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ADVERTISERS' ADHERENCE TO THE FTC'S GREEN GUIDES: A CONTENT ANALYSIS OF ENVIRONMENTAL MARKETING CLAIMS

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Abstract

In 1992, the Federal Trade Commission created the Guides for Use of Environmental Market Claims, with revisions made in 1996 and 1998. The Guides designate how the Commission applies Section 5 of the FTC Act, which prevents unfair or deceptive practices, to environmental claims. Based on the increased proliferation of environmental marketing claims, the FTC has decided to again revise the Guides. The purpose of this study was to examine whether the environmental claims present in print advertisements are included in the current FTC Guides and whether the qualifying language surrounding claims is acceptable, poorly explained, not explained, or meaningless. Advertisements from two time periods were selected for a comparison of types and qualification of claims. These time intervals represent a period of stringent regulation during which the Guides were revised (1996 – 1998) and a more recent period of less stringent regulation (2006 – 2008). A content analysis was conducted for full-page environmental print advertisements published during these periods in National Geographic, Audubon, Sierra, and People Weekly. Findings from this study suggest there were more environmental claims not identified within the Guides in the less stringent regulatory period (2006 – 2008). The study also suggests claims published during the more stringent period (1996 – 1998) were more likely than those in the 2006-2008 time period to contain qualifying language that, according to the Guides, was considered acceptable. The FTC was correct to begin a revision, as many claims did not appear within the current Guides. Further specification or clarification of general claims may strengthen this category. Many claims fell within the "other" category and may need to be specified more clearly in the revised Guides.

Introduction

Green marketing first gained attention in the 1970s, and the idea truly emerged during the 1980s. The introduction of green products more than doubled to 11.4% of all new business products between 1989 and 1990 and grew to 13.4% in 1991. During this same time period, green print advertisements grew by 430% (Ottman, 1993). In 1990, over nine percent of products introduced included some form of green marketing claim. Some advertisers distributed accurate information, but others exaggerated or made false environmental claims in order to appeal to environmentally concerned consumers (Welsh, 1991). A 1990 survey by J. Walter Thompson Co. found that 96% of consumers felt they needed more information to understand claims (Levin, 1990).

In response to the increase in environmental claims, individual

states began to pass laws governing their use. Problems associated with the regulation of green marketing claims led to the call for "nationwide regulation of green marketing" (Welsh, 1991, p. 994). To improve enforcement, the National Association of Attorneys General requested in March 1990 that the Federal Trade Commission work with the Environmental Protection Agency and state officials to develop national guidelines for environmental marketing. In July 1991, the FTC began holding public hearings to consider guidelines for firms making environmental claims. The hearings led to the issuance of the FTC's *Guides for Use of Environmental Marketing Claims in July 1992* to "reduce consumer confusion, help establish a level playing field for competition, and reduce the legal risk for marketers" ("Facts for Business," 2009, p.1).

The FTC Act enables the Commission to bring legal action against false or misleading marketing claims (FTC, 1998). The Guides designate how the Commission applies Section 5 of the FTC Act, which prevents unfair or deceptive practices, to environmental claims (FTC, 1998). According to the FTC policy statement on deception, claims within advertisements are considered deceptive if "there is a representation, omission or practice that is likely to mislead the consumer acting reasonably in the circumstances, to the consumer's detriment" ("FTC Policy Statement on Deception," 1984, p. 1). The Guides provide general criteria on how environmental claims should be substantiated; contain information that makes it clear to consumers whether the claim applies to the product, package, or both; qualify claims to avoid consumer confusion; and provide a clear basis for comparisons.

When the Guides were issued in 1992, the FTC established a three-year review that allowed the Commission to seek public opinion to determine whether the Guides should be revised. The review focused on "the effect of the Guides on green marketing, the state of consumer knowledge and perception of environmental claims, and whether additional terms should be included in the Guides" (Starek, 1996, p.1). The Commission also measured "trends in the frequency, content, and format of green claims on supermarket product labels" (Mayer, Cude, Gray-Lee, and Scammon, 1995, p. 1) and found that the number of environmental claims had increased substantially between 1992 and 1994, which suggested the Guides had not discouraged the use of environmental claims.

On October 4, 1996, the Commission completed the first stage of review and issued the updated Guides. The changes made were minor and included the addition of the "chasing arrows" symbol to the recycled section, an example to the ozone friendly section, and

the specification that broad environmental claims, such as “environmentally preferable,” should include qualifying language to limit “the superiority claim to the particular attribute or attributes for which the claim can be substantiated” (Mayer et al., 1995, p. 3).

The 1998 revision of the Guides made clear that “recyclable” claims include “the reuse, reconditioning, and remanufacturing of products or parts in another product” (“FTC Expands Definition of ‘Recyclable’ and ‘Recycled’ Claims, Agency Updating Its ‘Green Guides,’” 1998, p. 1). “Recycled content” was clarified to include “only those products or packages that were reused in the form of ‘raw materials’ in the manufacture or assembly of a ‘new’ package or product” (“FTC Expands Definition of ‘Recyclable’ and ‘Recycled’ Claims, Agency Updating Its ‘Green Guides,’” 1998, p. 1). Examples were added to the above categories as well as to the “compostable” category. The Guides were also clarified to show that they apply to services marketing and marketing via the Internet and email.

Since 1983, Green America’s Green Business Network has expanded from 345 members to nearly 5,000, a growth rate of about 1,350% (“Environmentally Friendly Businesses on the Rise,” 2009). The increase in environmental marketing claims, environmentally friendly businesses, and new technology and innovations has led to increased concern about the application of the FTC’s Guides. Because of this concern, the FTC has decided to revise its Guides earlier than originally planned to guarantee that they are applicable to the current marketplace and consumer understanding of environmental claims (“Reporter Resources: The FTC’s Green Guides,” 2009). The Commission has held several public workshops on issues that may be included in the revised Guides. These issues include a formal review of claims regarding carbon offsets, renewable energy certificates, and green building issues (Friel, 2008; “FTC Reviews Environmental Marketing Guides, Announces Public Meetings,” 2007).

Carbon offsets are financial projects or donations designed to reduce greenhouse gas emissions and offset emissions elsewhere (“FTC Reviews Environmental Marketing Guides, Announces Public Meetings,” 2007). These funds are given to third-party validated offset projects, such as renewable energy in the form of wind farms or reforestation efforts. In 2007, corporations and consumers in the United States spent more than \$54 million on carbon offset credits (Story, 2008). The sale of offsets in the United States is expected to continue to increase to comply with President Obama’s proposed 80% reduction in global warming emissions by 2050 (Schmidt, 2009).

As carbon offsets become more prevalent in today’s “greener” culture, consumers continue to gain exposure to the purchase of carbon offsets and carbon neutrality. For example, corporations such as Travelocity and Expedia give customers the opportunity to offset the carbon emissions associated with their trips (Velasquez-Manoff, 2010). Since these claims are becoming more prevalent and may have a greater effect on consumers in the future, it is necessary for the FTC to discuss carbon offset claims in the upcoming revision to the Guides.

Several studies of consumer behavior indicate that consumers are inclined to purchase products with environmental benefits (Ka-

lafatis, Pollard, East, and Tsogas, 1999; Mainieri, Barnett, Valdero, Unipan, and Oskamp, 2001; Todd, 2004; Reiser and Simmons, 2005). According to a recent report by the National Marketing Institute, consumers with environmental concerns represent more than \$230 billion in spending power (Friel, 2008). In 2007, a Cone Consumer Environmental survey found that “91% of consumers form a positive image of a company that showcases its environmental responsibility while 85% said they would switch brands or product affiliation because of a company’s negative corporate responsibility practices” (Billups, 2008, p. 2).

Consumers have continued to follow the green buying trend, even during the economic recession that began in 2007. When asked how the state of the economy affected their decisions to purchase green products, 51% of consumers surveyed said their buying habits were unchanged, and 19% had increased their consumption of green products. Only 14% said they were consuming less. The survey also found that 30% of consumers could not tell whether environmental claims in advertisements were true, while 10% said they believed information contained in environmental advertisements (Jackson, 2009).

Basing their study on Ajzen’s Theory of Planned Behavior, Kalafatis et al. (1999) examined consumers’ intentions to buy environmentally friendly products. This theory investigates the influences that attitudes, personal and cultural determinants, and preferences have on consumers’ intentions to purchase environmentally friendly products. The results, which were in agreement with Ajzen’s theory, explained the purchase intention for environmentally friendly products and showed that social influences have a significant impact on belief formation (Kalafatis et al., 1999). Accurate information and qualification of claims are necessary for consumers to comprehend product features and their respective benefits to the environment.

Mainieri et al. (1997) investigated whether environmental attitudes predict actual consumer behavior. An attitude is defined as “an enduring set of beliefs about an object that predisposes people to behave in particular ways toward the object” (Mainieri et al., 1997, p. 191). The authors hypothesized that positive environmental attitudes would be reflected in people’s actions, such as recycling or buying environmentally friendly products. These hypotheses were supported. Consumers’ positive beliefs about the environment predicted the number of goods purchased because of the presence of environmental claims on products, the positive impact on purchase decisions of claimed environmental features, and general environmental buying behaviors. This finding lends credence to the importance of measuring consumer comprehension of environmental claims within advertisements and their qualification. The results of the study also suggest that advertisers are more likely to place advertisements in environmentally themed magazines in order to best reach their target audience of environmentally concerned consumers.

Reiser and Simmons (2005) studied ecolabels associated with environmental information related to tourism and their effects on tourists’ decisions and consumption. The study was based on a previous finding that tourists had positive attitudes toward the Green Globe 21 (GG21) ecolabel in New Zealand and appeared to be highly aware of sustainability issues. Reiser and Simmons (2005)

added brochures, PowerPoint presentations, and posters to the GG21 logo of the Christchurch Visitor Information Center. They then observed and recorded the number of visitors to the Center and the number of collected brochures containing the ecolabel. Visitors also completed surveys. Consumers who expressed concerns about the environment had more positive attitudes toward the environment compared with consumers who were ambivalent. There was also evidence that, when there was little consumer knowledge of the meaning of an ecolabel, consumer interest was low.

Polonsky et al. (1998) analyzed whether environmental information on packaging was misleading. The objective of their study was to establish the accuracy of information on packaging for 20 representative brands of dishwashing liquid. The authors hypothesized that an extensive amount of environmental information would be misleading. Results suggested that 36% of the information was "acceptable," but 64% had "no explanation," was poorly explained, or was "meaningless." A majority of images, licensing agreements, and general environmental claims information were "acceptable" (Polonsky et al., 1998). Polonsky et al. concluded that the FTC's existing regulations failed to motivate firms to provide "completely accurate environmental information" (Polonsky et al., 1998, p. 290).

The study by Polonsky et al. (1998) provided a basis for the content analysis of environmental information on product packaging by defining the categories of misleading information. Content analysis studies conducted by Polonsky et al. (1998), Kangun et al. (1991), and Carlson et al. (1993) suggest the proliferation of environmental marketing claims and their tendency to be misinterpreted. These studies did not examine the frequency of the appearance of claims covered within the current FTC Guides in advertisements or the adequate qualification of these claims as specified within the FTC's Guides. Examining the types of claims included in advertisements and the extent to which these claims are qualified would give a better understanding of the current state of environmental advertisements.

Hypotheses and Research Questions

Two hypotheses were developed regarding whether or not claims are found within the current Guides and the qualifying language surrounding claims.

- H₁: There will be significantly more environmental claims (not found within the current FTC Guides) in environmental advertisements printed from 2006 to 2008 than in advertisements printed from 1996 to 1998.
- H₂: Environmental claims in environmental advertisements printed from 2006 to 2008 (a period of less stringent FTC regulation) will contain more qualifying language, as specified by the current FTC Guides, than environmental claims made in environmental advertisements printed from 1996 to 1998 (a period of more stringent FTC regulation).

The first hypothesis was based on the assumption that new technology and innovations have led to the increased use of environmental claims that are not present in the FTC's guidelines. The

second hypothesis was based on a study by Abernethy and Franke (1998) of the relationship between "... the amount and type of advertising information reported in prior research... [and]... the stringency of advertising regulation" (p. 240). The study found that advertisements during periods of less stringent FTC regulatory activity contained more information. Thus, strict advertising may reduce the amount of information provided to consumers, and advertisers may be more likely to qualify environmental claims during less stringent periods of FTC regulatory activity.

In addition, the current study addressed the following research questions concerning the types of environmental marketing claims and the language surrounding them:

- RQ1: Which environmental claims, whether covered or not covered by the current FTC Guides, appear in advertisements?
- RQ2: Which claims are more likely to be qualified in accordance with the current FTC Guides?

Methods

A content analysis was conducted for environmental advertisements published in magazines during periods of strict regulation (1996 to 1998) and more lenient regulation (2006 to 2008). Express claims asserted directly within advertisements were examined. Through a comparison of advertisements printed from 1996 to 1998 with those printed from 2006 to 2008, it was possible to identify differences between claims in advertisements printed during the two periods. In addition to representing more current advertisements, advertisements printed from 2006 to 2008 were published 10 years after the Guide's last revision. The goal was to examine the amount of qualifying environmental information suggested by the current FTC Guides. Whether the information was "acceptable," "poorly explained," "not explained," or "meaningless" was judged based on categories of misleading or deceptive environmental claims developed by Polonsky et al. (1998).

An environmental advertisement is defined as an advertisement in which an environmental claim is present. Nature and ecology magazines were chosen because they target audiences interested in environmental issues and education. Studies show that there is a link between positive beliefs about the environment and the intent to purchase environmentally friendly products (Mainieri et al., 1997). Therefore, advertisers targeting this segment of consumers are more likely to advertise in nature and ecology magazines.

After receiving training in the use of the coding instrument, which included defining each measure and how measures would be applied, two coders individually coded 3% of the total number of environmental advertisements sampled to determine intercoder reliability. These sample advertisements were taken from *Parks & Recreation* magazine. Disagreements and variations between coders were discussed and clarified. Coding was done independently after the coders reached an acceptable agreement level exceeding a Scott's pi of .70 (see Warren, Wicks, J., Wicks, R., Fosu, and Donghung, 2007). A Scott's pi of .84 was reached after the sample advertisements were coded. Other measures to achieve acceptable levels of reliability included defining "category boundaries with maximum detail" (Wimmer & Dominic, 2002, p. 166) and con-

ducting a pilot study. Only full-page environmental advertisements were analyzed in order “to enhance readability” of environmental claims (Carlson et al., 1993, p. 32).

The sample consisted of magazines with high circulations taken from the Standard Rate and Data Service (SRDS) magazine category “Nature and Ecology” (SRDS). Full-page advertisements in *National Geographic*, *Sierra*, and *Audubon*, which have three of the top circulations among nature and ecology magazines, were considered. The purpose and content of these magazines are to offer views on environmental lifestyles, problems, and topics.

National Geographic is published monthly and has a circulation of over 5 million (Mediamark Research & Intelligence, LLC, *National Geographic*, 2009). The average length of a magazine subscription is 12 years, and 68% of subscriptions are renewed. *National Geographic* also reaches 47.9% of opinion leaders, which is the highest percentage of this audience reached by all magazines (“*National Geographic* Media Kit,” 2006).

Sierra has a total paid and verified circulation of 599,400 (Mediamark Research and Intelligence, LLC, *Sierra*, 2009). The Sierra Club, an organization established in 1892 to promote the exploration and protection of the environment, publishes the magazine. The Sierra Club is on the forefront of the environmental movement and encourages conservation and environmental awareness, which is reflected in its publication *Sierra*. Of *Sierra* readers, 39.4% also regularly read *National Geographic* (“Sierra Club,” 2009).

Audubon has a total paid and verified circulation of 401,544 (Mediamark Research and Intelligence, LLC, *Audubon*, 2009). The content of the magazine is targeted toward “nature and wildlife enthusiasts, outdoor adventurers, and environmentalists” (Mediamark Research and Intelligence, LLC, *Editorial Profile*, 2009). The National Audubon Society, an organization dedicated to preserving and restoring ecosystems and natural habitats, publishes the magazine every other month (*Audubon*, 2010). Of its readers, 26% participate in environmental groups or causes, 59% are environmentally conscious, 71% are willing to pay more for a product that is environmentally safe, and 42% have “used environmentally friendly products in the last six months” (“*Audubon* Media Kit,” 2009, p. 10).

Advertisements from *People Weekly*, a publication categorized as general editorial, were also examined. With a paid and verified circulation of 3,691,819, the magazine has the highest circulation among magazines within the categories “Entertainment, Lifestyle & Popular Culture” and “News Publications” (“Mediamark Research and Intelligence, LLC, *People Weekly*, 2009). Readers have a relatively high median household income of \$67,178, and nearly 7 million readers have a household income of over \$100,000, which suggests that they can afford environmental products that are more expensive (“Monroe Mendelsohn Affluent Survey,” 2008). *People Weekly* was examined to assess whether environmental advertisements appear in a general publication and whether advertisers feature different content for a general audience versus an environmentally conscious audience. Since the magazine is published weekly instead of monthly, environmental advertisements from issues published the first week of each month were

analyzed. Previous research (Stemple, 1952) supports the premise that a sample size of 12 issues of a newspaper was sufficient to represent the sample accurately.

Operational Definitions of Variables

The environmental marketing claims examined were general claims, degradable, biodegradable, recycled content, compostable, recyclable, refillable, ozone safe, ozone friendly, and carbon offset. The operational definition of an environmental marketing claim is any marketing claim that positions a product as being more beneficial or less harmful to the environment than comparable products.

As defined by the FTC’s *Guides for the Use of Environmental Marketing Claims* (1998), “degradable” and “biodegradable” claims state that products will break down and return to nature. General claims, such as “eco-friendly” or “eco-safe,” offer a general environmental benefit. “Compostable” claims are used for products or packages that will break down or become part of usable compost. “Recyclable” claims are associated with products that can be collected, separated or recovered, and used again or reused in the manufacturing of another product. “Recycled content” claims state that a product is made from recycled material or the percentage of recycled content in the product is given. “Refillable” claims mean that the product can be returned for refill or may be refilled by the consumer. “Ozone safe” and “ozone friendly” claims are associated with products and packaging that do not harm the atmosphere by depleting the ozone layer. “Carbon offset” claims are identified by any given definition of carbon offset, its effects, or the specific amount of emission reduced. “Renewable” claims indicate that the product or service may be returned to a like-new state and reused. “Other” claims are those that offer a specific environmental benefit not included in the previously mentioned categories.

Polonsky et al. (1998) developed categories based on how likely advertisements were to mislead consumers. These categories were labeled “acceptable” or adequately justified with information explaining the meaning of and reason for stating the claim; “poor explanation” or not justified with enough information to make a clear claim; “no explanation” or lacking information with which to evaluate the truthfulness of the claim; and “meaningless” or “too broad” (Polonsky et al., 1998, p. 285). An example of an acceptable claim would be “20 percent post consumer waste plastic is used in the packaging of this product.” A claim with a poor explanation would be “The product is made from recycled plastic.” This claim is poorly explained because it fails to address the percentage of the product that is made up of recycled plastic. A recycled claim with no explanation would simply state that the product is “recycled” without stating the percentage or part of the product that is recycled. Finally, an example of a meaningless claim might be the simple assertion, “Save our World” (Polonsky et al., 1998, p. 285).

For general environmental claims to be adequately qualified, “claims may convey that the product, package or service has specific and far reaching environmental benefits” (FTC, 1998, p. 5). Degradable, biodegradable, or photodegradable claims “should be qualified to the extent necessary to avoid consumer deception about: (1) the product or the package’s ability to degrade in the

environment where it is customarily disposed; and (2) the rate and extent of degradation" (FTC, 1998, p. 6). Compostable claims should indicate that the package can be "safely composted in a home compost pile or device," (FTC, 1998, p. 7) or that the package is not suitable for home composting. Recyclable claims should be qualified so that consumers can determine whether the claim refers to the product or package. A recycled content claim "should be adequately qualified to avoid consumer deception about the amount, by weight, of recycled content in the finished product or package" (FTC, 1998, p. 10). An example of an acceptable recycled content claim is that "the product contains 20% recycled fiber." A refillable claim is adequately qualified if "a system is provided for: (1) the collection and return of the package for refill; or (2) the later refill of the package by consumers with product subsequently sold in another package" (FTC, 1998, p. 13). Ozone safe and ozone friendly qualifications should state that the product does not harm the ozone or contain an ozone depleting substance. Carbon offset claims are not defined within the current Guides but are being considered for the revision to the Guides because of their increased appearance in advertising claims. Carbon offset claims are considered acceptable if a definition of carbon offsets is given and the amount of reduction in emissions is specified.

Pilot Test Results

A pilot test of the coding instrument and the hypotheses was conducted using advertisements printed in Parks & Recreation. The hypotheses were retested in the actual study, and the advertisements coded in Parks & Recreation were not included in the results. In the pilot study, 20 full-page advertisements were analyzed. Five were taken from each year: 1996, 1998, 2006, and 2008. The analysis revealed that 50% of advertised products fell in the "other" product category and featured playground equipment and turf. These categories were not added to the coding instrument.

The results were inconsistent with the first hypothesis, which predicted there would be significantly more environmental claims not found within the current FTC Guides in environmental advertisements printed from 2006 to 2008 than in those printed from 1996 to 1998. All environmental claims coded in the pilot study were discussed in the current Guides. A majority of the claims were considered general.

Results were partially consistent with the second hypothesis, which predicted that environmental claims in advertisements printed from 2006 to 2008 would contain more qualifying language, as specified by the current Guides, than environmental claims in advertisements printed from 1996 to 1998. Advertisements printed from 1996 and 1998 contained more claims that had "no explanation" or were considered "meaningless" than did advertisements printed from 2006 and 2008, though advertisements from both time periods shared a similar number of claims with "acceptable" or "poor" explanations.

Following the pilot study, no additional categories were added to the coding instrument. Levels of acceptability for all environmental claims were well defined by the instrument. Additional examples of general environmental claims, featured in advertisements coded in the pilot study, were added to the instrument.

A complete analysis of advertisements in National Geographic, Sierra, Audubon, and People Weekly during the specified time frames was used to determine whether the data were consistent with the hypotheses. Since the data were nominal, a Chi-squared test was used for the analysis.

Results for Main Study

The sample of magazines in the main study produced 185 environmental print advertisements during the six-year period. Because more than one environmental claim could be coded in each environmental advertisement, more claims ($n = 270$) than advertisements were coded. Six different categories of claims were coded in the advertisements: general claims, biodegradable, recyclable, recycled content, carbon offset, and "other."

Claims Within and Outside of the Current Guides

The first hypothesis focused on the time periods during which the advertisements were printed. During a period of less stringent regulation (2006–2008), 44.9% of the claims coded were covered within the current Guides, while 55.1% were not. In advertisements printed during a more stringent regulatory period (1996–1998), 78.7% of claims coded were covered in the Guides, and 21.3% were not ($\chi^2 = 28.57$, $df = 1$, $n = 270$, $p < .001$). Advertisements containing environmental claims not currently covered within the Guides appeared more frequently during the period of less stringent regulation (2006–2008). The number of advertisements containing "other" and carbon offset claims, which are not covered in the Guides, increased by 33.8% from the period of more stringent regulation (1996–1998) to that of less stringent regulation (2006–2008).

Qualifying Language Surrounding Claims

The second hypothesis focused on the time period in which more qualifying information surrounded environmental claims. During the period of stringent regulation, 69.1% of claims contained qualifying language, whereas only 40.4% of the claims had qualifying language during the period of less stringent regulation. Qualifying language was coded as acceptable, poorly explained, not explained, or meaningless based on criteria found within the Guides. During the period of stringent FTC regulation (1996–1998), 52.1% of claims had acceptable qualifying language, 17% were poorly explained, 21.3% were not explained, and 9.6% were meaningless. During the period of less stringent regulation (2006–2008), 25.6% of claims had acceptable qualifying language, 14.8% were poorly explained, 42% had no explanation, and 17.6% were considered meaningless ($\chi^2 = 22.87$, $df = 3$, $n = 270$, $p < .001$). These results suggest that, during a period of stringent regulation, more qualifying information surrounds environmental claims. See Appendix A for a summary of the level of qualifying language surrounding all claims.

Research Questions

To answer the research questions, advertisements were analyzed for all the years combined in order to see which claims were present and their levels of qualifying language. The first research question asked which environmental claims appeared most within advertisements. Overall, 81.8% of claims were either general or "other" claims: 45.1% were general; 36.7% "other"; 8.9% re-

cyclable; 6.7% carbon offset; 1.5% recycled content; and 1.1% biodegradability. See Appendix B for a summary of the frequencies of environmental claims in the two time periods of interest, 1996-1998 and 2006-2008.

The second research question asked which claims were more likely to be qualified in accordance with the current Guides. The data show that 37.7% of general claims were acceptable, 13.1% were poorly explained, 22.1% had no explanation, and 27% were meaningless. Most "other" claims had no explanation (58.5%), 20.2% were considered acceptable, 16.1% were poorly explained, and 5% were considered meaningless. Of the biodegradable claims coded, all had no explanation. Among recyclable claims, 78.2% were considered acceptable, 13% were poorly explained, and 8.6% had no explanation. Of the recycled content claims, 25% were acceptable and 75% had no explanation. All refillable claims were acceptable. Among carbon offset claims, 44.4% were acceptable, 38.8% were poorly explained, and 11.1% were meaningless. See Appendix C for a summary of the claims that were more likely to be qualified in accordance with the current Guides across the two time periods of 1996-1998 and 2006-2008.

Discussion

As the popularity and prevalence of environmental products rise, more attention is being given to qualifying information surrounding environmental claims in print advertisements. The FTC first responded to the increase in environmental advertisements by issuing the Guides in 1992, with subsequent revisions in 1996 and 1998. In 2007, due to an increase in the green marketplace, the FTC began conducting public hearings and research with the intention of revising the Guides. The expected issuance of the revised Guides was late 2009 or early 2010, but the release date is now uncertain due to the new administration's hold on several regulations initiated by the previous administration. This study examined environmental advertising and marketers' adherence to the Guides based on the use of qualifying language. The obtained data have important implications for those concerned about which areas should be added or strengthened in the upcoming revisions as well as how marketers' adherence to the Guides has varied from a previous, more stringent period of advertising regulation to current conditions.

Previous studies concerning environmental advertising claims (Polonsky et al. 1998; Kangun et al. 1991; Carlson et al. 1993) found that claims can be misleading on a variety of levels, as determined by the information surrounding the claim. Polonsky et al. developed categories of misleading information that were used for the development of similar categories within this study. While Polonsky et al. analyzed product packaging, print advertisements were examined in the current study, where the analyses focused on the levels of misleading information surrounding claims, the variations in misleading information during periods of high or low regulatory activity, and the presence of identified claims within the current Guides.

The results of the current study show that more environmental claims not covered by the current Guides (55.1%) appeared during the period of less stringent regulation (2006 – 2008). These claims included carbon offset and "other" claims. Conversely, 21.3% of claims from the period of stringent regulation (1996 – 1998) fell

into the carbon offset and "other" claims categories. The increase in claims not within the current Guides validates the FTC's assumption that an increase in green marketing necessitates the Guide's revision. Since these claims are not discussed within the Guides, advertisers have no guidance regarding the qualification of environmental claims, which increases the probability that they may not include acceptable qualifying language. Claims that fell within the "other" category included emission-reducing incentives, fuel efficiency, renewable energy, sustainability, and cleaner energy. By examining claims that are prevalent but not covered within the Guides, the FTC can target specific areas to research and to include within the upcoming revision of the Guides.

Previous studies found that increased environmental information surrounding products and positive societal influences heighten green consumerism. Qualifying language was also examined in this study. Although it was hypothesized that more information would be found in periods of less stringent regulation (2006 – 2008), 40.4% of advertisements were coded as having acceptable or poor explanations during a period of less stringent regulation versus 69% during the period of stringent regulation (1996 – 1998). Acceptable and poorly explained claims both contained some qualifying language, though the poorly explained claims lacked some of the language necessary to properly qualify them. Meaningless claims and claims that lacked explanation contained no qualifying language. This discrepancy between the hypothesis and results may be based on the fact that, in their study, Abernethy and Franke measured the amount of general information within advertisements, not the qualifying language. The failure of claims to be acceptable resulted in the advertisers' noncompliance with the Guides.

The current lack of qualifying language within advertisements, coupled with the large number of claims not currently addressed by the Guides, indicates the need for a revision of the Guides. Ultimately, all claims should have acceptable language. The increased number of acceptable claims during the period of strict regulation may have been due in part to the release of the revised Guides. The announcement of their release, as well as any publicity that may have resulted, may have prompted advertisers to conduct their business accordingly. A higher percentage of claims advertised that were covered by the Guides may have also increased the probability that these claims would be acceptably qualified according to the Guides.

Most claims in the total sample (81.8%) were classified as "general" and "other," the two most ambiguous categories. Currently, general claims are covered within the Guides. Although 37.7% of all general claims were considered acceptable, almost a fourth were considered meaningless, suggesting a need to further clarify general claims and to develop guidelines for prevalent general claims such as "environmentally friendly." Among the "other" claims, a majority (58.5%) had no explanation, an issue that must be addressed via revised Guides by including frequently occurring claims such as emission-reducing incentives, fuel efficiency, renewable energy, sustainable, and references to cleaner energy and by developing specific instructions to qualify these claims.

Future studies could apply the classification system used in this study to assess advertisers' compliance with the Guides.

Suggestions for further study include examining multiple media formats in various time periods, which may provide greater insight into emerging environmental advertising trends. Advertisements of various sizes could be examined to see whether size has an effect on the level of qualification. Future studies could also expand the genres of magazines to determine in which publications advertisers are most likely to place environmental advertisements. Although not addressed in this paper, only 10% of the total environmental advertisements coded were found in People Weekly, with the majority (56.1%) found in National Geographic. Clearly marketers are selective in making environmental claims.

Other variables, such as where a claim appears within an advertisement, could be studied in more detail to see if a correlation exists between the variable and the level of qualification. In the current study, a majority of the products advertised fell into the product categories of services (37.3%) and automobiles (24.9%), which suggests that these product categories may be areas of concern for the FTC. Future studies could also examine the relationship between consumer attitudes and the colors and images present within environmental advertisements. In the current study, the predominant color used in environmental advertisements was green (39.7%). Advertisers may wish to attract consumers with pro-environmental attitudes by using the color most often associated with the environmental movement. Additional research could target consumers' responses towards specific colors and the connections among colors, claims, and qualifying language.

The results of the current study suggest that the FTC is correct in initiating a revision of the Guides. In fact, this revision should have been started prior to 2007 because, over the past several years, advertisers have increasingly made claims that are not covered within the Guides. Major areas of concern for the FTC are claims that fall within the "other" and carbon offsets categories. Claims in these categories have become more prevalent in recent years as a result of evolving technology and increased environmentalism. Publicity and discussion of the revised Guides in 1998 may have increased the likelihood of advertisers' adherence. Consumer education regarding environmental claims may encourage consumers to monitor advertisements and seek information. Corporate education about the revised Guides would also assist companies in making environmental claims by clarifying what is meant by an acceptable claim. Though it is hard to determine whether the FTC will be able to keep up with the rapid growth in environmental claims, the revision of the Guides to meet the demands of a changing marketplace will give advertisers a valuable resource. The revision will ideally lead to acceptable qualification and greater consumer comprehension of environmental claims.

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- Mentor Comments:** Dr. Ignatius Fosu explains the way in which Charlotte Muse's work is particularly relevant today since the FTC is planning to examine its current guidelines for green advertising. *Charlotte Muse's work examined green advertising with emphasis on adherence to Federal Trade Commission (FTC) regulations. The last revision of FTC regulations was in 1998. Since then, there has been a major increase in green advertising. It was therefore important to examine green advertisers' compliance with FTC regulations, what claims are currently predominant in green advertising, and whether the claims are accompanied by the appropriate qualifying language. Her work involved a thorough review and synthesis of the FTC's regulatory guidelines as well as extensive literature on the issue. She also conducted a content analysis that examined advertisers' adherence to the FTC regulations. Her study identified more claims being made by advertisers that are not covered in the 1998 FTC regulations. Based on her findings, she developed a set of very important recommendations. As the FTC has proposed to revise the regulations soon, her work makes a very important contribution to this body of knowledge. It provides key findings and recommendations that help fill a gap in the literature. Charlotte worked independently under my direction. While working on this project, she demonstrated her strength as an independent thinker and researcher. Although she used my comments in making revisions, I was impressed by her unique sense of dedication and personal determination to widen the scope of this work in order to make a unique contribution to the field.*

Appendix A

Level of Qualifying Language Surrounding Environmental Claims Expressed as Percentage of Total Environmental Claims in Time Period

Claim	1996 -- 1998				2006 -- 2008			
	A	PE	NE	M	A	PE	NE	M
General	39.4%	11.7%	7.4%	9.6%	5.1%	2.8%	11.3%	13.6%
Biodegradable	--	--	--	--	--	--	1.7%	--
Recyclable	3.2%	2.1%	2.1%	--	8.5%	0.6%	--	--
Recycled Content	1.1%	--	1.1%	--	--	--	1.1%	--
Refillable	1.1%	--	--	--	--	--	--	--
Carbon Offset	4.3%	--	--	--	2.3%	4.0%	0.6%	1.1%
Other Claims	3.2%	3.2%	10.6%	--	9.6%	7.3%	27.1%	2.8%
Total	52.3%	17.0%	21.2%	9.6%	25.5%	14.7%	41.8%	17.5%

Note. A =Acceptable, PE = Poorly Explained, NE = Not Explained, M = Meaningless. Cells with a value of — indicate that no advertisements fell within this category.

Appendix B

Environmental Claim Frequency Expressed as Percentage of Total Environmental Claims in Time Period

Claim	1996 -- 1998	2006 -- 2008
General	68.0%	32.9%
Biodegradable	--	1.7%
Recyclable	7.4%	9.0%
Recycled Content	2.1%	1.1%
Refillable	1.0%	--
Carbon Offset	4.2%	7.9%
Other Claims	17.0%	47.1%

Note. Cells with a value of — indicate that no advertisements fell within this category.

Appendix C

Level of Qualifying Language Surrounding Environmental Claims Expressed as Percentage of Total Number of Claims in Respective Category During the Time Period

Claim	1996 -- 1998				2006 -- 2008			
	A	PE	NE	M	A	PE	NE	M
General	57.8%	17.1%	10.9%	14.0%	15.5%	8.6%	34.4%	41.3%
Biodegradable	--	--	--	--	--	--	100.0%	--
Recyclable	42.8%	28.5%	28.5%	--	93.7%	6.3%	--	--
Recycled Content	50.0%	--	50.0%	--	--	--	100.0%	--
Refillable	100.0%	--	--	--	--	--	--	--
Carbon Offset	100.0%	--	--	--	28.5%	50.0%	7.1%	14.2%
Other Claims	18.7%	18.7%	62.5%	--	20.4%	15.6%	57.8%	6.0%

Note. A =Acceptable, PE = Poorly Explained, NE = Not Explained, M = Meaningless. Cells with a value of — indicate that no advertisements fell within this category.