2016

Perceived Believability of Televised Green Advertising

Linda Jo Warren

Perceived Believability of Televised Green Advertising
Linda Jo Warren
Tennessee State University

Consumers are typically skeptical and cynical of advertising claims for products and generally disbelieve most advertised information. Believability of advertisers' claims is crucial for consumer adoption of products, but consumers' environmental imagination should be assessed to enhance believability of green marketing claims. Consumer belief in an advertised product is nearly essential to prompt the consumer to purchase. This paper examines the perceptions of consumers and their believability of specifically green versus non-green televised advertisements. The FTC considers not only a product in its rulings, but also the packaging, formulations and disposal of the product. Consumer belief of advertising relating demographic, psychographic, and behavioral variables plus product familiarity were analyzed. Findings contradict earlier research on advertising believability for other product categories. Significant predictors provide a contribution to the research such as political preference, television hours viewed, and marital status. Consumer familiarity with a product was found to be statistically significant.

Businesses offering green or environmentally friendly products to consumers face challenges in a marketplace where consumers may hesitate to purchase a green product or pay a higher price for a green product that can have a less expensive, equivalent non-green alternative. Consumers can infer meaning from advertisements in a number of ways, but the degree to which environmental claims are deemed credible may affect consumers' belief in the claim plus according to Zinkman and Carlson (1995) consumer concerns for environmental issues have not necessarily converted to consumer purchases. Consumers willingly admit that they are skeptical of advertising yet they paradoxically extract information from advertisements, fully cognizant of advertisers' exaggerations (Calfee & Ringold, 1994). Research has shown that believability of an ad by consumers is an important construct in a consumer's decision to buy the product being advertised (Broadbent, 1997; Fishbein & Ajzen, 1975; Haan & Berkey, 2002; Holbrook, 1978). The growth of environmental concern by consumers has led to a marketplace where consumers vary in their ability to analyze critically or understand ever-proliferating claims of being green. As the number of products and services with green marketing claims has surged in recent years, the efficacy of green marketing claim believability is a timely pursuit and the subject of this study as it pertains to specifically televised green advertising.

The average 21-year-old American has been exposed to 23 million marketing messages with many of these messages containing false or misleading information about products and services in the marketplace (Weiss, 2003). Friedman (2008, p. 204) states that "green" was the most trademarked 2007 term as reported by the U.S. Patent and Trademark office and the number of products and services with green marketing claims surged with 5,933 new green products introduced to the United States market in 2007(Wade, 2008). The majority of marketers have been conscientious with their green claims, but there have been noted attempts to influence consumers' understanding of green product claims. Some businesses have been accused of *Greenwashing* as they promote the greenness of their products without providing substantial evidence of the product being environmentally preferable with *Greenwashing* being comparable

to puffery in that the consumer may wonder whether there is proof of an implicit advertised claim. Corresponding to consumer saturation in advertisements is the level of skepticism that consumers hold for advertised products (Obermiller & Spangenberg, 1998). Many factors have been shown to measure skepticism in advertising such as gender, educational level, age and consumer marketplace knowledge (D. Boush, Friestad, & Rose, 1994; Schaefer, et al., 2005). Research has shown that as one's educational level increases and as one ages, skepticism in advertising increases while there appears to be little difference in comparing gender and skepticism in the United States. In comparing misleading advertising to puffery, deception in advertising simply means that the ad is false yet only encourages consumers to take steps in ways that may hurt them, while puffery intends only embellishment to the facts (Haan & Berkey, 2002). Obermiller and Spangenberg (1998) noted that approximately 70% of consumers over 60 years old demonstrated skepticism toward advertising. These consumers believe that if any advertisement is untruthful and persuades people to buy things they do not want, then that type of advertising should be more regulated (Calfee & Ringold, 1994; Obermiller & Spangenberg, 1998). Messages that are vague, unsubstantiated or possibly false could not only draw the attention of federal regulators but could also damage a marketer's relationship and reputation with consumers.

The primary significance of this study is that there has been little research to gage the believability of specifically green advertising. Marketers should be aware of particular demographic segments that may or may not be receptive to their green advertising messages. Believability of advertising for other products such as pharmaceuticals has been shown to demonstrate consumer influence (Atkin & Beltramini, 2007, p. 1). Marketers should adjust their advertising strategy in a way that consumers are receptive to it or expand their advertising to include receptive segments. Pioneers in green innovation will enjoy a first- mover advantage allowing them to command a higher price for green products, gain a competitive advantage, and advance their corporate image (Chen, 2008).

LITERATURE REVIEW AND CONSTRUCT DEFINITIONS

Skepticism towards advertising, which is academically defined as a general tendency to disbelieve any advertising claims can result from consumers' evaluation of the literal truth of an advertisement but also from observation of the possible motive of the advertiser (Obermiller & Spangenberg, 1998). Manipulative intent or attention-getting tactics by advertisers have been shown to create resistance to persuasion, an increase in counter arguing, and decreased confidence in a brand or advertiser (Obermiller & Spangenberg, 1998). Previous research conducted on misleading advertising has paid careful attention to claims where consumers have made flawed judgments about products. These judgments could be the result of implied superiority claims, incomplete comparisons or subtle inferences that consumers deem as a claim-fact discrepancy (Darke & Ritchie, 2007; Gardner, 1975). Pollay (1986) stated that false advertising claims have turned consumers into a "community of cynics" who hold doubts about media and advertisers (Pollay, 1986 p.29). According to Leo Burnett, founder of the infamous Leo Burnett advertising agency, "The greatest thing to be achieved in advertising, in my opinion, is believability and nothing is more believable than the product itself" (Rieck, 2005, p. 169).

The objective and purpose of the study was to investigate believability of green advertising messages and to identify variables that may have an impact on believability. Attention in this research was directed toward measuring the degree of consumers' believability of green advertisements as it relates to these variables. Consumer-based studies can examine specific

characteristics of consumers and differentiate levels of believability. The determination of believability in green ads can be used to demonstrate the effectiveness and value of a green marketing advertising campaign. There are many antecedents to a consumer's purchasing decision; however, ad believability is believed to be a strong indicator of a consumer having a positive buying experience (Obermiller & Spangenberg, 1998).

This research explored environmentally friendly or green advertising and comparatively tested whether consumers believe televised green and/or non-green marketing advertisements. Specifically, this study differentiated the specific type of product advertised while focusing on traditional demographics such as income, age, and ethnicity. Psychographic data was collected such as television viewing habits and propensity of the consumer to recycle. Consumer familiarity with the product was also gauged as a predictor of advertising believability.

Researchers and marketers should concern themselves with consumer beliefs in green advertising to avoid marketing their products to target market segments that may be unresponsive to their efforts. According to Kotler (2011), the environmental agenda will have a profound influence on marketing theory and practice therefore, perceived believability by consumers of televised green advertising is important although the green product may be misunderstood (p. 132). The nature of this study was to ascertain which consumers believe green advertising based on their demographic, psychographic and lifestyle profiles. The focus of the study was to assist marketers in their targeting and segmentation strategies for advertising green products rather than casting a wide net of promotional activities and hoping to catch a few receptive green consumers.

Reaching green consumers in an effective way requires not only knowledge of the potential consumer but knowledge of antecedents to consumer skepticism about advertising overall. Many consumers doubt the efficacy of green products and concern themselves with the question of product performance versus an equally effective and perhaps lower-priced non-green product. If the consumer believes the advertising message and believes the product claim in the ad, then they will be more compelled to make the purchase.

Marketers can utilize the knowledge gained in this study for media selection and time slot selection based on the consumer profiles revealed as a result of this study. This research identified consumers who are almost green or undecided, providing an opportunity for marketers to seek out some slow green product adopters and allow for growth of the green product into the mature stage of product evolution.

Believability of green advertising The problem of believable green advertising stems from three important constructs:

1. Climate change or global warming is not readily understood scientifically by many consumers who may feel earth-friendly products and global warming are both a hoax.

2. Brand loyal consumers may not want to switch to a green product and fear that a green product will produce an inferior result whether the product is a low or high-involvement product.

3. Fast moving media such as blogging, tweeting, or social media can quickly identify a company who is *Greenwashing* their products or failing to conduct themselves as a sustainable enterprise.

Regulatory guidelines affecting green marketing are not well defined or enforced and are primarily supported by the Federal Trade Commission (FTC) Green Guides last updated in 2012. This study questioned previously held beliefs about advertising skepticism and provides data

suggesting that ads once deemed unbelievable may be somewhat moderated by a popular, socially revered subject such as saving the environment. Advertising skepticism and subsequent believability of green advertising claims may also be influenced by peer pressure, a heightened social acceptance of being a green consumer, plus the noted unpopularity of not being a green consumer. Contribution of new knowledge to the field was an objective of this study as not much is known about believability of specifically green advertising.

The definition of green is not universally standardized nor is it clearly and consistently used in media, but for the purpose of this study, the term green will either imply or directly identify practices or will describe an action. Further defined, green minimizes environmental impact of product consumption, is environmentally friendly, ozone friendly, phosphate free, recyclable, non-toxic, eco-safe, biodegradable or environmentally preferable (Clark, 2008; Janssen & Jager, 2002). The term green is so multifaceted that it also includes the minimization of pollution, responsible use of non-renewable resources, and preservation of the environment (McClean & McEachern, 2002; Mostafa, 2007).

Puffery in advertising. Advertising is supposed to be original, catchy and if done well, thought-provoking. Some ads cross the line from creative to controversial, from somewhat misleading to somewhat false and from mild exaggeration to puffery. Legally defined, *puffery* is a claim that praises advertised items by not stating any explicit facts through the use of subjective terms that represent no factual substance to consumers (Preston, 1996). Product advertisements that make claims of being the best, the favorite, the biggest or the longest lasting are typical examples of puffery. Consumers frequently view advertisements and green marketing claims that announce a company's product as the *greenest* either implicitly, because the green attribute is implied or explicitly, because the claim is stated. Apple Computers, in their recent marketing campaign, touts its new line of notebook computers as the *world*'s *greenest* lineup of notebooks ("The world's greenest lineup of notebooks," 2009). Comparing Apple's green claims to Preston's six levels of puffery, the use of "greenest" closely resembles the use of the word "best" which is the strongest of the puffed claims (p.13) made by advertisers (Preston, 1996).

The focal point of this study is to link consumer perceptions about puffery, ad believability, false advertising, and consumer skepticism about green product claims. Metonymy is the key to many green marketing messages as consumers can be described as being green, green as an overall cultural movement toward environmentalism, and referring to a green lifestyle (Mazur & Zhong, 2009).

RESEARCH QUESTIONS

In Egypt, men reported more positive attitudes towards a green purchase than women and also demonstrated more environmental knowledge than women (Mostafa, 2007). Age, income and educational level as variables likely affect believability levels because older, well educated people tend to have more life and product experiences than younger, less educated consumers although marital status, political preference, and hours television was viewed, prove to be more important indicators. Income was expected to increase believability in green advertising because wealthier consumers have met their basic needs of food, shelter and safety so environmentally friendly products are a financially reachable consumer good yet product familiarity proved to be a stronger indicator of green televised advertising believability (Buttel, 1992; Inglehart, 1990; Mostafa, 2007).

Television viewing habits demonstrated an impact on green advertising believability by consumers. Television is the dominant American consumer viewing medium; however,

consumers are also watching video on mobile devices like phones and tablets. Nielsen data showed that the average television viewer watched more than 151 hours of television per month, three hours of monthly online video, and four hours per month on mobile phones (Stelter, 2009; "Television, internet and mobile usage in the U.S.: A2/M2 Three screen report," 2009). The Nielsen data demonstrated a 1.4% increase from the previous year. Time-shifted TV, which is playback primarily on a DVR (digital video recorder) within seven days of broadcast, showed the highest year- over- year increase usage at 37.1% as more than 29% of U.S. homes are able to time-shift television viewing ("Television, internet and mobile usage in the U.S.: A2/M2 Three screen report," 2009). Advertisers are at somewhat of a disadvantage by time-shifted television viewing as consumers may fast forward past advertisements (Stelter, 2009). The number of minutes consumers spend with all media is consistent across all age groups except for 45-54 year olds who view television on average an extra hour per day (Stelter, 2009).

It is noted that repetitive viewing of television and possibly viewing the same ad repetitively breeds familiarity with a product and therefore makes an advertisement more believable. In a study of direct-to-consumer advertising of pharmaceuticals, DTC television advertising had the highest believability score (Atkin & Beltramini, 2007, p. 1). Credibility is characteristically defined as a quality engendered by a source that is perceived as accurate, trustworthy, expert, or believable; hence credibility and believability are linked implicitly (Atkin & Beltramini, 2007). The following are the questions that were addressed in this study;

RQ1: Is there a statistically significant difference in consumer believability total scores between green and non-green televised commercials?

RQ2: Do demographic variables predict the believability total score for green or non-green commercials?

RQ3: Will consumer familiarity with a product predict believability scores of televised green or non-green advertising?

Consumers who were the most environmentally-concerned represented 17% of the adult U.S. population with unconcerned environmental consumers comprising 16% and the balance of the population somewhere between (Mooth et al, 2009). The study found that skepticism is not goaded by green products nor does believability appear to affect consumer willingness to accept green product claims. Consumers are willing to believe the assurances made by green product marketers but are still skeptical that products are truly as green as they claim because consumers tend to exhibit sensitivity to *Greenwashing* (Mooth, et al., 2009). Most consumers believe that green products will cost more than traditional products yet price tolerance varies by consumer segment.

Methodology and Hypotheses

The purpose of this study is to test the theories of skepticism toward advertising (Obermiller & Spangenberg, 1998), believability of the forms of puffery in advertising (Haan & Berkey, 2002; Preston, 1996), and believability of television advertising (Beltramini, 1982) that relate gender, age, income, educational level, race/ethnicity, television viewing habits, and familiarity with a product as they relate to believability of the advertisement, the dependent variable. The independent variables are a consumer's demographic, psychographic, behavioral factors, and familiarity with the product.

The study consisted of a consumer-based survey delivered electronically using a computer aided survey instrument to staff, faculty, and students at a community college in the Southwest. This study used the Beltramini Believability Scale to test consumer believability of a televised green

marketing message based on demographic, behavioral, and psychographic variables plus product familiarity (Beltramini & Evans, 1985). The survey instrument by Beltramini (1982) measured believability of advertisements with a 10-item scale. This instrument was pre-tested for a wide range of product types with all items based on scales that have been previously validated (Beltramini, 1982; Beltramini & Evans, 1985). Maloney (1963) and Beltramini and Evans (1985) asserted that belief or non-belief in an advertisement are not mutually exclusive events by the consumer, but that there is a "range of gradations" between believability and disbelievability to evoke confidence in an advertisement's truthfulness (p. 171). The measurement objects selected for use in the study consisted of actual television-aired advertising videos chosen from information obtained from a focus group based on one product touting an environmental benefit and a similar non-green product. The ad time range was 15 to 30 seconds and had aired during prime-time television viewing hours of 7-10 pm in the central time zone in the U.S.

The focus group consisted of 6 people of the sample community to determine useful insights and to record the group's real motivations for either purchasing or not purchasing green products. Clorox Green Works, Marriott Hotels, British Petroleum, and Windex brands were used for the discussion. Overall consumer beliefs about green products were discussed in terms of cost, benefits, efficiency and environmental impact. Observations were made to help determine why consumers reject or accept green product advertising claims. The study survey respondents answered 11 demographic, behavioral or psychographic questions following a video commercial they viewed and indicated their response about their believability of that commercial. On a scale of 1-5, with 5 indicating the highest believability, respondents rated the commercial based on their opinions of whether the ad was believable to unbelievable, dishonest to honest, not authentic to authentic and other scaled extremes to measure believability. In addition to viewing the two commercials, the focus group engaged in a discussion moderated by the researcher to assure useful insights of the participants. As an exploratory step, the focus group assisted the researcher to evaluate the green and the non-green ads for the larger subsequent study. The researcher acknowledges that the group was too small and too nonrandom to infer information on the entire market, but the group served as an investigative tool and removed some of the researcher bias in the green advertisement selection process. The session was moderated to ensure the right material was covered and transcribed for later use and as a confirmation of the study. The same survey instrument planned for the focal study was evaluated in the focus group. Scores were derived by averaging the 10 semantic differentials such that higher scores will reflect greater believability, a methodology that is identical to other studies using the Beltramini believability scale (Bearden & Netemeyer, 1999; Beltramini, 1982). The sample size desired for the full study was at least 172 respondents as calculated using Faul, Erdfelder, Buchner & Lang (2008) G*Power 3.0.2 assuming there is medium effect size of .15, an alpha of .05, and power of .80; however, a sample size over 200 was preferable and attained with over 100 responses per commercial type (green vs. non-green) (Faul et al., 2008). A sample size over 200 provided an opportunity to generalize the study finding to the population of interest from the sample population (Ravid & Haan, 2008). A cluster type of probability sampling where the population is divided into internally heterogeneous subgroups reflected the sample environment polled through a computer- assisted- survey instrument at a Southwestern Community College. This method provided an unbiased estimate of population parameters and demonstrated better efficiency than simple random probability sampling plus the cost was less per sample. Lower statistical efficiency did not result as subgroups were considered homogeneous; however, age,

income, educational level and television viewing habits were randomly dispersed among students, administrators, and staff of the college. Quantitative analysis using SPSS 19.0 for Windows was used to establish relationships among the demographic, behavioral, and psychographic variables as well as product familiarity. Analysis of variance was used as a measure to compare the effects among the constructs as they related to green advertising believability. The study was designed to evaluate the predictability of the independent variables in green advertising believability.

Two other variables included in this study, familiarity with a product and a respondent's habit of recycling, have not been studied together in terms of green advertising believability. Research has shown that familiarity with a product as a single construct can be related to believability of product claims, yet information is not available specifically about consumer familiarity with a green product (Haan & Berkey, 2002). Consumer recycling habits, as they relate to green advertising believability have not been widely studied or reported.

This theory and framework leads to the following hypotheses:

H1o: There is no statistically significant difference in consumer believability total scores by televised commercial type (green vs. non-green).

H1a: There is a statistically significant difference in believability total scores by commercial type (green vs. non-green).

Regarding the differences in green versus non-green televised advertisements, it was important to determine relationships between the data points. To test this hypothesis and research question 1 an ANOVA model revealed a mean for each commercial type group as well as the grand mean for all the data points from all the groups. Maloney (1963) and Beltramini and Evans (1985) assert that belief or non-belief in an advertisement are not mutually exclusive events by the consumer, but that there is a range of gradations between believability and disbelievability to evoke confidence in an advertisement's truthfulness (p. 171).

The resulting analysis showed that there were significant differences in believability scores between the green and non-green groups with the green group having statistically higher believability scores than the non-green group; therefore rejecting the null hypothesis. The results are significant because they show that televised advertisements touting green products are indeed believable to many consumers which contradicts earlier research on advertising believability overall (Beltramini & Evans, 1985; Beltramini & Stafford, 1993; Darke & Ritchie, 2007). As the research found consumer believability with the green advertisement, this may suggest that consumers have a desire to believe green product claims because they want to be good citizens with regard to environmental issues and they have reduced personal barriers to green products (Bonini & Oppenheim, 2008; Horner, 2008). Skepticism by consumers for green products may have become diluted as governments have mandated changes to products to protect the environment. Changes such as an increase in gas mileage for automobiles and the ban of phosphates in cleaning products like dishwasher detergent, initially met with some trepidation by consumers, have become normal (Bardelline, 2009; "CAFE Overview," 2015). New information piques the interest of consumers and draws their attention to an advertisement, particularly when it is innovative information (Chiu, 2008). The Veblen Effect Theory suggests that a higher price enhances utility of a good as it raises personal status as a symbol of wealth, and appeals to status conscious consumers therefore status seeking may also be an explanation for believing a green product advertisement because many green products are priced at a premium (Bagwell & Bernheim, 1996). The Hypothesis 1 result indicates that green product television advertising is

a worthy endeavor for marketers and that believability in the ad may result in sales from a targeted green group of consumers.

H2o: The demographic variables do not predict the believability total score and there is no difference between the televised commercial types.

H2a: The demographic variables (gender, age, income, education, race, marital status, and occupation) predict the believability total score, and there is a difference between the commercial types.

H2a2: The demographic variables do predict the believability total score, but there is no difference between commercial types.

To investigate these hypotheses, predictability of the believability score based on demographic variables for both green and non-green advertisements are needed as it is posited in previous research that believability of any advertisement is reduced as age, income, and education increases and may also be true of green product advertisements (Beltramini, 1982; Haan & Berkey, 2002; Maloney, 1963; Obermiller & Spangenberg, 1998).

Hypothesis 2 tested the predictability of believability scores based on consumer demographic variables as they relate to the type of televised commercial (green vs. non-green). The variables used include gender, age, income, education, race, marital status, occupation, political preference, television hours watched daily, and recycling habits. The model generated by multiple regressions indicates that it was not a good predictor for the non-green group and did not predict believability scores effectively. The regression model for the green group was statistically significant and effectively predicted believability scores. Three predictors provided a significant contribution individually with variables: other political preference, 2 to 3 hours of television viewed per day, and other marital status. Consumers who are Democrats, watch 2 to 3 hours of television per day, and report other marital status are likely to have greater believability scores. In a review of the literature, it is apparent that both political parties desire minimization of human contribution to environmental problems yet they differ significantly on the methods to attain this goal.

The Republican party platform prefers methods more favorable to businesses, market driven, and technologically advanced rather than governmental intervention ("2015 Republican Platform: Natural Resources," 2015). In contrast, the Democrat platform prefers governmental intervention such as green initiatives for renewable energy projects and funds to educate workers for careers in renewable energy (West, 2009). Democrat participants in the study may be more aware of government environmental initiatives because they are well publicized in the media where private business initiatives are less publicized, hence it may appear that the government is more effective with environmental issues.

Television viewing hours is another significant variable to predict believability of a televised green advertisement with television viewing habits anticipated to have an impact on green advertising believability by consumers in the literature review. In this study, two to three hours of television viewing per day was significant in determining believability in televised green advertising which is less than the national average as reported by Nielsen (2009). This difference could be explained by the participation of students in the study who report less television viewing than other groups and are less exposed to televised advertising than non-students (Petrys, 2012). College students represented 35.5% of the green group.

The third variable in the regression analysis that suggests predictability of believability in televised, green advertisements is marital status with participants reporting other marital status

demonstrating greater believability in the green advertisement. The significance of marital status in believability of green advertising was somewhat of a surprise as the literature review found mixed significance for marital status as a predictor for either non-green or green advertising. In previous studies, marital status, as it relates to green purchase behavior showed that married people tend to buy more green products than singles or that marital status had no significance in green product purchases (Kheiry & Nakhaei, 2012; Noor & Muhammad, 2012).

A study of demographics and social influence found that singles were more susceptible to informational and normative influence than married couples and respondents' living situation was also a factor. Participants who lived with a roommate or parents were more susceptible to informational influence than persons living alone or with a significant other (Girard, 2010). Relating marital status as other and demonstrating significance as a variable in green marketing believability may be somewhat intertwined with the notion of the informative and normative influence to conform to rational information because the participant thought they were expected to do so. The significance of other marital status should be observed with caution as there are few studies to support this information. This portion of the study is useful to marketers who would like to segment their television advertising to target groups that are more likely to believe their ads and purchase their products. Advertising choices may be limited to certain channels, hours, or programming to reflect these targeted groups and to avoid spending advertising dollars where they would be least effective.

 H3o: Consumer familiarity with the product does not predict believability total scores and there is no difference between the commercial types (green vs. non-green).

H3a: Consumer familiarity does predict believability total scores and there is a difference between the commercial types.

H3a2: Consumer familiarity does predict believability total scores and there is no difference between commercial types.

There is evidence that product familiarity may enhance believability of an advertisement so these hypotheses were analyzed using multiple regression to test prediction of believability scores based on familiarity for each product type advertised (green vs. non-green)(E. Johnson & J. Russo, 1984).

Hypothesis 3 is based on the research question that postulates that consumer familiarity with a product does not predict believability scores and that this familiarity does not differ between commercial types. Consumer familiarity is considered an advantage as consumers with familiarity with a product brand or class can select information that is most relevant and better evaluate new or existing alternatives (E. J. Johnson & E. Russo, 1984; Sheau-Fen, 2012). The regression models generated by the data indicate that the non-green group with consumer familiarity was not statistically significant yet the green group with product familiarity was significant and that the regression model demonstrated a reduction in believability of a product if the consumer is not familiar with it. This model indicates that a familiar product advertised to a consumer generates higher believability scores if the product is green.

It is projected that repetitive viewing of the same television advertisement may enhance familiarity with a product and therefore make an advertisement more believable. Research has shown that familiarity with a product as a single construct can be related to believability of product claims, yet information is not available specifically about consumer familiarity with a green product (Haan & Berkey, 2002). Brand familiarity, brand reputation, market share and perceived quality is strongly correlated within a product category such as household cleaners and

disinfectants so it is highly likely that a positive association will carry over from the parent brand schema to a product with a green brand extension (Chatterjee & Kay, 2010; Pechmann & Ratneshwar, 1991). This would also indicate that brand or category extensions, cross-branding and line extensions such as Clorox Green Works, have enjoyed success with their green products as consumers were previously familiar with the brand name (Frazier, 2008). The inference of this study is that using marketing strategies that foster familiarity with a green product should be used to enhance believability of the product's advertised message.

ANALYSIS AND RESULTS

Believability of an advertisement, according to Maloney (1963) depends on an interaction with a consumer's attitudes, competition between the new information, and old beliefs plus memories accumulated from prior experience. For this reason, the data was analyzed for the green or non-green advertisement believability score to determine which people found the advertisement more believable, what percentage of people believed or disbelieved the ad and strove to determine which variables impeded or enhanced believability.

Data Collection

Data for this study were collected in February and March 2012. Globally and within the U.S. at that time, consistent splits between populations believed or disbelieved the concepts of global warning and climate change and consumer opinions varied about the use and efficacy of green products (Friedman, 2005; Horner, 2008; Kloor, 2012). World economies were suffering from recession, unemployment, and budget deficits. Consumers increasingly felt the need to cut their spending yet demonstrated a demand for household cleaning products, with green products demonstrating popularity with many consumers.

Survey Monkey, a survey delivery system, was used to distribute the survey electronically in February 2012. The survey was launched on February 22, 2012 and closed on March 07, 2012, when 372 individuals had responded to the survey with most participants completing it. Survey A (non-green) and Survey B (green) were delivered simultaneously to a randomly split list of 19,0000 email addresses of staff, faculty and students at a Southwestern College, which was provided by the Office of Technology Services at that college. The email address list was provided in an Excel spreadsheet, split in half randomly using Excel software which created an email list for each Survey A and B. The final data analysis included 303 participants which exceeded the recommended number generated by G*Power of 172 participants (Faul, 2008).

Results

The majority of the participants for each group were female: non-green (98, 64.9%) and green (110, 72.4%). For the non-green group, the most common age group was 35-44 (33, 21.9%) and 50 (33.1%) participants had an education level of some college. For the green group, many participants were between the ages of 45-54 (38, 25.0%) and had an education level of post graduate (49, 32.2%). The majority of the participants were White: non-green (95, 62.9%) and green (104, 68.4%). The majority of non-green participants watched 1 - 2 hours of television (83, 55.0%), while only 63 (41.4%) green participants watched 1 - 2 hours of television. Fifty-seven (37.5%) green participants had an income under $25,000 and 54 (35.8%) non-green participants responded with an income under $25,000. The majority of non-green participants were married (82, 54.3%) and answered yes to recycling (92, 60.9%). The majority of green participants answered yes to recycling (87, 57.2%), but only 72 (49.0%) were married. Among non-green participants, there was an almost equal number of Democrats and Republicans (47, 31.1%), whereas, the green participants had more Democrats (53, 34.9) than any other political

party preference. From the non-green group, 74 (49.0%) held professional occupations and the majority answered yes to product familiarity (141, 93.4%). From the green group, 72 (52.0%) held professional occupations and 62 (40.8%) answered yes to product familiarity. Frequencies and percentages for non-green and green participants are presented in Table 1.

Table 1

Frequencies and Percentages for Non-Green and Green Participants

	Non-green		Green	
Demographics	*n*	*%*	*n*	*%*
Gender				
Male	53	35.1	42	27.6
Female	98	64.9	110	72.4
Age				
18-24	24	15.9	26	17.1
25-34	32	21.2	30	19.7
35-44	33	21.9	24	15.8
45-54	30	19.9	38	25.0
55+	32	21.2	34	22.4
Education				
High School/GED	7	4.6	12	7.9
Some college	50	33.1	46	30.3
2 year college degree	30	19.9	20	13.2
4 year college degree	20	13.2	25	16.4
Post graduate	44	29.1	49	32.2
Ethnicity				
American Indian or Alaskan native	32	21.2	30	19.7
Asian/Pacific Islander	1	0.7	1	0.7
Black	1	0.7	2	1.3
Hispanic/Latino	10	6.6	9	5.9
White	95	62.9	104	68.4
Other	12	7.9	6	3.9
Income				
Under $25,000	54	35.8	57	37.5
$25,000-44,999	36	23.8	39	25.7
$45,000-64,999	31	20.5	26	17.1
$65,000-84,999	9	6.0	16	10.5
$85,000 or more	21	13.9	14	9.2
Hours of Television				
Less than one	43	28.5	45	29.6
1-2	83	55.0	63	41.4
3-4	19	12.6	37	24.3
5 or more	6	4.0	7	4.6
Recycling				
Yes	92	60.9	87	57.2
No	17	11.3	20	13.2

		Non-green		Green	
Demographics		*n*	*%*	*n*	*%*
Occasionally		42	27.8	45	29.6
Marital status					
Single		59	39.1	69	45.4
Married		82	54.3	72	47.4
Other		10	6.6	11	7.2
Political preference					
Democrat		47	31.1	53	34.9
Republican		47	31.1	44	28.9
Independent		32	21.2	30	19.7
Other		25	16.6	25	16.4
Occupation					
Professional		74	49.0	79	52.0
Blue collar		8	5.3	4	2.6
Student		55	36.4	54	35.5
Retired		3	2.0	3	2.0
Other		11	7.3	12	7.9
Product familiarity					
Yes		141	93.4	62	40.8
No		2	1.3	43	28.3
Somewhat		8	5.3	47	30.9

Believability Scores

The range of believability scores in the green group ranged from 1.00 to 5.00 ($M = 3.46$, $SD = 0.86$). The range of believability scores in the non-green group ranged from 1.00 to 4.90 ($M = 3.06$, $SD = 0.91$). Each group was asked about believability of the green or non-green advertisement they viewed as part of the electronically delivered survey based on variables such as trustworthiness, convincingness, credibility, reasonableness, honesty, question-ability, inconclusiveness, authenticity, and likeliness. A 5-point Likert-type scale, where one represents a lack of adjective and five represents the fullness of the adjective (e.g. 1=unbelievable and 5=believable) was constructed for the believability score by adding the total responses and arriving at a mean score between 10 and 50 points. As the dependent variable, believability was measured using 10 items. The independent or grouping variable was the televised commercial type, which was either green or non-green.

Means and standard deviations by group (green vs. non-green) are presented in Table 2.

Table 2

Means and Standard Deviations of Believability Scores by Group (Green vs. Non-Green)

Variable	Green		Non-green	
	M	*SD*	*M*	*SD*
Believability	3.46	0.86	3.06	0.91

The results of the ANOVA for believability total scores by group (green vs. non-green) were statistically significant, $F (1, 301) = 15.49$, $p < .001$, suggesting there were differences in believability scores by group. The green group ($M = 3.46$, $SD = 0.86$) had higher believability scores than the non-green group ($M = 3.06$, $SD = 0.91$). The null hypothesis – there is no statistically significant difference in consumer believability total scores by televised commercial type (green vs. non-green) – must be rejected. The results of the ANOVA are presented in Table 3.

Table 3
ANOVA on Believability Total Scores by Group (Green vs. Non-green)

Variable	Green		Non-green			
	M	*SD*	*M*	*SD*	*F* (1, 01)	*p*
Believability	3.46	0.86	3.06	0.91	15.49	.001

To determine if the demographic variables (gender, age, income, education, race, marital status, occupation, political preference, television hours watched, and recycling participation) predict the dependent variable (believability scores), two multiple regressions were conducted (green vs. non-green). The multiple regressions assessed the demographic variables as they predict the believability scores.

Non-green group
The multiple regression conducted for the non-green group, with the demographic variable predicting believability total scores, was not statistically significant, $F (28, 122) = 1.45$, $p = .087$, $R^2 = .25$, indicating that the model did not effectively predict believability scores. The results of the multiple linear regressions are presented in Table 4.

Table 4
Multiple Linear Regressions with Demographic Variables Predicting Believability Total Score for the Non-Green Group

Model	B	SE	β	t	p
Gender (ref: male = 1)	0.13	0.16	.07	0.80	.423
18-24 years old (ref: 25-34 years old)	-0.13	0.27	-.05	-0.47	.640
35-44 years old (ref: 25-34 years old)	0.05	0.25	.02	0.21	.837
45-54 years old (ref: 25-34 years old)	0.12	0.28	.05	0.43	.668
55+ years old (ref: 25-34 years old)	-0.31	0.30	-.14	-1.03	.305
$25000-44999 (ref: under $25000)	-0.37	0.24	-.17	-1.54	.127
$45000-64999 (ref: under $25000)	-0.44	0.31	-.20	-1.41	.160
$65000-84999 (ref: under $25000)	0.08	0.37	.02	0.21	.835
$85000+ (ref: under $25000)	-0.44	0.33	-.17	-1.35	.179
High school or GED (ref: some college)	0.09	0.40	.02	0.22	.826
2 year degree (ref: some college)	-0.39	0.22	-.17	-1.76	.081
4 year degree (ref: some college)	-0.41	0.28	-.15	-1.47	.145
Post graduate (ref: some college)	-0.58	0.29	-.29	-1.98	.050
American Indian or Alaskan native (ref: White)	-0.18	0.21	-.08	-0.85	.397

Model	B	SE	β	t	p
Other ethnicity (ref: White)	0.05	0.22	.02	0.23	.819
Single (ref: married)	0.20	0.18	.11	1.12	.266
Other marital status (ref: married)	-0.06	0.33	-.02	-0.19	.851
Blue collar occupation (ref: professional)	-0.36	0.38	-.09	-0.95	.344
Student (ref: professional)	0.02	0.28	.01	0.06	.953
Other occupation (ref: professional)	-0.16	0.29	-.05	-0.56	.574
Less than one hour of television (ref: 1-2 hours)	-0.15	0.18	-.07	-0.84	.405
Two-three hours of television (ref: 1-2 hours)	-0.02	0.24	-.01	-0.08	.935
Four or more hours of television (ref: 1-2 hours)	-0.20	0.42	-.04	-0.46	.647
No recycling (ref: yes recycling)	-0.19	0.26	-.07	-0.73	.468
Occasional recycling (ref: yes recycling)	0.05	0.18	.03	0.29	.772
Republican (ref: Democrat)	-0.07	0.21	-.04	-0.33	.740
Independent (ref: Democrat)	0.00	0.22	.00	0.02	.986
Other political preference (ref: Democrat)	-0.28	0.24	-.12	-1.17	.243

Green group

The multiple regression for the green group, with the demographic variables predicting believability total scores, was statistically significant, $F (28, 123) = 1.93$, $p = .008$, $R^2 = .31$, indicating that the model effectively predicted believability scores. The combination of predictors accounted for (R^2) 31% of the variance in believability. Only three predictors individually provided a significant contribution towards the prediction of believability scores: other political preference ($B = -0.48$, $p = .023$), two-three hours of television watched ($B = 0.63$, $p = .003$), and other marital status ($B = 0.68$, $p = .025$). These three significant predictors suggest that for participants who are more likely to select a political preference other than Democrat, there is a decrease in believability scores by .48 units. Additionally, as participants are more likely to have watched two to three hours of television versus less than one hour, there is an increase in believability scores by .63 units. Finally, as participants are more likely to report other marital status versus being single or married, there is an increase in believability score by .68 units. The results of the multiple linear regressions are presented in Table 5.

Table 5

Multiple Linear Regressions with Demographic Variables Predicting Believability Total Score for the Green Group

Model	B	SE	β	t	p
Gender (ref: male = 1)	0.30	0.16	.16	1.88	.062
18-24 years old (ref: 55+)	0.32	0.32	.14	1.02	.309
25-34 years old (ref: 55+)	0.12	0.26	.06	0.47	.639
35-44 years old (ref: 55+)	0.12	0.25	.05	0.50	.620
45-54 years old (ref: 55+)	0.33	0.21	.17	1.60	.113
$25000-44999 (ref: under $25000)	0.38	0.22	.19	1.73	.087
$45000-64999 (ref: under $25000)	0.16	0.27	.07	0.59	.556

Model	B	SE	β	t	p
$65000-84999 (ref: under $25000)	0.58	0.32	.21	1.81	.072
$85000+ (ref: under $25000)	-0.01	0.32	.00	-0.03	.979
High school or GED (ref: post graduate)	0.25	0.35	.08	0.72	.472
Some college (ref: post graduate)	0.27	0.29	.14	0.92	.360
2 year degree (ref: post graduate)	0.36	0.28	.14	1.27	.207
4 year degree (ref: post graduate)	0.11	0.23	.05	0.48	.632
American Indian or Alaskan native (ref: White)	0.19	0.21	.09	0.91	.364
Other ethnicity (ref: White)	0.22	0.24	.08	0.92	.360
Single (ref: married)	0.12	0.16	.07	0.75	.454
Other marital status (ref: married)	0.68	0.30	.21	2.28	.025
Blue collar occupation (ref: professional)	0.47	0.47	.09	1.00	.319
Student (ref: professional)	-0.02	0.28	-.01	-0.07	.946
Other occupation (ref: professional)	-0.02	0.29	-.01	-0.07	.947
One-two hours of television (ref: less than one hour)	0.31	0.18	.18	1.73	.086
Two-three hours of television (ref: less than one hour)	0.63	0.21	.32	3.00	.003
Four or more hours of television (ref: less than one	0.37	0.35	.09	1.06	.292
Yes recycling (ref: occasional recycling)	0.07	0.17	.04	0.40	.688
No recycling (ref: occasional recycling)	-0.30	0.25	-.12	-1.23	.221
Republican (ref: Democrat)	0.05	0.19	.02	0.24	.808
Independent (ref: Democrat)	-0.34	0.20	-.16	-1.70	.092
Other political preference (ref: Democrat)	-0.48	0.21	-.21	-2.30	.023

To determine if the independent variable (consumer familiarity) predicts the dependent variable (believability scores), two multiple regressions were conducted (green vs. non-green). The multiple regressions assessed the consumer familiarity (yes, no, somewhat) as they affected the believability scores.

In the preliminary analysis, the assumptions of the multiple regressions were assessed. Normality for all scores (from both green and non-green groups) was assessed with Kolmogrov-Smirnov (KS) tests; the results were significant for some scores, indicating the assumption was not met yet this suggests that the analysis is strong against the assumption if there are at least 30 participants for the analysis (there are over 150 in each analysis) (Pallant, 2007). The non-green multiple regression with the consumer familiarity predicting believability total scores was not statistically significant, $F (2, 148) = 0.31$, $p = .735$, $R^2 = .00$, indicating that the model did not effectively predict believability scores. The results of the multiple linear regressions are presented in Table 6.

Table 6
Multiple Linear Regressions with Consumer Familiarity Predicting Believability Total Score for the Non-Green Group

Model	B	SE	β	t	p

Somewhat familiar (ref: familiar)	-0.23	0.33	-.06	-0.69	.492
Not familiar (ref: familiar)	0.23	0.65	.03	0.36	.721

The green multiple regression with the product familiarity predicting believability total scores was statistically significant, $F(2, 149) = 4.00$, $p = .020$, $R^2 = .05$, indicating that the model effectively predicted believability scores. The combination of predictors accounted for (R^2) 50% of the variance in believability. Only one predictor individually provided a significant contribution towards the prediction of believability scores: not familiar with the product ($B = -.25$, $p = .006$), suggesting that as participants are more likely to not be familiar with the product versus familiar, there is a decrease in believability scores by .25 units. No other individual predictors in the model provided a significant or unique contribution toward the prediction of believability scores. The results of the multiple linear regressions are presented in Table 7.

Table 7
Multiple Linear Regressions with Consumer Familiarity Predicting Believability Total Score for the Green Group

Model	B	SE	β	t	p
Somewhat familiar (ref: familiar)	-0.23	0.16	-.12	-1.40	.165
Not familiar (ref: familiar)	-0.47	0.17	-.25	-2.82	.006

FINDINGS, IMPLICATIONS AND LIMITATIONS

Countless consumers have been alienated by practices of green advertisers resulting in governmental regulation of green advertising claims, businesses re-evaluating their green initiatives, revision of sustainability strategies, and modification to green product or service advertisements. Consumer confidence in a product because it is advertised as being green may either enhance or detract from the appeal of the product to consumers as they evaluate the products for credibility, reliability, and believability of the advertised claims. Efficacy of the advertised product may also be questioned by a consumer. Calfee and Ringold (1994) reported steady observation in public opinion polls that approximately two-thirds of consumers claim they distrust the truthfulness of advertising (Obermiller & Spangenberg, 1998).
Political, environmental, governmental, and scientific communities have separate opinions and approaches dealing with environmental issues with some leaders claiming there are no environmental issues beyond the ones reported by the media. A report released by the Yale Project on Climate Change Communication found that at least 70% of Americans believe that global warming is a reality (Marin, 2012). In the same report, it was noted that the four years between 2008 and 2012 have been a pivotal time for Americans who have changed their views to believe that global warming is no longer a distant problem, but one that may affect them individually. Consumer concerns about environmental and climate change issues, according to Zinkman and Carlson (1995) may not cause consumers to convert their purchases to environmentally friendly products; however, since the 1990's this purchasing behavior has gradually changed.

It appears that consumers of green products are similar to other consumers in that they desire immediate gratification and visible, tangible results from their green products (O'Donoghue & Rabin, 2000). Hybrid automobiles demonstrate instant savings by minimizing fuel costs and Bonnie plant peat pots realize instant and future savings in addition to the obvious reduction of plastic disposal. Tide Coldwater will have a fairly immediate display of hot water cost saving and Green Works will have instant results once the consumer uses the product. Delayed gratification is also a factor with green products as some products are advertised as environmentally preferable or their use is expected to help reduce climate change or global warming, such as all-electric vehicles. Climate change moves slowly, often measured in centuries or millennia, and gratification to the consumer would need to provide intrinsic gratification rather than instant or intermediate fulfillment such that the consumer might rely on a fact-claim belief (Friedman, 2008). Many electronics and appliances with green designations demonstrate small savings that must aggregate over time and be realized annually for substantial or measurable savings of energy ("Features of Energy Star qualified new homes," 2009; Friedman, 2008; Horner, 2008; "How to plant Bonnie peat pots," 2009).

Limitations of the study

This study was conducted in the Southwest region of the United States and may not reflect the opinions or findings in other U.S. regions hence the study will not provide for the generalization of believability in green advertising to other situations (Creswell, 2005). A participant who considers himself environmentally enlightened may have been more responsive to the electronic survey although the invitation to participate was voluntary and assumed independent observations with equal variances (Cooper & Schindler, 2006). None of the survey participants were under the age of 18 so believability of green advertising was not tested within this cohort group.

It is recognized by the researchers that the term green is multifaceted such that study participants may have their own definition which could also include terms like sustainability, non-polluting, renewable, or environmental preservation (McClean & McEachern, 2002; Mostafa, 2007). Another limitation of this study is that the number of hours a consumer watches television is self-reported and subjective. According to Nielson (2008), the typical person watches television approximately 31 hours per week in the U.S. Television viewing may be under reported in some cases by consumers yet one obesity study compared self-reported television viewing time with an objective, electronic measure of viewing hours and found that most self-reports underestimated TV viewing time by only 36 minutes per day with mean objective viewing times consistent with Nielson Reports (Nielson, 2008; Otten, 2010). When outliers of the objective measures for television viewing were removed because a few participants indicated that the television was on in the background, but not being watched, the researchers found that television viewing was underestimated by about 12 minutes (Otten, 2010).

Businesses interested in the findings of this study should use the data carefully to help identify links between consumers and believability of green advertising and consider that believability is linked to other significant interrelated variables such as credibility and skepticism (Obermiller & Spangenberg, 1998).

As green products are developed, researched, and marketed, businesses must remain cognizant of being sincere, transparent, and honest in their green product claims plus green advertisers must follow appropriate legal guidelines and avoid taking advantage of vulnerable consumers. The FTC Green Guides should be continually updated with specific guidelines to protect consumers

and guide businesses that wish to avoid the scrutiny and inquiry of the FTC or other groups who monitor truth in advertising like the National Advertising Division of the Council of the Better Business Bureau ("About the children's advertising review unit," 2008; Aula, 2010; "How FTC benefits consumers," 2012)

Trustworthiness, as a variable in the believability survey instrument used in this study, is a vital determinant of believability in consumer advertising (Beltramini & Stafford, 1993; Sirdeshmukh, Singh, & Sabol, 2002). Consumer trust is a crucial element for building market share and customer relationships in a viable way (Sirdeshmukh, et al., 2002; Urban, 2000). Berry (1995, p. 242) stated the "the inherent nature of services, coupled with abundant mistrust in America, positions trust as perhaps the single most powerful relationship marketing tool available to a company". Trust by customers of service suppliers is dependent on the customers' completed experiences with the supplier and they tend to continue the relationship because they feel less vulnerable and uncertain (Berry, 1995). Moorman, Deshpande, and Zaltman (1992) in Sirdeshmukh et. al. (2002, p. 315) stated that when placing emphasis on consumer behavioral intent, trust can be defined as "a willingness to rely on an exchange partner in whom one has confidence". Trust can also influence loyalty as the consumer reconciles their values with the values of a provider plus this congruency is significantly related to the consumer's satisfaction and loyalty to the product (Gwinner, 1998; Sirdeshmukh, et al., 2002)

A study of three drivers of green brand equity- green trust, green satisfaction, and green brand image, found that green trust is positively associated with green brand equity (Chen, 2010). In that study, Chen (2010, p. 312) stated that green trust was defined as "a willingness to depend on a product, service, or brand based on the belief or expectation resulting from its credibility, benevolence, and ability about its environmental performance". The trust variable could reflect a consumer's exposure to a specific product or brand, a pleasant or unpleasant experience and certain attitudes about the brand or product. Credible celebrity endorsement, positive social media reviews, and affirmative word-of-mouth for green products could lend trustworthiness to a green product (Chatterjee & Kay, 2010).

Green line extensions for established brands can leverage equity associated with core products and revitalize a parent brand name plus be a good fit of the product brand extension to the core product is typically more positively received by consumers than a poor fit (Aaker & Keller, 1990; Chatterjee & Kay, 2010). This research found that unfamiliarity with green products reduces believability in the product's advertising. For example, a paper towel manufacturer could extend its core product with recycled content as a green extension yet a category extension for cloth towels may be less successful. Previous studies found that product categories of detergents, cleaning products, and paper towels are associated with high levels of environmental unease by consumers (Chatterjee & Kay, 2010; Niva, 1998).

There are barriers to bringing environmental trust to green products such as inconvenient use, high prices, performance perceptions plus the availability of equally functional non-green alternatives (Ginsberg, 2004). According to Bonini and Oppenheim (2008), a survey of 2000 Americans revealed that 61% believed that green products performed worse than conventional products (Chatterjee & Kay, 2010). Price sensitivity is a barrier to sales of green products as some green products cost more because of their unique ingredients or higher shipping rates of smaller green companies (Clifford & Martin, 2011). Green product sales also suffer external economic risks like recession when consumers become price conscious and are not willing to pay a premium for a green product.

In a study of adopters of alternative fuel vehicles (AFV) versus gasoline fueled vehicles, results showed that adopters revealed meaningfully higher attitude levels, greater personal and social norms, and novelty preferences yet adopters of innovative products tend to represent a small percentage of the market until trust is built for the product as more consumers adopt and demonstrate approval of the product (Jansson, 2011).

Recommendations for Future Research

Green product advertising has not been extensively studied over time periods and remains controversial as consumers' attitudes towards global warning and the environment fluctuate plus opinions vary on the need for environmentally friendly or green products. Recommendations for research in the future are based on this study's limitations and consumers' changing environmental attitudes to include

1. Larger number of study locations and participants or a greater geographically diverse sample to include multiple U.S. regions or major U.S. cities at both state and private educational institutions.
2. Additional demographic groups. This research was random and not limited, yet key demographics were omitted because of geographic limitations and because the research took place at a community college, there was a disproportionate group of well-educated participants which may not accurately reflect the population overall.
3. Brand familiarity. It cannot always be attributed to a single type of advertising yet this study focused on televised advertising. A marketer of green products would benefit from learning the source of product familiarity such as print, televised media, social media, in-store promotions or word-of-mouth.
4. Children. This group is considered a vulnerable but potentially profitable demographic group yet marketing to this specific group is controversial. Logo recognition can begin as early as age two (Valkenburg & Buijzen, 2005). Children are future consumers, tweens have demonstrated disposable income and as generational cohorts they have been exposed to a myriad of media including social media. In addition, children have been exposed to expanded contemporary recycling options and are relevant subjects to study as future or potential green or non-green consumers.

SUMMARY OF RESEARCH

Using parent brand domination along with green brand extensions to establish a green brand locus should activate a germane category in working memory of consumers who are in sync near that goal. Eco-friendliness positioning as a product variant in a product that is congruent with the dominant product category can increase the salience of the advertiser's message, yet the opposite may hold true if eco-friendliness is associated with an incongruent product. Green brand extension could be a branding opportunity for some products, yet the marketer must carefully examine how the green brand extension can affect the brand's value and the brand portfolio. Incongruity between the product and the green extension, such as a powerful car that is fuel efficient, reduces consumer product evaluations while congruity with the brand extension, like natural cereal products improves product evaluations (Broniarczyk & Alba, 1994; Chatterjee & Kay, 2010). Brand familiarity, brand reputation, market share and perceived quality is strongly correlated within a product category such as household cleaners and disinfectants so it is highly likely that a positive association will carry over from the parent brand schema to a product with a green brand extension (Chatterjee & Kay, 2010; Pechmann & Ratneshwar, 1991). The

Clorox brand has enjoyed a successful green brand extension with its environmental product launch of Green Works with retailers such as Wal-Mart accepting all five products of the line (glass, surface, all-purpose, bathroom, and toilet bowl cleaners), further requesting that the brand be extended into other categories like dish soap (Unruh & Ettenson, 2010). The need to understand what factors affect consumer acceptance of green televised advertising messages was the focus of this study. There is a cost associated with making the wrong decision about advertising and such bad decisions could adversely affect sales and profits (Grossnickle & Raskin, 2001). This study demonstrates that believability of an advertising message is an important construct in compelling a consumer to try or adopt a new product or brand. Understanding the degree of believability of green advertising differs by actionable market segments, much like believability of ads for products that are not green.

References

2015 Republican Platform: Natural Resources. (2015). *2015*. Retrieved from https://www.gop.com/platform/americas-natural-resources/

Aaker, D., & Keller, K. (1990). Consumer evaluations of brand extensions. *Journal of Marketing, 54*(1), 27-41.

About the children's advertising review unit. (2008). *2009*(July 3). Retrieved from http://www.caru.org/about/index.aspx

Aula, P. (2010). Social media, reputation risk and ambient publicity. *Strategy and Leadership, 38*(6), 43-49.

Bagwell, L., & Bernheim, B. (1996). Veblen effects in a theory of conspicuous consumption. *The American Economic Review, 86*(3), 349-371.

Bardelline, J. (2009). Washington State chemical ban spurs detergent smuggling Retrieved July 3, 2009, 2009, from http://www.greenbiz.com/blog/2009/04/02/wash-state-chemical-ban-spurs-detergent-smuggling

Beltramini, R. (1982). *Advertising perceived believability scale.* Paper presented at the Proceedings of the Southwestern Marketing Association, Wichita, KS.

Beltramini, R., & Evans, K. (1985). Perceived believability of research results information in advertising. *Journal of Advertising 14*(3), 18-31.

Beltramini, R., & Stafford, E. (1993). Comprehension and perceived believability of seals of approval information in advertising. *Journal of Advertising, 22*(3), 1-13.

Berry, L. (1995). Relationship marketing of services-Growing interest, emerging perspectives. *Journal of the Academy of Marketing Science, 23*(4), 236-245.

Bonini, S., & Oppenheim, J. (2008). Cultivating the green consumer. *Stanford Social Innovation Review, 6*(4), 6.

Broadbent, S. (1997). Single source-new analyses. *Journal of Market Research Society, 39*(2), 363-379.

CAFE Overview. (2015). *Corporate Average Fuel Economy*. Retrieved from http://www.nhtsa.gov/Laws+&+Regulations/CAFE+-+Fuel+Economy/Model+Years+2012-2016:+Final+Rule

Chatterjee, P., & Kay, M. (2010). *Green Brand Extensions: The role of attribute-product schema incongruity on the processing of environmental claims.* Paper presented at the Northeast Business & Economics Association.

Chen, Y. (2010). The drivers of green brand equity: Green brand image, green satisfaction, and green trust. *Journal of Business Ethics, 93*, 307-319. doi: 10.1007/s10551-009-0223-9

Chiu, Y. (2008). The persuasive effect of popularity claims in advertising: An informational social influence perspective. *Journal of American Academy of Business, 14*(1), 6.

Clark, D. (2008). Guides for the use of environmental marketing claims: Green building and textiles; Public workshop. *Federal Register, 73*(112). Retrieved from https://www.ftc.gov/sites/default/files/documents/public_events/green-building-textiles/p084203ggfrn.pdf

Clifford, S., & Martin, A. (2011, April 21, 2011). As consumers cut spending, 'Green" products lose allure, *The New York Times*. Retrieved from http://www.nytimes.com/2011/04/22/business/energy-environment/22green.html?_r=0&pagewanted=print

Cooper, D., & Schindler, P. (2006). *Business research methods* (9th ed.). New York: McGraw-Hill Irwin.

Creswell, J. (2005). *Educational Research* (2nd ed.). Upper Saddle River, NJ: Pearson-Merrill Prentice Hall.

Darke, P., & Ritchie, R. (2007). The defensive consumer: Advertising deception, defensive processing and distrust. *Journal of Marketing Research, 44*(February), 114-127.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. (2008). G*Power (Version 3.1.2). Duesseldorf, Germany: Universitat Kiel. Retrieved from http://www.psycho.uni-duesseldorf.de/abteilungen/aap/gpower3/download-and-register

Features of Energy Star qualified new homes. (2009). *2009*(July 10). Retrieved from http://www.energystar.gov/index.cfm?c=new_homes.nh_features

Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention, and behavior: An introduction to theory and research   Retrieved from http://home.comcast.net/~icek.aizen/book/ch9.pdf

Frazier, M. (2008). Clorox eco-friendly line finds green foes. *Advertising Age, 79*(24), 3-25.

Friedman, T. (2005). *The World is Flat*. New York: Farrar, Straus and Giroux.

Friedman, T. (2008). *Hot, flat, and crowded*. New York: Farrar, Straus and Giroux.

Ginsberg, J., Bloom, P. (2004). Choosing the right green marketing strategy. *MIT Sloan Management Review, 46*(1).

Girard, T. (2010). The role of demographics on the susceptibility to social Influence: A pretest study. *Journal of Marketing Development and Competitiveness, 5*(1), 13 & 14.

Gwinner, K., Gremler, D. Bitner, M. (1998). Relational benefits in service industries: The customer's perspective. *26, 2*, 101-114.

Haan, P., & Berkey, C. (2002). A study of the believability of the forms of puffery. *Journal of Marketing Communications, 8*(4), 246-256.

Holbrook, M. (1978). Beyond attitude structure: toward the informational determinants of attitude. *Journal of Marketing Research, 25*, 545-556.

Horner, C. (2008). *Red hot lies: How global warming alarmists use threats, fraud, and deception to keep you misinformed* (First ed.). Washington: Regnery Publishing, Inc.

How FTC benefits consumers. (2012). *2012*(May 1). Retrieved from http://www.ftc.gov/ftc/about.shtm

How to plant Bonnie peat pots. (2009). *2009*(July 2). Retrieved from http://www.bonnieplants.com/tabid/79/articleType/ArticleView/articleId/59/Bonnie-Peatpots-are-Easy.aspx

Janssen, M., & Jager, W. (2002). Stimulating diffusion of green products: Co-evolution between firms and consumers. *Journal of Evolutionary Economics, 12*, 283-306.

Jansson, J. (2011). Consumer eco-innovation adoption: Assessing attitudinal factors and perceived product characteristics. *Business Strategy and the Environment, 20*(3), 192-210. doi: 10.1002/bse.690

Johnson, E., & Russo, J. (1984). Product familiarity and learning new information. *Journal of Consumer Research, 11*(June), 8.

Johnson, E. J., & Russo, E. (1984). Product familiarity and learning new information. *Journal of Consumer Research, 11*, 542-550.

Kheiry, B., & Nakhaei, A. (2012). Consumers' green purchase decision: An examination of environmental beliefs, environmental literacy and demographics. *International Journal of Marketing and Technology, 2*(9).

Kloor, K. (2012, April 20, 2012). Some Climate Scientists Make Overtures to Their Critics Retrieved April 20, 2012, from http://www.yaleclimateconnections.org/2012/04/some-climate-scientists-make-overtures-to-their-critics/

Maloney, J. (1963). Is advertising believability really important? *Journal of Marketing, 27*(4), 1-8.

Marin, M. (2012, October 21, 2012). Report: Americans increasingly believe that global warming is real, *Orlando Sentinel,* p. 1.

Mazur, N., & Zhong, C. (2009). Do green products make us better people? *Psychological Science,* (In press). Retrieved from http://www.rotman.utoronto.ca/newthinking/greenproducts.pdf

McClean, P., & McEachern, M. (2002). Organic purchasing motivations and attitudes: are they ethical? *International Journal of Consumer Studies, 26*, 85-92.

Mostafa, M. (2007). Gender differences in Egyptian consumers' green purchase behavior: The effects of environmental knowledge, concern, and attitude. *International Journal of Consumer Studies, 31*, 220-229.

Nielson (Producer). (2008, October 5, 2009). A2/M2 Three Screen Report: Television, Internet and Mobile Usage in the U.S. Retrieved from http://blog.nielsen.com/nielsenwire/wp-content/uploads/2009/02/3_screens_4q08_final.pdf

Niva, M., Heiskanen, E., Timonen, P. (1998). Consumers' environmental sophistication, knowledge, motivation and behaviour. *European Advances in Consumer Research, 3*, 321-327.

Noor, A., & Muhammad, A. (2012). *Emerging green product buyers In Malaysia: Their profiles and behaviours.* Paper presented at the Clute Institute International Conference, Rome, Italy.

O'Donoghue, T., & Rabin, M. (2000). The economics of immediate gratification *Journal of Behavioral Decision Making, 13*(2), 233.

Obermiller, C., & Spangenberg, E. (1998). Development of Scale to Measure Consumer Skepticism towards Advertising. *Journal of Consumer Psychology, 7*(2), 159-186.

Otten, J., Littenberg, B., Harvey-Berino, J. (2010). Relationship between self-report and an objective measure of television-viewing time in adults. *Obesity, 18*(6), 3. doi: 10:1038/oby.2009.371

Pallant, J. (2007). *SPSS Survival Manual* (3rd ed.). New York: McGraw-Hill.

Pechmann, C., & Ratneshwar, S. (1991). The use of comparative advertising for brand positioning: Association versus differentiation. *Journal of Consumer Research, 18*(2), 145-160

Petrys, T. (2012). *College student recall of age and gender-appropriate medication advertised on Television.* Doctor of Philosophy Dissertation, Capella University, Minneapolis. Retrieved from   http://search.proquest.com/docview/928139479

Preston, I. (1996). *The great american blowup* (2nd ed.). Madison, WI: The University of Wisconsin Press.

Sheau-Fen, Y., Sun-May, L., Yu-Ghee, W. (2012). Store brand proneness: Effects of perceived risks, quality and familiarity. *Australasian Marketing Journal, 20*(1), 10.

Sirdeshmukh, D., Singh, J., & Sabol, B. (2002). Consumer trust, value, and loyalty in relational exchanges. *Journal of Marketing, 66*(January), 15-37.

Urban, G., Sultan, F., Qualls, W. (2000). Placing trust at the center of your internet strategy. *Sloan Management Review, 42*(Fall), 39-49.

Valkenburg, P., & Buijzen, M. (2005). Identifying determinants of young children's brand awareness: Television, parents, and peers. *Journal of Applied Developmental Psychology, 26*(4), 12.

West, L. (2009). U.S. economic stimulus package includes billions for energy and the environment. *About.com*. Retrieved from http://environment.about.com/od/environmentallawpolicy/a/econ_stimulus.htm