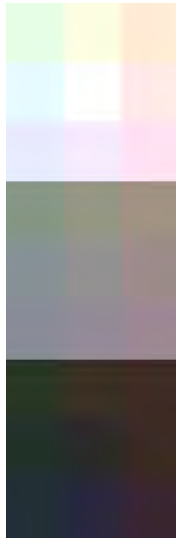


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## TECHNIQUE



1. Semi-neutrals are complex and fascinating colors that when paired can create the appearance of iridescence and pearlescence.



2. *Budh*, 1996

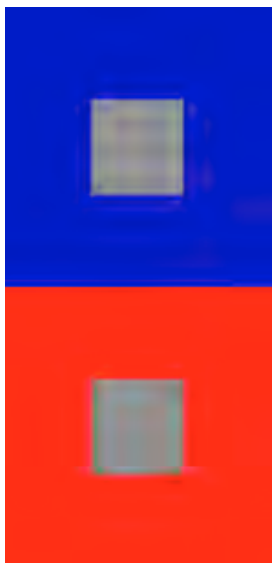
### IF YOU CAN SEE IT, IT'S COLOR.

Color is a complex phenomenon that involves physics, biology, and psychology. Color is a sensation our bodies produce when we receive vibrations within specific wavelengths of the electromagnetic spectrum. Color is a cognitive process, an understanding we arrive at once we have processed the physical sensation of light. Color produces symbolic and emotional reactions within us that either can be culturally shared or are highly individualistic.

Are black, gray, and white colors? At its most basic level, color is our visual response to the world. Simply put, if you can see it, it's color. Neutrals are hues without saturation (achromatic). Neutrals can be seen as dividing and uniting all hues – they can be seen as creating a line between all hues and they can be seen as a set of characteristics all hues share. Equally interesting are semi-neutrals – hues with very low levels of saturation. Neutrals are colors, very specific colors. And we've found specific uses for them.

Neutrals are key for photographic color adjustment. When they are rendered truly neutral the local color of an object (separate from environmental influence) is revealed.

Photographers use precisely defined neutral colors, such as gray cards, to establish known targets for color adjustment strategies designed to accurately reproduce the appearance of objects. Neutrals are essential colors used to evaluate the precision of the reproduction procedures used, including the quality of output profiles in color management. Neutrals help assess not only accurate reproduction of color but also the consistency of that color throughout the tonal scale (graybalance). While useful, these tools and strategies are limited. Attempts to achieve a neutral appearance numerically may overlook the influence of the context of the color within an image; a numerically neutral color will appear to have a subtle color cast when surrounded by strong color (the complement of the color surrounding it). Adjusting color to achieve a clean color palette can eliminate color influenced by ambient conditions, which if reproduced might lead to a more accurate rendition of a scene perceptually (the appearance of a gray card at sunrise/sunset or in deep shade is not neutral). Adjusting semi-neutrals to true neutrals can introduce a color cast to an image rather than remove one.



3. A neutral color on a colored ground no longer appears truly neutral. A precisely selected semi-neutral containing traces of the complement of the surrounding color will appear truly neutral.



4. Censored, 1996

Recently and almost certainly due to the increased use of digital capture, there has been a great deal of attention paid to white balance, or the color temperature of whites, again largely in an attempt to reproduce color "accurately." Targets, such as Gretag-Macbeth's ColorChecker, can be photographed under the same lighting conditions as a subject and the white patch (the second lightest in the chart), black patch, and gray patch can be used as known targets to create adjustment settings for subsequent exposures. This strategy gets you close fast, if your objective is a clean color palette. Using black, grays, or whites that are not known targets but found within a scene to specify neutrality in order to achieve a clean color palette is not optimal. This is particularly true with shadows and highlights as very often they contain significant amounts of color, which are often overlooked in the presence of saturated mid-value hues. Midtones are better choices.

Whether a color is truly reproduced accurately is both debatable and somewhat subjective. Reproduction involves calculated sacrifices, compromises, and adjustments in appearance given the limits of the medium reproducing color. Consensus is hard to establish (due to both individual perceptual differences and linguistic limitations). Personal preferences often influence the outcome. Achieving accurate color is extremely difficult; like approaching perfection (a sometimes worthy goal), it can only be done by degrees.

Using only one color correction strategy can be limiting. Some adjust color by the numbers only. Some go further, adjusting color to create a consensus between many individuals. Some take a further step, adjusting color to create pleasing color relationships, augmenting reality. Some go much further, adjusting color in a highly individual manner attempting to use the expressive potential of color without constraint. The uses of neutral colors extend far beyond accurate reproduction of appearances. Neutrals can be used to create compelling visual relationships. When found in combination with one another, closely matched semi-neutrals provide a quiet scintillating variety; they can even create the appearance of iridescence and pearlescence, an optical effect that gives colors a more luminous appearance – they seem to glow or sparkle.

To truly understand color you need to understand neutrals. And this is true not only technically and optically but emotionally as well. Like sound, color often evokes strong emotional reactions in us. Semi-neutrals affect us in subtler ways than fully saturated colors. The ways they move us are often delicate, nuanced, and at times highly complex.

Matisse said, "Black is the queen of colors." Perhaps white is the king? Are grays then the princes and princesses?