

The Relativity of Color

Josef Albers

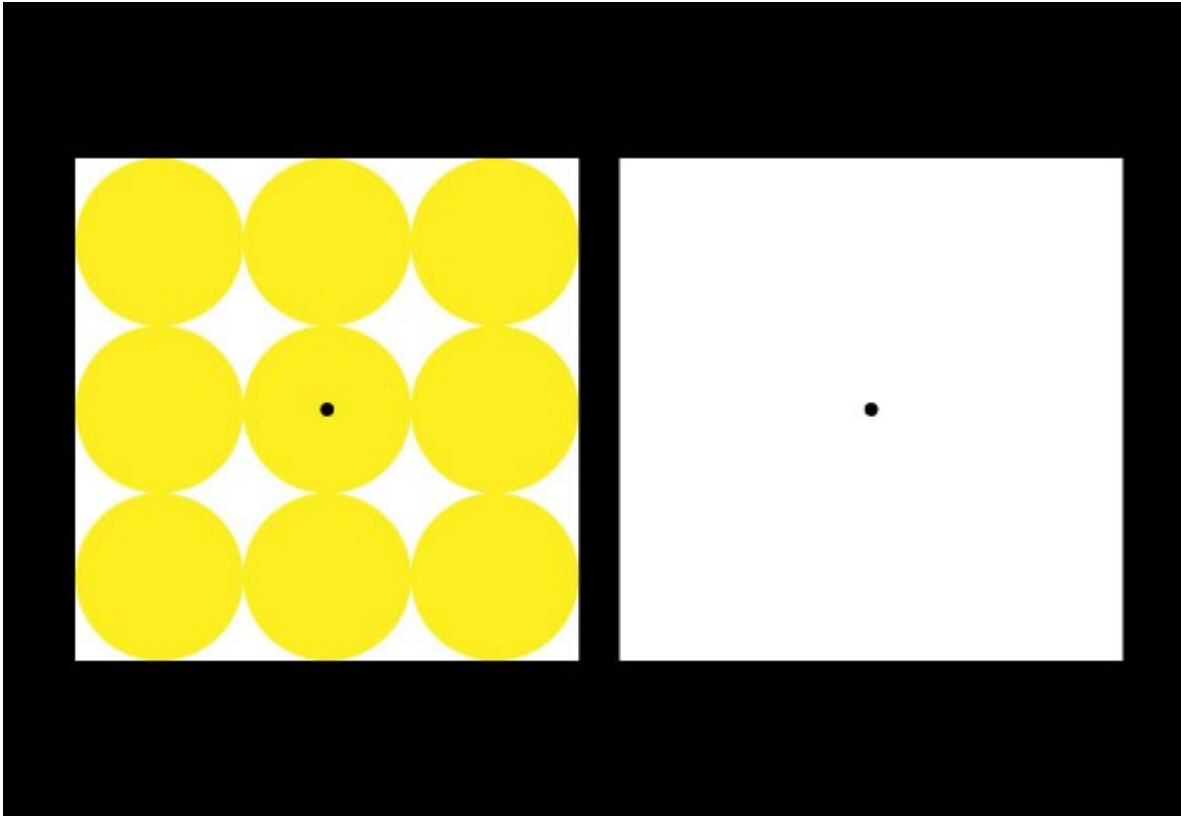
Josef Albers (1888-1976) was a German artist and educator. He was one of the original teachers in the Bauhaus who immigrated to the US. Albers worked with large flat, geometric planes of solid colors to demonstrate theories of color contrasts and optical effects created by color. Basic color theory tells us that optical sensations can be created by using particular color combinations and changing their arrangement and proportion.



His method of studying and teaching allow artists and designers to discover these relationships for themselves through a series of practical exercises.

The diagram below is an example of one Albers' color experiments to show the illusion of reversed afterimaging, often called **contrast reversal**.

Stare at the black dot on the left for 10 seconds, and then look at the black dot on the right. You might expect to see the compliment of yellow. However yellow diamond shapes, mirroring negative space between the circles, appear instead.



Albers, Revered Afterimage

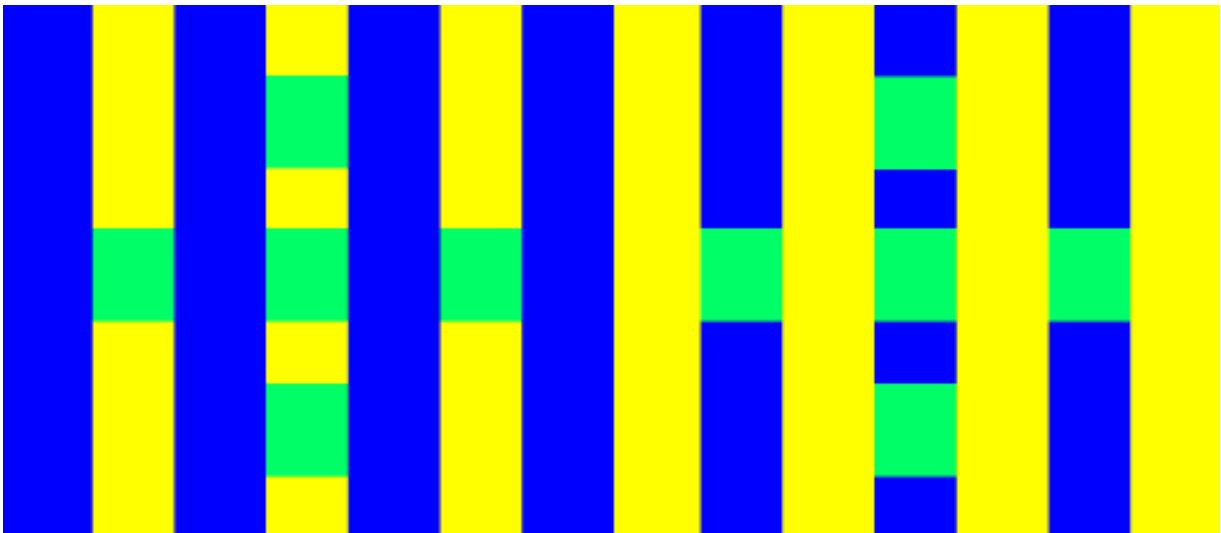
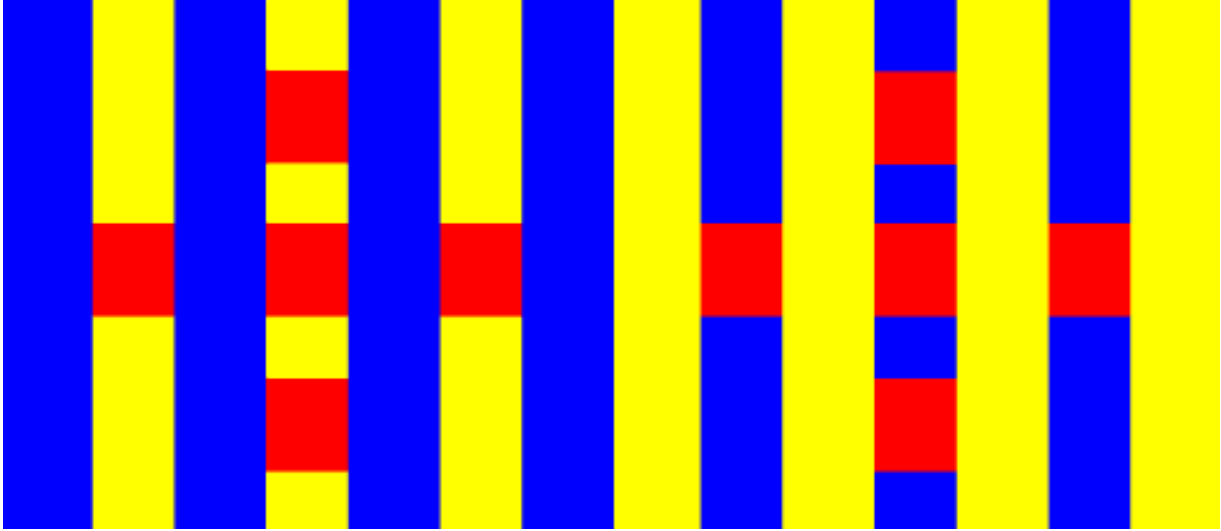


Michel Eugene Chevreul (1786-1889)

- Chevreul was a French chemist
- Born in Angers ("the Black City") France on August 31, 1786
- In 1824, Chevreul worked as the dyeing director at the tapestry-weaving studio Gobelins. He came to realize that many of the problems encountered in the firm's weaving had to do with how and with colors affect each other. His findings, set forth in his book, deal with **simultaneous contrast**.

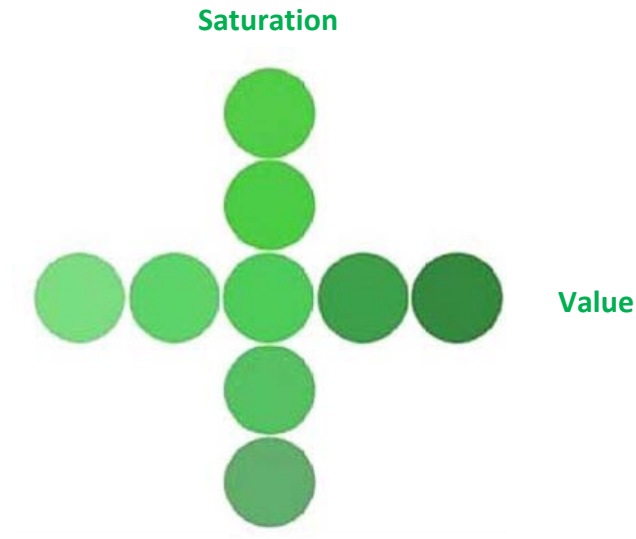
Theories:

Two colors, side by side, interact with one another and change our perception accordingly. The effect of this interaction is called ***simultaneous contrast***. Since we rarely see colors in isolation, simultaneous contrast affects our sense of the color that we see.



Simultaneous contrast may create an *optical illusion* that appears to lighten or darken the hue of a given color depending on whether it is placed beside a second color that is darker or lighter in hue.

Chevreul's basic concept of hue, purity and value



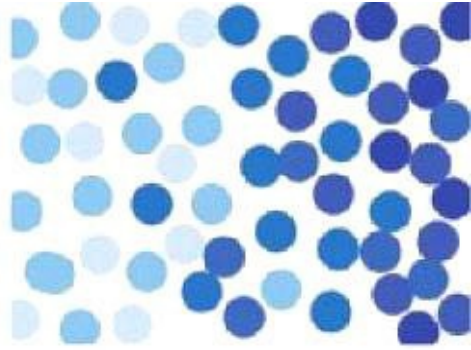
The center circle shows the represented hue of green. The vertical axis represents saturation with the most saturated version of the hue at the top and the most desaturated at the bottom. The horizontal axis represents value with left side showing a tint of the middle color and the far right expressing a shade of the same hue. **These concepts were embraced by French painter Georges Seurat and become central to his concept of visual color mixing.**

Chevreul also advanced the concept of optical mixing, which explains the manner by which two individual colors blend together to suggest a third color.

OPTICAL MIXING:
COLORS SIDE BY SIDE



An example of optical mixing when the paint was applied in separate strokes and the eye perceives it as green.

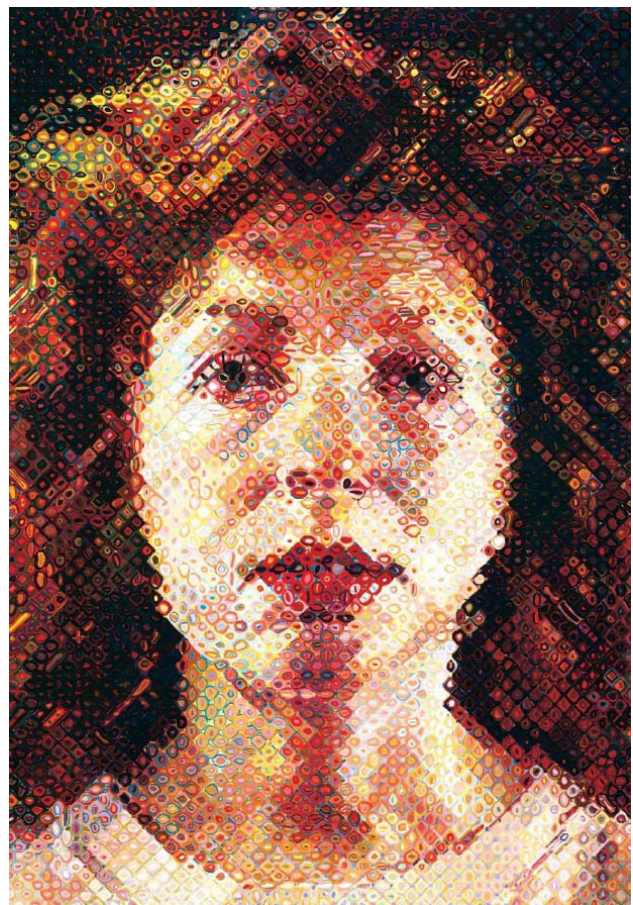
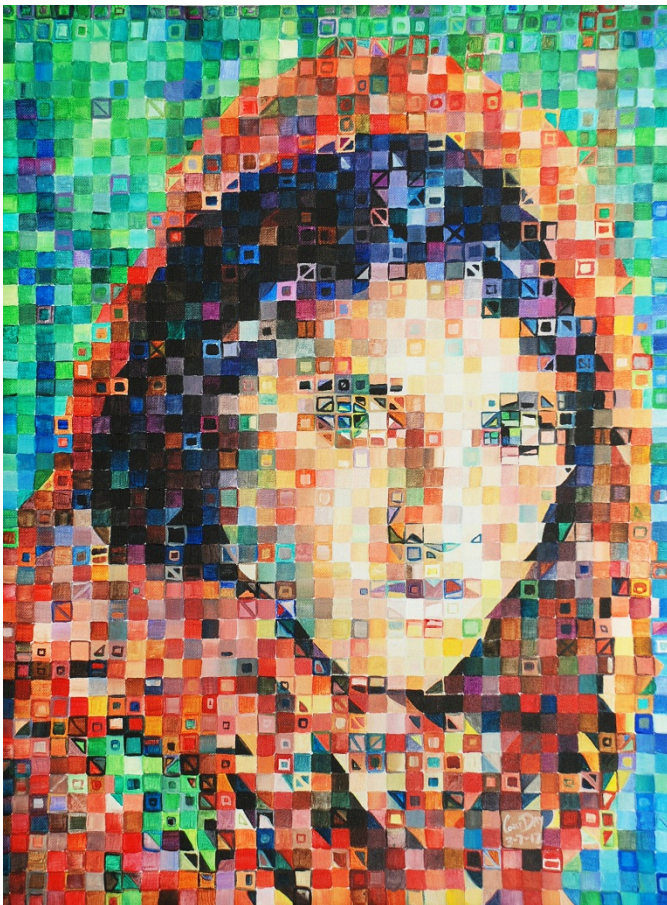


An example of how the pointillist style of visual color mixing works showing that if the dots of color are touching one another then colors will blend in the viewer's eyes. On the right you can see that when there is space in between the dots we read them as separate colors

Visual Color Mixing

Visual Color Mixing Techniques: *Visual Mixing = Optical Mixing*

- Techniques that suggest light
- Attempt to create a color by placing 2 pure colors next to each other rather than mixing them on a board.
- The viewer's eye mixes them together at a certain distance.



Styles and Techniques that use Visual Mixing: Post-Impressionist Seurat and Van Gogh used Visual Mixing, Pointillism, Television, Mosaics, Weavers, Printing Presses, Computer monitors (Pixels)

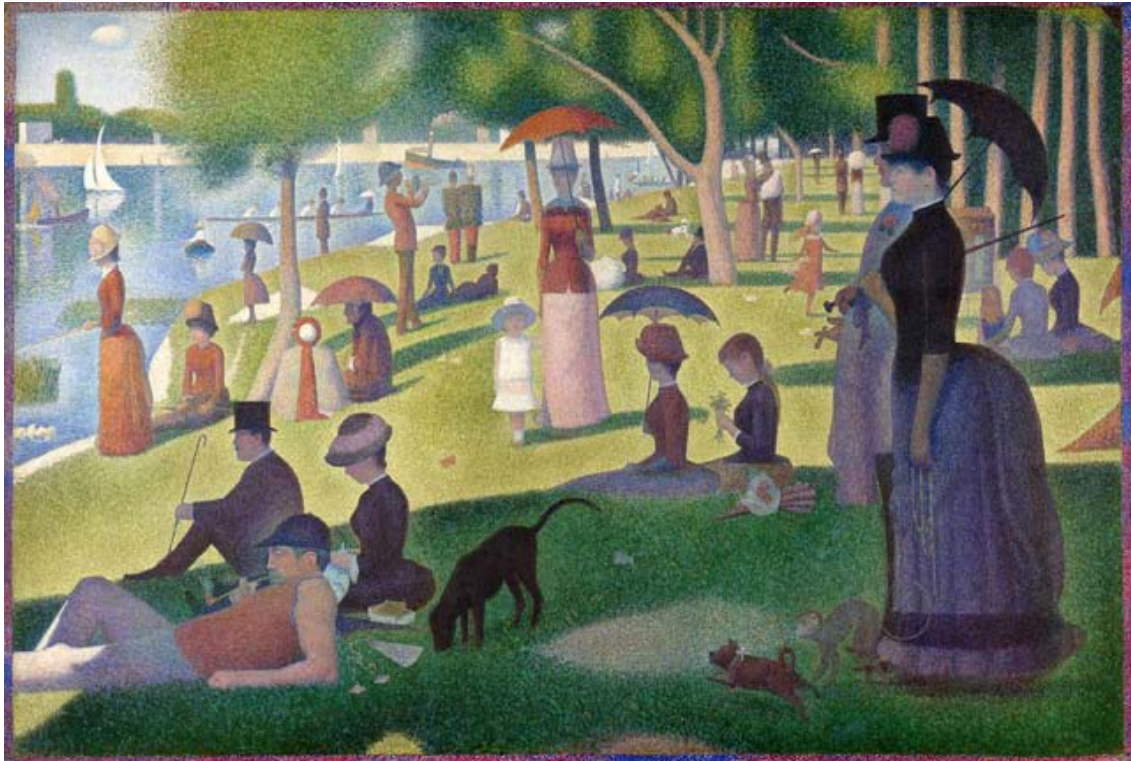
Pointillism

Pointillism is a technique of painting in which small, distinct dots of pure color are applied in patterns to form an image.

- Gorge Seurat developed the technique in 1886, branching from Impressionism.
- The term - Pointillism was first coined by art critics in the late 1880s.
- *Neo-impressionism* and *Divisionism* are also terms used to describe this technique of painting.
- The technique relies on the ability of the **eye** and **mind** of the viewer to blend the color spots into a fuller range of tones.
- is notably seen in the works of **George Seurat, Paul Victor Jules Signac, and Henri - Edmond Cross**

Paul Signac, *Femmes au Puits*, 1892, showing a detail with constituent colors





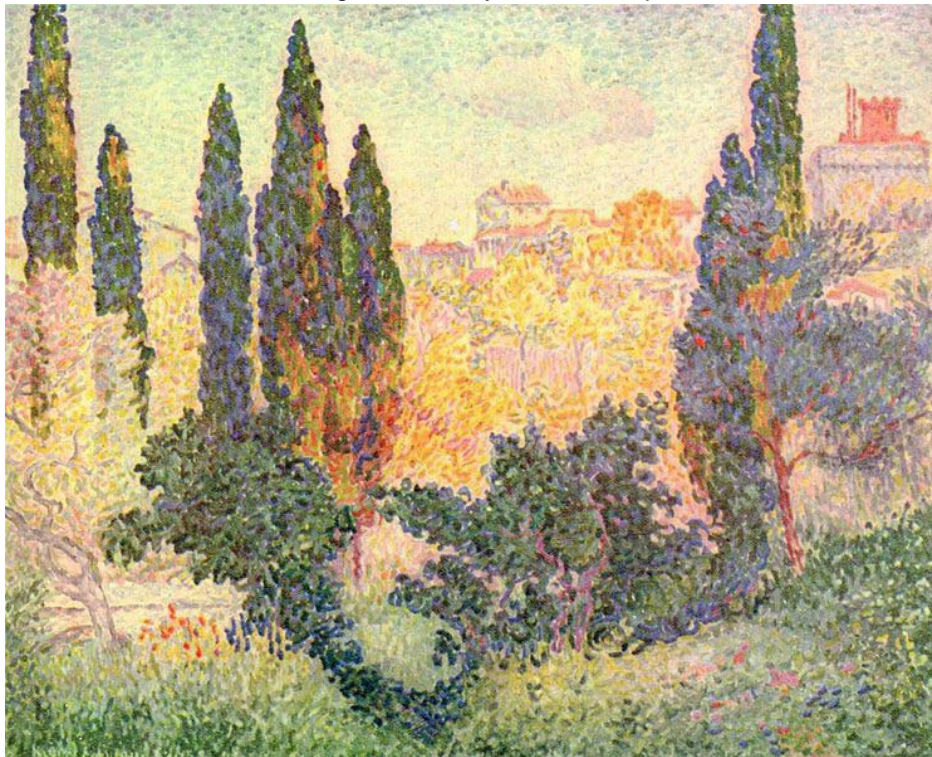
Georges Seurat. *Study for A Sunday Afternoon on the Island of La Grande Jatte*, 1884–1886



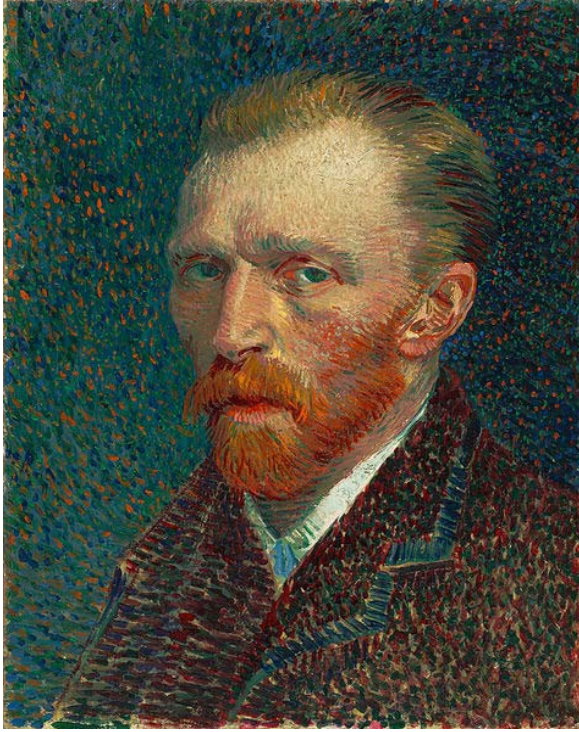
Georges Seurat. *The Bathers at Asnières*, 1884, in the National Gallery, London, depicting working class men relaxing outside work hours on the left bank of the river. One is calling over to the other side of the river, and all are bathed in sunlight.



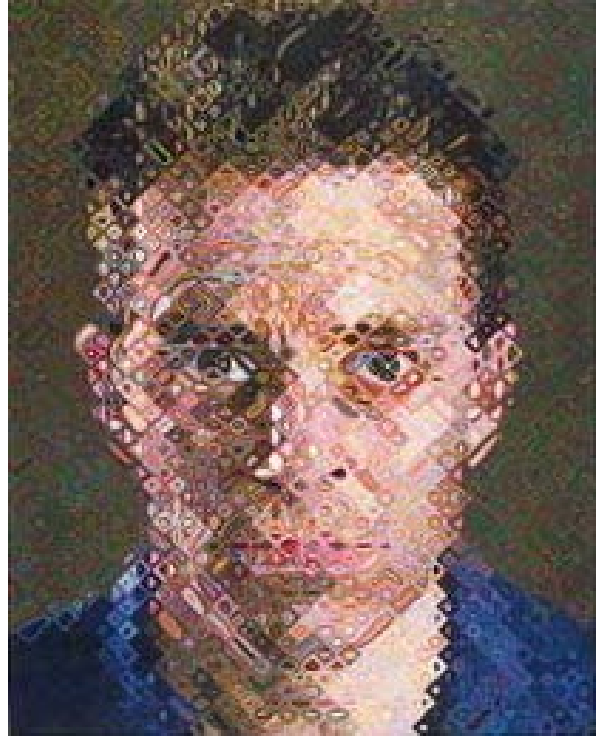
Paul Victor Jules Signac. Sunday 1888-1890, private collection



Henri-Edmond Cross, Cypresses at Cagnes,(c.1900)



Vincent van Gogh, *Self Portrait*, 1887, using pointillist technique.



Chuck Close



Paul Victor Jules Signac