Color Theory I

Color is a property of light.

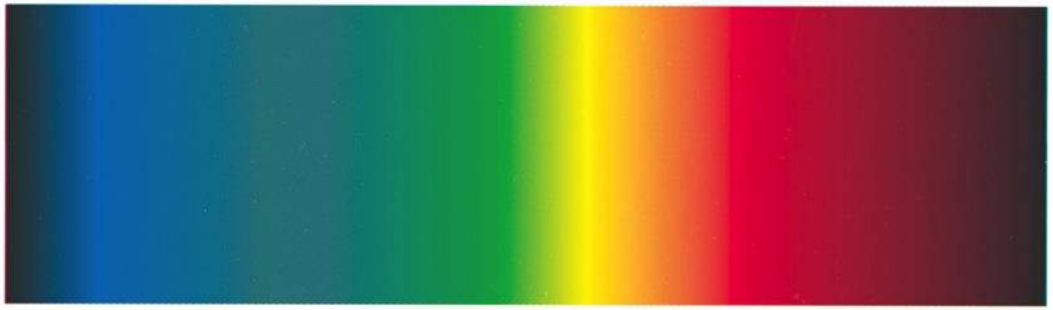
-Objects have no color of their own, they just reflect a particular wavelength from the color spectrum. (For example a blue object absorbs all of the wavelengths, EXCEPT for blue. The remaining wavelengths enter our eyes and this is what we see.)

-Light is made of all colors

-White reflects all the wave lengths of the color spectrum.

-Black absorbs all the wave lengths of the color spectrum.

- The spectrum of colors is created by passing white light through a prism.



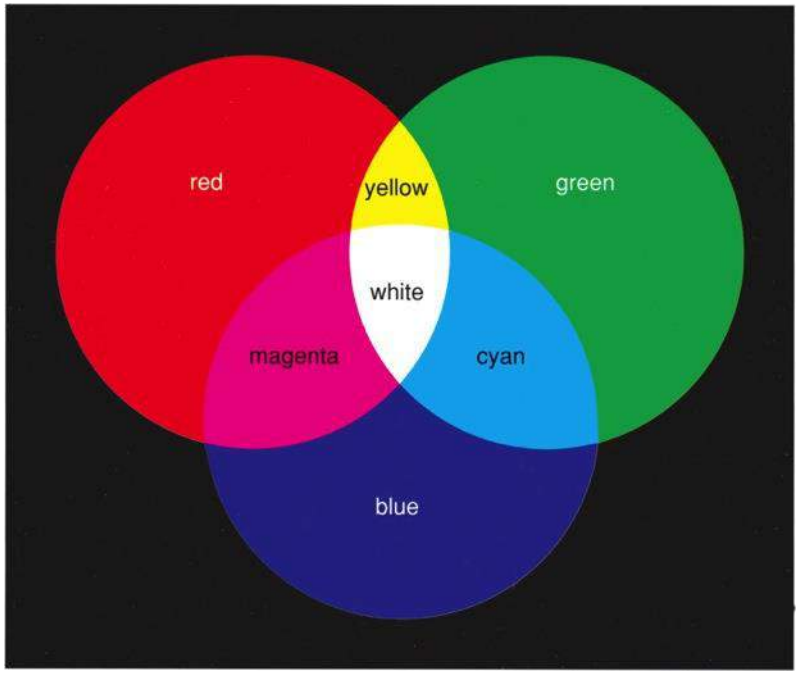
Color Mixing

Additive System – Color is created from projected light. (Computer art, photography, interior design…)

- Colors mix to create white in an additive system.

Subtractive System – Color is created from pigments, (Painting, drawing, etc…)

- ***Color Wheel*** – most common organization of color for the subtractive system



Colors of light mix according to the **additive process**.

Properties of Color:
Hue, Value, & Saturation

1. Hue

Properties of Color: Hue

Hue - The name of the color

- There are not many hues but there are many colors.
- Example: Pink, scarlet, maroon and crimson are colors, but they all have a hue of Red.
- Color sharing the same hue can have many different names. (It's a commercial sales thing.)

The twelve-step color wheel of Johannes Itten.

Color Wheel

The most common organization for the relationship of the basic colors is the 12 step color wheel. (It comes from the early 18th c.)

3 ***Primary Colors:***

- Red
- Blue
- Yellow

3 ***Secondary Colors -*** mixtures of the primary colors.

- Orange
- Green
- Violet

6 ***Tertiary Colors*** - mixtures of a primary and a secondary color.

2. Value

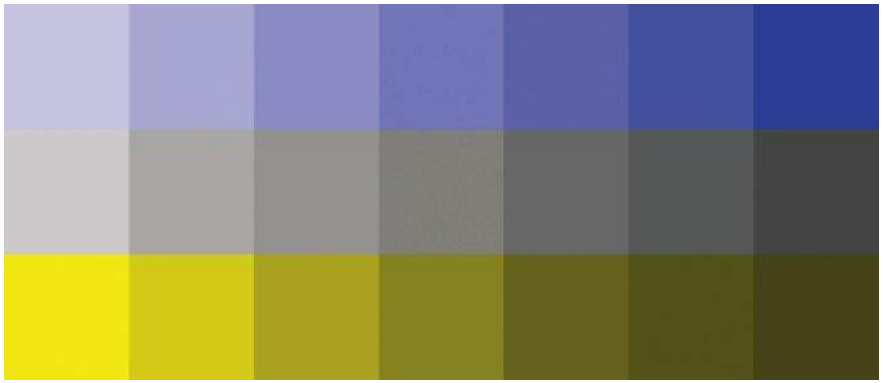
Properties of Color: Value

Value - Lightness or Darkness of a hue
Tint - adding white to a hue
Shade - adding black to a hue

"Most people can distinguish at least 40 tints and shades of any color."

"Normal" Color Value Differ

- "Not all the colors on the color wheel are shown at the same value."

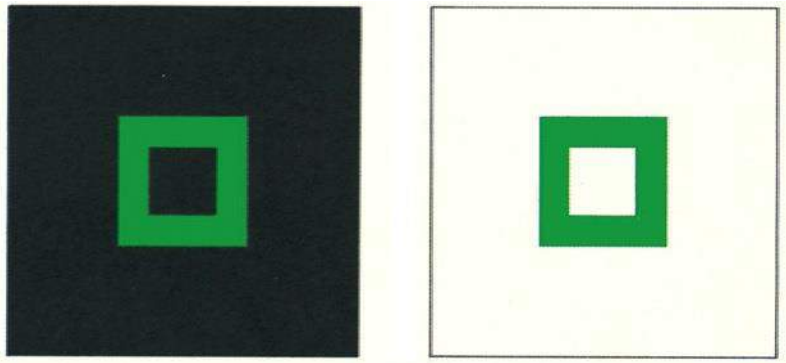


Value scales for blue, gray, and yellow with equal visual steps.

Properties of Color: Value

Changing Color Value

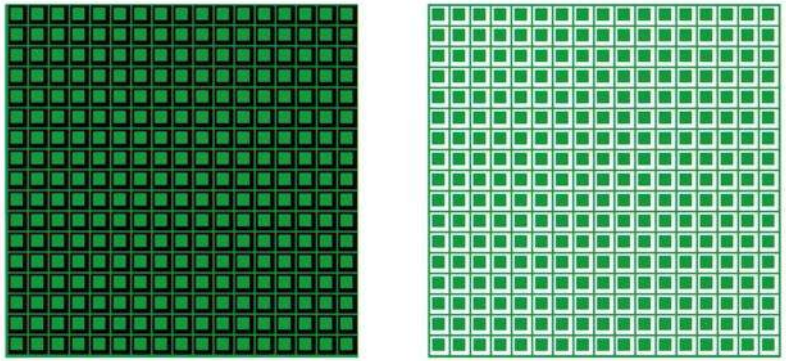
- When working with paint you can thin a color by adding medium.
- You can also alter the value by mixing hues.
- Value is changed by its surroundings.



The same color will appear to change in value, depending upon the surrounding color.

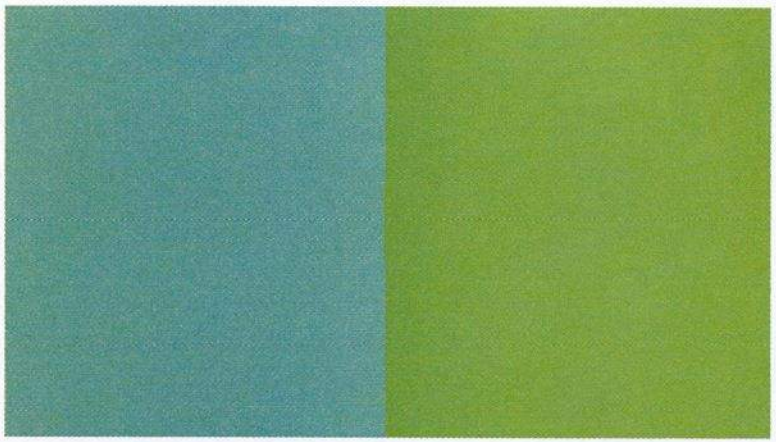
Color Interaction

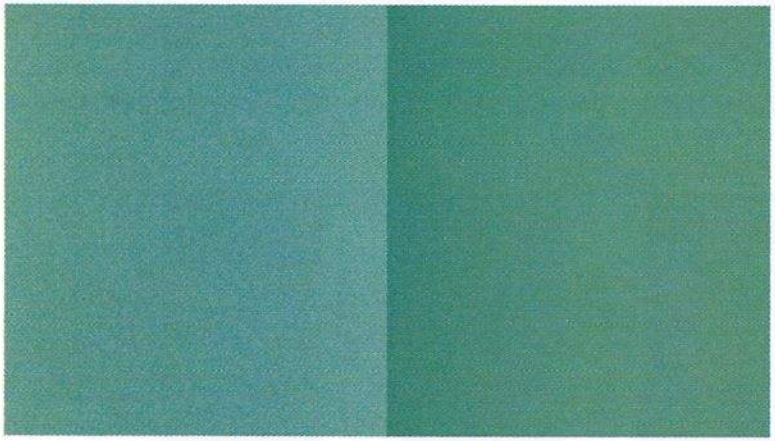
- Colors change with context.
- Amounts and repetition are also critical factors.

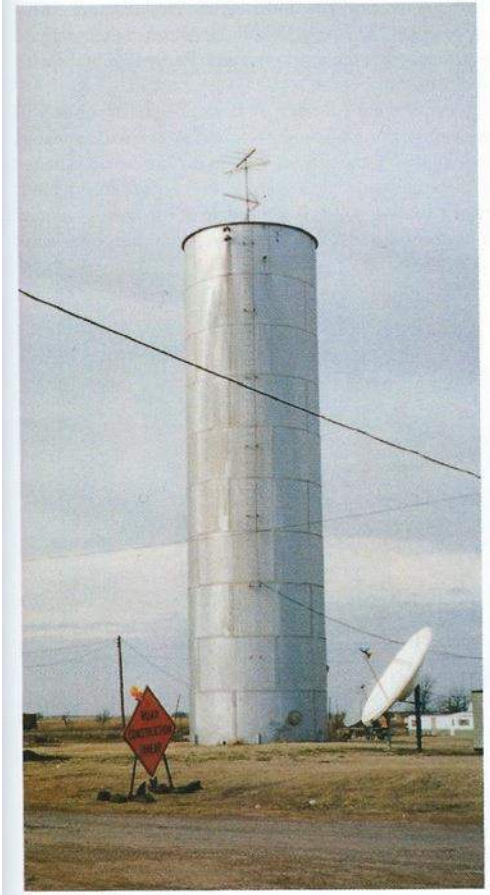


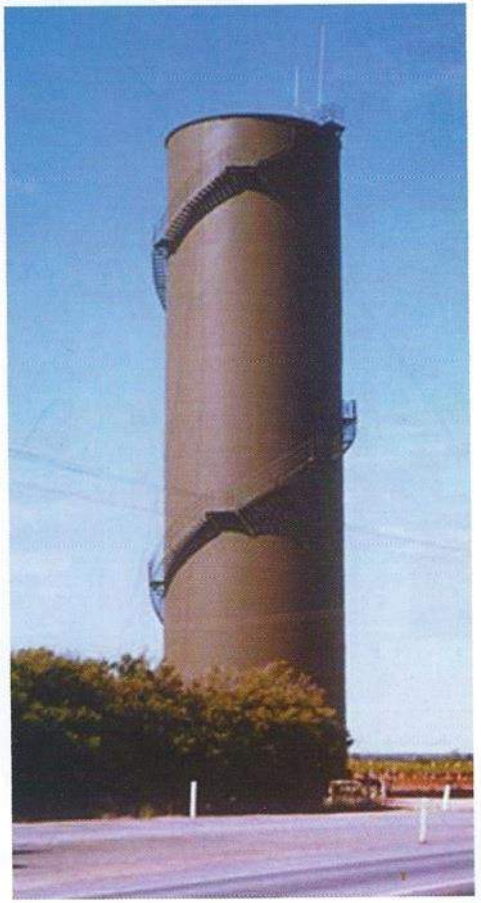
The visual mixture of green with black and white.

Using Value to Melt Borders









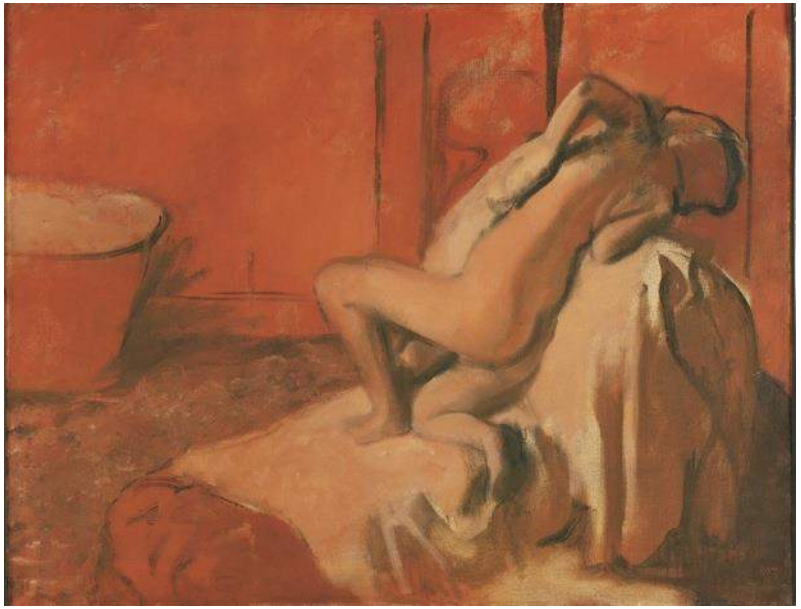
3. Saturation

Properties of Color: Saturation

Saturation = brightness of a color (also called ***intensity***)

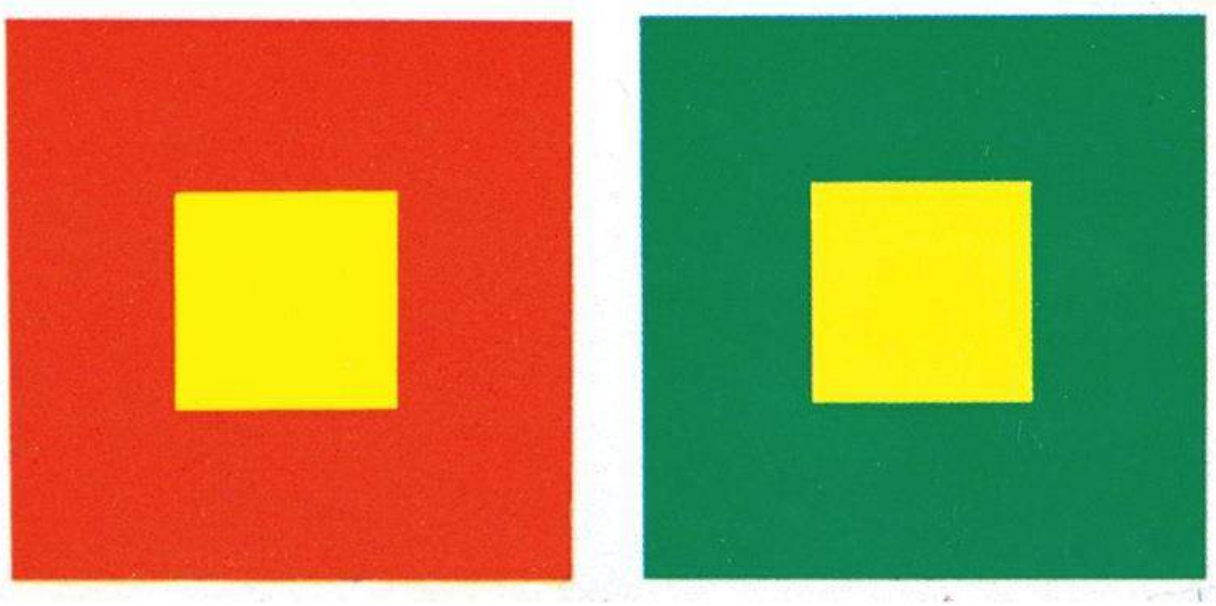
2 ways to lower saturation:
(or make a color duller)

- Mix with Gray
- Mix with hues opposite on the color wheel: ***Complement or Split complement***



New York. Edgar Degas. After the Bath, Woman Drying Herself. c.1896. Oil on canvas, 2’ 11” x 3’ 9 2/3”

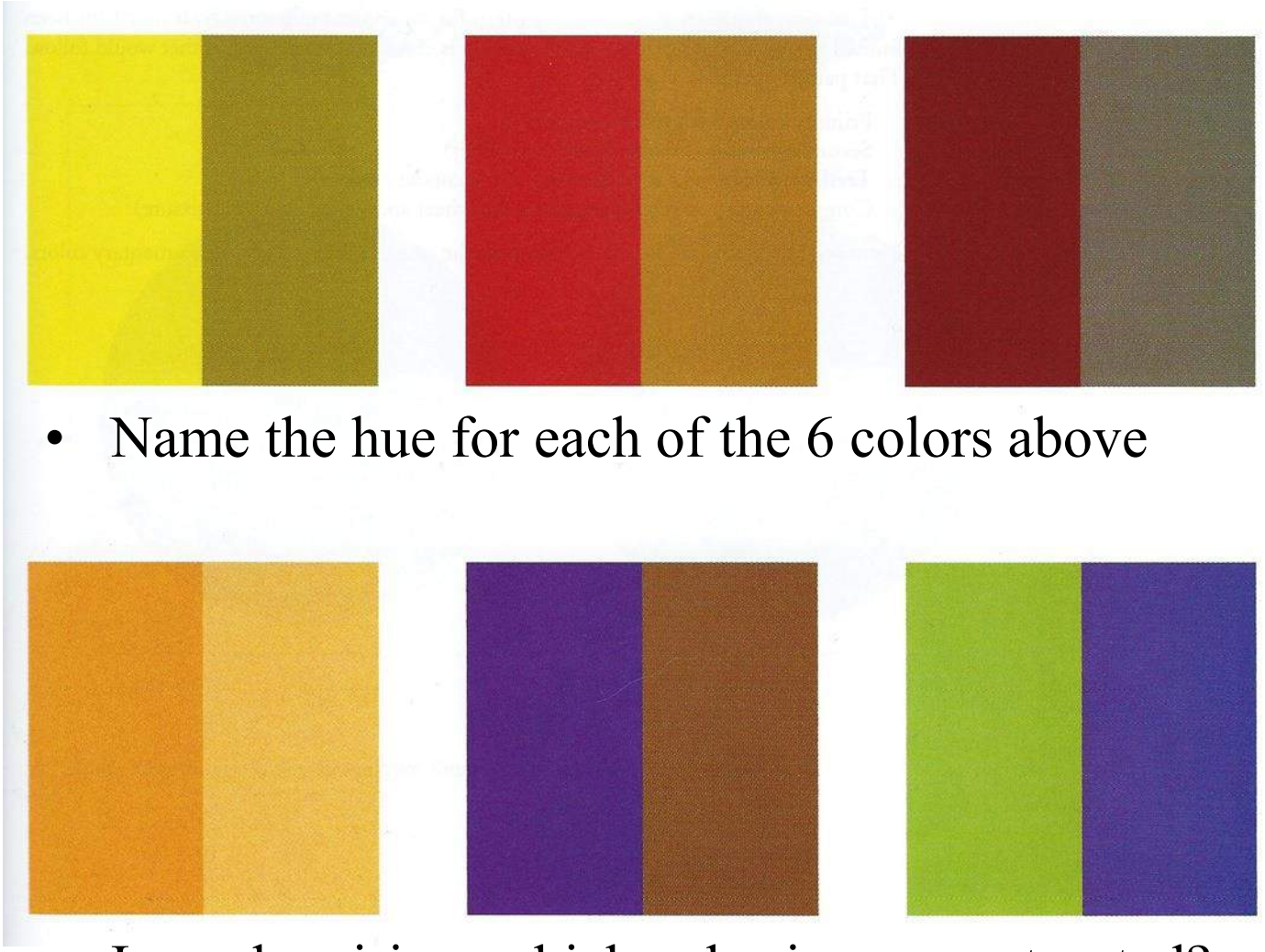
Influence of Context



A saturated, vibrant color will not show much change despite different surroundings.

Hue& Saturation

Hue & Saturation



- Name the hue for each of the 6 colors above
- In each pairing, which color is more saturated?

Color Mixing: Complementary & Split Complementary Colors

Color Mixing

Complementary Colors – opposite on color wheel

- Red-Green
- Blue-Orange
- Yellow-Purple

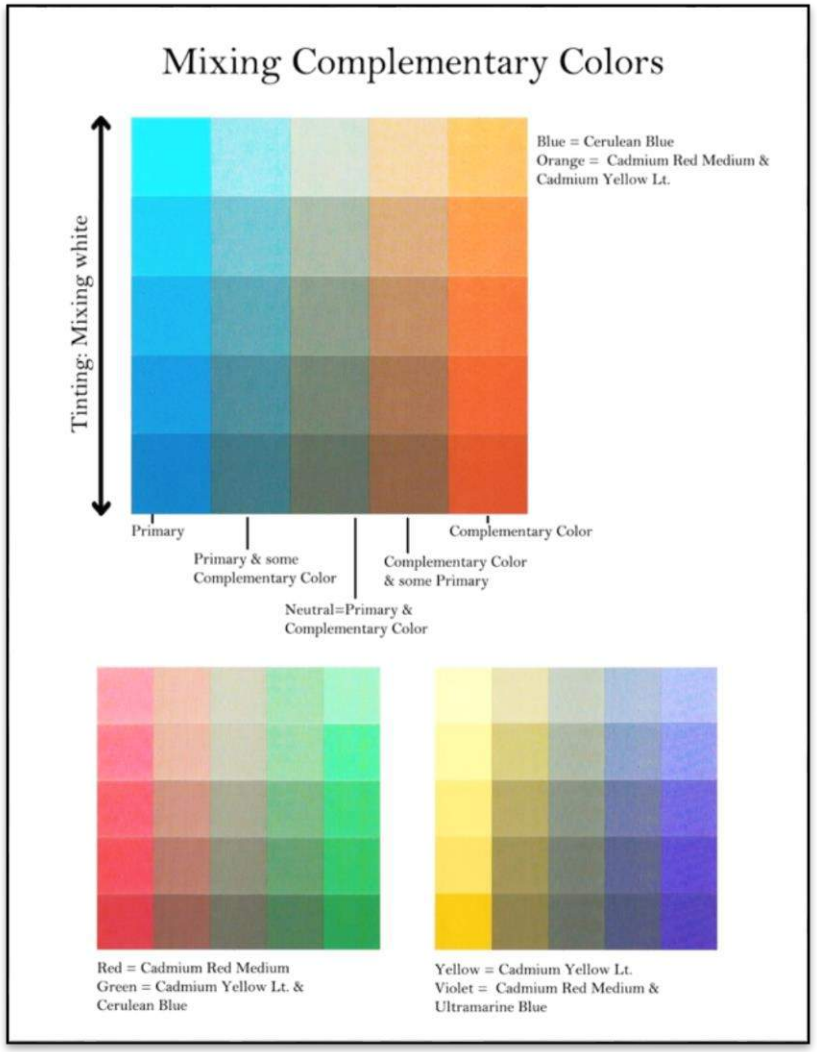
Uses:

- Placing 2 complementary colors side by side creates a brighter image.
- Mixing 2 complementary colors creates gray – desaturating the color

Mixing: Complementary Colors

- Mixing complementary colors will help you achieve more neutral, naturalistic tones

- **<u>Avoid using black</u>**, you can achieve darker and more neutral values by mixing complements. You will find that your painting will have stronger color interactions.



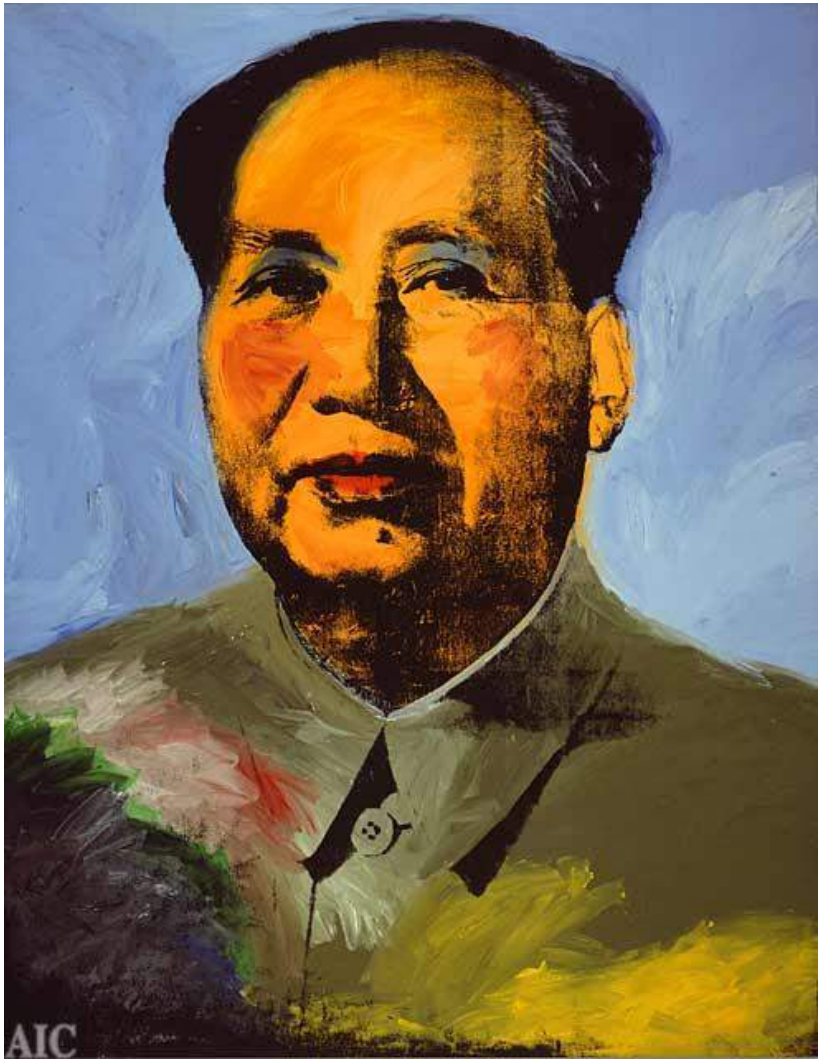
Intensity/Complementary Colors

To Make Colors <u>Appear</u> Brighter use:

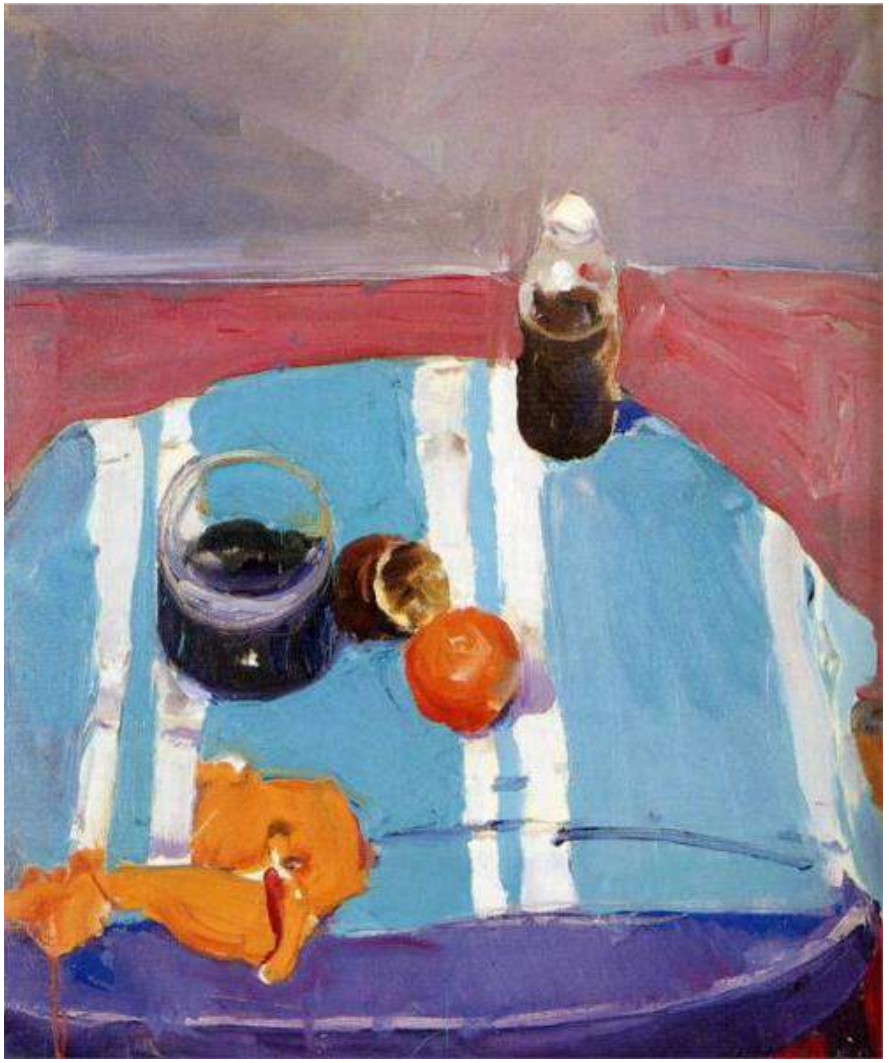
- ***<u>Simultaneous contrast</u>*** – when 2 complements are next to each other they increase the visual brilliance of each other

Casanova Table and Side Chairs. Domus Design Collection, New York.

Using Simultaneous Contrast



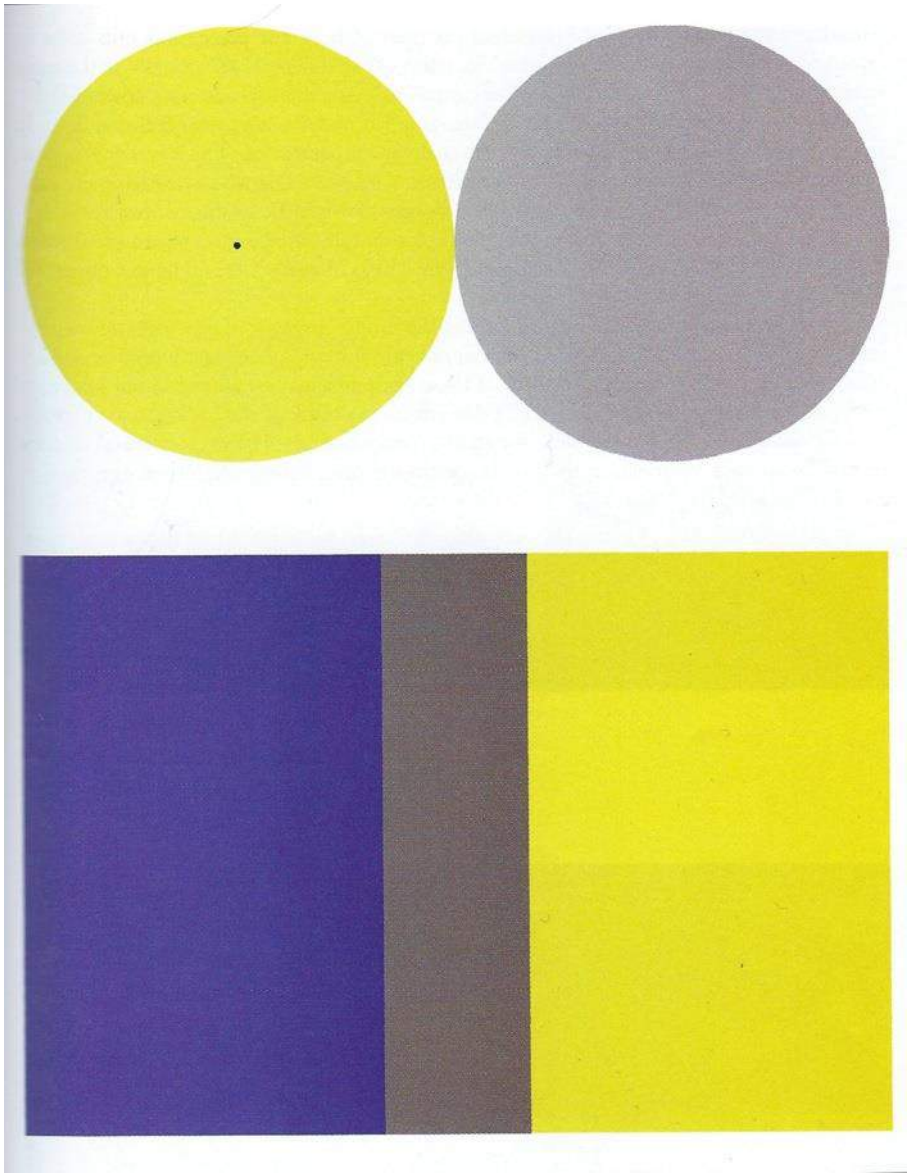
Andy Warhol - Mao



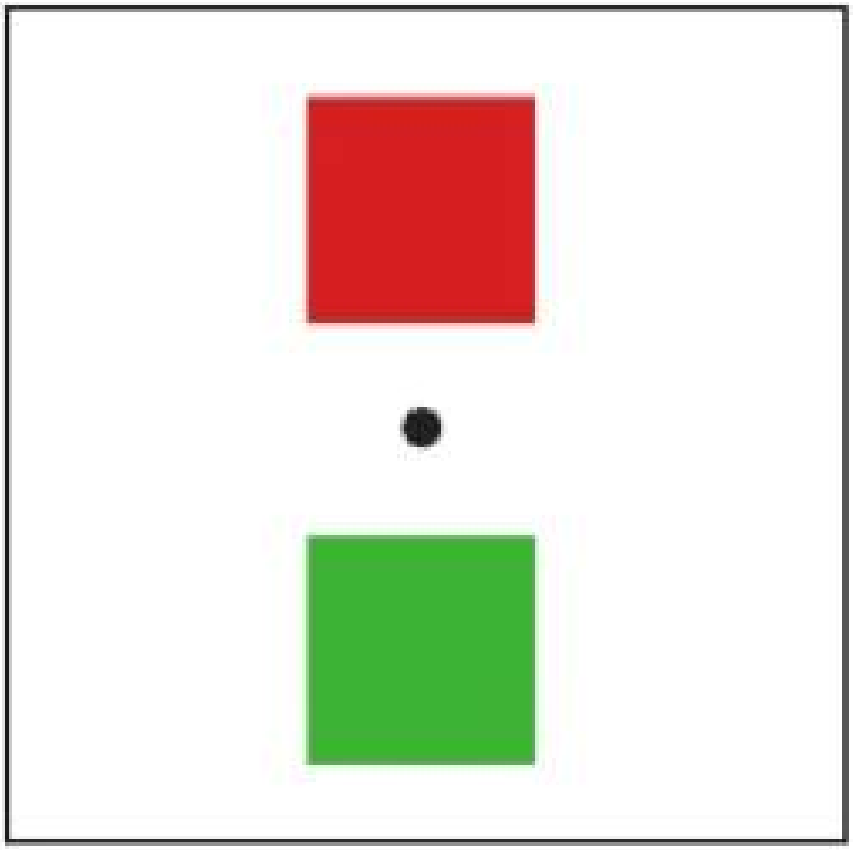
Still Life with Orange Peel, 1955
Richard Diebenkorn

Afterimage Effect

- ***Afterimage effect*** – when you stare at an intense color and then look away you will see the complementary color



Afterimage Effect



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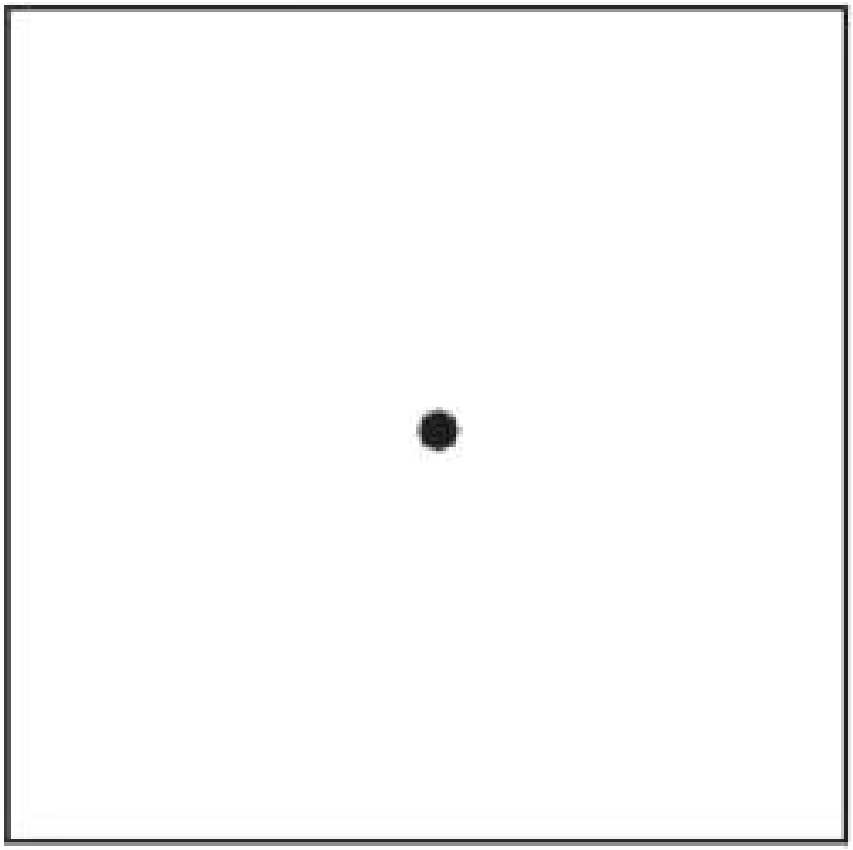

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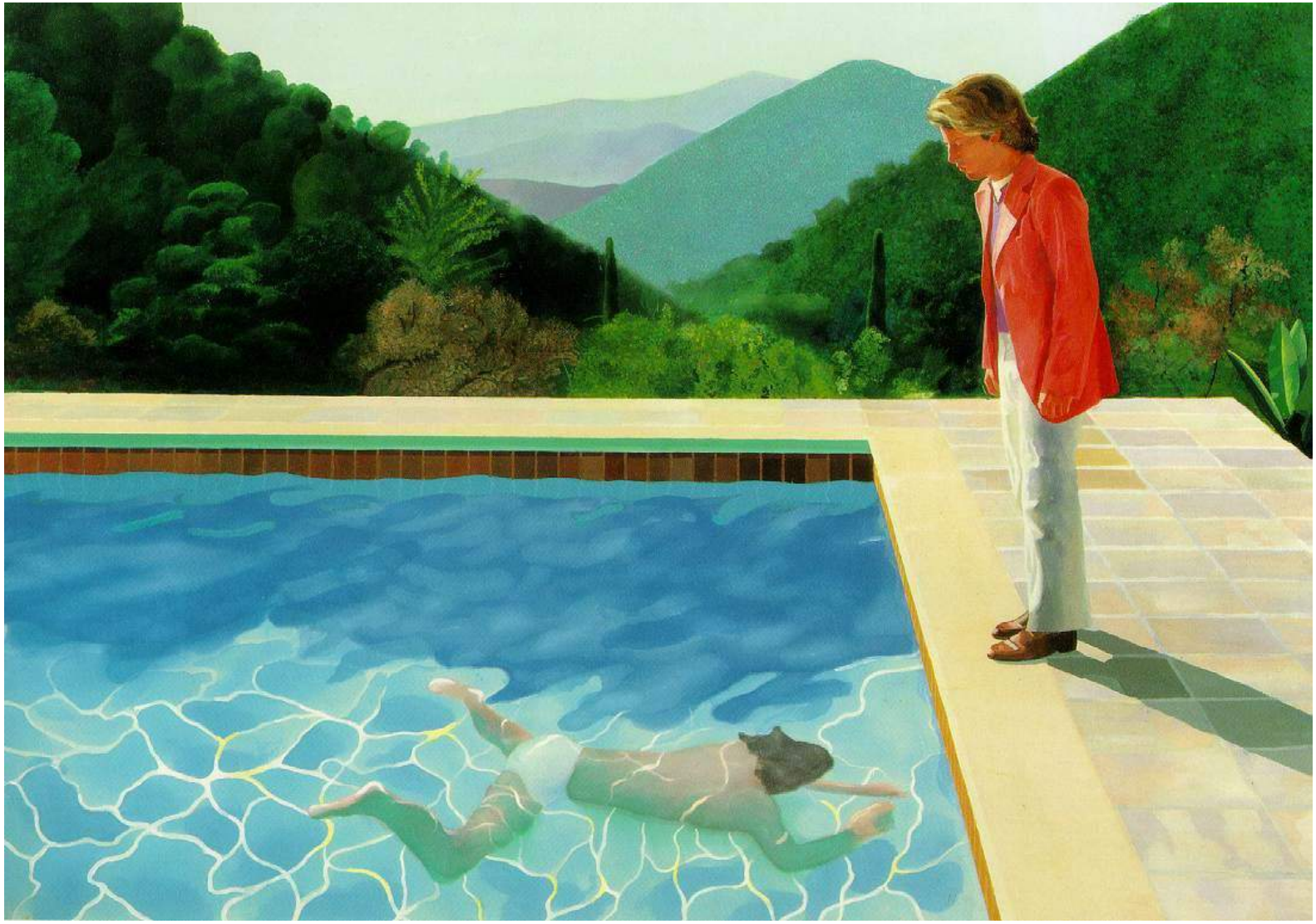
Mixing: Split Complements

Split Complementaries– one color and the two hues adjacent to the complement.

- Split complements function similarly to complementary colors when mixing and as a compositional tool
- More complex color structure and widely used

Split Complements - David Hockney uses greens and blue-greens to help balance the saturated red focal point.



Portrait of an Artist (Pool with Two Figures), 1972
David Hockney

Color Temperature

Color Temperature

- An artist may use warm and cool color relationships to create depth and volume.
- Color temperature is also used to create a strong sense of light

Warm Colors

Red, Orange, Yellow

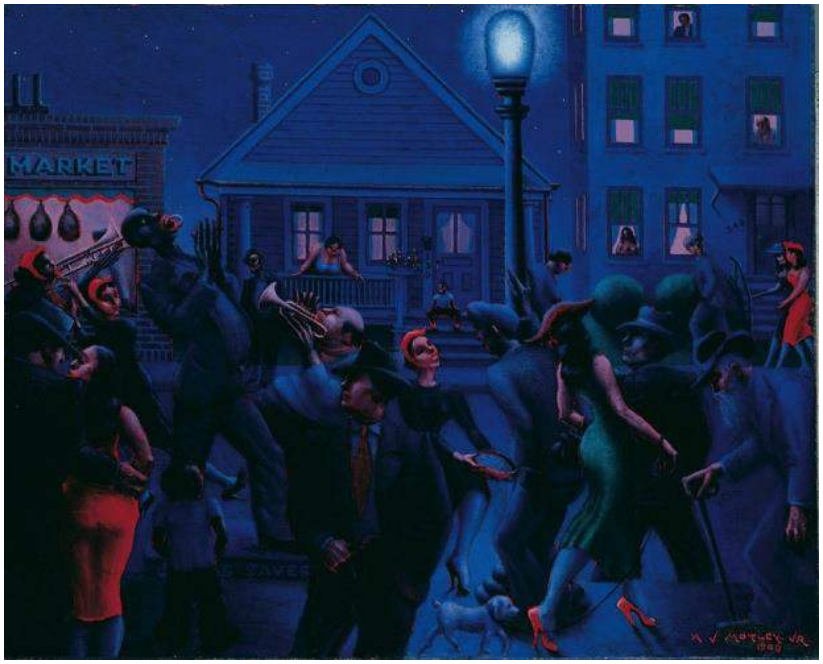
- Warm colors advance spatially.
- Represents – Fire, Sunlight
- Implies – Happy, energy, anger

Georgia O'Keefe, “Red Canna"

Cool Colors

Blue, Green, Purple

- Cool colors recede spatially.
- Represents – Sky, Water, Grass
- Implies – Sadness, Depression, Night



Archibald J. Motley Jr. Getting' Religion.
1948. Oil on canvas, 2' 7 7/8" x 3' 3 1/4"..

Color and Space

Color's Spatial Properties

- Color creates depth
- Intense, warm colors come forward, cool colors go back.

Atmospheric Perspective

- As things go back into the distance dust in the air makes them fading to blue-gray.

Using color to Emphasize Flatness

- Color can also be used to flatten space

Asher B. Durand. Kindred Spirits. 1849. Oil on canvas, 3' 8" x 3'.

David Hockney. Mulholland Drive: The Road to the Studio. 1980. Acrylic on canvas, 7' 2" x 20' 3"