

Expanding color design methods for architecture and allied disciplines

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ABSTRACT

The color design processes of visual artists, architects, designers, and theoreticians included in this presentation reflect the practical role of color in architecture. What the color design professional brings to the architectural design team is an expertise and rich sensibility made up of a broad awareness and a finely tuned visual perception. This includes a knowledge of design and its history, expertise with industrial color materials and their methods of application, an awareness of design context and cultural identity, a background in physiology and psychology as it relates to human welfare, and an ability to problem-solve and respond creatively to design concepts with innovative ideas. The broadening of the definition of the colorist's role in architectural design provides architects, artists and designers with significant opportunities for continued professional and educational development.

1. INTRODUCTION

During the closing decades of the 20th century, a broadening of the definition of the colorist's role within architecture and the allied design professions has helped to distinguish the discipline of color design and increase its relevance and significance in design industry and education. The methods that the color designer utilizes for work continues to expand due to the imaginative application of science, technology and the integrative processes of art and design. What the color design professional brings to the architectural design team is not only an expertise devoted to supporting the guiding design concept of a building, but also a richly diverse sensibility made up of a broad awareness and a finely tuned visual perception. This includes a knowledge of design and its history, an expertise with industrial color materials and methods of application, a knowledge of new technologies for visualization, an awareness of design context and cultural identity, a background in physiology and psychology as it relates to human perception and human welfare, and an ability to problem-solve and respond creatively to design concepts with innovative ideas.

2. RECENT PRECEDENTS OF ARCHITECTURAL COLOR

The role of the color designer striving to complete the work of the architect did not really appear until the 1950's, shortly after the end of the Second World War. Historically, in Europe, it was industrial architecture that made use of and supported the work of colorists. A little later in the 1960's, the appearance of huge apartment complexes that tended to be somber and repetitive in appearance created the need to personalize these buildings with color. In France, beginning in the early 1970's, new multi-disciplinary teams came together to build new cities: urban planners, architects and colorists. It became evident that colorists had found themselves in a new, experimental territory and there was neither formal education nor school for color applied to architecture. Colorists and architects used traditional studio media for planning color for architecture, i.e., drawing tools, paint and paper to visualize color as well as different planning methods in a way one could describe as fumbling and speculative that, with experience, progressively became more concrete.

From the burgeoning corporate giants of the entertainment industry in the 1980's and 1990's including the architecture of urban renewal and the ubiquitous urban mall, office buildings and office parks, restaurants, environmental graphic design and signage, the practical role of color in the landscape and design of our time demonstrates that the creative processes of architects, visual artists and designers, theoreticians, and those of a more analytical and rational method are together opening a new and essential chapter. The wealth of color design accomplishments in the last half of the 20th

century have engaged the public and sparked more than passing interest in color in architecture. A few examples of current methods of color design follow that reflect contemporary practice and beckon us to imagine what lies ahead – a future where the expectation will be for color throughout the built environment.

3. COLOR FUNCTION AND LEGIBILITY

With more than twenty-five years of experience in the field of architectural design, Gerald A. Reinbold, vice president of SHG Incorporated, considers himself an architect who frequently uses color to enhance legibility, clarify function, and (particularly in healthcare projects such as the Veteran's Administrative Medical Center Replacement Hospital and Research Center) promote an attitude of optimism and hope. Mr. Reinbold states, "Everything in the designer's toolbox must be brought to bear in the process of developing large-scale polychromatic architecture. Typically these tools include: conceptual sketches, renderings, 3-D models, material samples, large-scale mock-ups, etc. However, it is very difficult to simulate in the design process the effects of scale and distance on the perceptual quality of the built work. Here, our most reliable tools are experience and intuition."

The hospital occupies three full blocks in the mile-long, nine block Detroit Medical Center superblock. With siting requirements to reinforce the existing setback and green space adjacent to the facility, the program for three major building components included: diagnostic and treatment, medical and surgical nursing, and psychiatric nursing. Each component is expressed as its own building, both in color and massing, and all three are joined by an inner court.

As the project evolved during the conceptual phase, it became clear that a spirit of optimism, clarity of organization, and sense of scale could be effectively delivered through the use of color. The question then became one of selecting the appropriate materials to execute the concept. The criteria for material selection included: wide variety of colors available; permanent, nonfading or chalking characteristics; reasonably low first cost; low maintenance, low life-cycle cost.

A local project, 30-year old Saarinen-designed General Motors Tech Center in Warren, Michigan, provided inspiration for the major material: sand-molded ceramic glazed brick. This material not only met the primary requirements but also offered the additional benefits of a subtle range within each color; a tactile, handmade quality; and the desirable images of tradition and solidity. Complementing this material is another material popular in the same era: porcelain-enameled metal panels. Used as cornices, copings, sills, column covers, and spandrels, these panels provide brightly colored accents with the same assurance of permanence as the glazed brick.

Just as the plan is a three-part composition, the articulation of the hospital's exterior uses a palette consisting of three saturated colors and three neutrals to identify the three major building components and to create a system of pattern to further break down the scale. The primary facade, along John R. Street, is articulated as a tripartite composition in which the two main nursing units are clearly identified and are separated by the silver tones of the third unit, which identifies the main entry. Overlaying this composition is a second layer of smaller tripartite compositions of vertical elements offering a reading of the facade as an urban streetscape. The exterior color concept is also carried through on the interior, providing an additional aid in way finding, and creating a cheerful and optimistic environment.

4. ICONS, THEMES AND IMAGES

John Outram, a British architect known for his provocative use of interior and exterior color and decoration, believes in an architecture of ideas and themes. His use of building materials and his innovative applications of color, texture, form and space has been considered a new visual language for interior and exterior design and surface treatments. As he believes that buildings and their inhabitants interact in fundamental ways, his architecture employs ideas and themes to create thought-provoking spaces. His recent commission for the new Computational Engineering Building at Rice University in Houston, Texas, surrounds a striking and colorful interior with a deep facade of brick and pre-cast concrete. The design successfully bridges across the academic landscape of various departments with the physical attributes of large interior distances between offices and internal functions. The interior vistas catch the eye, as do the building's exterior materials, which harmonize

with the campus. But most of all, it is the visual language of Outram's ideas – an extension of material innovation and design research –together with his narrative for the project at hand that create an extraordinary lively and provocative environment.

One of the most remarkable aspects of Outram's architecture is the planning and execution of the ceiling decoration for the main hall. The study was created in Outram's office by Tanya Hunter and printed onto canvas by 4-color inkjets driven by computerized information, and then transferred to a giant 70 x 50 foot vaulted ceiling. The process, originated by Anthony Chanley of Outram's office, reproduces his A-1 size watercolor painting and explicates its narrative of Cosmic Time. All of the surfaces of the interiors are colored from the floor to the ceiling. Outram uses color to convey larger ideas; each choice is rich in symbolism. Color, therefore, is included to convey meaning and to stimulate both conscious and subconscious thought. The entrance hall is an expression of multihued columns, tiled flooring, and painted ceiling that create a spectacular fusion of volumetric color.

5. SIGN AND IMAGE

The London architectural firm of Madigan and Donald approaches design from an intellectual and scholarly point of view. The richness of these architect's methods and style is reflected in a recent project, the Cube Bar, which inhabits a former bank in a multilevel adaptive reuse project in London's Swiss Cottage district, north of Regent's Park.

The Cube Bar is situated at the intersection of the Jubilee and Metropolitan transportation lines and presents itself as an urban oasis for pedestrians anxious for a break from the frantic pace of the city. With signage in cold blue cathode tubing advertising the building as a place for rest and relaxation, highly visible graphics and signage help to frame a dominant window true to the scale and formidable presence of the building towers above it.

Stephen Donald states, "Contemporary science provides contemporary artists, architects, and designers unlimited access to a phenomenal range of polychromatic media with which to express and represent ideas...however, colors are not out there in the world-not an automatic correlate of wavelengths-but rather constructed in the branch..."

The color design was planned in part on a computer to understand the basic composition and possibilities of materials. The interior is a reflection of machine-age materials and a vision of the urban culture inside out. Painted panels and overlapping planes with recessed lighting in deep tones of blue-violet, yellow, and green recall both today's street culture and the Carnaby Street of the era in which the original bank was first opened. The spatial ambiguity between levels of café and bar is visually inseparable, allowing one space to flow into the next without artifice of separation. Colored light is also directional and pulls the visitor into the space, acting as a visual cue to explore and read the interior design as a three-dimensional abstract composition. The Cube Bar is more than a bar. Reflecting an architect's determination to explore everything, no matter how modest, as possibly being beyond the literal reality of its material, it is a celebration of the interacting elements of light, color, form, and space.

6. VIRTUAL SPACE

As we look ahead to the future, the new technology of Virtual Space will be a formidable color design tool. Immersive environments such as the CAVE (Computer Animation Video Enhanced) system-a rear-screen, three-dimensional stereo display device allows the viewer to step into a stereo-viewed theater plunging into the three-dimensionality of the synthetic computer world. Architectural spaces can be designed and then viewed from within the CAVE. Although true color will require advances in technology for the system, the experience is profoundly better than seeing a computer graphics view on the front of a small computer screen; rather, the viewer is surrounded with a stereo view of a three dimensional modeled world for a total, immersive experience.

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