

# Color Afterimage: Simultaneous Contrast

*"Simultaneous contrast is not just a curious optical phenomenon - it is the very heart of painting."*

**Josef Albers**

## To Do and Notice:

Stare at the boundary between the yellow and blue squares for a few seconds. Now slowly shift your gaze back and forth between the areas just to the right and left of the boundary separating the colors. What do you notice about the intensity of the colors in the areas immediately next to the boundary compared to color of the poster boards farther away from the boundary? Why do you suppose this happens?

## What's Going On:

Did you notice how both the yellow and the blue are greatly intensified in the area on either side of the boundary separating the two colors?

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 perception of the color that we see. Simultaneous contrast is most intense when the two colors are complementary colors, as are yellow and blue.

Simultaneous contrast may be explained in terms of afterimages. If you stare at one color for some time and then quickly shift your attention to a white sheet of paper, you generally will see a *negative afterimage* in a complementary color. If you are presented with two adjacent areas of different color, your eyes will flick back and forth between the two areas, and each color you see will be combination of the true color of that area and the afterimage of the adjacent area.

Artists' interest in color and light is influenced in part by the research of scientists like eighteenth and nineteenth century scientists Michel Chevreul and Ogden Rood. Specifically, the idea that color contrast enhances the difference in brightness and/or color between the interacting areas influenced Impressionist painters and divisionist ("pointillist") artists such as Georges Seurat and Paul Signac.