The Impact of Ad Background Color on Brand Personality and Brand Preferences

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ABSTRACT

Past research across a variety of disciplines has established a relationship between color and emotions, attitudes, and behavior. The primary purpose of this experimental study is to explore the impact of background color in print advertisements on brand image/personality and brand preferences (e.g., brand attitudes). For example, it is expected that viewers' perceptions of a brand's image/personality will reflect the image associated with the ad's background color (e.g., a brand will be judged to be more vibrant and exciting when it is advertised with a red background versus a more calming blue background). I utilize Aaker's (1997) five-dimension theoretical framework, composed of personality traits (i.e., *Sincerity, Excitement, Competence, Sophistication,* and *Ruggedness)* determined to be relevant to both human and brand personality and generalizable across product categories. In the interest of completeness, the impact of color on brand personality beliefs and the more traditional attribute-based types of beliefs is tested here. Findings indicate that background color in advertisements impact the advertised brand's "personality" and brand attribute perceptions: for example, the brand advertised with the red background was perceived as being more sophisticated and more exciting than the brand advertised with the blue background. In addition, altering an ad's background color rendered a different set of brand personality and brand attribute beliefs salient.

INTRODUCTION

Color is part of our daily lives. People use colors to express themselves and their emotions, to adapt to weather conditions (e.g., dark colors are used in winter to absorb the heat better while light colors are used in the summer to stay fresh), and also to simply help themselves feel confident with their bodies and appearance. Research indicates that over 80% of visual information is related to color: i.e., color conveys information. It identifies a product or a company, as well as the quality of the merchandise and much more (Colorcom.com). Color can influence consumers' purchase decisions, how they see things, their emotions, and thus it is integral to marketing. Color photographs are commonly used in ads because they are thought to have superior attention getting properties (Meyer-Levy and Peracchio 1995). For this reason, it is extremely important to understand how color affects attitudes, beliefs, and feelings. Marketers can then apply such knowledge to develop effective promotional strategies and tactics. For instance, a package can be designed to appear taller or shorter: e.g., light-colored packaging may make a package appear larger, whereas darker colors may minimize the perceived size (Pride and Ferrell 2003). The right colors communicate meaning and please the eye, whereas the wrong colors can be unpleasant and even unsettling. As a marketing tool, color can also be a subliminally persuasive force. As a functional component of human vision, color can capture attention, relax or irritate the eyes, and affect the legibility of text. All things considered, the right colors empower and contribute to the success of an advertising campaign, a product, a service, or even an interior space. In contrast, using the wrong colors can be a costly mistake (Colorcom.com).

Colors can also influence customers' emotions, positively or negatively. Previous research has shown a consistent association of colors with certain feelings and experiences. For example, the color "Blue" is soothing and associated with wealth, trust, and security, whereas "Red"

connotes excitement and stimulation (Pride and Ferrell 2003). In this study, I examine the relationship among color associations and brand personality, to determine if certain colors tend to create certain reactions about a product. For example, it is expected that viewers' perceptions of a brand's image/personality will reflect the image associated with the ad's background color (e.g., a brand will be judged to be more vibrant and exciting when it is advertised with a red background versus a more calming blue background).

BACKGROUND AND PREVIOUS LITERATURE

As presented above, different colors have varying effects on people. For instance, there are different responses to the two extremes of the spectrum, red and blue. Red tends to raise blood pressure, pulse rate, respiration, perspiration, and excites the brain waves. Across cultures, red has the fastest and most powerful effect on human emotions (Aaker, Benet-Martínez, and Garolera 2001). Other associations attached to the color red are heat, danger, power, passion, strength, blood, war, energy, warmth, talent, violence, and courage. Red is used to stimulate people to make quick decisions. Blue has a reverse effect. It tends to lower blood pressure, pulse rate, and brain waves. For most, blue symbolizes truth, justice, passion, love, talent, and creativity. Other common associations connected with the color blue are sky, cold weather, water, and ice (Birren 1950).

Past research has examined how color affects consumer's decisions and attitudes. Many of these efforts have compared black-and-white versus 4-color ads. Color photographs are commonly used in ads because they are thought to have superior attention getting properties. However, now that color ads are the "norm", a black and white ad may actually be more attention-getting due to a "contrast" effect. Meyers-Levy and Peracchio (1995) suggest that when consumers' processing motivation is low, product attitudes will tend to be based on simple heuristics associated with superficial cues such as the physical attractiveness of the photo, the

product, and/or the product user or spokesperson. Because color is likely to enhance the perceived attractiveness of these objects, consumers are likely to produce more favorable product attitudes when ads contain color rather than only black-and-white. However, when consumers are motivated to process an ad critically and extensively with an eye toward substantiating the ad's assertions, it appears that color may have one of two effects. Color can consume resources by stimulating inferential processing that may benefit ad claim substantiation as colors and objects that are agreeable with the message advocacy are processed. Alternatively, color may undermine ad claim substantiation by usurping resources that would otherwise have been devoted to processing substantiating information. This study reveals that under high motivation, the use of ad color and the extent to which an ad and its claims demand resources to process and/or to substantiate, jointly influences consumers' attitude.

It is also suggested that consumers may respond to the use of color in ads in a manner that may run afoul of advertisers' intentions. Specifically, it appears that under certain conditions, advertisers may realize double benefits by employing less costly black-and-white rather than color advertising, thus achieving enhanced ad effectiveness. This seems to be the case when consumers are motivated to expend substantial resources processing an ad that is extremely resource demanding, and insufficient resources remain to adequately substantiate ad claims. But, the extra cost of employing color in advertising is likely to be justified if consumers devote few resources to ad processing, and if the relatively high level of cognitive resources consumers allot to ad processing matches that needed both to process the ad's visual elements (e.g., colors) and to substantiate ad claims. Although this study helps us understand how viewer's processing motivation impacts the effectiveness of color versus black and white ads, the authors do not test the impact of different colors (e.g., red and blue). This is the primary focus of the research reported here.

Color can be used in advertising to attract attention and enhance communication through the illustration of visual and copy elements. Color's ability to attract attention has been documented for print media in general (Rossister1988, Valiente 1973). Lohse (1997), in an eye-tracking study, demonstrates that color Yellow Pages ads are viewed first, more often than black-and-white ads, and longer than equivalent ads in black-and-white. Despite considerable literature on the use of color in capturing attention, results are mixed on the use of color to influence consumer behavior. For example, both Kelly and Hoel (1991) and Rouse (1991) find that color ads did not lead to a significant increase in advertiser selection. Fernandez and Rosen (2000) demonstrate this value of color by comparing ad selection using simulated Yellow Pages with and without the presence of spot color used for either attracting attention or enhancing product appearance. The results show a significant effect for color advertising, especially when color was used to enhance product appearance rather than simply to attract attention. However, the study was limited to the use of spot color and only considered two product categories. The findings may also not translate directly to other (non-Yellow Pages) media, e.g., magazine print ads.

Color has the ability to increase credibility of the advertiser and believability of ad claims, particularly if the ad claims are color-related. For example, claims of "freshness" for food are more believable in color because color is an important food freshness cue (Mitchell and Olson 1981). A party store that claims, "We can liven up any party" would likely appear much more believable in color compared to a non-colored ad. However, an electrician who claims to be experienced may not increase believability as readily by using color because color is not directly related to the claim. Further study by Lohse and Rosen (2001) suggests that the use of color in Yellow pages advertisements (1) increases the perception of quality of the products or services and the credibility of the claims made about products or services for a particular business when compared with non-color advertisements, and (2) creates a more favorable attitude toward the

advertisement and the advertiser. The authors also argue that the use of photographic-quality

graphics in a Yellow pages advertisement (1) increases the perception of quality of the products

or services, the credibility of the claims made about products or services for a particular business

when compared with line art graphics, and (2) creates a more favorable attitude toward the

advertisement and advertiser. The positive effect of color and graphics in a Yellow Pages

advertisement is enhanced for advertisers whose products/services are colorful and/or more

easily evaluated through visual representation.

The findings of this experiment support the authors' theoretical arguments on the power of

color and graphics to signal information about quality and credibility in directional advertising.

Ads with color can help signal information about the quality of their products or services,

depending on product category. However, color does not signal information about the credibility

of those claims. To make advertising claims believable, it is important to use detailed realistic

photographs to signal information about credibility. Thus, the combination of process color and

photographic quality graphics would appear to help signal quality and credibility information, at

least for some products. The results indicate that graphics seem to have an effect across more

product categories than does color. Again, this study examines how color and photographic-

quality graphics can enhance credibility and increase perception of quality of the products or

services when compared with non-color advertisements, but does not study the effects that

different colors may have on these variables.

In an attempt to differentiate how different colors affect consumers, a recent endeavor

investigated the impact of blue and yellow background web page colors on users' time

perceptions while browsing the web (Gorn, Chattopadhyay, Sengupta, and Trupathi 2004). The

authors investigate the link between the color of a web page's background screen while the page

is downloading and the perceived quickness of the download. They predict that the background

screen color influences how quickly a page is perceived to download and that feelings of

relaxation mediate this influence. The results show that participants who viewed the color blue

perceived the page as downloading faster. These browsers had a greater feeling of relaxation and

positive attitude towards the website. One limitation of this study is that it only tested blue and

yellow, and findings were confined to the effects on time perception. Also, yellow might be a

weak comparison to blue because there are stronger colors that can be used. A good option is red

because red has more consistently been found to be different from cool colors (i.e. blue and

green), than yellow.

Although it is proven that color have a strong influence on product attitude, perceptions of

ad quality and credibility, color affects us in many other ways. Color is an important variable in a

wide range of applied and theoretical disciplines and has been argued to produce a variety of

sensory, perceptual, cognitive, and affective effects (Middlestadt 1990). At the physiological

level, color has been shown to affect arousal (Wilson 1966), leg strength (Pellegrini, Schauss,

and Birk 1980), performance of simple psychomotor skills (Naskshian 1964), and perception of

time (Smets 1969). Within the learning theory tradition, there is evidence that color connotations

can be conditioned to terms with which they are associated (Harbin and Williams 1966) and that

color preferences can be changed with simple learning trials (Peters 1943). Schachtel (1943)

argues that responses to color are similar to responses to affect in that they are immediate, direct,

and evoked rather than deliberated or mediated. There is evidence that color affects subjects'

reports of moods (Rosenstain 1985; Levy 1980). Furthermore, although there are cultural,

developmental and individual differences, colors and color words have been shown to be

consistently associated with mood-tones (Hevner 1935; Odbet, Karwoski, and Ekerson 1942;

Wexner 1954; Murray and Deabler 1957; Schaie 1961) and affective meanings (Adam and

Osgood 1973).

Middlestadt (1990) states that like music, color would be expected to affect how people

respond to products. And, like background music, background color does not convey explicit

product information but seems to represent affectivity and emotion. Also, while the specific

findings about color effects are complex and vary from study to study, red is consistently found

to be different from the cool colors of blue and green. This study does not focus on the effects of

color per se but rather on the process by which color produces attitude change. It was shown that

an aspect of the exposure situation, the background color had an effect on attitude toward buying

a product. Subjects exposed to a pen presented against a blue background with blue ambient

color evaluated buying the pen more positively than those exposed to the same pen with a red

background and ambient color. Also, it was possible to show that the color affected the

respondents' beliefs about buying the product. Compared to those in the red condition, those who

were exposed to the pen in the blue condition believed more strongly that buying the pen would

lead to two positive outcomes, buying a pen which was elegant and which was unique. The data

do not prove that a cognitive difference mediated the attitude and behavior effects found here.

However, the data demonstrated that subtle differences in how a product is presented, which do

not appear to involve product information, do produce differences in beliefs about the product.

As mentioned above, most prior research focuses on a limited set of dependent measures,

e.g., overall brand attitude or contact attempts. In the research study reported here, I examine the

impact of two different background colors (blue and red) on *brand personality* and brand

attribute beliefs, important predictors of brand attitudes.

Brand Personality: Conceptualization and Measurement

Most basically, *brand personality* is defined as "the set of human characteristics associated

with a brand" (J. Aaker 1997, p. 347). Brand personality tends to serve a symbolic or self-

expressive function. Researchers have focused on how the personalities of the brand enables a

consumer to express his/her own self, an ideal self or specific dimension of the self through the use of a brand. Brand personality is a key way to differentiate a brand in a product category. It is central driving force of consumer preference and usage, and a common denominator that can be used to market a brand across cultures (Aaker et al. 2001). Consumers are able to imbue brands with human personality traits, often in response to marketing/ advertising efforts aimed at associating specific brands with celebrities (or lesser known endorsers) regarded as possessing the desired set of traits. Alternatively, brand personalities may develop in response to brand name symbols or logo, adverting style, price, and/or distribution channel – or, color. Such associations tend to be relatively enduring and distinct (J. Aaker 1997). Thus, Apple is considered to be "young", whereas IBM is considered to be "old"; and Coke is "All American".

With rare exception (J. Aaker 1999; Aaker et al. 2001; Siguaw, Mattila, and Austin 1999), prior research on brand personality has relied on ad hoc scales or the "Big Five" human personality scales (capturing *Agreeableness, Extroversion, Conscientiousness, Culture,* and *Neuroticism*; as noted by J. Aaker [1999] and reviewed by Digman [1990]). In contrast, I utilize Aaker's (1997) five-dimension theoretical framework, composed of personality traits (i.e., *Sincerity, Excitement, Competence, Sophistication,* and *Ruggedness)* determined to be relevant to both human and brand personality and generalizable across product categories. In the interest of completeness, the impact of color on brand personality beliefs and the more traditional attribute-based types of beliefs is tested here.

Hypotheses:

> H1: Background color will impact brand personality and brand attribute beliefs.

> H2: Brand personality and brand attribute beliefs will impact brand attitudes.

> H3: A different set of brand personality and brand attribute beliefs will emerge as significant predictors of brand attitudes for print ads with different colored backgrounds.

METHODOLOGY

Overview

The primary purpose of this study is to explore the impact of one type of *non-verbal* executional cue in print advertisements (e.g., background color) on brand image/personality and brand preferences (e.g., brand attitudes). For example, it is expected that viewer's perceptions of a brand's image and personality will reflect the image associated with the ad's background color (e.g., a brand will be judged to be more vibrant and exciting when it is advertised with a red background versus a more calming blue background).

Pretests

The primary goal of the first pretest was to assess fundamental associations that consumers associate with alternative brands in the bottled water product class. Undergraduate subjects (N=10) were asked to write down whatever associations they had with "the product category, BOTTLED WATER." All associations identified by respondents were included in the final brand belief battery (used for the Main Experiment), except for the rarely mentioned brand name mentions and measures included in the brand personality inventory (described below). A second pretest (N=8) asked subjects to identify associations that came to mind for the brand names *Glacier* and *Aqua-Vitalis*. Examination of these lists revealed that *Glacier* best met the research goals: i.e., associations related to the name *Glacier* are not also typically affiliated with the colors red and blue (e.g., energizing versus relaxing).

Main Experiment

Subjects. A total of 73 undergraduate students[1] from California State University, Long Beach, assigned randomly to the different conditions, participated in the main experiment and

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[1] The sample was composed of 71.4% females and 28.6% males with a mean age of 22.69 and median age of 22.

provided responses complete enough for analyses. Analysis of the demand characteristic

questions showed no evidence that subjects knew the underlying purpose of the experiment.

Design and Stimuli. This study utilized a 1X2 factorial design, manipulating one non-verbal

ad execution element [background color: red versus blue]. Thus, two test ads were created: i.e.,

one with red background and the other with a blue background. Each of the 8.5"-11" print ads

[see Figure 1] presented a large image of a bottle of water with only the brand name (Glacier) on

the label. The bottom section of the ads stated "Drink Glacier" and "the new water of choice",

centered and on two lines. All text was printed in black on all ads, with the only differences

being the red versus blue background.

Procedure. Each respondent performed the various experimental tasks in a self-paced

classroom setting. First, participants were instructed to read the instruction page including a

statement of the cover story for the experiment, "Consumer Research Study." Specifically,

participants were simply told that the study dealt with "opinions about certain companies, their

brands and products." After some introductory questions, subjects viewed a high quality color

copy of one of the ads, followed by the remaining dependent measures (all detailed below). An

administrator who was blind to the individual treatment assignments and research hypotheses

administered all experimental treatments randomly at each session.

Dependent Measures.[2] Subjects first rated their overall impressions of five manufacturers of

bottled water (*Evian, Perrier, Fiji, Aquafina, and Dasani*), followed by a verbal thought protocol

eliciting "What would you say about the product to make the ad more convincing and

persuasive? Next, each participant viewed one of the print ads described above. Subjects then

proceeded to answer the remaining questions at their own pace, presented in the following order:

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[2] All multiple-item scales for the critical constructs averaged relevant items (9-point scales, unless
indicated otherwise).

purchase intentions, brand attitudes, product category attitudes, brand beliefs, brand belief

importance ratings, 42 brand personality items (Aaker 1997, 1999) plus 6 additional brand

personality items adopted from the factor names identified by Aaker (e.g., "feels distant",

"sophisticated", "genuine", "fun", "competent", and "feels approachable"), the five basic self

personality ratings identified by Aaker, the importance of these five personality traits, ad

attitudes, *Style of Processing* (SP) inventory (α=.30 for the *verbal* scale and α=.73 for the *visual*

scale; Childers, Houston, and Heckler 1985), demand effects assessments, product category

knowledge (4 items, α=.70), prior familiarity with "Glacier" bottled water, product usage, ad

background color perceptions (i.e., manipulation checks), brand name associations, age, gender,

and ethnicity.

The *brand attitude* scale ("dislike/like," "favorable/unfavorable," "unpleasant/pleasant," and

"positive/negative") was highly reliable (α=. 97). *Product attitudes* were assessed through three

indicators ("bad/good," "unfavorable/favorable," and negative/positive," α=. 97). Construct

scales created for *purchase intentions* ("unlikely/likely to consider buying," "would certainly

not/would certainly consider buying," and "would surely not/would surely consider buying," α=.

91) and *attitudes towards the ad* (A_{ad}: "negative/positive," "unfavorable/favorable,"

"dislike/like," "unpleasant/pleasant," α=. 96) were equally impressive.

Measures of *brand beliefs* and of the importance of these beliefs in choosing bottled water

captured *health-related, purity, relaxing, refreshing, image, energizing, price*, and *taste*

dimensions: *health-related* (safe, bacteria-free, nutritious, and healthy; α=. 89), *purity* (pure,

preservative-free, and clean; α=. 87), *relaxing* (relaxing and calming; Spearman Brown

reliability coefficient=. 83), *refreshing* (cooling, refreshing, cold, clear, thirst-quenching, and

fresh; α=. 94), *image* (good image, high quality, expensive, and for special occasions; α=.85),

energizing (perks you up, energizing, and invigorating; α=.85), *price* (economical and cheap; Spearman Brown reliability coefficient=.76), and *taste* (single item, tastes good). To predict attitudes, the predictors of interest are 'adequacy-importance' (AI) product terms (cf. Wilkie and Pessemier 1973; Ahtola 1975), in which the beliefs about a particular attribute or benefit (e.g., "'is pure' is not at all/very descriptive of Glacier") are multiplied by the stated importance of that attribute or benefit in brand choice ("not at all important/very important"). [These adequacy-importance (AI) brand belief product terms were used in all hypothesis tests.]

Respondents rated the brand on 48 (9-point rating scales) relevant personality descriptors (cf. Aaker 1997), followed by ratings of the importance of each in brand image and brand personality [BP] formation. Following the dimension structure validated by Aaker (1997, 1999), 11 were averaged to capture the *sincerity* dimension ("down-to-earth," "family-oriented," "small-town," "honest," "sincere," "real," "wholesome," "original," "cheerful," "sentimental," and "friendly," α=. 93), 11 the *excitement* dimension ("daring," "trendy," "exciting," "spirited," "cool," "young," "imaginative," "unique," "up-to-date," "independent," and "contemporary;" α=. 95), 9 the *competence* dimension ("reliable," "hard working," "secure," "intelligent," "technical," "corporate," "successful," "leader," and "confident;" α=.92), 6 the *sophistication* dimension ("upper class," "glamorous," "good looking," "charming," "feminine," and "smooth;" α=.90), and 5 the *ruggedness* dimension ("outdoorsy," "masculine," "Western," "tough," and "rugged;" α=.84). A final (ad-hoc) *serene/spirited* scale was created from four of the BP measures to capture more accurately associations most often attached to the (blue/red) colors studied here ("daring," "spirited," "exciting," and "fun;" α=. 89). As described above, AI scales were computed for the six brand personality construct scales.

RESULTS

Manipulation Checks and Tests of Ad Equivalence

To test the notion that viewers' perceptions of a brand's image and personality will reflect the image associated with the ad's background color, it is necessary that the red and blue backgrounds be judged as reflecting associations generally attached to these particular colors. Consistent with the vast body of literature into the "psychology of color" (e.g., Birren 1978), respondents exposed to the ad with a red background rated the color as being more intense and strong (Spearman Brown reliability coefficient = .80; M=5.86 vs. 4.48 for red and blue, respectively; t=2.84, $p<$. 01) than the blue background which was rated by those exposed to that (blue) color as being more peaceful, calming, and relaxing (α=. 92; M=6.46 vs. 2.82 for blue and red, respectively; t=9.34, p=.000). As desired, the ads were judged to be equivalent in terms of creativity, professionalism, complexity, and informativeness (all p values ranging from .22 to .92). Both colors were also rated as being similar in terms of vividness, brightness, and brilliance (α=. 81; t=0.42, ns), which were interpreted as reflecting that the background colors were comparable in terms of print quality. In summary, the color manipulation behaved as intended, i.e., was deemed successful.

Hypothesis Tests

The first hypothesis used simple independent sample t tests to assess the direct impact of background color on brand personality and brand attribute beliefs. Few significant differences emerged, but examination of the group means revealed that red and blue ads generated some predictable patterns among the belief scales. For example, the brand advertised in the red ad was rated as having a slightly more *exciting* personality than the blue ad (M=4.53 vs. M=4.08, t (70) =0.97, ns). The brand in the red ad was also perceived as having a more *competent and sophisticated* personality than the brand in the blue ad (M=4.07 vs. M=3.94, t(70) = 0.29, ns;

M=3.68 vs. *M*=3.60, *t*(70) =0.19, *ns*; respectively). The *ruggedness* personality scale was also higher for the brand advertised with a red background (*M*=4.56 vs. *M*= 4.41, *t* (70) = 0.19, *ns*). On the other hand, blue was found to be more *sincere*; i.e., the brand in the blue ad was perceived as having a more sincere personality than the red ad (*M*=4.50 vs. *M*=4.16, *t* (70) = 0.85, ns).

For attribute-based brand beliefs, *purity beliefs* were higher for the brand advertised with the red background versus the blue background (*M*=5.20 vs. *M*=4.96, *t* (70) = 0.43, *p*=0.05). Also, respondents perceived that the brand in the red ad was *healthier* than the brand advertised with the blue background (*M*=5.14 vs. *M*=4.72, *t* (70) = 0.83, *p*= 0.081). *Taste beliefs* were significantly higher for the brand advertised in the red ad than the brand advertised in the blue background (*M*=5.06 vs. *M*=4.32, *t* (70) = 1.33, *p*=0.036). The *image beliefs* toward the brand in the red ad were higher than the image beliefs for the brand in the blue ad (*M*= 4.04 vs. *M*=3.47, *t* (70) = 1.27, *ns*). On the other hand, the brand in the blue ad was found to be more *relaxing* than the brand in the red ad (*M*=4.83 vs. *M*=4.41, *t* (69) = 0.82, *ns*). Also, the brand advertised in the blue background was rated as more refreshing than the brand advertised in the red background (*M*=5.95 vs. *M*=5.79, *t* (70) = 0.32, *ns*). *Energy beliefs* were also higher for the brand in the blue ad: i.e., the advertisement with the blue background generated more energetic beliefs about the advertised brand than the advertisement with the red background (*M*=4.56 vs. *M*=4.50, *t* (70) = 0.13, *ns*). Lastly, the brand in the blue ad was perceived as *cheaper*: the low price beliefs were higher than the brand in the red ad (*M*=5.59 vs. *M*=5.30, *t* (69) =0.51, *ns*). [See Table 1 for a summary of these results.]

[Insert Table 1 about here.]

To test H2 and H3, OLS regression equations were first estimated with the *brand personality* AI belief scales, the (*color*) manipulation dummy variable (where *red* coded as '0', *blue* as '1'),

and the five interaction terms involving the five brand personality belief scales and the

manipulation dummy. A second regression model replaced the five brand personality scales with

the eight brand attribute scales. [The data for the independent variables were also mean-centered

prior to analysis because otherwise interpretation of interaction terms becomes problematic (Yi

1990).]

The overall model for brand personality beliefs was significant, indicating that brand

personality beliefs and their interaction with color impact brand attitudes (F (11, 58) =3.18, $p=$.

002, $R^2=$. 376). As predicted, the interaction between *sophistication* beliefs and the *color* dummy

is significant and negative ($b=$-0.87, $t=$-1.65, $p=$. 10), indicating that *sophistication* beliefs

contribute more to explaining brand attitudes towards the brand in the red ad ($b=$. 98, $t=$2.46, $p=$.

02) than towards the brand in the blue ad ($b=$-.12, $t=$-0.23, *ns*). The interaction between

excitement beliefs and the *color* dummy is significant and positive ($b=$1.0, $t=$2.30, $p=$. 025),

indicating that *excitement* beliefs have a greater and different impact on brand attitudes when the

ad had a blue background ($b=$. 91, $t=$1.69, $p=$. 10) relative to when the ad had a red background

($b=$-.48, $t=$-1.61, *ns*). [See Table 2 for a summary of these results.] No other interaction effects

were significant.

[Insert Table 2 about here.]

The overall model for brand attribute beliefs was significant, demonstrating that brand

attribute beliefs and their interaction with color impact brand attitudes (F (17,49)=3.12, $p=$. 001,

$R^2=$. 520). As stated in H3, the attributes most critical to brand attitudes varied for the red and

blue ads. For example, beliefs about *taste* ($b=$. 63, $t=$1.91, $p=$. 06) impact attitudes towards the

red ad ($b=$-.71, $t=$-2.11, $p<$. 05), but not the blue ad ($b=$. 05, $t=$0.24, *ns*). For the red ad, *taste* ($b=$.

71, $t=$-2.11, $p=$. 05) and *image* beliefs ($b=$. 44, $t=$1.70, $p=$. 10) explained most of the variance in

brand attitudes. In contrast, *refreshing* beliefs were the most critical predictors for the blue ad

regression model ($b=.$ 47, $t=1.77$, $p=.$ 09). [See Table 3 for a summary of these results]

[Insert Table 3 about here.]

DISCUSSION

In this study, I investigated the impact of ad background color on brand personality and

brand preferences. Consistent with previous literature, respondents exposed to the ad with a red

background rated the color as being more intense and strong than the blue background, which

was rated by those exposed to that (blue) color as being more peaceful, calming, and relaxing.

However, there was not strong evidence of a "transfer" of these inferences: i.e., respondents did

not rate the advertised brands as being significantly more intense versus relaxing.

I expected subjects to favor the brand with the blue background because the color blue

overall is considered to be the number one favorite color for both men and women (Colorcom).

Previous research has demonstrated that products advertised in blue backgrounds have a higher

preference over products advertised with red backgrounds: i.e., respondents presented with a

slide of a pen against a blue background exhibited a more positive attitude toward buying the

product than those shown the same pen against a red background (Middlestadt 1990).

Furthermore, the color blue has shown to create mental and general appearance associations that

relate to the product category; i.e. cold, sky, water, wet, transparent, and ice (Birrens 1961).

Another reason for these unexpected results might be that respondents were focusing on the color

itself rather than the relationship between product category and the background color. If this is

the case, the preference for the brand with the red background concurs with (1) previous research

that shows that the color red tends to have a higher response rate than any other color, and with

(2) objective impressions associated with red (e.g., passionate, exciting, fervid, active (Birrens

1961)). Thus, for example, if a person glances at a wall in a room full of advertisements, that

person's eyes would be engrossed to a red advertisement over a more subtle colored

advertisement.

Hypothesis 1 sought to assess the impact of background color on brand personality and

brand attribute beliefs. The brand advertised with a red background was rated higher in terms of

four of the five studied brand personality traits—excitement, competence, sophistication,

ruggedness—over the ad with the blue background which was only seen as being more sincere.

The color red has been proven to have the fastest and most powerful effect on human

emotions and stimulate people to make quick decisions (Birrens 1961). This suggests that an ad

with a red background color can create a feeling of excitement and lead to impulsive product

purchases for products in which attributes are not significant or there is no product

differentiation. The "personality" formed toward the brand advertised with the red background

was perceived as being more exciting, but not significantly so. Previous evidence shows that

when consumers' processing motivation is low, product attitude will tend to be based on simple

heuristics associated with superficial cues such as physical attractiveness and ad execution

elements (e.g., color). Unfortunately, the data did not concur with these expectations: i.e.,

different colors did (directly) impact brand attitude. Future research might explore potential

moderating and mediating factors.

The only brand personality construct that emerged as a significant predictor of brand

attitudes for the brand with the blue background was excitement. In other words, the

advertisement with the blue background was perceived as more exciting over the advertisement

with the red background. The only significant brand personality predictor of brand attitudes

towards the brand advertised with the red background was *sophistication*: that is, perceptions of

upper class, glamorous, good looking, charming, feminine, and smooth enhanced attitudes

towards the brand. One explanation for this is that 73% of the respondents were female. Previous

research shows that women show a preference for red (Birrens 1961).

For attribute-based beliefs, the brand with the red background generated stronger purity,

health, taste, and image beliefs over the brand with the blue background. In contrast, the brand

with the blue background was perceived as more relaxing, refreshing, energetic, and cheaper.

These offer partial support for the notion that the brand advertised with a blue background would

be perceived as being more calming and refreshing, characteristics generally attached to the color

blue. It is interesting that the red background enhanced overall brand "image", since red is not

typically seen as a sophisticated, classy, or high status color. Refreshing beliefs were stronger

predictors of brand attitudes towards the ad with the blue background. This appears consistent

with Lohse and Rosen's (2001) position that "Color has the ability to increase credibility of the

advertiser and believability of ad claims, particularly if the ad claims are color related." For

example, claims of "refreshing" in an ad for bottled water are more believable in a color that

would create refreshing cues (e.g., blue).

Limitations and Future Directions

Results demonstrated that the background color in print advertisements do influence

consumers' perceptions of the brand or product and do help create certain brand personalities and

brand beliefs for the product. These brand personality traits and brand attributes in turn impact

brand attitude (whether positive or negative). One limitation for the lack of significant results

may be the product category. The chosen product (*water bottle*) was closely related to the mental

associations (*sky, cold weather, water and ice*) that people have for one of the colors tested here,

blue. Thus, mental associations typically attached to the color blue may have overpowered our

manipulations. The product category might not be one for which consumers develop elaborate

brand personalities. Had a different product been used, more unique brand personalities might

have emerged along with more impact of brand personality on brand attitudes. Future research

should also explore other product categories that have either equal or neutral associations with

the colors being tested.

The brand personality measures may be limited: not sufficiently applicable to a product such

as bottled water. The R square for the brand personality (BP) regression model was only .376,

indicating that only 37.6% of the variance in attitude was explained by the five BP constructs.

Similarly, for the brand attribute model, only 52.0% of variance was explained by the set of

measured attributes. It is apparent that (1) this study may not have measured the most important

personality and attribute beliefs, and/or (2) other factors (not accounted for) are important in

attitude formation.

Lastly, note that the sample was only 73 college students, 71.4 % of which were female. It is

documented that overall, females and males have different color preferences. Even though the

color blue is the number one favorite color for both men and women, women show a preference

for red (Birrens 1961). A more representative sample is always desirable.

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TABLE 1
Summary of Construct Means for Red and Blue Ads

Measures	Red	Blue	t Value	p value
Sincerity Beliefs	4.16	4.50	0.85	.85
Excitement Beliefs	4.53	4.08	-0.97	.95
Competence Beliefs	4.07	3.94	-0.29	.43
Sophistication Beliefs	3.68	3.60	-0.19	.27
Ruggedness Beliefs	4.56	4.41	-0.33	.32
Purity Beliefs	5.20	4.96	-0.43	.05
Health Beliefs	5.14	4.71	-0.83	.08
Relaxing Beliefs	4.40	4.83	0.82	.73
Refreshing Beliefs	5.79	5.95	031	.61
Image Beliefs	4.03	3.47	-1.27	.16
Energy Beliefs	4.50	4.56	0.13	.12
Price Beliefs	5.30	5.59	0.51	.31
Taste Belief	5.06	4.32	-1.33	.04
Attitude Toward the Ad	3.74	4.15	0.69	.39
Brand Attitudes	4.61	4.93	0.86	.49

TABLE 2
Summary of Regression Statistics for Brand Personality Model

Predictors	Beta	*t* Value	*p* value
Color Dummy	.16	1.51	.14
Sincerity Beliefs	-.10	-0.39	.69
Competence Beliefs	.02	0.06	.96
Excitement Belief	-.43	-1.43	.16
Sophistication Beliefs	.98	2.18	.03
Ruggedness Beliefs	.02	0.10	.91
Color x Sincerity Beliefs	.07	0.22	.83
Color x Competence Beliefs	-.01	-0.04	.97
Color x Excitement Beliefs	1.02	2.30	.02
Color x Sophistication Beliefs	-.86	-1.64	.11
Color x Ruggedness Beliefs	-.29	-1.40	.16

TABLE 3
Summary of Regression Statistics for Attribute Beliefs Model

Predictors	Beta	*t* Value	*p* value
Color Dummy	.08	0.74	.46
Purity Beliefs	.02	0.06	.95
Health Belief	.35	0.94	.35
Relaxing Beliefs	.42	1.38	.18
Taste Beliefs	-.73	-2.08	.04
Refreshing Beliefs	.07	0.25	.80
Image Beliefs	.39	1.68	.10
Energy Beliefs	-.12	-.35	.73
Price Beliefs	-.09	-.50	.62
Color x Purity Beliefs	-.42	-.97	.33
Color x Health Beliefs	.01	0.03	.98
Color x Relaxing Beliefs	-.18	-.66	.51
Color x Taste Beliefs	.63	1.91	.06
Color x Refreshing Beliefs	.32	1.04	.30
Color x Image Beliefs	-.02	-.09	.93
Color x Energy Beliefs	.12	0.36	.72
Color x Price Beliefs	.09	0.47	.64

FIGURE 1

PRINT ADS

Drink GLACIER
the new water of choice

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the new water of choice