The power of color is undeniable. Because we are inherently visual creatures, color acts as a language that shapes our understanding of the world around us and deeply impacts our experiences, choices, and emotional responses. When it comes to commerce, research shows us again and again that color profoundly affects consumer perception of products and guides purchasing decisions. Whether working with pharmaceutical products, food packaging, textiles, or plastics, selecting color schemes that complement your product, fortify brand identity, and speak to customers is essential to ensuring success. But color preference is not arbitrary; complex cultural histories, mythologies, and symbolism inform our perception of color and create a system of chromatic signifiers. By understanding the associations we have with specific hues, product designers can use color psychology to tap into consumer desires and create color strategies that optimize appeal.

## Red

Red is the color of love, passion, energy, sexuality, danger, and urgency. After black and white, red has consistently been the first color identified and named by cultures around the world and it has been a potent chromatic symbol throughout history, from the earliest cave paintings to late capitalist advertising. Ancient Roman warriors wore red as sign of military strength and victory, in Christian symbolism it represented the blood of Christ and the martyrs, in Imperial China it was associated with nobility, and during the French Revolution red came to symbolize the fight for freedom. In today's visually saturated culture, red is as powerful as ever; from the glossy paint of an impressive sports car to the lips of a seductive woman to the flashing of police lights, red commands our attention and tells us a story of intensity, urgency, and excitement. Red warns us, seduces us, and, most of all, makes us take notice.

# Orange

Orange is a hot and lively color associated with activity, happiness, enthusiasm, the unconventional, and the exotic. This bright hue has a deep religious connection for Protestants, Hindus, and Buddhist, traditions in which orange plays a central role in iconography and history. Less aggressive than red but still attention-getting, orange is often used denote caution; because it draws the eye even in dim light, orange is a top choice for construction signs, buoys, life jackets, visibility gear, and aircraft black boxes. Its association with citrus fruits suggests health and awakens the appetite while the orange of nature in the fall brings to mind bounty. Although few people report orange as their favorite color, intelligent use of the hue can enliven consumer goods and inspire joy.

# Yellow

The brightness, warmth, and cheer of yellow invites our attention more than any other color. Across the world, yellow recalls the glow of sunshine and it is the color most in the West associate with optimism, amusement, and spontaneity while in Eastern cultures, it acts a symbol of courage, wisdom, prosperity, and the sacred. Its highly visible nature makes it perfect for denoting caution and ensuring that messages are heeded, which explains its universal application in signage, traffic lights, and advertisements. But not everything is sunny when it comes yellow; the color has been used to symbolize jealousy, physical illness, betrayal, and madness in various eras and cultures around the world. In Russia, "yellow house" refers to mental institutions, in Poland "yellow papers" refers to being insane, and historically yellow roses have been symbols of infidelity and the disappearance of love. 1 In the Middle Ages, artistic representations of Judas depicted him wearing yellow and the color soon became associated with betrayal and duplicity.

#### Green

Green is the color of freshness, growth, rejuvenation, youth, and restfulness. In Ancient Egypt, green symbolized the bounty of harvest, growth, vigor, and rebirth and green eye make up was worn to offer protection from evil and illness. 2 During the Renaissance bankers and merchants wore green to signify their social class and the green of American currency has made it synonymous with prosperity. In today's increasingly environmentally aware and health conscious society, green conjures up images of nature, renewal, and health so strongly that "going green" has become synonymous with responsible environmental practices. In contrast to the arresting nature of red, green is used to offer permission, safety, and free passage. But green also has a darker side; in China, green hats are a symbol of infidelity while in Western cultures it may indicate greed, jealousy, sickness, or inexperience.

#### Blue

Blue is the vastness of the ocean and the tranquility of a clear sky. Stability, fidelity, wisdom, loyalty, and expansiveness are all associated with this cool color and the blue hues found in nature create powerful links to cleanliness and purity. Blue wasn't always so revered; in Europe, blue clothing was reserved for the poor in the early Middle Ages and it wasn't until importation of expensive blue dyes from Afghanistan in the 1200s transformed its status that blue became associated with royalty, wealth, and power. Simultaneously, inclusion of blues in religious architecture and iconography, particularly the blue of the Virgin Mary's robes, created an enduring association with holiness and purity. However, along with the virtues of blue, it also carries with it links to undesirable emotions and events; in the West blue is often regarded as the chromatic representation of sadness and depression while in parts of Asia it is the color of mourning. Despite this, blue is by far the color most people report as their favorite.

# Purple

Purple is the marriage of red and blue, combining tranquility with passion and evoking mystery, creativity, luxury, wealth, and independence. Royalty, rulers, and religious leaders across cultures have chosen purple as the central component of their wardrobes, from the leaders of the Roman Empire to Japanese emperors, Roman Catholic bishops to the British monarchy. But purple was not only for those in power; purple was one of the official colors of the Women's Suffrage movement and subsequent social justice and counterculture groups have prominently featured purple within their own visual lexicons, slogans, and songs. Meanwhile, purple is used in China to represent harmony between yin (blue) and yang (red) and in the Roman Catholic church to symbolize penance and sacrifice. In Western culture, pairing purple with pink can suggest flirtatiousness, sexuality, and eroticism.

#### White

White is a combination of all colors on the visible spectrum and suggests cleanliness, honesty, neutrality, and goodness. Ancient Egyptian priestesses wore white to symbolize purity while in the Middle Ages white unicorns represented chastity and grace. These associations endure in modern times, where Christian children are baptized and receive first communion dressed in white and white gowns are standard attire for brides on their wedding days. White doves are a universal symbol of peace, white flags are used to signify the lack of aggression, and the glowing white of modern medical environments provide assurance of safety and absence of contamination. But white also carries darker connotations; medieval European queens wore white clothing as markers of their mourning and white continues to be worn at funerals in several European cultures today. In fact, white, far more so than black, is associated with death in many countries throughout the world.

## Black

Black was one of the first colors used by humans in the creation of visual artworks and holds extraordinary power in the human imagination. As Matisse said, "Black is a force." 3 While the color was associated with life and rebirth in ancient Egypt, it came to take on more sinister connotations in Greek mythology and in ancient Rome it was established as the color of death and mourning. During the Middle Ages, black was deeply connected with evil, sin, and spiritual darkness and by the 1600s superstitions regarding black animals, particularly cats, and associations with witchcraft began to take hold. In the 20th century, however, black was more fashionable than ever, acting as a symbol of sophistication, urbanism, rebellion, and intellectualism while simultaneously becoming evermore explicitly linked to exclusivity and prestige. Today, the duality of black makes it uniquely versatile, at once cool and conservative, modern and timeless, emotive and neutral.

Full article with photos available here:

 $\frac{https://www.hunterlab.com/blog/color-measurement-2/harnessing-the-potential-of-color-psychology-to-optimize-product-design/$