

Effects of functional green advertising on self and others

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Abstract

This study examines the effects of a functional green advertising promoting the environmental advantages of a product. It presents the results of three experiments designed to (a) explore consumers' perceptions of a functional green ad's effects on themselves and others, (b) determine how those perceptions are influenced by consumer environmental concern, and (c) examine how individualism–collectivism relates to self–other effect perceptions. Findings indicate that (a) consumers believe that functional green advertising exerts a stronger influence on others' purchase decisions than on their own purchase decisions; (b) the self–other difference is more salient among consumers with high environmental concern; (c) in the individualistic culture, the perceived effectiveness on self, not on others, predicts consumers' support for the regulation of functional green ads, while this effect is reversed when consumers are in collectivistic cultures. The study's findings extend several lines of research, including the literature on green advertising and the third-person effect.

KEYWORDS

consumer environmental concern, green advertising, individualism–collectivism, third-person effect

1 | INTRODUCTION

Green advertising is one of the most common types of green marketing. Companies usually communicate the relevant environmental advantages of their product compared to competing conventional by using green advertising. Numerous studies have confirmed that such environmental-friendly selling point of products can affect consumers' purchase intentions (Hartmann & Apaolaza-Ibáñez, 2009). However, since companies used misleading or exaggerated environmental appeals in the early days, which results in “greenwashing” (Carlson, Crove, & Kangun, 1993), consumers are still cautious about various forms of green advertising (Peattie & Crane, 2005). Evidence has shown that consumers are not only confused about green advertising claims but also distrustful of them, and are becoming increasingly suspicious of anything related to green communication (Carlson et al., 1993). Given this ambivalent nature toward green advertising, it is crucial to understand how consumers respond to it, especially those functional green advertisements¹ with oversimplified terms, such as “natural ingredients,” “environmental friendly,” and so on.

Despite the practical relevance and widespread occurrence of functional green ads, knowledge about their effects remains scarce. The literature displays three research gaps. First, previous research has examined consumers' attitudinal responses and purchase intentions regarding a persuasion tactic (DeLorme, Huh, & Reid, 2006; Eisend, 2008; Xie & Johnson, 2015; Youn, Faber, & Shah, 2000), but little

is known about the perceived effectiveness of functional green ads from the consumer's perspective. This issue is intriguing because functional green ads focus on product benefits and generally do not deliver individual benefits to buyers (Grimmer & Woolley, 2014), resulting in either no generally accepted definitions of expressions, which reduces consumers' efforts to understand the information (Carlson et al., 1993), or unclear meanings of claims, which would deliver a vague or omitted message to customers (Paço & Reis, 2012). Perceived effectiveness is a pivotal indicator of consumers' self and social awareness of the influence of this tactic, since consumer reactions are sometimes not motivated by the perceived effects of advertisements on themselves, but by perceived effects on others. For instance, parents are often concerned about misleading elements in TV commercials targeting children (Rose, Merchant, & Bakir, 2012). The “third-person perception” provides a theoretical framework that conceptualizes how effective people perceive mass communicated messages to be for the self and others (Xie, 2016). It predicts that people tend to perceive that mass media messages have a greater effect on others than on themselves (Davison, 1983).

Second, a previous study has demonstrated that the third-person perception can be moderated by consumers' knowledge about persuasion tactics (Xie, 2016). In this regard, it can be deduced that the environmental concerns (ECs) of consumers should moderate the third-person perception caused by functional green advertisements. However, though studies have shown the moderating effect of

consumer environmental concern in terms of green advertising (e.g., Grimmer & Woolley, 2014; Matthes, Wonneberger, & Schmuck, 2014; Pickett-Baker & Ozaki, 2008), no studies to date have examined how consumer environmental concern affects the self–others comparisons about perceived effectiveness in the context of functional green ads.

Third, the literature has documented individualism- or collectivism-orientation as moderators of the third-person perception (Lee & Tamborini, 2005). However, recent third-person perception research has ignored the moderating role of individualism–collectivism factor (Xie, 2016; Xie & Johnson, 2015). For instance, Xie and Johnson (2015) have demonstrated that it is the perceived effectiveness on themselves, not on others, that predicts consumer behavior. However, since such a conclusion is drawn by using participants from individualistic cultures, it may be the opposite in a collectivist culture.

Based on the theoretical framework of the “third-person effect” (Davison, 1983), the present study attempts to fill these research gaps by investigating the extent to which consumers perceive the inclusion of functional features in green ads as an effective persuasion tactic influencing their own and others’ purchase decisions. Furthermore, this research examines how consumer environmental concern might affect the third-person effect. This research also explores individual and group differences related to culture that are thought to moderate the third-person effect (Lee & Tamborini, 2005). Specifically, this research considers individualism–collectivism, the most widely studied dimension of cultural variability (Ting-Toomey, 1999), and examines how perceived effectiveness on the self and others might influence consumer supportiveness of regulating the use of functional green ads. This study investigates the role of individualism–collectivism on the third-person effect in the context of functional features in green ads. The study subsequently presents and discusses theoretical and managerial implications.

2 | LITERATURE REVIEW AND HYPOTHESES

2.1 | Functional green advertising

Green advertising varies from simple environmental-friendly claims of products, to corporate images emphasizing environmental credentials, to public events promoting environmental responsibilities (Hartmann & Apaolaza-Ibáñez, 2009). Green advertising is defined as “any ad that meets one or more of the following criteria: (a) explicitly or implicitly addresses the relationship between a product/service and the biophysical environment, (b) promotes a green lifestyle with or without highlighting a product/service, and (c) presents a corporate image of environmental responsibility” (Banerjee, Gulas, & Iyer, 1995, p. 22; Nyilasy, Gangadharbatla, & Paladino, 2014, p. 694). In general, these green claims are assumed to be authentic, and consumers tend to process explicit information highlighted by marketers and advertisers who are sincere in their efforts to be environmentally responsible (Leonidou, Leonidou, Paliawadana, & Hultman, 2011). However, regarding the information content of advertising claims in green ads, numerous studies judge the green ads to be ambiguous or even misleading (Bickart & Ruth, 2012; Carlson et al., 1993; Chang, 2011;

Fowler & Close, 2012; Sheehan & Atkinson, 2012), when advertisers sometimes use vague, omitted, delusive, or exaggerated environmental appeals, leading to “greenwashing” (Gaski & Etzel, 1986). Critics of green marketing are concerned about green claims and their effects on increasing confusion and cynicism in consumers (Leonidou et al., 2011; Matthes et al., 2014).

Regarding green marketing, functional green ads can render a focal message ambiguous to consumers. Functional green claims focus on product benefits and generally do not deliver individual benefits to buyers, which reduces the products’ environmental impacts (Grimmer & Woolley, 2014). Generally, only in cases of environmental-friendly consumer behavior would process functional messages (e.g., improvement of environmental quality) from green claims (Hartmann, Ibáñez, & Sainz, 2005). If a functional green ad is regarded as too technical or manipulative, it may reduce consumer efforts to understand the information, leading to advertisers’ failures in communicating with the public (Carlson et al., 1993). Technical environmental claims based on product benefits would lead to ineffectiveness on consumers who lack sufficient technical or scientific knowledge to process the message (Carlson et al., 1993; Paço & Reis, 2012).

On the other hand, to avoid the technical or manipulative functional green claims, some advertisers tend to utilize more comprehensible messages in green ads, such as “recyclable” and “environmental friendly,” to ensure the effectiveness of green ads and promote functional benefits (Hartmann et al., 2005; Matthes et al., 2014; Paço & Reis, 2012). For example, in the study of Matthes et al. (2014), the functional green ad is “plant-based ingredients from sustainable sources” and “biodegrades quickly and completely after use.” However, these “generalized and highly accessible” messages would also be unclear, resulting in ambiguities for consumers (Paço & Reis, 2012). Furthermore, other disadvantages of these functional claims would also be present, such as being easily imitated and reducing the flexibility of differentiation (Hartmann et al., 2005). These disadvantages would lead to the stereotyping and monotony of the functional green claims, which would also convey a vague or omitted message to customers. Without clearly knowing the meanings of green claims, consumers may not have sufficient information to make a rational judgment about a promoted brand or product. The difficulty in determining the “environmental truth” has created a generalized skepticism in relation to green advertising (Carlson et al., 1993).

2.2 | Third-person effect

Davison (1983) defined the “third-person effect” to include two hypotheses: perceptual and behavioral. The perceptual hypothesis of the third-person effect is also regarded as “third-person perception,” which suggests that persons will estimate that others are more susceptible to the negative effects of mass communications than themselves (i.e., when exposed to a persuasive communication, people tend to believe that the communicated messages to have a more significant influence on others than on themselves). Regarding the behavioral hypothesis, he indicated that “whether or not these individuals are among the ostensible audience for the message, the impact that they expect this communication to have on others may lead them to take

some action" (p. 3). The behavioral hypothesis emphasizes the impact of a communication from the anticipated or perceived impact on others, rather than on the self.

Previous studies have examined the "third-person perception" in terms of internet communication (Li, 2008), social networking sites, such as facebook ads (Paradise & Sullivan, 2012) and YouTube ads (Veenstra, Park, Lyons, Kang, & Iyer, 2015), public service announcements (Paek, Hove, Kim, Jeong, & Dillard, 2012), rap music (McLeod & Eveland, 1997), video games (Schmierbach, Boyle, Xu, & McLeod, 2011), television content (Gibbon & Durkin, 1995), and advertisements (Chapin, 2000). When exposed to persuasive mass media messages, people perceive greater influence on others than on themselves (Sherrick, 2016). Regarding the marketing domain, the perceptual hypothesis of the third-person effect has been supported by many empirical tests, such as drug ads (DeLorme et al., 2006), scarcity appeals in advertising (Eisend, 2008), and controversial product ads (e.g., gambling ads; Youn et al., 2000). In conclusion, in terms of the promotional messages, many consumers both overestimate the effectiveness on others and underestimate the effectiveness on themselves.

Numerous psychological theories are regarded as drivers of the third-person effect, including ego involvement, biased optimism, social comparison theory, and attribution theory. Generally, studies use attribution theory and biased optimism more frequently in the third-person effect research (DeLorme et al., 2006).

Regarding the attribution theory, two concepts are utilized to explain the third-person effect: the fundamental attribution error and egotistical differential attributions (i.e., self-serving motives). The fundamental attribution error refers to the fact that when people explicate others' behavior, they will attribute them to internal factors; on the other hand, when people explicate their own behavior, they will attribute them to external factors (Jones & Harris, 1967). The fundamental attribution error is also known as "correspondence bias," resulting from the gap between perceived reality and actual reality (Jones & Nisbett, 1972). As per Gunther (1991), the third-person effect occurs because individuals tend to underestimate responses to situational characters in others, and thus overestimate others' susceptibility to a persuasive message.

The third-person effect research relates to the concept of egotistical differential attributions, or self-serving biases (e.g., Sun, Pan, & Shen, 2008). The self-serving biases indicate that only in case of low perceived threats to self-esteem would individuals tend to attribute acts to external factors, resulting in the enhancement of a superior self-concept (DeLorme et al., 2006). As per Jones and Harris (1967) and Jones and Nisbett (1972), when perceiving a message as negative or considering an undesirable influence from a message, individuals tend to believe that others are more susceptible to this influence, to enhance and maintain positive self-feelings or avoid negative self-feelings. On the other hand, when the effect is regarded as socially or personally positive, people tend to attribute more influence to themselves (Eisend, 2008; Xie & Johnson, 2015), such as by thinking, "I am smart enough to recognize the value of the message," DeLorme et al., 2006, p. 50). These self-serving biases are frequently used to explain the third-person effect research findings, especially in terms of socially undesirable messages (e.g., Eisend, 2008; 2015; Xie & Johnson, 2015).

Existing studies relate the third-person effect to the content of persuasive messages (e.g., Eisend, 2008; 2015; Sun et al., 2008; Youn et al., 2000), while limited research focuses on the consumers' inferences regarding the tactics utilized in the environmental messages. Based on the Persuasion Knowledge Model (Friestad & Wright, 1994), the present research addresses the gap by examining the moderation effect of consumer environmental concerns on the third-person effect in the context of functional green ads. The Persuasion Knowledge Model can explain the psychological process about how a customer with high environmental concern could activate a defensive mechanism to guard against negative influences (Craig, Loureiro, Wood, & Vendemia, 2012; Friestad & Wright, 1994). The following section reviews the consumer environmental concern literature relating to the Persuasion Knowledge Model.

2.3 | Consumer environmental concern

The present research also explores whether the third-person effect is influenced by the level of consumer environmental concern. Environmental concern is regarded as "feelings that consumers have about many different green issues" (Zimmer, Stafford, & Stafford, 1994, p. 64). The concept of environmental concern comprises an awareness of environmental issues associated with the perceived demand for protecting the environment (Matthes et al., 2014). Studies regarding the moderating roles of environmental concern in the effects of green advertising remain mixed (e.g., Grimmer & Woolley, 2014; Pickett-Baker & Ozaki, 2008). Most studies indicate that consumers with high compared to low environmental concern could process stronger effects in environmental claims. For example, Grimmer and Woolley (2014) study the advertising effects by comparing a personal benefit green ad, an environmental benefit green ad, and a control group. They suggest that consumers with high compared to low environmental affect showed stronger effects on an environmental benefit green ad than on a personal benefit green ad. Conversely, they also conclude that "participants with low environmental affect showed higher purchase intentions for the personal benefit message over the pure environmental benefit message" (p. 13). Pickett-Baker and Ozaki (2008) find that consumers with high consumer environmental concern are generally more aware of green product marketing, and consider it more engaging and relevant. In contrast to these studies, findings by Schuhwerk and Lefkoff-Hagius (1995) suggest that consumers with low environmental concern react more positively to environmental claims compared to those with high environmental concern. Matthes et al. (2014) argue that environmental concern is not relevant in explaining consumers' susceptibility to green ads. Therefore, because environmental concern should be regarded as an important indirect factor instead of a direct one (Bamberg, 2003), it is necessary to examine the indirect role of environmental concern on the third-person effect in the context of functional green advertising.

With the Persuasion Knowledge Model as the theoretical foundation, this present research attempts to explain this moderating role of environmental concern. The Persuasion Knowledge Model suggests that consumers develop intuitive theories about how marketers use tactics to influence them (Friestad & Wright, 1994). Persuasion

knowledge allows consumers to “recognize, analyze, interpret, evaluate, and remember persuasion attempts,” and then to form attitudes, finally selecting and employing coping tactics on that basis (Friestad & Wright, 1994, p. 3). Three types of knowledge structures can describe the outcomes of persuasive messages: (a) agent knowledge comprises beliefs about the characteristics, competencies, and goals of a marketer, an advertiser, or a salesperson; (b) topic knowledge consists of beliefs about the subject or topic of persuasive messages, such as a product or service; and (c) persuasion knowledge relates to marketers’ attempts and tactics, which also consist of numerous subtopics, including “beliefs about marketers’ motives, strategies and tactics, effectiveness and appropriateness of persuasion tactics, psychological mediators of tactic effectiveness and ways of coping with persuasion attempts” (Campbell & Kirmani, 2000, p. 69).

When persuasion knowledge is activated, consumers tend to process the Persuasion Knowledge Model, and then induce a “change of meaning,” resulting in the shift of their mindsets from “message centric” to “tactic centric” (Friestad & Wright, 1994; Pechmann & Wang, 2010). In other words, once consumers learn and recognize marketers’ persuasive attempts, they may begin to assess the appropriateness and effectiveness of the tactics, which in turn may lead to an alteration of their attitude toward the marketer. When consumers find that it is difficult to access persuasion knowledge, they may generate more compliance with the tactics (Main, Dahl, & Darke, 2007). In terms of empirical evidence, several Persuasion Knowledge Model studies examine consumer attitudinal and behavioral responses to persuasion tactics (e.g., Xie & Johnson, 2015). Some of the literature argues that consumers with significant persuasion knowledge are more likely to maintain counterarguments (Pechmann & Wang, 2010), have more negative attitudes toward marketers (Xie & Kronrod, 2012), increase their unfavorable perceptions of brands (Ahluwalia & Burnkrant, 2004), and decrease their purchase intentions (Brown & Krishna, 2004).

Associated with the Elaboration Likelihood Model (Petty & Cacioppo, 1986), this also suggests that consumers may bring motivation and knowledge of the subject to bear on the persuasion attempts (Chang, Zhang, & Xie, 2015; Tucker, Rifon, Lee, & Reece, 2012). Regarding the green ad, consumer environmental concern has been viewed as a significant individual difference variable that shows different levels of motivation and knowledge of environmental problems (Bickart & Ruth, 2012; Chang et al., 2015; Liu, Wong, Chu, & Tseng, 2014; Paço & Reis, 2012). Thus, a higher level of consumer environmental concern tends to make one more sensitive to environmental issues (Matthes et al., 2014), which increases consumers’ ability and motivation to process green ad messages (Bickart & Ruth, 2012). Furthermore, because environmental problems are not considerable for consumers with low environmental concern (Grimmer & Woolley, 2014; Pickett-Baker & Ozaki, 2008), the present study hypothesizes that consumers with low environmental concern will be less concerned about, or even be indifferent to, green ad messages, which reduces their ability and motivation to process green ad messages. As a result, these effects should moderate the third-person effect in the context of functional green advertising. Thus, the present study first examines the moderating role of consumer environmental concern on the perceptual hypothesis of the third-person effect, and then focuses on the moderating effect

of cultural differences, particularly the individualism–collectivism dimension, on the behavioral hypothesis in the context of functional green advertising.

2.4 | Perceptual hypothesis

The functional green ad has been regarded as a persuasion tactic that tends to promote ambiguous environmental messages (e.g., Hartmann et al., 2005; Paço & Reis, 2012; Xie & Kronrod, 2012). Apparently, functional green ads with either manipulative or stereotypical messages, although they may technically be truthful, are deliberately framed to promote environmental favorable information. Thus, it is reasonable to expect considerable variance in perceived functional green ad effects. Prior research confirms the presence of a third-person perception in judgments about persuasive advertisements, such as deceptive ads (Xie, 2016), drug ads (DeLorme et al., 2006), scarcity appeals in advertising (Eisend, 2008), and controversial product ads (e.g., gambling ads; Youn et al., 2000). For instance, DeLorme et al. (2006) indicate that older consumers believe that direct-to-consumer prescription drug advertising exerts the greatest influence on others, as opposed to exerting an influence on themselves. The present study assumes that consumers would consider the influence of a functional green ad less than desirable due to its potential to mislead, and the third-person effect should therefore apply. Associated with the perceptual hypothesis of the third-person effect, consumers tend to perceive that this tactic will lead to more effectiveness on purchase decisions for others than for themselves.

H1: *Consumers tend to believe that the use of functional features (green claims) in green ads will have a stronger influence on others’ purchase decisions than on their own purchase decisions.*

This study also predicts that consumer’s environmental concern affects consumer inferences about the self and others differently. Because high-EC consumers care more about environmental issues in general (Matthes et al., 2014), they increase their ability and motivation to process green ad messages (Bickart & Ruth, 2012). Compared to low-EC consumers, high-EC consumers are more vigilant about environmental information, but functional green ads tend to provide ambiguous cues (Hartmann et al., 2005; Paço & Reis, 2012). As a result, consumers with high environmental concerns are more likely to believe that they can detect and cope with manipulative tactics effectively than consumers with low environmental concern on functional green ads (Chang et al., 2015). In this case, high-EC consumers would infer that they would be less influenced by the functional green ad and that, because others are not as sensitive, knowledgeable, or vigilant about this tactic, others are more susceptible to its influence (Xie, 2016). By contrast, for low-EC consumers with limited considerations regarding environmental issues (Matthes et al., 2014), a green ad is less relevant, and therefore fewer abilities and motivations to process the green ad’s messages will be employed by them. Low-EC consumers may find the green topic to be less involving; thus, they do not process the ad message sufficiently. Because the functional green ad is argued to be vague, low-EC consumers are less able to recognize and resist this tactic

effectively, so they tend to acknowledge its influence on themselves and others in general.

H2: *High-environmental concern (EC) consumers are more likely than low-EC consumers to believe that the use of functional features in green ads will have a stronger influence on others' purchase decisions than on their own purchase decisions.*

2.5 | Behavioral hypothesis

The behavioral hypothesis suggests that people are motivated by the third-person effect to take preventative or corrective actions against undesirable or negative influences (Davison, 1983). This hypothesis explains why consumers support more stringent regulation of marketing tactics (DeLorme et al., 2006; Eisend, 2008; Youn et al., 2000). The results of previous research regarding the motivational effects of perceived self-susceptibility and others' susceptibility toward persuasive messages remain mixed (e.g., Huh, Delorme, & Reid, 2004; Sun et al., 2008; Wei, Lo, & Lu, 2010; Youn et al., 2000). This hypothesis also argues that perceived self-susceptibility, others' susceptibility, or combined susceptibility toward persuasive messages might motivate behavioral intentions (Xie & Johnson, 2015). For instance, Youn et al. (2000) find that the perceived effect of gambling ads on other adults or children, not the self, motivates consumers to support restrictions on advertising. By contrast, Huh et al. (2004) find that only the perceived self-effect for the prescription drug advertising significantly predicts consumer support for censorship. Wei et al. (2010) demonstrate that the perceived effect of tainted food news on consumers themselves predicts their intentions to take preventive actions. Therefore, it is necessary to examine perceived self-effect and others-effect for functional green advertising.

Several factors have been studied and suggested as moderators for the perceptual hypothesis of the third-person effect (e.g., "the desirability of the message content, the social distance between self and other, and attributes of individuals and groups") (Lee & Tamborini, 2005, p. 295). In terms of group differences, research shows that the phenomenon functions consistently across different cultural groups, and culture has been seen as a critical factor relating to the third-person effect (Lee & Tamborini, 2005). However, limited research focuses on the moderating effects on the behavioral hypothesis of the third-person effect. In particular, research on the relationship between cultural differences and the behavioral hypothesis of the third-person perception remains unknown in the context of the functional green ad.

The individualism–collectivism dimension of culture is relevant in the third-person effect research because it clarifies the variability in the individual tendency to distinguish the self from others (Lee & Tamborini, 2005). Individualism is defined as "the broad value tendencies of a culture in emphasizing the importance of individual identity over group identity, individual rights over group rights, and individual needs over group needs," while collectivism refers to "the broad value tendencies of a culture in emphasizing the importance of the 'we' identity over the 'I' identity, group rights over individual rights, and in-group-oriented needs over individual wants and desires"

(Ting-Toomey, 1999, p. 67). People in individualistic cultures view themselves as different from others and groups, with an independent self-construal view characterizing the individual in terms of self-centered attributes and the betterment of the self (Aaker & Lee, 2001). On the other hand, people in collectivistic cultures perceive the self and others as more integrated, associated with the interdependent self-construal view, characterizing the individual in terms of group membership and the betterment of the community (Briley & Wyer, 2002).

Consumer supportiveness of regulating functional green ads can be regarded as a criterion variable (Xie & Johnson, 2015), reflecting consumers' behavioral intentions based on their perceptions about the effects of the tactic on themselves or others. The present study speculates that in individualistic cultures the perceived effectiveness on themselves, rather than on others, better predicts consumer support for regulation of the use of functional green ads. People in individualistic cultures with an independent self-view focus more on their own achievements and improvements, with a desire to succeed relative to others (Kareklas, Carlson, & Muehling, 2014). Based on the congruency effect, people from individualistic cultures are more likely to exhibit the concept of "egocentrism." In individualistic cultures, people are more cognitively or affectively concerned about the social effects on themselves than on others (Hsee & Weber, 1997). They are more likely to make social judgments associated with information relating to self instead of others (Chambers & Windschitl, 2004). Thus, individualistic consumers tend to rely on the perceived effectiveness on themselves to evaluate the need for regulation.

H3a: *In individualistic cultures, the perceived effectiveness on themselves, not on others, predicts consumers' supportiveness of regulating the use of functional features in green ads.*

On the other hand, regarding collectivism, it speculates that in collectivistic cultures, the perceived effectiveness on others, rather than on themselves, better predicts consumer support for regulating the use of functional green ads. People in collectivistic cultures tend to be encouraged by the values of fulfilling obligations and responsibilities over their own personal wishes or desires (Aaker & Lee, 2001). Associated with the congruency effect, people from collectivistic cultures are more likely to exhibit the "paternalism theory," which refers to "one's desire to protect others from being hurt, and the theory of protection," which refers to "one's tendency to take preventive action to protect others from negative media effects" (Wei et al., 2010, p. 602). Consumers in collectivistic cultures are more likely to support censorship of undesirable messages because they believe others to be more susceptible to negative effects of the messages than themselves. It is their obligation and responsibility to the group, over their own personal wishes or desires, that encourages their behavioral tendencies to support regulations. Therefore, collectivistic consumers tend to rely on the perceived effectiveness on others to evaluate the need for regulation.

H3b: *In collectivistic cultures, it is the perceived effectiveness on others, not on themselves, that predicts consumers' supportiveness of regulating the use of functional features in green ads.*

3 | STUDY 1

Study 1 examines the effect of consumer environmental concern on the third-person perception in response to the use of functional features in green ads, as hypothesized in H1 and H2. A 2 (self/others) \times 2 (high/low EC) between-subject experimental design is employed. Consumer environmental concern is measured as an individual difference variable.

3.1 | Pretest

The present study employs two versions of a print ad for a pretest with 249 undergraduate students. As per Hartmann and Apaolaza-Ibañez (2009) and Hartmann et al. (2005), green advertising based on functional appeal should communicate the relevant environmental advantages of the product compared to competing conventional products. Such advantages may include, for example, environmental-friendly production processes, product use, or product elimination. Based on these criteria, this study employs two versions of a print ad for a dishwashing liquid. The control group only depicts the product, brand name, and a slogan (see the Appendix). The brand is anonymous (i.e., referred to as Brand XYZ). The functional ad shows product, brand, and slogan along with a list of seven brief ecological advantages of the detergent in front of a neutral background. The arguments are used in real ads for dishwashing liquid (see the Appendix). This simple design highlights the functional features (green claim) as a catchy phrase, and avoids introducing potential noise, such as information overload and visual complexity.

After reading each piece for two minutes, participants complete green ad skepticism questions (Paço & Reis, 2012) and report their ad evaluation (Gorn, Pham, & Sin, 2001). They then assess skepticism of the ad using four 7-point semantic differential items from Paço and Reis (2012) (Cronbach's $\alpha = 0.79$). Furthermore, this study measures ad evaluation with seven semantic differential items from Gorn et al. (2001) (Cronbach's $\alpha = 0.89$). Sample items include "the ad is pleasant," "I react to the ad favorably," and "I feel positive toward the ad."

The results revealed that the two ads differed in their green ad skepticism level ($M_{\text{control}} = 3.31$ vs. $M_{\text{functional}} = 4.20$; $t(247) = -7.96$, $p < 0.001$). The results also suggest the differences in the ad evaluation: control ($M = 3.92$, $SD = 1.05$) and functional conditions ($M = 3.64$, $SD = 1.06$), $t(247) = 1.99$, $p = 0.04$. Thus, respondents rate this functional ad as significantly skeptical in a pretest. According to this pretest, the functional ad evokes negative reactions, such as misleading and untruthful.

3.2 | Main study

Study 1 examines the effect of consumer environmental concern on the third-person perception in response to the use of functional features in green ads, as hypothesized in H1 and H2. A 2 (self/others) \times 2 (high/low EC) between-subject experimental design is employed. One hundred and seventy-six students from a university in Zhuhai, China

participated in this study and received a small gift as compensation (67% female, age range: 18–22 years).

Participants are randomly assigned to one of two between-subject conditions (i.e., self vs. others). In both conditions, they read a functional print ad of a dishwashing liquid product (see the Appendix). According to Malhotra, Schaller, and Patil (2017), "when the experimental independent variable(s) has predetermined levels that are manipulated by the researcher, and only the continuous dependent variable is measured using self-report participant data, common method variance will not impact the correlation between the independent and dependent variable." Therefore, the common method variance is not controlled in the current study.

Participants in the "self" condition rate the effectiveness of the ad claim for themselves right after they read the ad: "how would this ad claim affect your purchase decision about the advertised product (1 = would not affect your decision; 7 = would be a primary factor)?" Those in the "others" condition rate the effectiveness of the functional features (green claim) for others in general: "how would this ad claim affect others' purchase decisions about the advertised product (1 = would not affect others' decisions; 7 = would be a primary factor)?" The measurement is adopted from Richards (1990) and Xie and Johnson (2015). After that, they complete a 7-point EC scale (Matthes et al., 2014), including four items, such as "I am concerned about the environment" (1 = strongly disagree; 7 = strongly agree) (Cronbach's $\alpha = 0.87$). Finally, participants answer basic demographic questions, such as age, gender, and education.

3.3 | Results

3.3.1 | Manipulation check

Individual differences in environmental concerns are not significantly different between the self ($M = 5.49$, $SD = 0.99$) and others conditions ($M = 5.17$, $SD = 1.39$), $t(174) = 1.76$, $p = 0.08$. The self/others manipulation do not affect environmental concerns in this case.

3.3.2 | Perceived effectiveness

A "floodlight analysis" (Spiller, Fitzsimons, Lynch, & McClelland, 2013) is conducted to test H1 and H2, using the Hayes and Matthes (2009) MODPROBE macro for SPSS. Perceived effectiveness is regressed on the self/others condition (the self-condition = 0, the others condition = 1), ECs ($M = 5.33$, $SD = 1.22$, $\text{min} = 2.00$, $\text{max} = 7.00$), and their interaction. The results revealed a significant interaction ($\beta = 0.93$, $t(172) = 5.90$, $p < 0.001$, $r = 0.35$). The Johnson-Neyman technique is used to decompose the interaction, in which the simple effect of the self/others is significant, $t(172) = -4.00$, $p < 0.001$, $d = 1.05$. Participants perceive functional features in green ads as more effective on others ($M = 4.83$, $SD = 1.39$) than on themselves ($M = 3.40$, $SD = 1.33$), and H1 is therefore supported. There is a significant effect of the self/others for those participants whose ECs are higher than 4.26 ($\beta = 0.50$, $SE = 0.25$, $p = 0.05$, $d = 0.15$), but not for those participants whose ECs are lower than 4.26. Thus, H2 is supported. As Figure 1 illustrates, environmental concerns are a significant predictor of the perceived effectiveness on others ($\beta = 0.66$, $t(87) = 8.13$, $p < 0.001$,

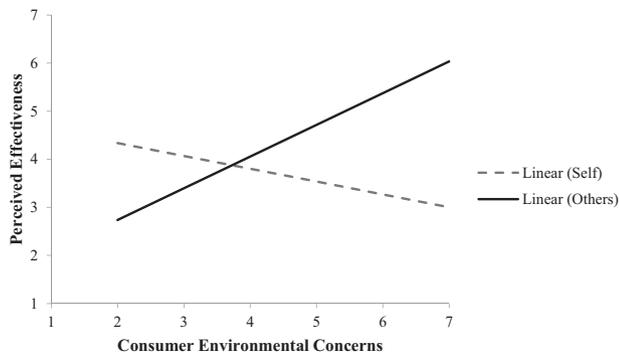


FIGURE 1 Perceived effectiveness as a function of consumer environmental concerns and the self/others condition

$r = 0.66$) but not on the self ($\beta = -0.27$, $t(89) = -1.90$, $p = 0.06$, $r = 0.20$).

3.3.3 | Discussion

Study 1 supports H1, that consumers tend to believe that the use of functional features (green claims) in green ads will have a stronger influence on others' purchase decisions than on their own purchase decisions. The results also demonstrate the moderating effect of consumer environmental concern: the third-person effect is more significant among high-EC participants than among low-EC ones, as H2 suggests. Study 2 is also employed to test H1 and H2, with an expansion of Study 1 by addressing two problems. First, the previous literature applied the norm of "the third person" in different profiles, such as "others in general," "others in a specific group," and "an average person" (e.g., Huh et al., 2004; Xie & Johnson, 2015). In Study 1, perceived effectiveness on the "self" and on "others in general" is tested, while perceived effectiveness on the "self" and on "an average person" is examined in Study 2. Changing the third person referent would enable an empirical test of whether the third-person effect observed in Study 1 could be replicated. It is necessary to conduct a replication test in Study 2, which provides evidence regarding whether the self–other difference will be salient beyond situations in which the prompt is "others in general."

Second, consumer environmental concern is measured as an individual difference variable by a self-report scale in Study 1. Previous studies have manipulated other moderators (e.g., persuasion knowledge) experimentally to examine how awareness of specific tactics affects consumers' responses to persuasive attempts (e.g., Campbell & Kirmani, 2000). However, limited research has used this experimental method regarding consumer environmental concern, while most of them view consumer environmental concern as a continuous variable and use regression analysis (e.g., Bickart & Ruth, 2012; Chang et al., 2015; Matthes et al., 2014). Thus, Study 2 tends to fill this gap and follow the previous paradigm by manipulating participants' environmental concern about the use of functional features (green claims) in green ads. A direct manipulation provides an opportunity to evaluate whether, and how, consumer environmental concern might influence the perceived effectiveness of this tactic on themselves and others differently.

4 | STUDY 2

A 2 (self/an average person, within-subject) \times 2 (priming condition/control condition, between-subject) mixed experimental design is employed. Each participant rates the perceived effectiveness of the ads on themselves and an average person. The within-subject measures allow a test to pinpoint the predictive effects of consumers' inferences about themselves and others, respectively. Furthermore, Study 2 examines the effect of specific environmental concern on the third-person perception. The within-subject design could reduce potential errors associated with individual differences because each participant serves as his or her own referent (Howell, 2002).

Participants are randomly assigned to one of two between-subject conditions. In the priming condition, participants first read the following text about environmental concern toward green communication: "A growing number of consumers are becoming concerned about the environment. For example: (a) The phosphate detergent washing wastewater discharges into waste systems, and it is difficult for ordinary wastewater processing systems to break down phosphates. As phosphates carry into streams, lakes, and rivers, they increase algae growth and subsequently decrease the oxygen that is needed for healthy aquatic life (i.e., fish), and contribute to the pollution of water bodies (Ekholm & Krogerus, 2003). (b) Nonbiodegradable materials do not react and dissolve easily in the natural process, while biodegradation refers to the breaking down of organic substances (i.e., plants, dead animals, rocks, and minerals) by natural process. Plastic, a combination of elements extracted from crude oil then remixed by men in white coats, is nonbiodegradable. It has been thought that there is no natural system (i.e., enzymes and microorganisms) to break down this manmade petrochemical compound (Alexander, 1981). Parallel to this trend, advertisers often use environmental appeals in advertising in the hope of attracting a person to buy the product. Many companies were quick to adopt green claims, sometimes using delusive or exaggerated environmental appeals. For example, the words commonly used in much environmental advertising, such as 'environmental friendly,' 'degradable,' 'recycled,' 'recyclable,' or 'ozone friendly,' have no clear, uniform meaning." They are also asked to submit any thoughts about this example. After that, they complete a 7-point EC scale (Cronbach's $\alpha = 0.94$) (Matthes et al., 2014).

On the following screens, participants read the functional ad and answer questions about their opinions. In the control condition, participants read the functional ad and answer questions directly, without the priming task.

Immediately after reading the ad, all participants rate the effectiveness of the functional features in green ads on themselves: "how would this ad claim affect your purchase decision about the advertised product?" (1 = *would not affect your decision*; 7 = *would be a primary factor*), and the same question about an average person, "how would this ad claim affect an average person's purchase decision about the advertised product?" (1 = *would not affect his/her decision*; 7 = *would be a primary factor*). The order of these two measures (i.e., "self" first vs. "an average person" first) is counterbalanced. Participants also rate how suspicious they are about ad truthfulness on a 7-point scale for

“deceptive,” “dishonest,” “misleading,” and “untruthful” (1 = *not at all*; 7 = *very*) (Cronbach's $\alpha = 0.93$).

4.1 | Results

4.1.1 | Manipulation check

Individual differences in environmental concerns are significantly different between the priming ($M = 6.02$, $SD = 0.75$) and control conditions ($M = 4.21$, $SD = 0.98$), $t(160) = 13.21$, $p < 0.001$. Participants in the priming condition are more suspicious about ad truthfulness ($M = 4.31$, $SD = 1.36$) than those in the control condition ($M = 3.69$, $SD = 1.20$), $t(160) = 3.08$, $p < 0.01$. The higher level of suspicion indicates that the specific environmental knowledge about functional features in green ads is more salient in the priming condition than in the control condition. Therefore, the text about environmental concern toward green communication successfully manipulated high and low environmental concern.

4.1.2 | Perceived effectiveness

A 2 (priming/control) \times 2 (self/an average person) repeated-measure ANOVA is performed. The results show that the main effect of the self/average person comparison is significant: the perceived effectiveness is stronger on an average person ($M = 5.35$, $SD = 1.17$) than on the self ($M = 4.46$, $SD = 1.05$), $F(1, 160) = 54.84$, $p < 0.001$, $\eta_p^2 = 0.28$. The main effect of priming is not significant, $F(1, 160) = 0.68$, $p = 0.41$. The two-way interaction is significant, $F(1, 160) = 21.42$, $p < 0.001$, $\eta_p^2 = 0.13$. Specifically, participants in the priming condition report lower effectiveness on the self ($M = 4.23$, $SD = 1.03$) than those in the control condition ($M = 4.69$, $SD = 1.03$), $t(160) = -2.82$, $p < 0.01$, $d = 0.45$. By contrast, the former reports higher effectiveness on an average person ($M = 5.68$, $SD = 0.91$) than the latter ($M = 5.02$, $SD = 1.31$), $t(160) = 3.69$, $p < 0.001$, $d = 0.60$ (see Figure 2). H2 is therefore supported.

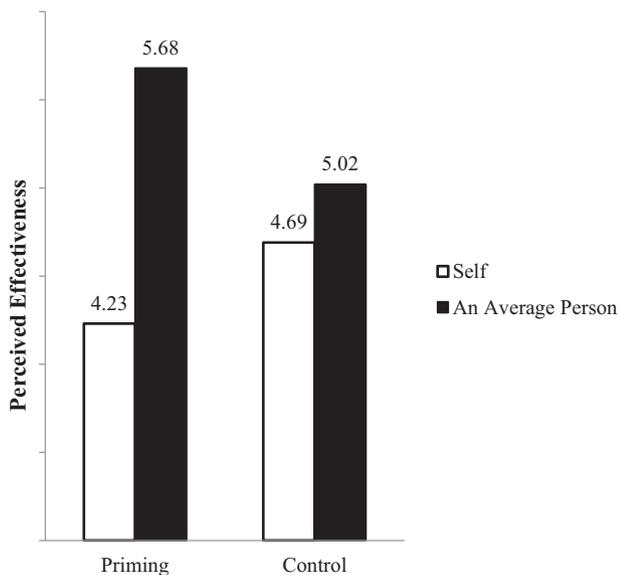


FIGURE 2 The interplay of the third-person effect and consumer environmental concerns on perceived effectiveness

4.2 | Discussion

Study 2 supports H2, that high-EC consumers are more likely than low-EC consumers to believe that the use of functional features in green ads will have a stronger influence on others' purchase decisions than on their own purchase decisions. Moreover, Study 2 also proves a pattern consistent with Study 1 in terms of the third-person effect. In other words, the functional green ad is regarded as more effective on an average person than on the self. Extending Study 1, Study 2 demonstrates that consumer environmental concern could reduce the perceived effectiveness of the functional green ad on consumers themselves, and this concern also increases the perceived effectiveness on an average person.

Studies 1 and 2 examine the perceptual hypothesis of the third-person perception regarding consumer environmental concern. However, the results of previous research regarding the behavioral hypothesis of the third-person perception toward persuasive messages remain mixed (e.g., Huh et al., 2004; Sun et al., 2008; Wei et al., 2010). Thus, it is necessary for this study to test the behavioral hypothesis of the third-person perception toward the persuasion tactic. Furthermore, regarding the group differences as a moderator for the perceptual hypothesis of the third-person effect (Lee & Tamborini, 2005), the relationship between cultural group differences and the behavioral hypothesis of the third-person perception remains unknown in the context of the functional green ad. Therefore, the present study designs Study 3 to investigate the cultural effects on the behavioral hypothesis of the third-person perception. The hypothesis predicts that, in an individualistic culture, the perceived effectiveness on the self is associated with consumers' support for regulations on the use of functional features in green ads, while in a collectivistic culture, the perceived effectiveness on others is associated with consumers' support for regulations on the use of functional features in green ads.

5 | STUDY 3

This experiment employs a 2 (self/an average person, within-subject) \times 2 (individualism/collectivism, between-subject) design. One hundred and thirty-eight students (62.8% female, age range: 18–22 years) from a university in Zhuhai, China participate in the main study for extra course credit.

Participants are first asked to complete scales assessing individualism and collectivism, adopted from McCarty and Shrum (2001) (Cronbach's $\alpha = 0.76$) and Kim and Choi (2005) (Cronbach's $\alpha = 0.79$), respectively. This study performs a median split of individualism and collectivism to create low- and high-individualism scores and low- and high-collectivism scores. Participants who score above the median value for individualism are classified as high individualism, while those who score below the median value are classified as low individualism. Similarly, participants who score above median value for collectivism are classified as high-collectivism, while those who score below the median value are classified as low-collectivism. This classification scheme yields four groups. In this study, “high-individualism and low-collectivism (coded as individualistic culture)” and “low-individualism

and high-collectivism (coded as collectivistic culture)" groups are selected for further study.

After respondents are classified into these two groups (i.e., individualistic culture vs. collectivistic culture), they are randomly assigned to one of these two conditions. On the following screens, all participants read the functional ad and answer questions on their opinions.

Immediately after reading the ad, all participants rate the effectiveness of the functional features in green ads on themselves: "how would this ad claim affect your purchase decision about the advertised product?" (1 = would not affect your decision; 7 = would be a primary factor), and the same question about an average person, "how would this ad claim affect an average person's purchase decision about the advertised product?" (1 = would not affect his/her decision; 7 = would be a primary factor). The order of these two measures (i.e., "self" first vs. "an average person" first) is counterbalanced.

Participants then report their supportiveness of regulation: "do you support regulations that require advertisers to regulate the functional features in green ads (e.g., 100% recyclability)?" It captures the construct of supportiveness of regulation. After that, they complete two seven-point scales: attitude toward green products (Chang, 2011; Cronbach's $\alpha = 0.82$) and green purchase behavior (Kim & Choi, 2005; Cronbach's $\alpha = 0.81$). Finally, participants answer basic demographic questions, such as age, gender, and education.

5.1 | Results

5.1.1 | Manipulation check

Participants in the individualism condition are more individualistic ($M = 4.96$, $SD = 0.50$) than collectivistic ($M = 3.60$, $SD = 0.35$), $t(116) = 17.25$, $p < 0.001$. In the collectivism condition, participants are more collectivistic ($M = 5.06$, $SD = 0.54$) than individualistic ($M = 3.47$, $SD = 0.53$), $t(116) = -16.12$, $p < 0.001$. Furthermore, a two-way ANOVA is conducted. The two-way interaction is significant, $F(1, 232) = 546.03$, $p < 0.001$. There are no other main effects (all $p > 0.05$). Specifically, participants in the individualism condition report being less collectivistic ($M = 3.60$, $SD = 0.35$) than those in the collectivism condition ($M = 5.06$, $SD = 0.54$), $t(116) = -17.39$, $p < 0.001$. By contrast, the former reports being more individualistic ($M = 4.96$, $SD = 0.50$) than the latter ($M = 3.47$, $SD = 0.53$), $t(116) = 15.79$, $p < 0.001$. Therefore, individualism/collectivism is successfully manipulated.

5.1.2 | Perceived effectiveness

A 2 (individualism/collectivism) \times 2 (self/an average person) repeated-measure ANOVA is performed. The results show that the main effect of the self/average person comparison is significant: the perceived effectiveness is stronger on an average person ($M = 4.42$, $SD = 1.17$) than on the self ($M = 3.86$, $SD = 1.56$), $F(1, 232) = 9.93$, $p < 0.01$, $d = 0.41$. The main effect of individualism/collectivism is not significant, $F(1, 232) = 0.50$, $p = 0.48$, nor is the two-way interaction, $F(1, 232) = 0.01$, $p = 0.96$. More specifically, participants in the individualistic culture condition report lower effectiveness on the self ($M = 3.92$, $SD = 1.65$) than on an average person ($M = 4.49$, $SD = 1.22$), $t(116) = -2.14$,

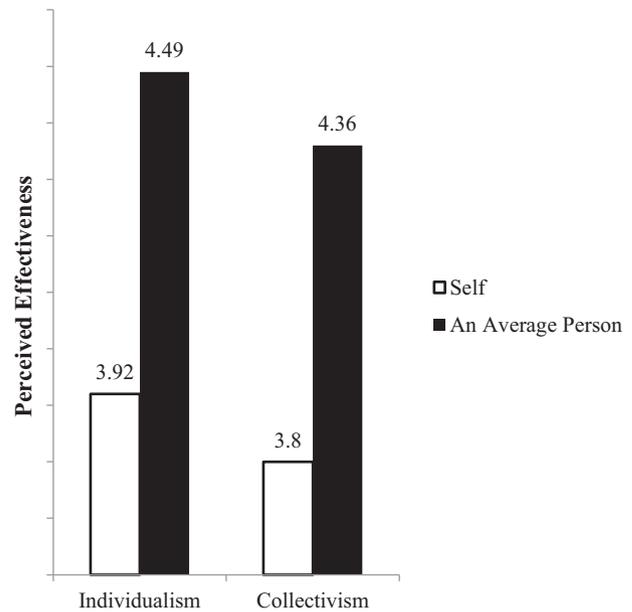


FIGURE 3 The interplay of the third-person effect and individualism/collectivism on perceived effectiveness

$p = 0.03$, $d = 0.40$. Similarly, participants in the collectivistic culture condition report lower effectiveness on the self ($M = 3.80$, $SD = 1.48$) than on an average person ($M = 4.36$, $SD = 1.11$), $t(116) = -2.32$, $p = 0.02$, $d = 0.43$ (see Figure 3). H1 is therefore supported.

5.1.3 | Supportiveness of regulation

Regression analysis is used to test the extent to which the perceived effectiveness on the self or an average person could better predict consumer supportiveness to regulate the use of functional features in green ads. Supportiveness is regressed upon the perceived effectiveness on the self and on an average person.

In the individualistic culture condition, the coefficient of effectiveness on the self is significant ($\beta = 0.31$, $p < 0.05$, $r = 0.34$), whereas that on an average person is not significant ($\beta = 0.05$, $p = 0.71$). Thus, H3a is supported. In the collectivistic culture condition, the coefficient of effectiveness on the self is not significant ($\beta = -0.09$, $p = 0.50$), whereas that on an average person is significant ($\beta = 0.40$, $p < 0.01$, $r = 0.35$). H3b is therefore supported (see Table 1, Table 2, Table 3).

5.2 | Discussion

Study 3 supports H3a, which states that, in an individualistic culture, the perceived effectiveness on self, rather than on an average person, is associated with consumers' support for regulations of the use of functional features in green ads. Study 3 also supports H3b, which states that in a collectivistic culture, the perceived effectiveness on an average person, rather than on self, is associated with consumers' support for regulations on the use of functional features in green ads. Furthermore, Study 3 reveals a corresponding result with Study 1 regarding the third-person perception, supporting H1. The functional green ad is perceived as more effective on an average person than on the self.

TABLE 1 Descriptive statistics, correlations, and reliabilities on the individualistic culture condition^a

Variables	Mean	SD	1	2	3	4	5	6	7	8
Age ^b	18.61	0.74	1.00							
Gender ^c	0.93	0.25	<i>-0.42**</i>	1.00						
Education ^c	14.54	1.91	0.02	0.22	1.00					
Attitude toward green products	5.93	0.95	-0.15	-0.15	-0.06	1.00				
Green purchase behavior	4.67	1.46	-0.15	-0.18	-0.01	0.47**	1.00			
Perceived effectiveness on the self	3.92	1.65	-0.03	-0.10	-0.12	0.08	0.12	1.00		
Perceived effectiveness on an average person	4.49	1.22	-0.22	-0.01	-0.05	0.31*	0.08	0.41**	1.00	
Supportiveness of regulation	6.39	0.95	0.10	-0.18	-0.098	0.30*	0.02	0.34**	0.25	1.00

^aReliability coefficients are in italics on the diagonal, $n = 59$. ^b0 = male, 1 = female. ^cIn years; * $p < 0.05$; ** $p < 0.01$.

TABLE 2 Descriptive statistics, correlations, and reliabilities on the collectivistic culture condition^a

Variables	Mean	SD	1	2	3	4	5	6	7	8
Age ^b	18.36	0.61	1.00							
Gender ^c	0.88	0.33	0.22	1.00						
Education ^c	14.20	1.98	-0.02	0.31*	1.00					
Attitude toward green products	5.94	0.74	0.08	0.20	0.00	1.00				
Green purchase behavior	4.69	0.99	-0.21	-0.03	0.08	0.40**	1.00			
Perceived effectiveness on the self	3.80	1.48	-0.11	-0.09	0.179	-0.059	0.24	1.00		
Perceived effectiveness on an average person	4.36	1.11	0.06	-0.02	0.03	0.15	0.29*	0.28*	1.00	
Supportiveness of regulation	5.78	1.23	-0.03	-0.24	-0.31*	0.01	0.01	-0.02	0.35**	1.00

^aReliability coefficients are in italics on the diagonal, $n = 59$; ^b0 = male, 1 = female; ^cIn years; * $p < 0.05$; ** $p < 0.01$.

TABLE 3 Results of regressions on supportiveness of regulation

Models	Supportiveness of Regulation in the Individualistic Culture Condition ^a		Supportiveness of Regulation in the Collectivistic Culture Condition ^a	
	β	t Value	β	t Value
<i>Control variables</i>				
Age	0.11	0.77	-0.06	-0.45
Gender	-0.08	-0.53	-0.15	-1.13
Education	-0.02	-0.14	-0.26	-1.97
Attitude toward green products	0.35	2.35*	0.02	0.15
Green purchase behavior	-0.18	-1.27	-0.09	-0.59
<i>Independent variable</i>				
Perceived effectiveness on the self	0.31	2.25*	-0.09	-0.67
Perceived effectiveness on an average person	0.05	0.37	0.40	3.07**
(R^2 adjusted)	0.14		0.16	
F	2.33*		2.56*	
df	7		7	

^aStandardized coefficients are reported. $n = 59$; * $p < 0.05$; ** $p < 0.01$.

6 | GENERAL DISCUSSION

The present study extends previous studies on the third-person perception to the context of consumer responses to a persuasion tactic. Both the perceptual hypothesis and the behavioral hypothesis of the third-person effect are examined. In three studies, participants rate the perceived effectiveness of functional green claims on the self, others, or an average person. The findings support the third-person perception

because participants report that a functional green ad would be more effective for others than themselves.

More specifically, this research demonstrates the moderation effect of consumer environmental concern on the perceptual hypothesis of the third-person perception. In Study 1, consumer environmental concern is measured as an individual difference variable, reflecting consumers' considerations about the environment in general. In Study 2, specific concerns about green claims are manipulated

experimentally. The findings are complementary because general or specific consumer environmental concern decreases the perceived effectiveness of functional green ads on the self, such that high-EC consumers report a stronger third-person perception than low-EC consumers. These findings are consistent with findings in other consumer domains that consumers with high concerns or knowledge of the persuasion tactic tend to believe that the use of this tactic would have a stronger influence on others' purchase decisions than on their own purchase decisions (e.g., Eisend, 2015; Xie & Johnson, 2015). The results also provide additional empirical evidence for the interaction effects indicated by the Persuasion Knowledge Model (Friestad & Wright, 1994).

On the other hand, regarding the behavioral hypothesis, this research supports the moderation effect of cultural differences on the third-person perception. In Study 3, in the individualistic culture, it is the perceived effectiveness on themselves, not on others, that predicts consumers' supportiveness of regulation of the use of functional features in green ads, whereas this effect is reversed when consumers are in collectivistic cultures. This research also replicates the congruency effect with two cultural differences.

7 | THEORETICAL IMPLICATIONS

This research contributes to the literature on multiple fronts. First, the findings extend the research on ad skepticism in the context of green advertising. The results of previous research regarding ad skepticism toward green advertising remain mixed. For example, it is stated that "consumers are indeed skeptical of green claims" (Sheehan & Atkinson, 2012, p. 6); that "environmental claims are often viewed skeptically and are miscomprehended" (Bickart & Ruth, 2012, p. 52); and that "consumers evaluate green advertising as vague or misleading" (Fowler & Close, 2012, p. 121). However, other studies argue that skepticism toward green advertising is far less serious than previously thought; for example, "a survey of US consumers found no positive relationship between green consumerism and general ad skepticism" (Matthes et al., 2014, p. 115). The findings of the pretest in this research suggest that the functional green ad evokes negative emotions, such as misleading and untruthful, resulting in ad skepticism. This study contributes to the literature on green ads and provides a better understanding of green ad skepticism.

Second, consistent with previous studies, this study extends the third-person perception to the context of consumer responses to a persuasion tactic. Despite the increasing research on the third-person perception (e.g., Eisend, 2015; Li, 2008; Schmierbach et al., 2011), this research provides a better understanding of the third-person perception of functional features (green claims) in green ads. Furthermore, this study provides empirical evidence regarding both the perceptual hypothesis and the behavioral hypothesis of the third-person effect.

Third, while extant studies have shown the moderation effect of consumer environmental concern in terms of green advertising (e.g., Grimmer & Woolley, 2014; Matthes et al., 2014; Pickett-Baker & Ozaki, 2008), this research provides evidence that environmental concern affects consumer impressions about the self and others differently.

High-EC consumers may be more capable of recognizing marketers' manipulations in functional green ads. They tend to process such persuasive attempts with greater caution, and therefore believe that the tactic of functional green ads is less effective on themselves. High-EC consumers also infer that other consumers are susceptible to the influence of this tactic, at least to a greater extent than themselves.

Finally, this research also contributes to the third-person effect literature regarding the behavioral hypothesis. Davison (1983) states that the overestimation of the negative impact on others would lead people to engage in some form of protective action. However, the empirical results of previous research regarding the motivational effects of perceived self-susceptibility and others susceptibility toward persuasive messages remain mixed (e.g., Huh et al., 2004; Sun et al., 2008; Wei et al., 2010; Youn et al., 2000). Moreover, limited research focuses on the moderating effects of the third-person effect on the behavioral hypothesis. This research enriches the literature on behavioral hypothesis of the third-person effect in the context of functional green ads, by examining the moderation effects of cultural differences. In this research, it is the concern in individualistic cultures about the third-person effect of functional green ads on the self, not the others, that predicts consumer support for regulations. This finding is consistent with the self-centric inferential reasoning documented in the literature (Yan & Sengupta, 2013), because people tend to care more about their self-interest and rely on self-relevant information in making judgments about social issues. On the other hand, this research suggests that in collectivistic cultures the third-person effect of functional green ads on others, not the self, predicts consumer support for regulations, consistent with the paternalism theory (Ebejer & Morden, 1988). These findings indicate the need for greater attention to factors shaping the third-person perception processes. For example, though most studies focus on Western society, clearly cultural determinants of this phenomenon need to be observed more closely.

8 | MANAGERIAL IMPLICATIONS

From a public policy standpoint, an important question is the extent to which marketers should be required to generate functional messages in green claims. This research addresses this issue from the standpoint of public opinions by providing empirical evidence about the motivational factors driving consumer support for regulation. This research finds that, in individualistic cultures, the more effective functional green claim is perceived on themselves, the more supportive consumers are of regulating this persuasion tactic, whereas this effect is reversed when consumers are in collectivistic cultures. In other words, in individualistic cultures, when consumers believe that a potentially manipulative persuasion tactic is used and might influence their purchase decisions, they are more likely to support regulation of functional green ads, while this effect is reversed when consumers are in collectivistic cultures.

This research also calls for attention to the issue of how to reduce consumer suspicion of functional green claims from the standpoint of marketers. Some practitioners may argue that it is simply not feasible to put all the functional environmental information in an ad

or a product label. More research is needed to address the specifics necessary to make this practical and realistic for marketers. For example, marketers may enable more detailed environmental-friendly information on products online, such as through a video of energy-conscious production or the process of recyclable packaging. An ad may contain a quick response (QR) code, which does not interfere with marketers' core claims and allows relatively easy access to more product information. With the increasing availability of instant internet access via mobile communication devices, such as smartphones and tablets, marketers can effectively inform consumers, especially those who would like to consider detailed environmental information.

9 | LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

This research takes an important step forward in examining the third-person effect in the context of functional green ads, but it is not without limitations. One potential limitation is that this research uses a single-item scale to measure perceived effectiveness. Obviously, this measure has been argued as less exhaustive to capture different aspects of the effects of the persuasion tactic. Future research could be conducted to address the multidimensionality of the perceived effectiveness of persuasion tactics using multiitem measurement scales. However, a single-item scale can be regarded as valid when the constructs are specific, consisting of a concrete singular object and a concrete attribute (Bergkvist & Rossiter, 2007). In this research, the perceived effectiveness on purchase decisions in the context of functional green ads is a specific construct (Xie & Johnson, 2015), and thus could be measured effectively with a single-item scale. Furthermore, the measure of consumer environmental concern needs more careful examination in future research. Study 1 utilizes a self-report scale that measures a subjective judgment of one's environmental concern. Future research may adopt more objective and specific types of measures (e.g., Paço & Reis, 2012). In addition, Study 2 manipulates consumer environmental concern with a priming task. It is conceivable that participants who read about the use of green claims were more likely to be motivated to acquire environmental concern than those who did not.

Second, when exploring the effects of messages on consumer perceptions in this research, consumer responsiveness to the specific claims may result in potential limitations. In this research, perceived effectiveness would be affected by consumers' involvements when processing functional green ads. High-involved consumers tend to question such claims, influencing the perceived effectiveness. Low-involved consumers may be less motivated to process the claims, and thus less likely to discern the use of functional green ads. Future studies may examine other moderators of the third-person effect regarding cognitive processing.

Third, although the current study revealed the moderating effects of culture differences on the behavioral hypothesis of the third-person effect, the mechanism of such moderating effects remains unknown. Psychological ownership might be a possible theoretical framework for such an effect, as psychological ownership can be assumed to take a mediating role in the link between self-identity and consumer

perceptions, attitudes, and behaviors (Jussila, Tarkiainen, Sarstedt, & Hair, 2015). Assessing the findings of the current study in a psychological ownership context would offer unique insight to interested researchers and practitioners.

Fourth, the effect of green advertising examined in this research is assessed through the perspective of college students, which limits the generalization of the findings. In this research, respondents are not representative of the general population of younger consumers and other variable measurements are needed. Thus, caution should be exercised when generalizing the results to the larger population (Liu & Brock, 2011). Future research could use field studies with a more varied age group.

Finally, this research studies the effects of functional green claims by utilizing print ads with elaborated product attributes. Generalization of the findings should be further examined by involving variations of this claim type (e.g., television ads), as well as other claim types (e.g., emotional green ads, or combined green ads) (Hartmann & Apaolaza-Ibáñez, 2009; Matthes et al., 2014).

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ENDNOTE

¹ According to Hartmann, Ibáñez, and Sainz (2005), three major green appeals were distinguished: a functional appeal (e.g., recyclable package), an emotional appeal (e.g., pleasant nature scenery on package), and a combination of the two (e.g., pleasant nature scenery on a recyclable package).

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APPENDIX A



XYZ
Dishwashing Liquid

Control Group



- Natural ingredients from plant-based origins
- Biological nutrients
- Phosphate-free, no damaging chemicals
- Never tested on animals
- Recyclable packaging with a recyclability of 100%
- Biodegradation available
- Energy-conscious production

XYZ
Dishwashing Liquid

Functional Ad

APPENDIX B**Skepticism**

1. Most environmental claims on package labels or presented in advertising are true.
2. Because environmental claims are exaggerated, consumers would be better off if such claims on package labels or in advertising were eliminated.
3. Most environmental claims on package labels or in advertising are intended to mislead rather than inform consumers.
4. I do not believe most environmental claims on package labels or presented in advertising.

Ad evaluation

1. The ad is pleasant–unpleasant.
2. The ad is good–bad.
3. The ad is enjoyable.
4. I like–dislike the ad.
5. I react favorably–unfavorably to the ad.
6. I feel negative–positive toward the ad.
7. The ad is fun–not fun to read.

Environmental concern (EC)

1. I am concerned about the environment.
2. The condition of the environment affects the quality of my life.
3. I am willing to make sacrifices to protect the environment.
4. My actions impact the environment.

Individualism

1. Being unique, different from others in many respects.
2. Being competitive with others.
3. Working independently from other.

Collectivism

1. I respect the majority's wish.
2. I support my group, where they are right or wrong.
3. I respect decisions made by my group.
4. I maintain harmony in my group.