Green Marketing or Greenwashing: How Consumers Evaluate Environmental Ads

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Over the past few years, there has been a significant increase in the number of cases related to greenwashing. This research investigates how consumers develop green skepticism to react to greenwashing practices. In two studies, we demonstrate that environmental ads (either vague or specific ads) are more effective in persuading weak-attitude consumers resulting in lower green skepticism than strong-attitude consumers. In contrast, strong-attitude consumers exhibit a backfiring behavior when presented with vague ads, evidenced by their higher level of green skepticism and lower WTP for products featured in the ads. More interestingly, specific ads are effective among strong-attitude consumers, lowering their green skepticism and increasing their WTP. Our research has theoretical and managerial implications for green marketing communication.

Keywords: green marketing, greenwashing, green skepticism, environmental attitude strength

INTRODUCTION

Green marketing was first introduced in the 1980s and has increased its importance as a business strategy. Research has shown that companies' sustainability efforts could help build long-term relationships with shareholders (Torelli et al., 2020), increase customer loyalty (Rosenbaum & Wong, 2015), and improve purchase intention (Kumar et al., 2021). The 2021 Global Sustainability Study conducted with 10,281 consumers from 17 countries revealed that 63% of consumers have modestly to significantly purchased more sustainable products (Simon Kucher & Partners, 2021). Companies strive to integrate sustainability into their operational and strategic activities in response to consumers' growing demand for green product alternatives (Ghaffar et al., 2023; Winston, 2021). Consumers walking down the aisles of a grocery store will see countless environmentally friendly products ranging from food to household supplies.

Environmental or green messages refer to advertisements creating an impression that products are more environmentally friendly than their conventional counterparts (Banerjee et al., 1995). Many companies have been known for creating positive environmental impacts and living up to their sustainability commitments, such as Impossible Foods, Beyond Meat, and Patagonia who received the United Nations' Champions of the Earth awards in 2018 and 2019, respectively (UN Environment Programme, 2023). However, some companies, under pressure from consumers to disclose information about the sustainability of their operations and products, have spent more resources on advertising being environmentally friendly than on

notable sustainability efforts, which is referred to as greenwashing (Delmas & Burbano, 2011; Lyon & Montgomery, 2015). In the U.S., the Federal Trade Commission (FTC) designs Green Guides, providing detailed guidance on the types of claims deemed to be deceptive (FTC, 2012). A marketing claim is considered deceptive or misleading when it is not valid or cannot be verified that it is valid, which is also described as greenwashing (Carlson et al., 1993). The number of greenwashing cases has increased significantly in the past several years. RepRisk, the world's largest Environmental, Social, and Governance data science company, recorded a 70% increase in greenwashing incidents in the banking and financial service industries in the last twelve months (i.e., 148 cases as compared to 86 cases last year) (Reuters, 2023; ESG RepRisk, 2023). In addition, in their 2022 greenwashing report using a 10-year dataset from 2012 to 2022, ESG RepRisk showed a significant increase in the number of American and European companies with greenwashing risk exposure (ESG RepRisk, 2022). With the rising number of companies engaging in greenwashing, many consumers have developed green skepticism, which is defined as a tendency to doubt the environmental performance of a company or environmental advisements of a product (Mohr et al., 1998; Leonidou & Skarmeas, 2017).

Attitude has been a very important topic in marketing literature because attitudes can predict and shape consumer behavior (Ajzen & Fishbein, 1977; Murphy & Dweck, 2016). Consumers with a strong attitude toward a particular subject usually have a greater understanding of it and consider it highly significant to their beliefs or values (Krosnick et al., 1993); their attitudes are also durable and difficult to change (Krosnick & Petty, 1995). In some instances, strong attitude consumers who encounter persuasive messages intended to change their behavior may resist the messages, resulting in backfiring behavior (Tormala & Petty, 2002; Pham & Mandel, 2019). In our research, we propose that the strength of consumer attitudes toward the environment will affect how consumers process information in environmental ads, which in turn can influence their green skepticism. Building upon the attitude and green skepticism literature, this research will investigate how consumers process environmental ads. More specifically, we propose that consumers with a strong attitude toward the environment will more likely perceive vague environmental ads (i.e., ads that do not provide strong evidence of why the product is environmentally friendly) as greenwashing, increasing their green skepticism and leading to negative product evaluation. Those consumers, however, will not perceive specific ads (i.e., ads that give customers detailed information about why the product is environmentally friendly) as greenwashing. The following section will review the literature on greenwashing, green skepticism, and environmental attitude strength. We then discuss our theoretical framework and hypotheses.

THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

Greenwashing and Green Skepticism

Greenwashing happens when companies mislead consumers about their environmental practices (firm-level greenwashing) or the environmental benefits of their products or services (product-level greenwashing) (Delmas & Burbano, 2011; Gatti et al., 2021; Seele & Schultz, 2022). Kohl's and Walmart were recently charged with making misleading environmental claims by advertising that bamboo textiles were made using environmentally friendly processes. However, the process of converting bamboo into rayon involves the use of toxic chemicals, which can lead to the production of harmful pollutants (FTC, 2022). Another case of greenwashing is Etihad Airways, who made two advertising claims: "Net zero emissions by 2050" and "Flying shouldn't cost the Earth" but did not have a clear path and a feasible plan to achieve the goals (Visontay, 2023). Green advertising aims to increase consumer awareness, create a positive image, and stimulate demand; however, it will damage the company's reputation when those actions do not stand up to scrutiny (Berrone et al., 2017). Past research documented that deceptive environmental ads would deteriorate consumers' trust in green marketing (Parguel et al., 2015), and false green marketing claims reduced consumers' attitudes toward an ad, especially when consumers had a higher degree of environmental knowledge (Schmuck et al., 2018). Guyader and colleagues (2017) showed that greenwashing practices in retail stores distracted some consumers, making them less likely to notice environmentally friendly products. Further, research showed that perceived greenwashing could affect

consumer emotions (Szabo & Webster, 2021), damage consumer trust in a brand (Ulusoy & Barretta, 2016), and eventually influence the purchase intention of green products (Zhang et al., 2018) and heighten consumer attention to price premiums (Lee et al., 2018).

Ad skepticism is "the tendency toward disbelief of advertising claims" and is conceptualized as a marketplace belief (Obermiller & Spangenberg, 1998, p. 160). The level of consumers' ad skepticism could vary depending on their experiences with companies in the marketplace. Thus, a consumer may be more (or less) likely to be skeptical of some companies than others. (Obermiller & Spangenberg, 1998). Early inquiry into understanding green consumers and how they react to marketing communications found them to be skeptical of environmental advertising in general (Shrum et al., 1995). Mohr et al. (1998) developed a green skepticism scale to measure consumers' tendency to doubt environmental ads. Some questions in the scale include: "Most environmental claims on package labels or in advertising are intended to mislead rather than to inform consumers" and "I do not believe most environmental claims made on package labels or in advertising."

There have been several studies attempting to explore the antecedents of green skepticism. Leonidou and Skarmeas (2017) found that consumers were less skeptical of companies operating in an industry with less environmental stringency and a good history in environmental management. Farooq and Wicaksono (2021) suggested that consumers were more likely to develop skepticism about the oil industry and large companies with a history of greenwashing. In addition to examining industry characteristics, researchers also explored how consumer characteristics could affect green skepticism. Using multiple regression analysis, Finisterra do Poco & Reis (2012) found that only 14% of skepticism related to environmental claims could be explained by a combination of three independent variables: environmental concern, conservation behavior, and buying behavior. Further studies need to be conducted to explore other factors that can affect green skepticism. Research suggests that greenwashing incidents are one of the main factors that heighten consumers' green skepticism (Leonidou & Skarmeas, 2017; Farooq & Wicaksono, 2021). With increased cases of companies engaging in greenwashing, some consumers developed green skepticism to cope with greenwashing. Consumer green skepticism poses significant risks for companies because it can hinder the success of their green marketing programs. If consumers did not believe in their green efforts, all the costs to increase their sustainability would be wasted.

This research will investigate the effect of two environmental ad types (i.e., vague and specific ads) on consumer green skepticism. A vague environmental ad is a marketing claim that is too general and does not provide customers with information on why the products are sustainable (Carlson et al., 1993). Vague ads are somewhat popular in the marketplace, where marketers make a green claim about their products without providing consumers with detailed explanations of why they are better for the environment than others (e.g., "This product is made from sustainable and renewable resources"). In contrast, a specific environmental ad is defined as a claim that gives customers specific information about how the products are environmentally friendly. In specific environmental ads, companies discuss in detail and provide evidence to demonstrate why the products are sustainable (e.g., "This product is made from recycled cotton. Using recycled cotton, we extend the life span of fiber and use fewer environmental resources since producing a single pound of conventional cotton takes about 173 gallons of water"). In the following section, we will discuss how consumers with weak and strong environmental attitudes will process these two types of environmental ads differently and how their judgment will, in turn, affect their green skepticism and willingness to pay (WTP).

Attitude Strength and the Effect of Environmental Attitude

Attitude refers to consumer judgment of ideas, people, objects, events, or behaviors (Ajzen & Fishbein, 1977). Eagly & Chaiken (1998) proposed the ABC Model of Attitudes comprising three components: Affect, Behavior, and Cognition. Affect characterizes one's feelings about an attitude object. Behavior characterizes one's intention toward the attitude object, and cognition characterizes one's knowledge about the object. Further, attitudes are also characterized by their strength. Petty & Krosnick (2014) defined attitude strength as "the extent to which attitudes manifest the qualities of durability and impactfulness" (p.3). Durability refers to the stability and persistence of one's attitude, and impactfulness refers to the degree to which one's attitude can influence information processing, judgment, and behavior. Attitude

strength has been demonstrated to play a vital role in consumer decision-making. When encountering a persuasive message attempting to change their attitude, consumers with a strong (vs. weak) attitude will be more likely to resist the message and engage in message-opposing behavior, such as increasing their attitude certainty (Tormala & Petty, 2002). In the same notion, Pham & Mandel (2019) demonstrated that pro-GMO marketing claims would make negative aspects of GMOs more accessible in strong anti-GMO consumers' minds, leading them to evaluate GMOs more negatively and less likely to purchase GMOs.

Environmental attitudes refer to consumers' attitudes toward environmental issues. Many studies have shown a positive relationship between environmental attitudes and green behavior (e.g., Polonsky et al., 2012; Dhir et al., 2021; Baierl et al., 2022). Polonsky and colleagues (2012) measured outward factors of environmental attitudes, which are attitudes about the need for changes in society to protect the environment; in contrast, Dhir et al. (2021) measured inward factors of environmental attitudes, which are an individual's attitudes about what they can do to protect the environment. In this research, we propose that attitude strength is an important construct that should be used in green marketing to measure consumers' environmental attitudes. The attitude strength scale discussed by Petty and Krosnick (2014) captures three attitudinal dimensions: accessibility, importance, and cognition. Accessibility measures the ease with which environmental concerns come into an individual's mind. Importance measures how important the environmental issues are to an individual. Finally, cognition measures how much one knows about the issues on environmental. We adapted this scale to make it specifically for environmental issues and green products. Please see Appendix 3 for the adapted scale.

We propose that this attitude strength scale with three dimensions helps us better capture what consumers think about the environment than previous scales, which only used one or two dimensions. For example, Baierl et al., 2022 used 55 questions to evaluate participants' environmental attitudes (e.g., "I have tried to persuade my parents to buy an energy-efficient car" or "I collect and recycle used paper") and Prakash et al. (2019) used three items to measure attitude (e.g., "I would prefer to buy products that use biodegradable material in packaging"). Those items are only the "Behavior" component of attitudes. Additionally, some other papers measured environmental attitudes indirectly using an environmental concern scale with items such as "The balance of nature is delicate and easily upset" or "When humans interfere with nature, it often produces disastrous consequences" (Dunlap & Jones, 2002; Lee, 2008; Matthes & Wonneberger, 2014; Panopoulos et al., 2022) or subjective or perceived environmental knowledge which is the "Cognition" component (Barber et al., 2009; Jaiswan & Kant, 2018; Mostafa, 2006).

As discussed in the previous section, a vague environmental ad only contains information that the product is environmentally friendly without providing detailed explanations (e.g., This product is made from sustainable and renewable resources). We propose that since strong environmental attitude consumers have more knowledge about environmental issues than weak environmental attitude consumers (dimension "Knowledge" in the Attitude Strength scale developed by Petty & Krosnick, 2014), they perceive vague environmental ads as greenwashing and will be more likely to develop green skepticism. Conversely, since weak environmental attitude consumers do not have good knowledge about environmental issues, they will not develop skepticism. Instead, weak attitude environmental consumers will rely on the information in the vague environmental ad to make their judgment.

H1: *Consumers who hold a strong environmental attitude will be more skeptical of vague environmental ads than those who hold a weak environmental attitude.*

Upon encountering an environmental ad, a consumer with a strong attitude toward the environment will evaluate it more carefully because environmental issues are important to them (dimension "Importance" in the Attitude Strength scale). They do not only rely on information from the ad to make judgments but also retrieve information from their memory (Dimension "Accessibility" in the Attitude Strength scale). Strong environmental attitude consumers have good knowledge (dimension "Knowledge" in the Attitude Strength scale) about environmental issues, so they will be skeptical about the vague ad and perceive it as greenwashing. On the contrary, strong environmental attitude consumers will perceive a specific ad with

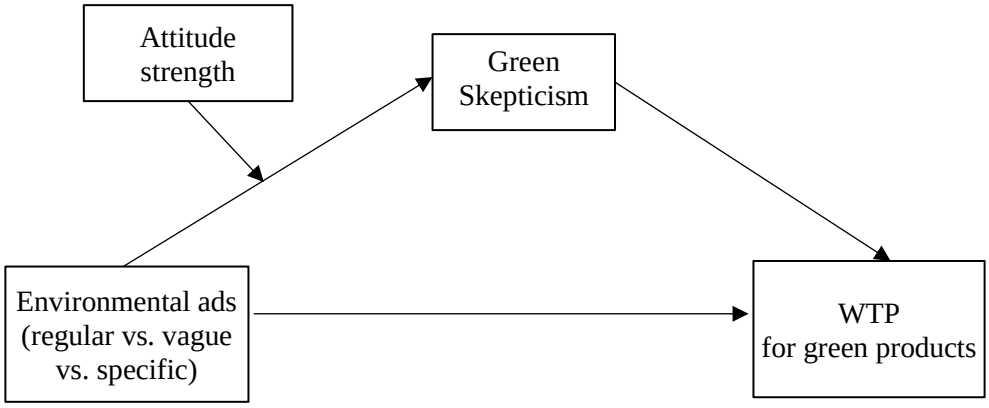
detailed information about how the products are environmentally friendly as more credible and will be less skeptical about it. Thus, we propose:

H2a: *Consumers who hold a strong environmental attitude will be more skeptical of vague environmental ads than specific environmental ads.*

Since strong environmental attitude consumers are more skeptical of a vague ad (as compared to a specific ad) as in hypothesis H2a, and the environmental issues are important to them (dimension "Importance" in the Attitude Strength scale). Thus, we hypothesize that their strong attitude toward the environment will manifest in their behavior: lower willingness to pay (WTP). Please Figure 1 for our theoretical framework.

H2b*: Consumers who hold a strong environmental attitude will have a lower WTP for products featured in vague environmental ads than those featured in specific environmental ads.*

FIGURE 1
THEORETICAL FRAMEWORK



METHODOLOGY

Overview of Studies

We conducted two experimental studies to test our hypotheses. We used one regular ad and two environmental ads in the studies (i.e., Study 1: regular and vague environmental ads; Study 2: vague and specific environmental ads). We adapted the environmental ads that Kohls used described in the lawsuit between the FTC and Kohls. We chose these particular products and environmental ads because these were actual products and marketing claims by a company in the marketplace. To rule out the effect of branding on consumers' evaluation, we used fictitious brand names in the ads. The regular and vague environmental ads in Study 1 were designed based on the description of the products in the lawsuit between Kohl's and the FTC (FTC, 2022). In Study 2, we used specific environmental ads in addition to the vague ads. The specific ads were designed based on product descriptions on Patagonia's website (Patagonia, 2023). The specific ads discussed the company's efforts to use recycled cotton to reduce CO2 emissions and conserve water. This information was absent from the vague ads. We recruited participants using Amazon Mechanical Turk (MTurk) in both studies.

We understand that there are certain challenges in using MTurk workers for data collection. Some challenges are MTurkers' inattention, self-misrepresentation, self-selection bias, high attrition rates, inconsistent English language fluency, non-naivete, perceived researcher unfairness, etc. (Aguinis et al., 2021). Before conducting these studies, we had a plan to address these issues following Aquinis et al.'s recommendations. More specifically, we paid extra fees to set qualifications to screen MTurkers as follows:

(1) HIT approval rate of at least 95%, (2) location in the U.S., and (3) the number of HITs approved greater than 100. Setting qualifications could help us to reduce the issues with self-misrepresentations, inconsistent English language fluency, and MTurker non-naivete. We also addressed the issue of (1) MTurker inattention by placing two attention checks throughout the surveys using the methods suggested by Agley et al. (2022), (2) perceived researcher unfairness by paying U.S. minimum wage and using a consent form, including details of compensation rules, and (3) self-misrepresentation and social desirability bias by providing an accurate estimated time of commitment and what MTurkers will be asked to do.

Study 1

This study aims to explore how consumers evaluate regular versus vague ads and their WTP for products featured in these ads. We predict that when presented with vague ads, strong environmental attitude consumers will show higher levels of green skepticism and lower intention to purchase products featured in the ads than weak environmental attitude consumers.

Method

Amazon Turk workers (n = 130; 45.4% female) participated in a 2 (ads: vague environmental vs. regular ads) X continuous (attitude strength; measured) between-subjects design. Eleven participants who failed the attention test were not included in the data. We first instructed participants in this study that we are interested in their evaluations of different ads. Participants were randomly assigned to evaluate either regular ads or vague environmental ads. As depicted in Appendix 1, the two environmental ads were very similar, except that the vague ads had the following information: "Going green has never been sumptuous. Made from sustainable and renewable resources, this sheet set keeps you cozy while suiting your eco-friendly taste." We then asked participants to indicate their level of agreement with the statement: "This ad is about an environmentally friendly product" (1 = strongly disagree to 7 = strongly agree) and decide at what price they would pay for the products displayed in the ads. We then measured participants' green skepticism by asking them to indicate the extent to which they agreed or disagreed that the environmental claims were true or misleading (Mohr, et al., 1998) (Appendix 2). Toward the end of the survey, we measured participants' attitude strength toward the environment using a scale adapted from Petty and Krosnick (2014) (Appendix 3).

TABLE 1
PARTICIPANT'S DEMOGRAPHIC

Demographic variable	Study 1	Study 2
Gender		
Female	59 (45.4%)	57 (47.2%)
Male	71 (54.6%)	66 (51.4%)
Other/Prefer not to say	0 (0%)	2 (1.4%)
Age		
18 – 24 years old	26 (20%)	49 (35%)
25 – 34 years old	54 (41.5%)	44 (31.4%)
35 – 44 years old	28 (21.5%)	28 (20.6%)
45 – 54 years old	15 (11.5%)	15 (10.7%)
55 years old or above	7 (5.4 %)	4 (2.9%)
Education		
High school graduate	8 (6.2%)	10 (7.1%)
Some college	15 (11.5%)	23 (16.4%)
4-year college	85 (65.4%)	89 (63.6%)
Professional degree	22 (16.9%)	18 (12.9%)

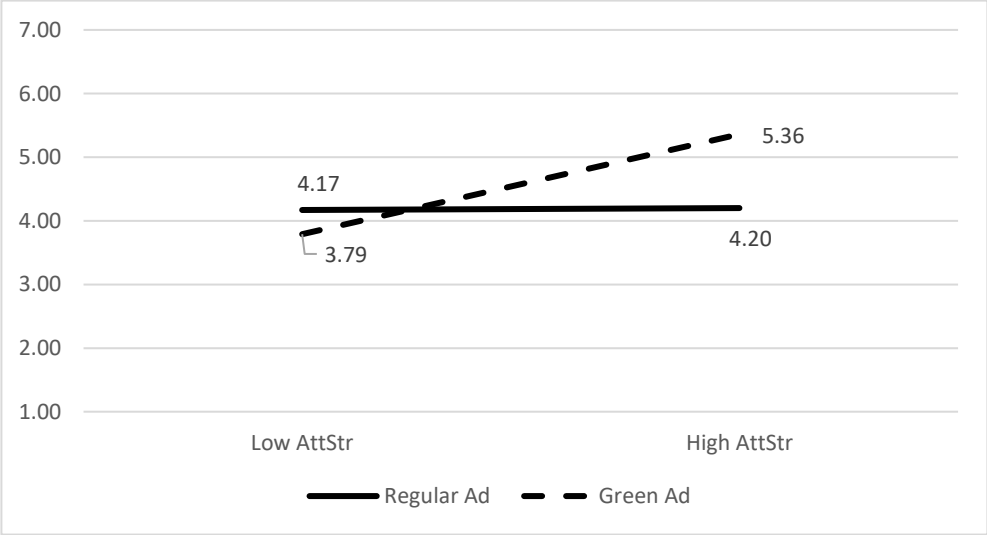
Ethnicity		
White	111 (85.4%)	125 (89.3%)
Black or African American	10 (7.7%)	9 (6.4%)
Asian	6 (4.6%)	4 (2.9%)
Other	3 (2.3%)	2 (1.4%)

Results

Manipulation Check. Participants who received the vague environmental ads rated the item "This ad is about an environmentally friendly product" significantly higher than participants who saw the regular ads (M = 5.82 vs. M = 2.76, t(117) = -17.45, p < .001), indicating that the participants saw and processed the claims in the environmental ads. We combined all items of attitude strength (α = .88) and mean-centered it. We then ran multiple regression of participants' green skepticism and WTP with three independent variables: (1) type of ads (0 = regular ad, 1 = vague environmental ad), (2) mean-centered attitude strength, and (3) the interaction: attitude strength X type of ads.

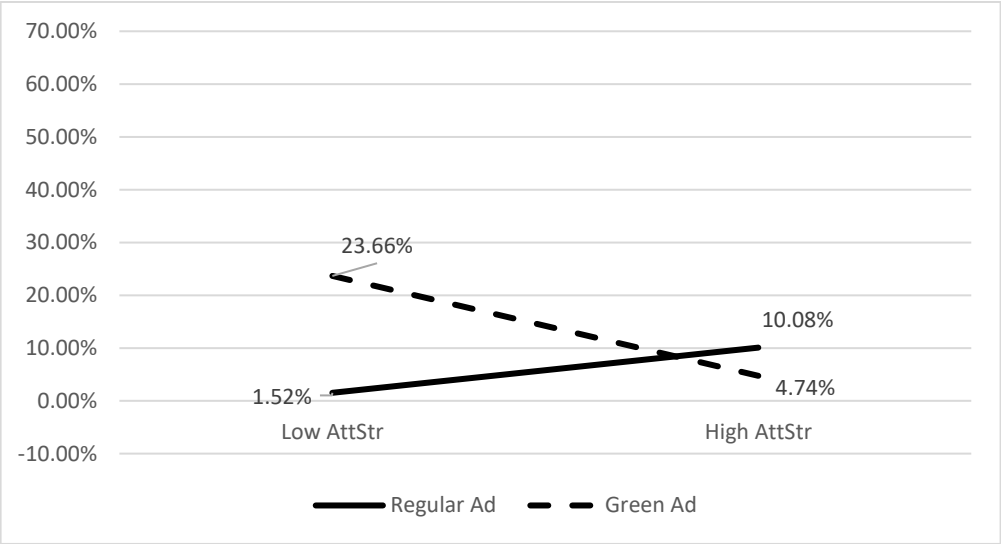
Green Skepticism. The main effects of the types of ads and attitude strength were not significant (*p*s = .13 and .94, respectively). However, the interaction between attitude strength and types of ads was significant (*b* = .70, t(115) = 3.00, *p* < .01). To examine this interaction further, we conducted a spotlight analysis among weak attitude participants and strong attitude participants (one standard deviation below and above the mean). Spotlight analysis is a common analysis used in experimental research when dealing with continuous data (Fitzsimons, 2008). Using spotlight analysis, we can explore the effect of environmental ads on green skepticism at one SD below the mean of attitude strength (weak attitude participants) and one SD above the mean of attitude strength (strong attitude participants). Results of the spotlight analysis showed that among participants who received the vague environmental ad, those who had strong attitude strength showed a higher level of green skepticism than those who had weak attitude strength (*b* = .71, *t*(115) = 4.04, *p* < .001). However, strong-attitude participants who received the vague environmental ads reported higher green skepticism than those who received the regular ads (*b* = 1.16, *t*(115) = 3.22, *p* < .01), suggesting that strong-attitude participants are more skeptical toward the vague ads than the regular ads, confirming H_{1a}. In addition, weak attitude participants showed no difference in their green skepticism across the two ad conditions (*p* = .13) (Figure 2).

FIGURE 2
STUDY 1 GREEN SKEPTICISM



WTP. The main effect of the type of ads was marginally significant (b = 4.11, t(115) = 1.97, p = .05). The main effect of attitude strength was not significant (p = .44). The two-way interaction attitude strength X type of ads was significant (b = – 4.58, t(115) = –2.41, p < .05). To explore this interaction, we conducted a spotlight analysis among weak and strong attitude participants (1 SD below and above the mean). Among participants who received the vague environmental ad, those who had strong attitude strength were willing to pay less for these products as compared to those who had weak attitude strength (b = – 3.60, t(115) = – 2.51, p < .05). In addition, weak attitude participants who received the vague environmental ad were willing to pay more for the product than those who received the regular ad (b = 9.21, t(115) = 3.09, p < .01). However, among strong attitude participants, there was no difference in the WTP for the products featured in the vague environmental and the regular ads (p = .74), suggesting that the vague environmental claim does not affect strong-attitude participants' WTP (Figure 3).

FIGURE 3
STUDY 1 WTP FOR GREEN PRODUCTS FEATURED IN THE ADS



Study 2

Results of Study 1 showed that strong-attitude (vs. weak-attitude) participants demonstrated a high (vs. low) level of green skepticism, resulting in lower WTP for products featured in vague environmental ads. In this study, we explore participants' responses to specific environmental ads. We predict that strong-attitude participants will not be skeptical toward specific environmental ads because these ads provide them with detailed information about how the products are environmentally friendly, leading them to have a high WTP for products featured in those ads.

Method

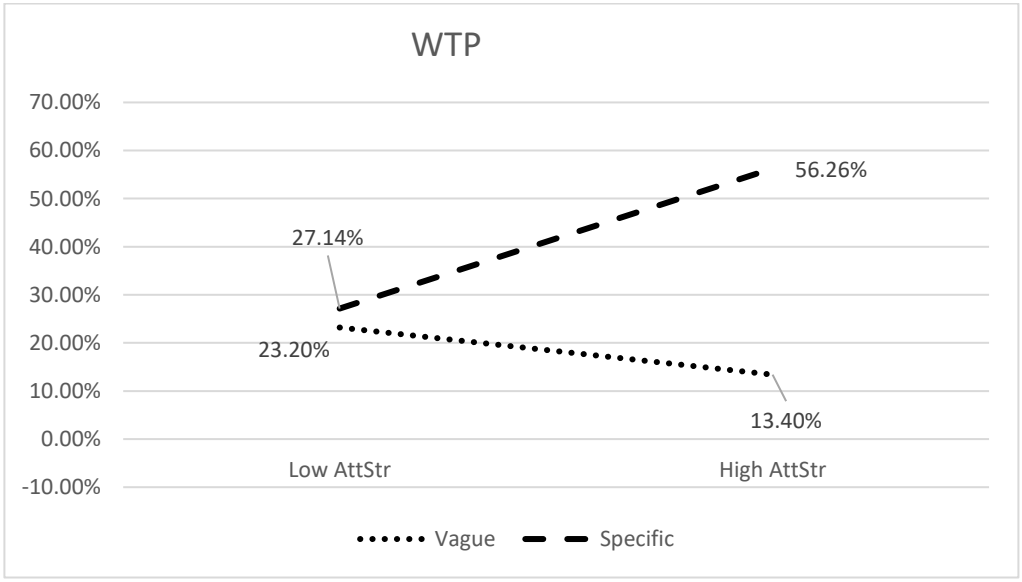
Amazon Turk workers (n = 140; 47.2% female) participated in a 2 environmental ads (vague vs. specific) X continuous (attitude strength; measured) between-subjects design. 15 participants who failed the attention test were not included in the data. We used the same vague ads as in Study 1. For the specific ads, we added information about why the products are environmentally friendly (Appendix 1). First, we randomly assigned participants to see either vague or specific environmental ads. Next, as in study 1, we asked participants about their evaluation and their WTP for products featured in the ads. We also measured participants' green skepticism and attitude strength.

Results

Six attitude strength items (α = .92) and four green skepticism items (α = .94) were combined as in study 1. We then again mean-centered attitude strength and performed two multiple regressions on the WTP for products featured in the ads and participants' skepticism with the three independent variables: (1) mean-centered attitude strength, (2) type of ads (1 = specific claim, 0 = vague claim), and (3) the two-way interaction: mean-centered attitude strength X type of ads. We expect that the specific (vs. vague) ads would lead to a higher WTP for green products featured in the ads. We also expected that the specific ads would facilitate participants' green skepticism compared to the vague ads.

WTP. The main effect of the environmental claim condition was significant, indicating that participants who received the specific ads were willing to pay more for these products than participants who received the vague ads (b = .23, $t(124)$ = 3.91, p < .001). However, the main effect of attitude strength was not significant (p = .26). The interaction between ad conditions and attitude strength was significant (b = .14, $t(124)$ = 3.24, p < .01). To further explore this interaction, we conducted spotlight analyses among weak attitude strong attitude participants. Strong attitude participants who received the specific ads were willing to pay more for the products than those who received the vague ads (b = .43, $t(124)$ = 5.05, p < .001). Thus, H_{2b} was confirmed. In contrast, among weak attitude participants, there was no difference in their WTP for green products featured in the specific versus vague ads (p = .65). In addition, the slope of attitude strength was significant in the *specific ad* condition (b = .11, $t(124)$ = 3.63, p < .001), suggesting that strong-attitude (vs. weak-attitude) participants were willing to pay more for the products featured in the specific ads (Figure 4).

FIGURE 4
STUDY 2 WTP FOR GREEN PRODUCTS FEATURED IN THE ADS



Moderated Mediation Analysis. We conducted a moderated mediation analysis with Hayes' (2017) model 7 with the type of ads (i.e., vague or specific environmental ads) as an independent variable, WTP for green products as a dependent variable, green skepticism as a mediator, and attitude strength as a moderator, consistent with our theoretical framework (Figure 1). Based on 5,000 bootstrap samples, the interaction effect between type of ads and attitude strength was significant (b = –.71, $t(124)$ = –3.78, p < .001). More specifically, strong attitude participants who received the specific ads reported significantly lower green skepticism than those who received the vague ads (b = –1.72, $t(124)$ = –4.65, p < .001). In contrast, there was no difference in green skepticism between weak-attitude participants who received the specific ads and those who received the vague ads (p = .48). Thus, H_{2a} was confirmed. More importantly,

moderated mediation analysis revealed that the indirect effect was significant among strong attitude participants (b = 1.39, SE = 1.72, 95% CI: .64 to 7.54), suggesting that green skepticism mediates the relationship between strong environmental attitude consumers and their WTP.

DISCUSSION AND IMPLICATIONS

We conducted two experimental studies using different types of environmental ads to test our hypotheses on the interaction between types of ads and consumers' environmental attitudes. As predicted, environmental ads (either vague or specific ads) are more effective in persuading weak-attitude consumers resulting in lower green skepticism than strong-attitude consumers. In contrast, strong-attitude consumers exhibit a backfiring behavior when presented with vague ads, evidenced by their higher level of green skepticism and lower WTP for products featured in the ads. More interestingly, specific ads are effective among strong-attitude consumers, lowering their green skepticism and increasing their WTP.

Theoretical Implications

This research has theoretical contributions to environmental marketing research. First, the present study sheds light on how certain environmental ads (i.e., vague ads) intended to persuade consumers to purchase green products could backfire by increasing consumer green skepticism and lowering their WTP for green products. We also demonstrated that specific ads featuring detailed information about why the advertised products are environmentally friendly will be more effective in persuading consumers. Previous research focused on the negative effects of environmental claims on perceived greenwashing and attitudes toward the brands. For example, Schmuck et al. (2018) explored how vague and false claims influenced consumers' perceived greenwashing, and Parguel et al. (2015) examined how deceptive ads could affect consumers' attitudes toward a brand. Our research examines the effectiveness of specific ads and vague ads on consumer green skepticism and WTP.

In addition, it is noteworthy that we use fictitious brands to eliminate the effects of branding on consumer evaluation. Thus, we can ensure that green skepticism measured in the studies is the only result of the interaction between consumer attitudes toward the environment and types of environmental ads. Moreover, we adapted the attitude strength scale in Petty and Krosnick (2014) to make it specifically about consumers' attitudes toward the environment. The scale captured three dimensions: accessibility, importance, and knowledge, and provided a more comprehensive measure of consumers' thinking about environmental issues than previous scales, as discussed in the "Theoretical Background and Hypotheses Development."

Managerial Implications

Our findings have practical implications for marketers. Our research illuminates the importance of ad content in environmental marketing strategies. We demonstrate that not all environmental ads are perceived equally by consumers. Environmental ads are supposed to help companies create awareness, improve brand awareness, and increase customer loyalty. However, vague ads can backfire among certain consumers. To increase ad effectiveness, marketing practitioners should use specific environmental ads to ensure that they provide customers with a complete story about why their products are sustainable. It is also essential that companies be honest and provide consumers with factual information that is valid and verifiable; otherwise, it will be considered false marketing, which can hurt the company's reputation in the long term. Our research shows that both strong and weak attitude consumers respond positively to specific ads. Therefore, companies do not need to distinguish between environmental strong and weak attitude consumers. Specific ads can be used as an effective marketing tool to win both groups of customers.

Future Research

In this research, we used fictitious brands for the two studies to rule out the effect of branding. In future research, we would like to investigate how consumer environmental attitudes and attitudes toward brands interact with each other, affecting consumer decision-making in green marketing. Further, we used

environmental ads for textile products in our studies. In addition to the effect of brand names, we note that product categories may play a role in consumer decisions because consumers' green evaluations may vary across product categories. Their evaluation may also be different for hedonic and utilitarian products. Thus, this warrants future research. Our research examines consumers' self-reported WTP for green products after exposure to environmental ads. In future research, we plan to conduct field studies to measure consumers' actual WTP, which may help confirm the validity of our research in real life.

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APPENDIX 1: ADVERTISING STIMULI

Regular Ads – Study 1

Home Collection Sheet Set

Brand: SweetHome

COLOR: **SEAGLASS STRIPE**

SIZE: **PLEASE CHOOSE A SIZE**

FULL SET | QUEEN SET | KING SET | CKING SET | STD PC 2PK | KG PC 2PK

PRODUCT DETAILS

Sleep in absolute luxury with this premium luxury bed sheet set from Home Collection.

Home Collection Textiles 6-piece bamboo Towel Set

Brand: SweetHome

COLOR: **STERLING BLUE**

PRODUCT DETAILS

Always have plenty of towels on hand for your guests.

Dry off in an eco-friendly way with this bamboo towel set.

FEATURES

- 6 pack
- Bamboo loops for superior absorbency
- Luxurious plush look and feel.

CONSTRUCTION & CARE

- Rayon made from bamboo, cotton.
- Machine wash
- Imported

WHAT'S INCLUDED

- Two 27'' x 54'' bath towels
- Two 16'' x 26'' hand towels
- Two 13'' x 13'' wash cloths

Vague Ads – Studies 1 and 2

Home Collection Natural Bamboo Sheet Set

Brand: SweetHome

COLOR: **SEAGLASS STRIPE**

SIZE: **PLEASE CHOOSE A SIZE**

FULL SET | QUEEN SET | KING SET | CKING SET | STD PC 2PK | KG PC 2PK

PRODUCT DETAILS

Going green has never been sumptuous. Made from sustainable and renewable resources, this sheet set keeps you cozy while suiting your eco-friendly taste.

Sleep in absolute luxury with this premium luxury bed sheet set from Home Collection.

Home Collection Textiles 6-piece Towel Set

Brand: SweetHome

COLOR: **STERLING BLUE**

PRODUCT DETAILS

Always have plenty of towels on hand for your guests.

FEATURES

- 6 pack
- Uniform loops for superior absorbency
- Luxurious plush look and feel

CONSTRUCTION & CARE

- Egyptian cotton
- Machine wash
- Imported

WHAT'S INCLUDED

- Two 27'' x 54'' bath towels
- Two 16'' x 26'' hand towels
- Two 13'' x 13'' wash cloths

Specific Ads – Study 2

Home Collection Natural Recycled Cotton Sheet Set

Brand: SweetHome

COLOR: **SEAGLASS STRIPE**

SIZE: **PLEASE CHOOSE A SIZE**

FULL SET | QUEEN SET | KING SET | CKING SET | STD PC 2PK | KG PC 2PK

PRODUCT DETAILS

Sleep in absolute luxury with this premium bed sheet set.

Going green has never been sumptuous. Made from recycled cotton***, this sheet set keeps you cozy while suiting your eco-friendly taste.

*** Producing a single pound of conventional cotton takes about 173 gallons of water. By using recycled cotton, we extend the life span of a fiber that has already been created, uses fewer environmental resources and still has that soft, comfortable feel.

For the Spring 2022 season, 32% of our cotton fabrics are made with recycled cotton. Using recycled cotton reduces CO_2 emissions by 80% compared to using conventional virgin cotton.

Home Collection Textiles 6-piece Recycled Cotton Towel Set

Brand: SweetHome

COLOR: **STERLING BLUE**

PRODUCT DETAILS

Always have plenty of towels on hand for your guests.

Dry off in an eco-friendly way with this recycled cotton towel set.

- Made from recycled cotton ***
- Superior absorbency
- Luxurious plush look and feel

*** Producing a single pound of conventional cotton takes about 173 gallons of water. By using recycled cotton, we extend the life span of a fiber that has already been created, uses fewer environmental resources and still has that soft, comfortable feel.

For the Spring 2022 season, 32% of our cotton fabrics are made with recycled cotton. Using recycled cotton reduces CO_2 emissions by 80% compared to using conventional virgin cotton.

WHAT'S INCLUDED

- Two 27" x 54" bath towels
- Two 16" x 26" hand towels
- Two 13" x 13" wash cloths

APPENDIX 2: GREEN SKEPTICISM SCALE (ADAPTED FROM MOHR, EROĞLU, & ELLEN, 1998)

1. The environmental claims in the product details are true (reverse-coded).
2. The environmental claims in the product details are exaggerated, consumers would be better off if such claims were eliminated.
3. The environmental claims in the product details are intended to mislead rather than to inform consumers.
4. I do not believe in the environmental claims in the product details.

APPENDIX 3: ATTITUDE STRENGTH SCALE (ADAPTED FROM PETTY & KROSNICK, 2014)

1. How easily does your attitude come to mind when you encounter issues about environmentally friendly (or green products)?
2. About how often do you have thoughts about environmentally friendly (or green) products?
3. How important would you say the issues of environmentally-friendly (or green) products are to you personally?
4. How much do you personally care about the issues related to environmentally-friendly (or green) products?
5. How well informed are you about environmentally-friendly (green) products?
6. How much do the issues of environmentally-friendly (green) products directly affect you?