

Implications

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Defining the User

Design professionals who have been involved in the design of the built environment for more than 15 years have a new challenge facing them. It has to do with the face of the “user.” No, we’re not referring to the computer user popularized through satirical skits on *Saturday Night Live* and through other media formats, but the people who inhabit the spaces we design.

One of my most vivid recollections of high school in a Maryland suburb of Washington, DC, occurred in my junior year—and it had little to do with academics. It was an hour-long demonstration of table tennis (ping-pong) by the National Chinese Table Tennis Team. Nixon had just come back from his visit to China, and the visit by this team was a method conceived by the White House to popularize the success of Nixon’s visit. Even though I attended school with children of diplomats from around the world, the impact of this famous visit still remains with me. In fact, I still have the school newspaper that reported this momentous occasion.

Today, I doubt that anyone at a high school would jump at a chance to attend such an event, and certainly seeing athletes from China would not raise the

curiosity level it did in the mid-70s. That’s a good thing on many levels. As our society becomes more culturally and ethnically diverse, we all have an opportunity to become excited and learn about many other cultures, ethnicities, and beliefs.

Both on a personal and professional level, this opportunity to learn is phenomenal, and is changing the way we all think. Researchers in areas of innovation theory, business administration, and education all agree that diversity in the lab, in the workteam or board room, and the classroom add up to a superior outcome versus the endproduct of a group of individuals that come from the same background, with the same education, and similar training.

The ongoing challenge for the design practitioner is to consider the changing face of the user—and of the client in fact, when designing the environment. We can no longer assume that we know who will be using the space from casual observation or limited interviews of key individuals representing the client. It is imperative that during the pre-design phase of the project that the design professional investigates the cultural make-up of the anticipated users of the space. This might involve discussions with the client



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that might require that demographic trends are investigated and that anticipated growth in the area is considered, to determine who will be working in the corporate headquarters, attending classes, recovering, or taking a vacation in the client's facility.

Encourage your clients to take the time to investigate the cultural and ethnic aspects of the users of their future or renovated facility. Consider the influence of culture on color, symbolism, organization and size of space, and orientation of view and daylight. All are perceived in unique ways depending on cultural orientation. To create a successful space, this background investigation must occur. Business profits, learning outcomes, recovery rates and wellness, and productivity all depend on how well the space is designed—to do that you must know who those people are.

This issue of *Implications* presents just two of the issues to be considered—perceptual meaning of color and symbolism as determined by culture. To meet your client's expectations and those of the users of the space, be sure to identify cultural influences as you design spaces for 2004 and beyond.

—Caren S. Martin, Ph.D., Director, *InformeDesign*

Color Meaning Across Cultures

Color is an inherent visual property of form in both the natural and designed environment. Interior designers consider many aspects of color when specifying the color palette of an interior space in the process of solving a design problem. Function and aesthetics are often key aspects of color palette selection, which works well when working within a homogeneous culture because color meanings are common to all. However, interior designers are frequently working within multicultural environments, which may result in people attaching different meanings to the color palettes used. Designers must be knowl-

edgeable about the meanings individuals from various cultures attach to color palettes because our lives and work are conducted in global, cultural environments.

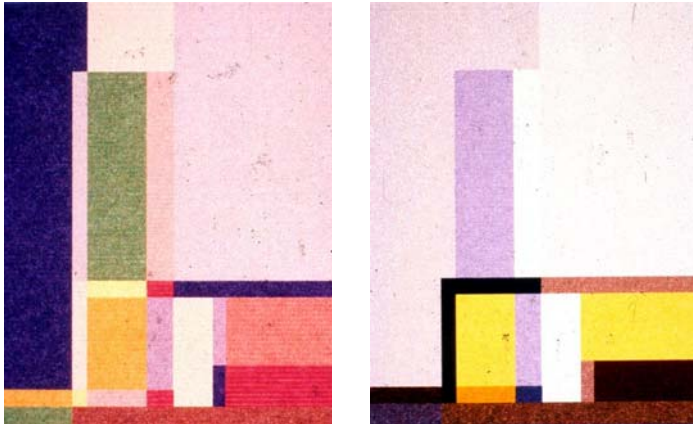
Importance of Color Meaning

Color is one of the most relative components of an interior space. It is what most occupants see first and, therefore, can be very influential and complex. The different meanings people give to color exacerbate this complexity. To understand this complexity, designers pay attention to the dimensions of hue, value, and chroma and the relationships of color contrast, overlapping, and adjacencies because the person in the interior space views all of these conditions at the same time.

It has been found that there are different interpretations of color meaning based on the viewer's culture. Color meaning has generally been studied as it related only to a single color, i.e., red, blue, or yellow. An instrument to study the meaning of color in interior environments based on color palettes was developed by Guerin and Park (1994). Using that instrument, it is possible to comparatively study the cultural meaning of interior color palettes.

Tools to Measure Importance

Guerin and Park's instrument allows the study of the meaning of color in interior environments based on an integrated view of colors within an interior, or an integrated color palette. This is the combination of several colors that are used for interior components such as walls, floors, ceilings, window treatments, and furnishings. It is characterized by combining hue, value, and chroma as well as color contrast, overlapping, and adjacencies. They developed this integrated color palette to use as a visual research instrument that allows subjects to focus only on the interior space's color without the influence of other interior components such as furniture or artifacts.



Integrated Color Palettes Using Warm Hues

The examples above show two of the integrated color palettes they used in the study. All the different palettes are composed of vertical and horizontal lines and shapes representative of those that occur in interior environments. The proportion of the two-dimensional shapes or sections represents the different components in an interior. Large planes represent the walls, floor, and ceiling. Medium size planes represent furnishings and window treatments. The smallest planes represent accessories. The asymmetrically balanced arrangement of various sized rectangular shapes simulates the relationships of interior color contrast, overlapping, and adjacency. These relationships are held constant in all color palettes tested to control for the effect of shape juxtaposition. Additionally, the proportion of colors is represented by the various sizes of color planes.

Park and Guerin (2002) then used this integrated color palette to identify differences in color meaning and color preferences in interior environments in four different cultures, American, English, Korean, and Japanese. To learn more about their study, see *InformeDesign's* Research Summary *Color, Meaning, Culture, and Design*.

—Denise A. Guerin, Ph.D., Coordinator, *InformeDesign*
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Dr. Guerin is a professor of interior design in the Department of Design, Housing, and Apparel. She received her Ph.D. from Michigan State University focusing on energy conscious interior design and is an NCIDQ certificate holder. She is a Fellow of the Interior Design Educators Council (IDEC) and she has received the Morse-Alumni Distinguished Teaching Award, the Michael Tatum Excellence in Education Award from IIDA, and the 2003 Louis Tregre award from NCIDQ.



Meanings of Symbols

A symbol is used to represent an abstract, metaphysical concept. Symbols stand for something else by relationship, suggestion, interpretation, resemblance, or association. The purpose of symbols is to convey and simplify particular ideas and concepts. The meanings of symbols are accumulated slowly from generation to generation. Connotations vary based on the cultural context, as well as the influence that symbols have on one another.

In terms of cultural perception, the meanings of objects are interpreted differently because of their

diverse frames of reference. For example, a fat belly represents gluttony in the western culture while in Chinese culture it represents the wealth of god. Yellow signifies the imperial in China, whereas in northern Europe, it stands for deceit and timidity.

The perception of an image is rapid—almost instantaneous. According to Pettersson (1999), three assumptions for the perception of symbols can be made. First, several different symbols may convey a similar meaning and a specific message. Second, a particular symbol may be able to carry different messages. Third, as an audience, we have to learn the intended meaning of symbols.

Wileman (1993) indicated that there are three groups of symbols: pictorial, graphic, and verbal symbols. Pictorial symbols include photographs, illustrations, or drawings. Viewers can relate to pictorial symbols with real-world examples. Graphic symbols include

image-related graphics, concept-related graphics, and arbitrary graphics. Image-related graphics contain profiles of an object. In concept-related graphics, the object is perceivable, but it contains less detail than in image-related graphics. Arbitrary graphics are abstract symbols that are created from the designer's imagination. Verbal symbols include verbal description, nouns, and labels of objects.



Symbolic Chinese Artifact

According to Glenn (1980), every object and phenomenon is a symbol of something else or some further thing, and this relationship is continuous in an infinite regression. Glenn draws two conclusions about symbolism. First, every symbol is a thing in and of itself. Symbols do more than simply stand for something else; they evoke relationships amongst themselves in the form of pairing, reciprocity, opposition, etc.

A second conclusion that Glenn draws about symbolism is that although a symbol itself remains unchanged, the degree of understanding we have about it and the meaning it carries is not constant; these things vary through time and from person to person. For example, the swastika was originally used by Native Americans to represent the sun and immortality. After its adaptation by the Nazi party of Germany during World War II, the symbol became such a strong Nazi party image that it is almost impossible to reinstate its original function and meaning in native culture.

Symbols play an important role in human life because they are essential for the perception of reality. Their importance is reinforced by Charles Peirce's explanation that symbolism is the nature of human beings because we are symbol-using and sign-using organisms (Nowak-Fabrykowski, 1992). Additionally, the major objective of symbols is to facilitate communication beyond the limitation of words.

Relationship of Culture and Symbols

Human culture represents historical and geographical traditions of specific groups of people, describing their particular perspectives and reflecting specific human experiences. (Wagner, 1975). The ability to create and symbolize culture is the nature of humans (Dhaouadi, 1993). Humans are the creators of meaning and they are conscious of this fact. Humans are also able to reflect upon meanings and

interpret meanings held by others. Every culture has a system of communication and assigned meanings are contained in the most commonly used language and symbols. The signs can be visual, verbal, or a combination, but most importantly, they have the capacity of producing a sense of culture and they construct reality.

Due to sign systems, people from different cultures construct their activities and interpersonal relationships to those that can be accommodated by their own environment (Rubinstein, 1993). In other words, every culture has its own system of cultural symbols. Symbolization is a fundamental human activity and essential act of the mind (Percy, 1990).

Symbol, as described, is part of the product of culture that facilitates communication. Susan Langer asserts that symbols are not used only for communication—their importance is found in the formulation of experience. The formulation of things, events, and natural ordering of the world are all symbolic expression or symbolization. Symbols signify aspiration, broader abstract or philosophical cultural principles, and belief systems that go beyond specific contextual meanings. Especially with belief systems, symbolic representation plays an essential role in the construction and reinforcement of concepts. Symbols take on a critical role in connecting individuals, cultures (through ideologies), and holding entire communities together (Page, 1992).

—Sauman (Sue) Chu, Ph.D., Assistant Professor, University of Minnesota

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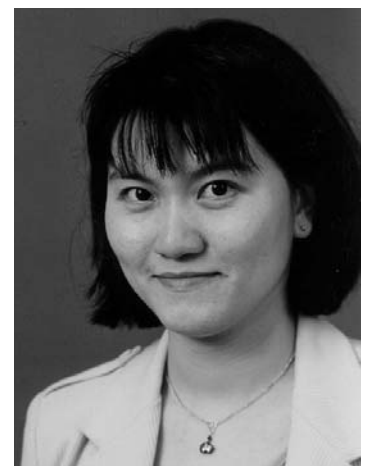
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Related Research Summaries

InformeDesign has many Research Summaries about culture and ethnicity and related, pertinent topics. We believe that this knowledge will be valuable to you as you consider your next design solution and worth sharing with your clients and collaborators.

“Color, Meaning, Culture, and Design”

—*Journal of Interior Design*

“Culturally-Specific Design Helps Dementia Patients”

—*Environment and Behavior*

“Home Influences Asthma Among Hispanic Children”

—*Journal of Exposure Analysis and Environmental Epidemiology*

“Context-Sensitive Signs Improve Recycling Rates”

—*Environment and Behavior*

“Shelter is An Important Expenditure for Asian Americans”

—*Family and Consumer Sciences Research Journal*

“Creative Culture and Urban Renewal”

—*Journal of Urban Affairs*

“Landscapes Convey Cultural Values”

—*Landscape Ecology*

“Impact of Age, Ethnicity, and Poverty on Children's Home Experience”

—*Child Development*

“Cultural Factors Affect Housing Settlements”

—*Journal of Architectural and Planning Research*

“Children At Risk for Sun Damage”

—*Family and Consumer Sciences Research Journal*

“Kitsch Provides Comfort and Security”

—*Journal of Material Culture*

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The Mission

The Mission of Informedesign is to facilitate interior designers' use of current, research-based information as a decision-making tool in the design process, thereby integrating research and practice.

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