Handbook of Color Psychology

We perceive color everywhere and on everything that we encounter in daily life. Color science has progressed to the point where a great deal is known about the mechanics, evolution, and development of color vision, but less is known about the relation between color vision and psychology. However, color psychology is now a burgeoning, exciting area and this Handbook provides comprehensive coverage of emerging theory and research. Top scholars in the field provide rigorous overviews of work on color categorization, color symbolism and association, color preference, reciprocal relations between color perception and psychological functioning, and variations and deficiencies in color perception. The *Handbook of Color Psychology* seeks to facilitate cross-fertilization among researchers, both within and across disciplines and areas of research, and is an essential resource for anyone interested in color psychology in both theoretical and applied areas of study.

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Foreword

For generations, the school child's mnemonic Roy G. Biv (red, orange, yellow, green, blue, indigo, violet) has undermined the scientific foundation for understanding color. What appears to be an innocent aid for recalling the sequence of spectral colors is instead a misleading assignment of colors to physical wavelengths of light. When the hues from red through violet are attached to wavelengths from 700 through 400 nanometers, it suggests that the colors we see are properties of the wavelengths themselves, but that is not so. The critical word in the last sentence is *we*. Physical wavelengths have no color; instead, *we* have both detectors in the eye that respond to these wavelengths and, moreover, subsequent neural circuitry that causes our experience of seeing color.

You cannot tell a book by its cover, and often not by its title either. Here, however, the *Handbook of Color Psychology* is aptly named to highlight this most important underpinning for understanding color. Color is in the mind of the viewer (thus psychological), not in light (the physical) or even in the eye's photoreceptors, which create from light the essential biological signals for seeing. This principle of color vision recurs frequently in this volume.

The fact that color is a product of the mind might seem to limit the precision or depth of scientific inquiry, but actually the opposite is true. There are several reasons for this. First, centuries of inventive behavioral techniques together with decades of physiological recordings have advanced our understanding of nearly every aspect of color. Second, experimentally testable theories and computational models, often developed in parallel with experimental work, have revealed comprehensive explanatory frameworks and, of equal significance, exposed shortcomings of intuitively attractive yet flawed conceptualizations. Importantly, theoretical frameworks can comfortably mingle physical and physiological properties with psychological concepts such as attention, memory, thought, inference, and prior knowledge. Third, knowing that color perception is in the mind broadens the areas of inquiry. Psychological perspectives naturally incorporate changes over the life span as well as individual differences in color perception (and not just for the 8% of men with a genetically determined difference in comparison to the other 92%, but also more subtle differences within the 92% of men and among women). Studies of the influence of language and culture on color benefit from well-grounded psychological principles, as do investigations of color categories, color preferences, and even color percepts aroused by listening to music. All of these topics are included here.

Fourth, color psychology goes beyond processes having influence *on* color to embrace the many facets of behavior influenced *by* color. Emotional responses to hues are a classic example, but colors influence also the perception of faces and flavors, human competitiveness, and even romance. Color is used routinely in symbols and signals (and to avoid

signaling, via camouflage). The reviews of how color is used in and affects our lives extend the remarkable scope here.

The authoritative coverage of such breadth draws on the expertise of over 50 contributors who were brought together by three broad-minded editors. Anyone with an interest in the colors *we* experience will find much to appreciate and applaud here.

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