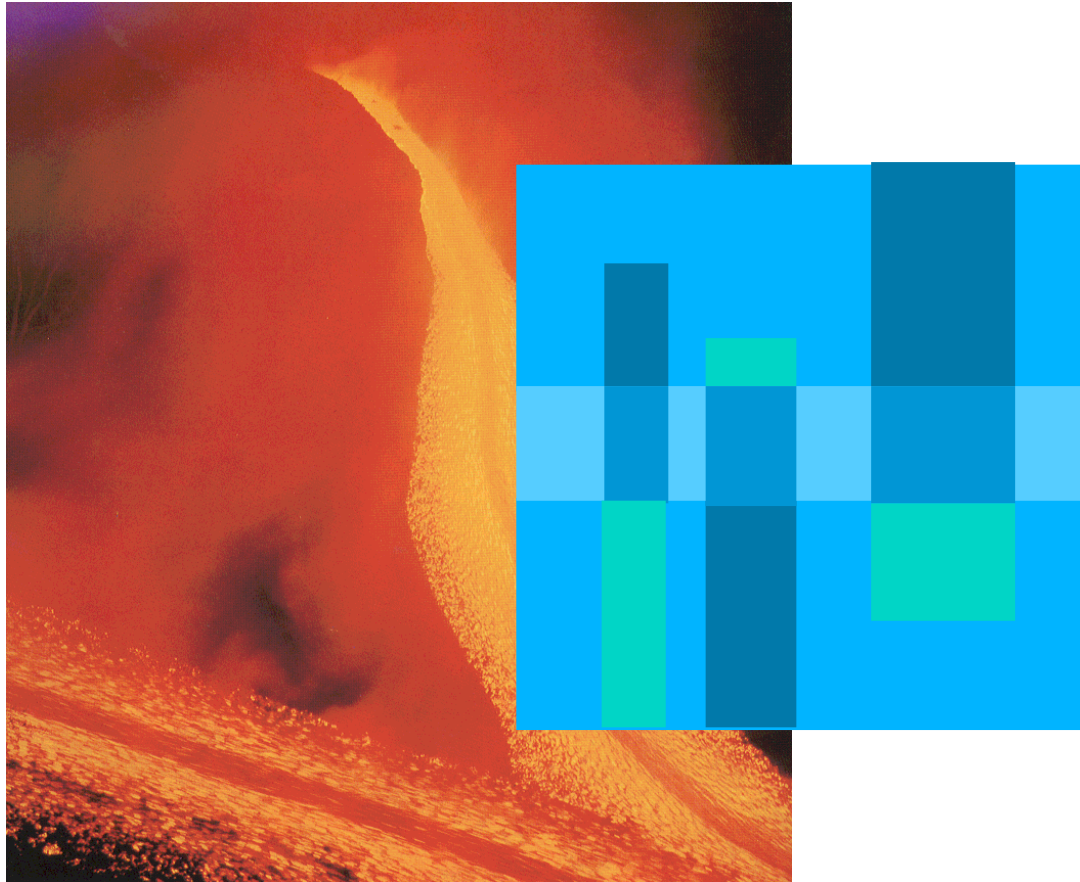
Emotions

Cool



Mixed Emotions

Beware



Emotions

Tranquillity



Cool colors, low contrast, low saturation

WARNING: low saturation can give the impression of cheapness or weakness

Color Selection Procedure

1) Set Color Goals

product image and target market

product use and readability

Color Selection Procedure

2) Decide about warm or cold, lightness

deal with product as a monochrome object

Color Selection Procedure

3) Set background color

largest area of single color

light or low saturation (dull) often used

Color Selection Procedure

4) Choose accents

simplest approach:

choose similar colors of higher saturation

try to balance accents with background

Color selection Procedure

5) Limit your palette

typically no more than 2-3 colors

use saturated colors sparingly