

Assignment 2: Interactive Color Study

Colors are a powerful statement of personal expression, taste and communication. How those colors are combined to express an idea can blur or enhance the message you are trying to portray to your target audience. Itten provided six principles for color contrast [1] but these four are illustrated in the color study applet:

1. Complementary colors - any pair of complementary colors contains all three primaries.
e.g. red, green = red (yellow & blue)
blue, orange = blue (yellow & red)
yellow, violet = yellow (red & blue)
2. Cold-warm contrast: blue-green slows down circulation and represents a calming state; red-orange simulates the space around it creating an energetic state.
3. Simultaneous contrast: the eye posits the complementary color when it's missing.
4. Contrast of extension: what quantitative proportion between two or more colors may be said to be in balance.

The remaining two principles: light-dark contrast and contrast of saturation were not shown because they are inherently represented by Java's color dialog: the brightness and saturation options in the HSB tab.

The purpose of this color study is thus to educate the participant about color effects, balance and harmony by allowing dynamic interaction with colors (such as varying hue, saturation and value) and their resulting effects based on Itten's color principles. The center star represents the user's expression of color and is changed by the button at the top of the screen. This button was not placed in the center of the screen since it would disrupt the flow of color transitions. Once a color is selected, this color fans out to the cardinal regions of the display to demonstrate the four principles listed above. In particular, I personally had a difficult time visualizing simultaneous contrast. However with the help of [2] and using the mouse to remove the current color, I was able to view the complement. In addition, explaining the principles on the GUI provides instruction on how the principles are demonstrated.

Itten's principles for Color Study

Select color for center star...

Cold-warm contrast

Cool

Warm

R/YB Complementary Color: based on Itten's color wheel.

Simultaneous Contrast: Focus on the center white dot for 15 seconds. Try not to blink! Keep your eyes on the center. Then move the mouse over the ellipse above. What color do you see?

Contrast of Extension: Proportion of color and complement in balance

Ref: [http://faculty.washington.edu/chudler/chvision.html]

References:

1. Itten, Johannes. The Elements of Color: A Treatise on the Color System of Johannes Itten Based on His Book the Art of Color (A Basic color library). Van Nostrand Reinhold, 1971.
2. Dr. Chudler's Neuroscience Visual Experiments Page [http://faculty.washington.edu/chudler/chvision.html]. Last accessed: Oct 26, 2007.