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Color Usage in International Business-to-Business Print Advertising

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The use of appropriate color in international business-to-business advertisements can profoundly impact the success of an advertised product. This study compares the usage of colors in business advertisements in France, the United States, and Venezuela. The findings conclude that Venezuelan ads use significantly more red, orange, and green colors, while advertisements from France and the U.S. use higher proportions of black and brown colors. The U.S. also utilizes significantly more black-and-white ads than either France or Venezuela. These findings differ from prior theories of color preferences, indicating that cultural meanings may influence business'

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color selections for advertisements. Managerial implications for color usage in advertising across national boundaries are discussed and suggestions for future research are provided.
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INTRODUCTION

Color decisions in international business-to-business advertising have typically been based upon personal tastes, anecdotal evidence, or successful home country campaigns. Because of a vacuum in decision-making knowledge, international marketing managers often follow a trial-and-error selection process that originates with color schema developed in other regions of the world, in essence, a de facto standardized color strategy [1, 2]. However, given the complexities of this situation,

The color choices made in standardization efforts are integral to industrial product success.

marketing managers may not make the best color selections for global advertisements without well-developed empirical guidance frameworks [3–5].

As global harmonization continues, business-to-business advertising may have greater potential than consumer advertising for standardized global advertisements [6, 7]. Globalization of industrial markets, web-based advertising, and increased pressure to achieve market efficiencies have motivated business-to-business marketers to consider the adaptation of standardization strategies in international promotions, including the colors utilized in advertisements. The color choices made in standardization efforts are integral to industrial product success [8]. That is, if people in various cultures and/or geographical areas possess disparate perceptions of colors, a standardization color strategy is unlikely to succeed. Hattwick et al. [9] explain the importance of color in advertising:

Color is an important tool for shaping customers' feelings and responses. It is a tool which can do greater harm than good if indiscriminately used. The advertiser who chooses colors on the basis of broad generalizations or of personal bias is in danger of making gross mistakes (p. 3).

Ricks [10] documented numerous international product failures resulting from inappropriate color decisions. It is generally believed that both color preferences and color usage influence advertising effectiveness [11]. Although studies of standardization and color are well documented

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in the trade press, few empirical studies have examined the color schemes utilized in business-to-business advertisements across national boundaries [12]. The purpose of this study is to gain a greater in-depth understanding of the color strategies used in business-to-business advertisements across countries. To operationalize this study, selected French, U.S., and Venezuelan business magazine ads were analyzed to provide managers with a richer level of knowledge about the ability to standardize colors in international business-to-business advertising.

BACKGROUND

Advertisers understand the importance of color. For more than 60 years, researchers have studied the effect of colors in print ads [13]. They have found that colors are multifaceted in nature and can stimulate emotional responses, affect persuasiveness [14], prestige [15], and the consumer's overall perceptions of the product [11, 16, 17]. Colors have been shown to reinforce copy claims [18], improve learning [19], and increase readership [20] and sales [21]. The average magazine reader also recognizes that utilizing color increases advertising costs [22].

Early studies concluded that color ads were more attractive and interesting than black-and-white ads [15, 23]. However more contemporary evidence suggests that, in a competitive market place, a black-and-white ad may be a useful differentiation tool [24]. For example, in recent Nuprin commercials, a small yellow pill is contrasted against a black-and-white environment to illustrate the pain medicine's uniqueness relative to the competitors. In the U.S. market, insurance, banking, investment firms, jewelers, and even soft drink companies have successfully used black-and-white advertisements [25].

Demographic variables and culture influence the color effectiveness of an ad. Gender comparative studies have demonstrated differences in color preferences [11, 26], although no such difference appears to exist between white and black Americans [27]. However, when Lee and

Colors have been shown to reinforce copy claims, improve learning, and increase readership and sales.

Barnes [11] compared color differences between male versus female targeted magazines and white versus black targeted magazines, no difference in color usage was found between male/female targeted magazines, but significant differences in color usage existed between black/white targeted magazines. These findings suggest that advertisers may base their color decisions on extraneous factors.

Color usage has been shown to differ among cultures at various levels of economic development and geographic location [28]. Petterson [29] proposes geographical heritage as an explanation for color preference. That is, in areas where sunlight is extremely bright, colors and contrasts decline in intensity, thereby making it more difficult to distinguish between colors. Consequently, through natural selection, peoples of equatorial descent have a more highly developed black/white vision (i.e., a larger number of efficient rods in the retina). Bornstein [30] indicates that peoples living nearer the equator possess greater amounts of yellow intraocular pigmentation in the eye that causes a depression in color discrimination and a reduction in the perception of blueness. Those peoples from northern latitudes, where light is reflected less directly, have developed a more refined color vision, at the expense of black/white vision. Lower levels of yellow pigmentation increase the short-wave visibility and consequently lower the perception of blue. If true, these fundamental physiological differences may help explain the need for differing chromatic stimulation to facilitate the perception of color.

Economic development and technological advancement have also been shown to impact color usage across cultures. People from industrialized nations possess a wider experience range of colors. Conversely, those cultures emanating from areas of emerging economic development tend to possess differing color experiences, albeit, at a lesser magnitude [29].

RESEARCH HYPOTHESES

Several studies have demonstrated differences in color usage among peoples of differing geographical heritage, sunlight exposure, and economic development. These results suggest that advertising in country-specific magazines should vary in their usage of color schemas. However, Cutler and Javalgi [6] propose that culture will shape consumer advertising and not business-to-business advertising. Therefore, as France, the U.S., and Venezuela differ across these color-specific cultural dimensions, this study proposes:

H₁: There are differences in color usage between country specific business-to-business magazine advertisements.

Black-and-white ads have been shown to be less attractive and less likeable than color ads, but in certain instances black-and-white ads appear to be a valuable differentiating mechanism. Since cost and availability of color advertisements are primary considerations in less affluent countries, and opportunities for standardization are restricted by market conditions in these countries [31], differences in the use of black-and-white ads should be expected. As color differences can be posited across countries, the utilization of black-and-white advertisements should reflect similar differences. Therefore:

H₂: There are differences in black-and-white usage between country specific business-to-business magazine advertisements.

METHODOLOGY

Advertisements from the largest distribution, biweekly business magazines in France (*Le Nouvel Economiste*), the United States (*Fortune*), and Venezuela (*Gerente*) were selected for this study. While the authors acknowledge a substantial limitation in the selection of only one

Economic development and technology impact color usage across cultures.

print magazine from each country, single magazine business-to-business content analysis is established as valid sampling procedure for cross-cultural studies [8, 11, 13, 22] with “. . . no known reason to suspect that the sample is biased in any particular way” [8]. Print ads were selected because “differences in color preferences between cultures are more likely to be manifested in color usage in printed advertisements” [8]. Only full-page advertisements in issues distributed in each domestic market between January and March of 1995 were examined. If an ad appeared several times it was counted only once. A single moderator selected a total of 220 ads from *Le Nouvel Economiste*, 264 ads from *Fortune*, and 358 ads from *Gerente* for consideration. Three male and three female judges recorded the dominant color of each advertisement without communicating with one another. The dominant color was defined as the color that occupied the largest area of the ad. The color classifications were black, blue, brown, gray, green, orange, red, violet, white, and yellow. These colors have been established as standard hues that are readily observable in content analysis [8]. To increase categorical consistency, a visual color chart was provided to each judge. Finally, the judges recorded black-and-white ads in a separate category.

RESULTS

Reliability of the data is a major concern for content analysis [32]. Therefore, interjudge reliability was com-

puted to confirm the degree of consistency between coders across the defined color categories. The ratio of coding agreements for judges is displayed in Table 1.

The ratio of coding agreements to the total number of coding decisions was 0.8646. These results fall within the domain of accepted reliability for content analysis prescribed by Kasssarjian [7].

Table 2 shows that 53 black-and-white and 211 color advertisements were acquired from *Fortune*, 23 black-and-white and 197 color advertisements from *Le Nouvel Economiste*, and 14 black-and-white and 344 color advertisements were obtained from *Gerente*. Black-and-white ads accounted for 20% of all the *Fortune* ads, 10% of *Le Nouvel Economiste*, and 4% of the *Gerente* advertisements.

A chi-square value of 41.58, which is significant at the 0.01 level, indicates there is a significant difference in the use of color versus black-and-white ads between the three magazines.

Table 3 exhibits the average color distributions and observed significance level of the chi-square test of independence across the various magazines. The *P*-values indicate differences in color usage are present across the three magazines.

Advertisements in all magazines utilized large amounts of blue and white colors. Advertisements in *Gerente* used significantly more red, orange, and green. Advertisements in *Fortune* and *Le Nouvel Economiste* used higher proportions of black and brown colored ads. *Fortune* exhibited a significantly higher percentage of violet ads.

TABLE 1
Interjudge Reliability

	One	Two	Three	Four	Five
Two	0.8437				
Three	0.9240	0.8407			
Four	0.9354	0.8297	0.9295		
Five	0.8258	0.7546	0.8200	0.8196	
Six	0.9186	0.8107	0.9414	0.9929	0.8511

TABLE 2
The Number of Black/White versus Color Ads*

	Black/White	Color	Total
<i>Gerente</i>	14	344	358
<i>Fortune</i>	53	211	264
<i>Le Nouvel Economiste</i>	23	197	220

*Chi-square = 41.58, significant at 99% confidence level.

Color advertisements may also reflect modernity and progress, key elements in emerging economies.

DISCUSSION AND CONCLUSIONS

These findings provide support for H_1 , that color usage differs in business magazine advertisements from divergent cultures. However, the large quantity of blue and white colors present in all magazines may demonstrate a potential opportunity for business-to-business color standardization. In contrast to earlier findings [8], the use of bright colors of red, green, and orange was significant, indicating that sunlight may indeed play a factor in color preferences among the three countries. Also, the proportion of dark colored magazine ads detected in northern, industrialized areas indicate that prior theories of color preferences and color ranges may not be (1) accurate, or (2) practiced in current business-to-business advertisements.

As color has been shown to evoke meanings [33], the results of this study may potentially be explained by advertisers' use of cultural meanings in their selection of color schemas. For example, in the U.S. blue is viewed as a masculine color, while in France the masculine color is red. Purple is the mourning color in Venezuela, whereas, it is black in France and the U.S. The color green is associated with money in the U.S. and pharmacies in France. An international advertiser with a thorough understanding of the feelings associated with these colors may adapt the color schemas to country specific ads in an attempt to invoke the desired image for the product. Opportunities

for standardization are limited by those color combinations that evoke radically inconsistent meanings across cultures. However, opportunities for color standardization still exist where color usage and meanings are consistent or neutral across cultures.

The findings also provide support for H_2 , suggesting that business magazines differ in the usage of black-and-white ads between cultures. U.S. advertisements use the greatest use of black-and-white color schemas, while Venezuelan ads use the fewest. Further examination of the black-and-white ads selected from *Fortune* confirm extensive use of these ads in the fields of financial services, insurance, and luxury items. This may indicate an attempt by U.S. advertisers to communicate a traditional, conservative message to consumers, through old-style color schemas. But, in emerging economies, black-and-white ads may not be viewed as being appropriate for these types of business-to-business ads. Black-and-white ads may be perceived as being "cheap" and of lower quality, certainly not an appropriate or desired image for the securities and luxury product industries. The use of color in advertisements may also reflect modernity and progress, key elements for potential investors in emerging economies. Standardization of black-and-white advertisements may therefore be restrained by a country's economic development level.

While this study's sample is composed of ads from three divergent cultures, the sample is not comprehensive

TABLE 3
Color Distribution by Magazine

	Black	Blue	Brown	Gray	Green	Orange	Red	Violet	White	Yellow	Total
<i>Gerente</i>	23	85	21	24	37	9	33	12	72	28	344
<i>Fortune</i>	16	66	19	20	16	3	4	13	27	27	211
<i>Le Nouvel Economiste</i>	16	72	18	21	9	4	12	5	30	10	197
<i>P-value</i>	0.067*	0.315	0.076*	0.135	0.072*	0.097*	0.078*	0.062*	0.281	0.260	

*Significant at 90% confidence level.

Standardization in color usage could reduce the effectiveness of international business-to-business advertising.

enough to suggest the acceptable color combinations for standardized advertisements. Caution is advised therefore in generalizing this research beyond the parameters established in this study. However, only through continued research can the question of color standardization in international business-to-business advertisements be fully answered. Future research should extend into additional countries, a wider variety of business-to-business publications, the time dependency of color usage, and use alternative research methodologies. As a framework is developed that offers greater guidance in color selection for marketing managers, international business-to-business advertisers must weigh the costs of adaptation against the risks of using standardized color schemas not totally appropriate for the market. Excessive pressure toward increased market efficiency and lower costs through standardization in color usage could result in a reduction of effectiveness in international business-to-business advertising.

In summary, this study provides initial guidance for marketing managers about how to utilize colors within international business-to-business advertising publications. This study also has important implications for marketing managers that include: (1) culture limits the use of standardized colors in business-to-business ads; (2) economic development levels affect the use of black-and-white ads across national boundaries; (3) colors used in business-to-business advertisements must be carefully selected based upon target market perceptions or “meanings”; and (4) caution must be exercised when approving colors recommended by international advertising agencies. Local understanding is still an important criterion for designing an advertisement that communicates what the sponsor wants the recipient to understand and/or feel. By possessing a more thorough understanding of the influences of colors in business-to-business advertisements, industrial marketing managers can make more in-

formed advertising decisions that will lead to greater market efficiency and increased profits for the firm.

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