

Color Perception: Implications For Interior Design Presentation Techniques

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The selection of color for interiors is an important decision for consumers. It is a complex task for most, however, and the common practice of selecting colors from paint samples may not result in the room the consumer envisioned. This paper presents the results of research conducted to determine whether colors selected from paint samples would be the same colors selected from a designer's rendering. It was concluded that preferences do differ according to presentation technique, and the implication of the findings for designers and researchers are discussed.

One of the most difficult decisions to be made in changing one's interior surroundings is the determination of color schemes or general use of color. Color is ranked as one of the most important factors in the design of today's environment (Birren, 1969). As consumers plan the design of their interior space, they need to be acutely aware of the impact that certain colors have on themselves and other members of their families. It is obvious that all colors are not alike in appeal or influence, and individuals should take great

care in making color selections that are compatible with their specified preferences of hues.

By understanding the relationship between color preferences and interior features, the individual creates a more perfectly agreeable environment which will be harmonious with the complex personalities inhabiting that living space (LaGarce, 1972). Selecting colors for the home which have positive aesthetic appeal would seem to be one step toward achieving such harmony and appears to represent a relatively simple task. In actual fact, however, impressions about colors can be deceptive and the identification of preferences becomes a difficult process.

Because of the unlimited availability and choices of colors, decision making by the consumer has become exceedingly complex. Decisions concerning color used in interiors often are made after viewing a myriad of colored paint samples. These samples sometimes are misleading in determining the final appearance of a

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room because colors on walls and ceilings reflect back and forth, and often appear different from the original paint sample. Therefore, to aid the consumer in making selections, professional interior designers are being engaged with increasing frequency to plan changes in color schemes. By employing a designer, it then becomes the task of that specialist to represent the color selections in such a way that the client can accurately visualize how the finished product will appear. How can the designer maximize the probability that a client's choice of favorite color selected from a small paint sample is still viewed favorably when it is applied in an interior setting? Are there technical skills which the interior designer can employ which will achieve this outcome?

Color Presentation Techniques

The skills training of interior designers traditionally has included learning techniques such as mechanical drawing, sketching, and building models. Each of these represents an attempt by the designer to maximize the reality of the perceived finished product for the consumer. A black and white presentation typically has been accompanied by a collage of materials, including paint samples, to be used in planning new construction or renovation of existing space. Additional versions of the plans sometimes are rendered in color in an effort to provide a photographic interpretation of the completed interior. It has been assumed that these presentations allow the client to more realistically visualize the colors as they will actually appear in a room than would be possible from a paint sample alone. This assumption, however, has not been tested empirically, and it is unclear at this point in time how similarly consumers perceive one color as represented on paint samples as compared with the same color presented on a rendering executed by an interior designer. Therefore, the purpose of this study was to determine that similarity of perception.

Research Design

Subjects

A sample of 100 people was obtained from a list of residents who had filed for building permits in two Texas cities. There were fifty-four females and forty-

six males who were either new home owners or home builders. This group was chosen because they recently had been involved in making color selections and were sensitized to the design process associated with interior planning. Respondents varied in age from twenty-one years to sixty-eight years with the mean age being 36.38 years. In addition, it was discovered that this sample had owned from one to ten homes, including the one being built or purchased, with a mean number of 3.04 homes per subject.

Instruments

In order to investigate the degree to which subjects perceived color preferences similarly when viewing a paint sample as compared with a designer's rendering, two research instruments were employed. To represent the paint samples, the short Luscher Color Test (Luscher, 1971) was selected. This instrument consists of eight 1'' x 2'' color samples which include red, yellow, violet, blue, green, grey, brown, and black. This test was chosen because it was originally designed for use in color preference studies and it offered a standard range of hues to which the subjects were asked to respond.

Perception of preferences based on a designer's rendering was determined by having each subject to respond to a set of eight interior quick-sketch drawings (Henton, 1978). Each drawing was presented using a common medium, common furniture pieces chosen to de-emphasize the style variable, and common accessories. The eight sketches varied only in the colors used for each monochromatic scheme, and the colors were chosen to match exactly with those eight included in the Luscher Color Test. The drawings were executed with a freehand style using colored pencils and water base markers. A two-point perspective line drawing was first sketched with colored pencils, and values were added by use of the markers. Each drawing was numbered on the back to correspond with the numbers of the colored cards in the Luscher Color Test. Preliminary sketches were presented to a criterion committee of three design authorities. Suggestions for revisions of the drawings were accepted and made as determined by the committee. Each interior drawing was then finalized, retaining consistencies except for color in each drawing (see example, Figure 1).

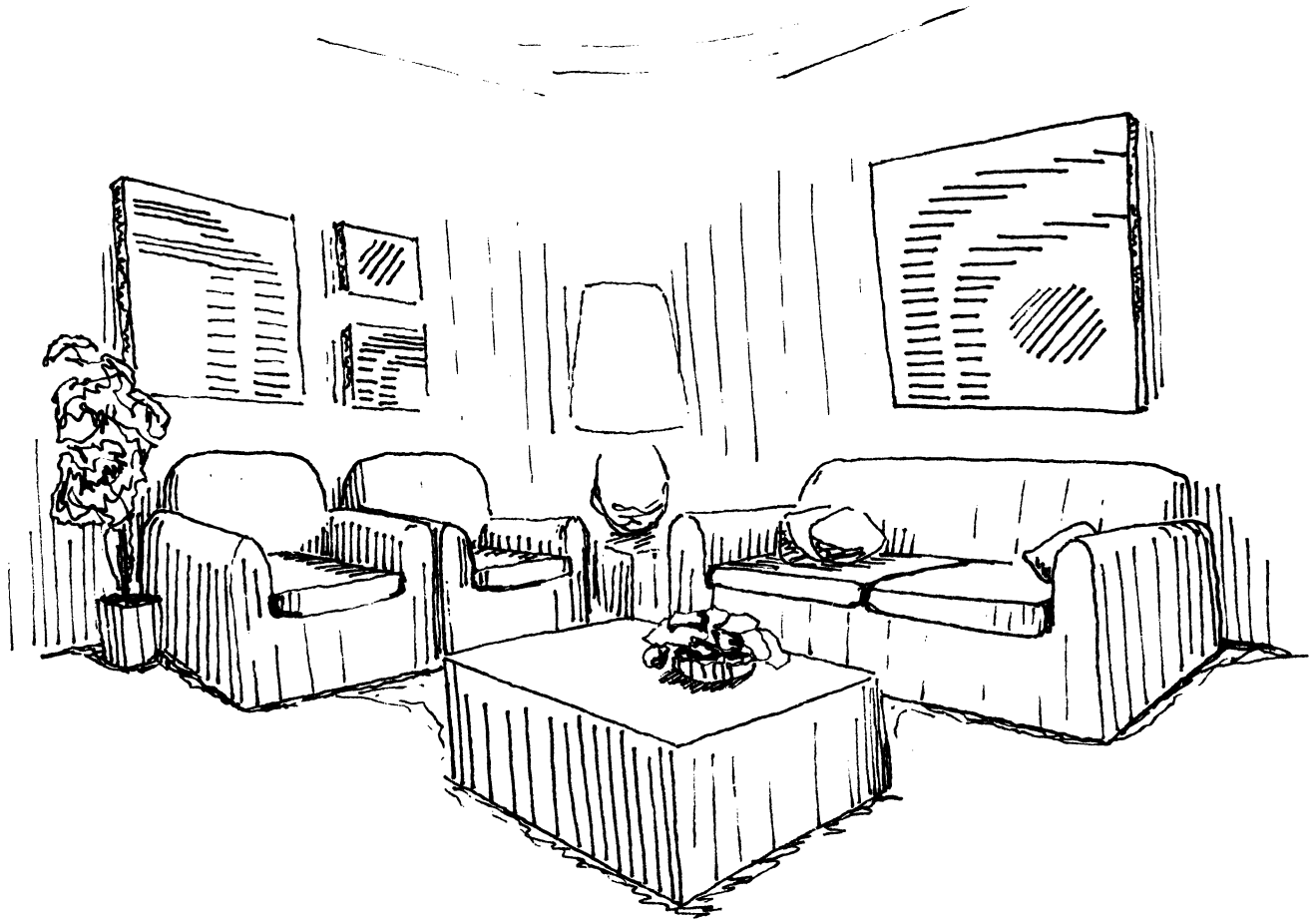


FIGURE 1 — Example of line drawings used to compare color preferences in a designer's rendering to paint samples.

Procedures

The testing procedure involved a personal interview with each subject conducted by a researcher. In each instance the Luscher Color Test was administered, which involved a rank order of the eight available colors according to the subject's personal preference. This was followed by the administration of a short questionnaire designed to collect demographic data. Next, the Luscher Color Test was given a second time, as recommended by Luscher, which resulted in the set of data utilized for analysis (for explanation of testing

procedures, see Luscher, 1971). Finally, the eight quick-sketch perspective drawings were presented, also to be rank ordered by color preference. It was decided that administering the two instruments at the same interview session would allow the subjects to remember what preferences had been indicated on the Luscher Color Test even as they were responding to the quick-sketch color schemes. If differences between the rank orderings were revealed, it would suggest that one's perception of what he or she liked best in colors definitely varied according to presentation media.

Results and Discussion

In order to determine the existence of a relationship between color preferences on the Luscher test and on the quick-sketch drawings, the data were analyzed by the use of Kendall's tau. This technique is appropriately used with rank order data, particularly when the data contain a large number of tied ranks, i.e. when a respondent selected the same color in the same rank positions in both tests (Nie, Hull, Jenkins, Steinbrenner, & Brent, 1975). When the analysis was computed, the resulting correlation was .53, indicating that only 28 percent of the variance was being accounted for and suggesting that color preference was not being perceived similarly on the two measures.

Based on these results it appears that choice of color preference is influenced to some degree by the medium of presentation. The color that appeals to an individual on a paint sample seems to change in appeal, either positively or negatively, when the color is applied to an interior space. The opportunity to represent value variation on the quick-sketch drawing may introduce a new perception of how the color would appear in a room. By constructing a facsimile of the finished product, even in two-dimensional form, the designer may assist the client to more accurately visualize the outcome which can be expected from certain color selections.

This study represents an initial attempt to compare how favorably consumers view particular colors when the presentation media are varied. Additional research

is needed, however, before any definite conclusions can be drawn. In order to determine how accurately the consumer envisions a finished product, research in a space laboratory or other types of controlled settings is needed. Only then, when the individual can stand inside the walls treated with the chosen colors, will it be possible to identify degree of perceptual accuracy. Until that research is done, evidence from this investigation would seem to support the need to continue training prospective interior designers in color presentation techniques.

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