

Performance or Safety?

**How Regulatory Foci and Brand Associations Affect Gen Z Car Shoppers' Attitudes
Toward and Intentions to Respond to Mobile Advertising Claims**

by

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Abstract

This study aims to systematically examine the effects of message-regulatory focus fit and message-brand association fit on Gen Z consumers' attitudes and intentions to respond to mobile advertising claims, employing Regulatory Focus Theory and Elaboration Likelihood Model as the theoretical frameworks underlying such effects.

Study 1 was conducted as a between-subjects online experimental study manipulating consumers' situational regulatory focus (promotion- vs. prevention-focused) and ad claim framing (performance- vs. safety-focused) among 429 U.S. consumers aged between 19 to 25. Results demonstrated that when the male consumers' regulatory foci fit the ad claim framings (i.e., promotion-focused consumer saw performance-focused ads, and prevention-focused consumers saw safety-focused ads), they have more positive attitudes toward and greater intentions to respond to the ad claims than if their regulatory foci did not fit the ad claim framings (i.e., promotion-focused consumer saw safety-focused ads, and prevention-focused consumers saw performance-focused ads). This interaction effect was mediated by regulatory fit. However, female consumers responded more positively to safety- than performance-focused ad claims, regardless of their individual regulatory focus.

Study 2 was conducted as a between-subjects online experimental study manipulating the brand association (performance- vs. safety-salient) and ad claim framing (performance- vs. safety-focused) among 263 U.S. consumers aged between 19 to 25. Results revealed that when the brand associations do not fit the ad claim framings, male consumers have more positive attitudes toward and greater intentions to respond to the ad claims than if the brand's attribute associations fit the ad claim framings. The interaction effect was mediated by the amount of

elaboration. However, female consumers responded more positively to the ad claims when the ad messages were congruent with the brand associations.

The findings of this study suggest that the fit/non-fit between consumer regulatory focus and ad claim framing, and the fit/non-fit between brand-attribute association and ad claim framing should be considered as influencing factors in mobile advertising. Brand managers and marketers should also utilize gender-specific mobile advertising messages when targeting Gen Z consumers to enhance the effectiveness of their products and services' communication and marketing strategies.

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Chapter 1. Introduction

As one of the most powerful marketing tools, the primary purpose of commercial advertising, regardless of its media or form, is to drive sales of a product or service by informing and persuading the target consumers (Hackley, 2005). Since the mid-19th century, corporations, organizations, retailers, and service providers have utilized different tools, media channels, and strategies to communicate with consumers through advertising messages. Ranked as the 9th biggest industry with a global market value of \$3 trillion (Novicio, 2021), the automobile industry invests billions of dollars each year to promote its products through advertising. For example, in 2020, the “Big Three” automakers in the U.S. spent almost \$9 billion in total worldwide advertising, including Stellantis’ (formerly Fiat Chrysler) 4.2 billion, General Motors’ \$2.7 billion, and Ford’s \$1.82 billion (Johnson, 2021).

Aside from home, a personal vehicle is arguably the second-most expensive purchase for most people to make (Dogen, 2019). Since there are many brands, models, features, and configurations to choose from, deciding which car to buy often poses a critical challenge for consumers. A global survey conducted in May 2020 showed that the Covid-19 pandemic changed why and how people buy cars (Phelan, 2020). Among all people surveyed who were considering buying a car in 2020, 45% of those were under the age of 35, and a majority of them had never owned one before. Due to hygiene concerns, personal vehicles are considered much safer than public transportations, taxis, and share-ride services. For the same reason, most consumers, including about 49% of those from the U.S., prefer digital shopping and online purchasing rather than visiting car dealerships in person (Phelan, 2020).

In the United States, people can be granted a driver's license at a very young age — 16 to 18 years old, depending on the state law (Witmer, 2019). For young drivers, cars symbolize freedom, maturity, and independence. To them, driving is considered a fun and exploratory experience. Statistics also show that young drivers are more likely to take risks, make mistakes, become distracted, and sometimes cause fatal accidents (Witmer, 2019). Hence, beyond the price tag, this group of shoppers is also looking for features and add-ons, fuel economy, reliability, safety ratings, and overall driving experience (Hearst Autos Research, 2020).

As a form of advertising via mobile devices, mobile advertising allows retailers and service providers to connect their target consumers directly with relevant information about their products and services (Grewal et al., 2016). A study by Cox Automotive in 2018 showed that 2 out of 3 car buyers don't know what kind of car they want to buy at the initial shopping stage (Niziak, 2021), which gives car manufacturers and dealerships the opportunity to influence this group of potential customers through advertising messages. Among all vehicle buyers, 95% use digital as a source of information and spend 33% of their research time on a mobile device (Anderson, 2021). Since mobile ad campaigns have been shown five times more effective than online ads (Yaniv, 2009), and young car shoppers such as Gen Zers are more likely to trust the content of mobile apps (Van den Bergh, 2016), car manufacturers and marketers have been using mobile advertising campaigns to attract young car shoppers. However, there is little research on what makes some mobile ads more effective than others, or what factors contribute to effective mobile advertising campaigns. For example, which vehicle attributes (e.g., performance, safety, etc.) should be advertised? How should these attributes be framed in the advertising claims? How would consumers' perceived brand association with these attributes affect the processing of such claims? How would consumers' regulatory focus towards goals affect their responses to the

advertising? How would these factors interact and affect the effectiveness of the advertising?
This research attempts to answer these questions.

Problem Statement

Advertising has been traditionally defined as mass communication designed to change the recipient's attitudes and behavior (Meffert et al., 2000), and the general goal of advertising has been to communicate information to a specific group of audience effectively to achieve the desired effect (Müller et al., 2011). Depending on the message content, time, scope, media type, and target segment, Schmid and Lyczek (2006) suggested differentiating various advertising goals into three categories: cognitive goals (communicating the key information about the product or service), emotional goals (linking a product or service with specific emotions), and conative goals (stimulating potential consumers to take behavioral actions). Thus, the effectiveness of an advertisement can be measured very differently depending on these goals.

For marketing and advertising professionals, the effectiveness of a billboard ad about a restaurant near an exit may be measured by visits of new customers; a TV commercial about an internet service can be measured by the number of new subscribers; for a mobile ad, the click-through rate on the "add to cart" button will be more appropriate to measure its effectiveness. For researchers, the measure of advertising effectiveness has been primarily on attention (e.g., Aaker & Lee, 2006), attitude (e.g., Xia & Monroe, 2009), brand equity (e.g., Pednekar, 2013), and intention to respond (e.g., Li, 2021). Informativeness and credibility (e.g., Jäger & Weber, 2020) of advertising claims, product type (e.g., Partouche et al., 2020), and individual differences such as involvement level (e.g., Müller et al., 2011), need for cognition (e.g., Choi et al., 2017), and consumer regulatory focus (e.g., Roy & Phau, 2014) have been identified as the key factors which significantly influence the effectiveness of the advertising messages.

Many researchers (e.g., Roy & Phau, 2014) have been using Regulatory Focus Theory (Higgins, 1998), Regulatory Fit Theory (Higgins, 2000), and Elaboration Likelihood Model (Petty & Cacioppo, 1981) as the frameworks to study consumer behavior and understand regulatory focus to respond to advertising messages and their information processing and attitude change toward the advertisement. Among the key constructs, regulatory focus refers to the motivational and self-regulation strategy consumers engage in pursuing their goals (Higgins, 1998), which can be promotion-focused or prevention-focused; elaboration refers to the extent to which a person thinks carefully about the content of a message (Petty & Cacioppo, 1981); and regulatory fit refers to the “relation between a person’s orientation to an activity and the means used to pursue that activity” (Higgins, 2000, p. 1218).

Previously, many researchers (e.g., Bhatnagar & McKay-Nesbitt, 2016; Li, 2021; Roy, 2017; Roy & Phau, 2014; Sun et al., 2021; Zarouali et al., 2019) have suggested that when the advertised product attribute aligns with or fits the consumer’s regulatory focus, a stronger attitude toward the advertisement and the product will occur, which then lead to greater purchase intention. On the other hand, Fridman, Ubel, and Higgins (2018) found that non-fit messaging can increase attention to the message content, increase the willingness to process the information, and de-intensify individual pre-existing attitude biases toward the products. Some researchers (e.g., Boush & Loken, 1991; Durgee 1999; Fridman et al., 2018; Fiske & Taylor, 1991; Lane, 2000; Machleit et al., 1993; Sjödin & Törn, 2006) also discovered that when the advertised brand association does not fit the product attribute promoted in the advertising message, more positive thoughts could occur, which may lead to a more favorable attitude toward the advertisement and greater intention to respond. Together, these contradictory findings on the effect of message-regulatory focus fit and message-brand association fit on the

effectiveness of advertising messages indicate a research gap that needs to be investigated, especially in the mobile advertising context.

Purpose and Objectives of the Study

To address the aforementioned gap in consumer research in mobile advertising setting, this research attempts to investigate the impact of advertising claim framing, consumer regulatory focus, and brand association on consumers’ attitudes toward and intentions to respond to mobile advertising claims, as well as provide insight regarding regulatory fit and elaboration as the underlying mechanism for these effects through two experimental studies. Hence, the overarching purpose of this research is to systematically examine the roles of message-regulatory focus fit (whether the advertising claim framing is congruent with consumers’ regulatory focus) and message-brand association fit (whether the advertising claim framing is congruent with the brand-attribute association) in consumers’ attitudes toward mobile ads and their intentions to respond to mobile advertising claims while using Regulatory Focus Theory (Higgins, 1998) and Elaboration Likelihood Model (Petty & Cacioppo, 1981) as the theoretical underpinnings for these effects.

Table 1
List of variables

Type	Variables
IVs	Consumer Regulatory Focus (promotion-focused vs. prevention-focused)
	Advertising Claim Framing (performance-focused vs. safety-focused)
	Brand Association (performance-salient vs. safety-salient)
DVs	Attitude toward mobile ad claims
	Intention to Respond to mobile ad claims

	Regulatory Fit
Mediators	Elaboration Amount
	Elaboration Valence

More specifically, Study 1 aims to 1) examine the interaction effects of Gen Z consumers' regulatory focus (promotion-focused vs. prevention-focused) and advertising claim framing (performance-focused vs. safety-focused) on a) consumers' attitudes toward and b) consumers' intentions to respond to mobile advertising claims; and 2) investigate the mediating role of regulatory fit in the above effects. Study 2 aims to 1) examine the interaction effects of brand associations (performance-salient vs. safety-salient) and advertising claim framing (performance-focused vs. safety-focused) on a) consumers' attitudes toward and b) consumers' intentions to respond to mobile advertising claims; and 2) investigate the mediating role of elaboration amount and elaboration valence in the above effects.

Definition of Terms

Advertising Claim: “A statement made in advertising about the benefits, characteristics, and/or performance of a product or service designed to persuade the customer to make a purchase” (American Marketing Association).

Advertising Claim Framing: The “manner in which a specific attribute information is framed” in the ad (Levin & Gaeth, 1988, p. 182). In this study, advertising claim framing is operationalized by manipulating the claim context to focus on specific product attributes, either performance attribute centric (Performance-focused) or safety attribute centric (Safety-focused). For example, “Great performance” for the performance-focused claim condition, and “5 star safety” for the safety-focused claim condition.

Attitude: “A person’s overall evaluation of persons, objects, and issues” (Petty & Wegener, 1998, p. 323). For this study, consumer attitude is defined as a feeling of how favorably or unfavorably or how positively or negatively a consumer views mobile advertising claims. A modified version of a five-item 7-point semantic differential scale adapted by Andrew and Shimp (2006) was used to measure attitudes toward mobile ad claims.

Brand Familiarity: The accumulated related experiences that consumers have had with a brand (Alba & Hutchinson, 1987). A simplified version of a single item 7-point bipolar scale adapted by Tam (2008) was used to measure the level of brand familiarity.

Brand Association: Anything connected to the memory of a brand (Aaker, 1991) or the connections between the brand and its unique attributes in consumers’ minds (Keller, 1993). In this study, a simplified version of a single item 7-point Likert scale adapted by Yoo et al. (2000) was used to measure the level of brand association (one for brand-performance association, and one for brand-safety association). The brands with the least differences between the brand-performance association rating and the brand-safety association rating will be categorized as the “attribute-balanced” brands; the brand with the greatest positive difference between the two ratings will be categorized as the “performance-salient” brand; the brand with the greatest negative difference between the two ratings will be categorized as the “safety-salient” brand. In Study 1, attribute-balanced brands were used to control the effect of brand association. In Study 2, attribute-salient brands were used to investigate the effect of brand association.

Elaboration: The extent to which an individual thinks carefully about the content of claims (Petty & Cacioppo, 1981). For this study, elaboration amount and valence (positive/negative) were measured using both scales and open responses. A modified

version of a five-item 7-point Likert scale adapted by Oh and Jasper (2006) was used to measure the amount of elaboration on advertising claims. An index of the valence of message was calculated to measure the valence of elaboration by using a method from a study by Briñol et al. (2015).

Intention to Respond: The mental state that represents a commitment to carrying out an action (Fishbein & Ajzen, 1975). In this study, a modified version of a three-item 7-point Likert scale developed by Venkatesh and Bala (2008) was adapted to measure the strength of the consumer's intention to respond to the mobile ad claims.

Need for Cognition (NFC): An individual's "tendency to engage in and enjoy thinking" when processing information (Cacioppo & Petty, 1982, p. 116). In this study, an 18-item 7-point Likert scale developed by Cacioppo et al. (1984) was used to measure the need for cognition.

Regulatory Fit: The "relation between a person's orientation to an activity and the means used to pursue that activity" (Higgins, 2000, p. 1218). A "fit" occurs when customers utilize techniques and engage in activities that are consistent with their goal orientation (regulatory focus), they have the feeling that "it just seems right" and experience heightened motivation to pursue the goal activities (Cesario et al., 2008). For this study, a modified version of a three-item 7-point Likert scale adapted by Khajehzadeh, Oppewal, and Tojib (2014) was used to measure the level of regulatory fit.

Regulatory Focus: The motivational and self-regulation strategy consumers engage in pursuing their goals (Higgins, 1998), which can be promotion-focused or prevention-focused. Higgins (1998) stated that individuals with a strong promotion focus are concerned with hopes and aspirations, and they will be more motivated by incentives related to

achievement goals; those with a stronger prevention focus are concerned with responsibilities and obligations, and they will be more motivated by incentives related to safety goals. In study 1, the situational regulatory focus was manipulated and checked via the method used by Wan, Hong, and Sternthal (2009).

Chapter 2. Review of Literature

This chapter provides a review of literature for the major constructs and their relationships proposed in the studies, describes the theoretical framework supporting the research proposal, and presents the conceptual model and hypotheses for this research. The chapter contains three sections: 1) Overview of background knowledge; 2) Theoretical framework; 3) Hypotheses development. Section 1 reviews background literature on mobile advertising, Gen Z, and U.S. Auto Industry Mobile Advertising. Section 2 reviews Regulatory Focus Theory and Elaboration Likelihood Model as the theoretical framework. Section 3 introduces the conceptual model and discusses focused literature on the variables in the hypotheses to establish support for the hypothesized relationships between those variables.

Overview of Background Knowledge

Mobile Advertising and Gen Z

Advertising is referred to as “a paid, mediated form of communication from an identifiable source, designed to persuade the receiver to take some action, now or in the future” (Richard & Curran, 2002, p. 74), and this communication can be “conveyed to an audience through print, electronics, or any method other than direct person-to-person communication” (Richard & Curran, 2002, p. 74). The recent growth of the Internet and worldwide communication technology provides companies with a new platform to promote their products and services directly to consumers through mobile devices. This new form of advertising is commonly known as mobile advertising (Noor, 2016).

Mobile advertising can be defined as “text and/or graphic-based commercial messages that are sent to consumers via mobile devices,” which include Short Messaging Service (SMS),

Multimedia Message Service (MMA), mobile banner ads, and full-screen mobile ads (Peter et al., 2007, p. 129). In recent years, mobile phones and other mobile devices have provided a new channel for businesses to connect with their consumers and deliver commercial messages for various products and services. In 2021, smartphone users worldwide surpassed 6.3 billion (Statista, 2021), and mobile advertising spending worldwide reached \$288 billion (Statista, 2022). Despite the economic implications of Coronavirus Disease 2019 (COVID-19), the Interactive Advertising Bureau (IAB) released its latest Internet Advertising Revenue Report for 2020, which showed a 12.2 percent increase in digital advertising (IAB, 2021). Compared to traditional media, such as print ads and broadcast media, mobile ads enable marketers to reach appropriate audiences at the right time and in the right place (Izquierdo-Yusta et al., 2015). Mobile ads are perceived as novel, and they may improve consumers' attitude toward the ad because of a mobile phone's personal and active nature (Conner & Lee, 2015)

Anyone born between 1981 and 1996 was classified as a Millennial by Pew Research Center, while those born after 1997 were classified as Generation Z, or Gen Z (Dimock, 2019). According to a survey conducted by Deloitte, an international professional services network company, Gen Zers would surpass Millennials in 2020, not only by population, but also as the generation entering the workforce and spending money on products and services (Deloitte, 2017), so it is important for businesses and marketers to move their focus on Gen Zers and understand who they are, what they value, and how they respond to brands and advertising messages (Martin, 2021).

Gen Zers are characterized as a generation that is accustomed to social media, constant connectivity, on-demand entertainment, and innovative communications since they grew up with mobile devices, WIFI, and high-bandwidth cellular service (Dimock, 2019). Compared to

Millennials, Gen Zers are well-educated, financially more prudent, more tech-savvy, more ethically and culturally diverse, more tolerant of diversity, and less loyal to brands (Dimock, 2019). Van den Bergh (2016) suggests that 64% of Gen Zers are more likely than other generations to trust the content of mobile apps and brand messages. Due to Gen Zers' short attention span (8 seconds in comparison to Millennials' 12 seconds), it is critical for marketers to develop effective communication strategies to attract the attention of this group of consumers and increase their purchase intentions.

U.S. Auto Industry Mobile Advertising

A report from INVOCA (Anderson, 2021) showed that after a dip in 2020, the automobile industry in the United States spent \$12.42 billion on digital advertising. Summit Advertising (2021) reported that the U.S. automotive sector invested more than \$9.42 billion in mobile ads in 2018, which resulted in a conversion rate of 45% — much higher than any other traditional marketing techniques. Industry data also showed that over 60% of car shoppers would start research online, and the customers who started their new car searches on a mobile app were 73% more likely to buy a car (O'Connell, 2019). Since consumers can search, decide, and now even buy cars on their mobile devices, digital advertising is the area that auto manufacturers see as an investment worth making.

Past research (Stephen et al., 2013) has shown that mobile ads work more effectively for products that are both utilitarian (with practical functions) and high-involvement (expensive, which demands deliberation) — such as washing machines and utility vehicles. Through analyzing the survey data of 39,946 U.S. consumers on the effectiveness of mobile ads on a variety of products, Stephen et al. (2013) found that mobile ads increased positive attitudes and purchase intentions for utilitarian and high-involvement products, yet no effect for hedonic and

low-involvement products. The explanation by the researchers was that since only a little information can be conveyed due to the small screen size of mobile phones, mobile ads are more effective for the consumer to be cued to product information that they already attained through previous exposures and naturally when they are close to making a purchase decision.

In the car buying context, previous researchers have found that consumers use product attributes such as brand name, affordability, and safety features to determine purchase preference (Rizvi et al., 2018), and they consider the purchase price, performance, vehicle quality, and driving experience before purchasing a car (Mairesse et al., 2012). Performance expectancy is positively related to purchase intentions of vehicles (Leicht et al., 2018). A positive attitude toward the product increases the intention to buy safer cars (Kassim et al., 2019), and brand association and perceived quality affect consumers' purchase intentions toward cars (Thanomsub, 2020).

As of May 2021, the number of smartphone owners in the U.S. surpassed 270 million (Socratic Technologies, 2021), and over 95% of people in the 18-29 age group (a large section of Gen Z) owned a smartphone. According to a recent poll conducted by Bankrate.com, the majority of Americans believe that 21 is the appropriate age to buy or lease their first car. (Parker, 2020). Consumer Reports and Insurance Institute for Highway Safety (IIHS) suggested that safe and reliable new cars and SUVs with good road-test performance will be their ideal choices (Bartlett, 2021). According to the National Automobile Dealers Association (NADA), the best new cars for teenagers and college-age students (i.e., Gen Z consumers) range from \$19,000 to \$29,500. Most popular small to midsized cars and SUVs fall into this price range — including Mazda CX-3 (\$20,800), Jeep Renegade (\$22,850), Honda Civic (\$27,700), Subaru

Forester (\$24,200), Nissan Rogue (\$26,050), Toyota Rav4 (\$26,350), and Chevrolet Equinox (\$27,300).

Advertising factors, media factors, informativeness, credibility, perceived value, and ease of use are found to be significant predictors of consumers' response to mobile advertising (e.g., Choi et al., 2008; Goh et al., 2020; Izquierdo-Yusta et al., 2015; Lee & Johnson, 2021; Maseeh et al., 2021; Noor, 2016). More specifically, informativeness, credibility, and individual difference significantly influence attitudes toward mobile ads and purchase intentions (Goh et al., 2020; Maseeh et al., 2021; Sigurdsson et al., 2018). According to Zhu and Meyer (2016), mobile shoppers appreciate straightforward information about product features, values, and benefits since they are goal-oriented and value quick task completion via their mobile devices. Such information-driven advertisements about the utilitarian features of the products will increase consumers' cognitive involvement, thus leading to more positive attitudes and greater purchase intentions (Bart et al., 2014; Zhu & Meyer, 2016). Based on the findings from these previous studies, this research will focus on three primary factors — advertising claim framing as the informativeness factor, brand association as the credibility factor, and consumer regulatory focus as the individual difference factor, and examine the interaction effects of these three factors on Gen Z car shoppers' responses to mobile advertising claims.

Theoretical Framework

Regulatory Focus Theory (RFT)

According to research conducted over the last few decades, people's basic requirements for nourishment and security have influenced their judgment, attitude, and behavior (Lee & Higgins, 2009). Regulatory Focus Theory (Higgins, 1998) examines the relationships between

the motivation of consumers and how they go about achieving their goals. Since the principle of self-regulatory focus can provide insights into how consumers' motivations and goals are formulated, numerous studies have been conducted to investigate its effects in the context of advertising and consumer behaviors (e.g., Lee & Aaker, 2004).

In his Self-Discrepancy Theory, Higgins (1987) identified three domains of the self — the representation of the set of attributes that you or someone else believes that you *actually* possess (actual self), *should* possess (ought self), or *would like to* possess (ideal self), and how the discrepancies between self-concept and self-guides lead to different motivational predispositions and negative psychological situations. As a continuation of the Self-Discrepancy Theory, Regulatory Focus Theory (Higgins, 1998) relates motivational self-guides to specific behavioral outcomes, in such that ideal self-regulation involves promotion-focus concerns with advancement, aspirations, and accomplishment, and ought self-regulation involves prevention-focus concerns with protection, safety, and responsibility.

Regulatory Fit Theory (Higgins, 2000, 2005) is a theory that examines the relationship between a person's motivational orientation and the methods or strategies they use to pursue their goals. This theory suggests that when people use the preferred means, they will experience a "regulatory fit" — a fit between their regulatory focus and the activities they are to engage in, and they would feel right about the activity and be more eager to engage (Cesario et al., 2008). Previous studies have demonstrated that a good fit would strengthen consumers' regulatory focus and trust in their judgments (Aaker & Lee, 2006), enhance the value perceptions of products, and lead to positive outcomes (Avent & Higgins, 2006; Wang & Lee, 2006), and increase the effectiveness of advertising claims (Hong & Zinkhan, 1995). Freitas and Higgins (2002) also

found that high regulatory fit increases people's anticipations of task enjoyment and perceived task success.

The central postulate of the Higgins's (1998) regulatory focus theory is that people aim to maximize pleasure and avoid pain, and they pursue goals with one of two strategic inclinations — either a promotion focus (approaching pleasure/gains) or a prevention focus (avoiding pain/losses). People with a promotion focus will make decisions with the motivation to gain positive outcomes, and those with a prevention focus will make their decisions with the motivation to reduce negative outcomes. According to this theory, people with salient nurturance needs (promotion-focused) regulate their attitudes and behaviors toward approaching gains and avoiding non-gains, and those with salient security needs (prevention-focused) regulate their attitudes and behaviors toward approaching non-losses and avoiding losses. Another postulate is that chronic (individual) regulatory focus depends on the availability of a self-discrepancy, and situational (momentary) regulatory focus can be manipulated through priming or message framing. Because of the above-mentioned postulates, Regulatory Focus Theory will be applied as the source of hypotheses and Regulatory Fit Theory as the mechanism to explain the interaction effect of advertising claim framing and situational regulatory focus on consumers' attitude toward the advertisement and behavior in response to the advertising claims.

Elaboration Likelihood Model (ELM)

As a kind of persuasive communication, advertising's primary goal is to inform, persuade, and change consumers' attitudes and behaviors. When responding to an advertisement, the hierarchy of effects model (Lavidge & Steiner, 1961) argues that consumers go through three key stages: cognitive (awareness, knowledge), emotive (liking, preferring, conviction), and behavioral (purchase). The Elaboration Likelihood Model (ELM) of persuasion (Petty &

Cacioppo, 1981; Petty & Wegener, 1998) is a dual process theory that describes how people form and change their minds. The central postulates of ELM are that 1) by default, people want to hold the right opinions and attitudes; 2) depending on individual and situational factors, people will engage various amounts of effort (elaboration) to evaluate a claim; and 3) variables can influence the amount and direction of attitude change by either serving as persuasive arguments, serving as peripheral cues or affecting the extent or direction of elaboration of arguments.

The ELM (Petty & Cacioppo, 1981) postulated two major persuasion paths: the central route and the peripheral route. Persuasion will occur through a person's attentive and thoughtful assessment of the material offered in support of an advocate under the central route (e.g., processing textual information). Persuasion via the peripheral route, on the other hand, is based on a person's identification with stimulus signals that are often unrelated to the stimulus' logical quality (e.g., processing background image). The ELM predicts that attitudes formed via the central route will tend to persist over time, resist persuasion, and be more influential in guiding judgment and behavior than attitudes formed via the peripheral route because the central route involves a high level of message elaboration and a great deal of cognition about the arguments.

Based on the postulates mentioned above, it can be assumed that advertising claim framing and perceived brand association with product attributes will affect the amount and direction of attitude change towards the advertised product, thus the purchase intention. In the context of mobile advertising, the ELM model provides a theoretical framework to understand how to strategically engage the consumers through a central route to process the information presented in the persuasive arguments. When advertising claim framing and the brand association are not congruent (non-fit), due to the contradictory information, the consumers may

engage a higher level of elaboration to process the information through the central route, thus the amount and direction of cognitive elaboration can be used to explain and predict attitude formation and change toward the advertised claims and the influence on behavioral intentions.

Proposed Model and Hypotheses Development

This model below (see Figures 1 and 2) shows the interaction effects of advertising claim framing, consumer regulatory focus, and brand association on consumer responses to mobile ads, the effects of mediating variables, and the relations hypothesized in this study.

Figure 1

Interaction Effect of Consumer Regulatory Focus and Advertising Claim Framing on Consumer Attitude toward Mobile Ad and Intention to Respond to Mobile Ad Claims

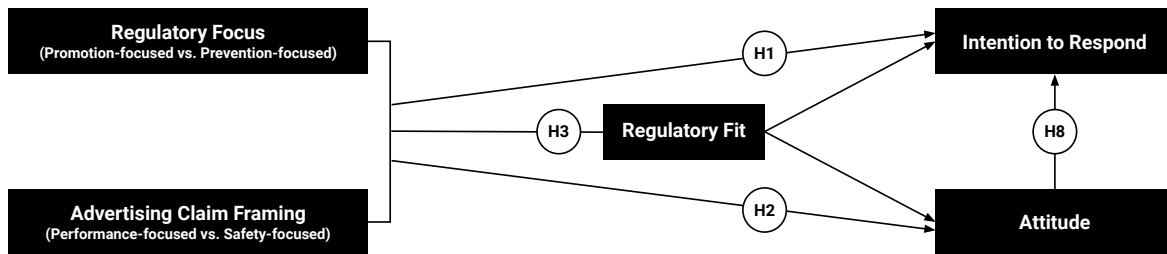
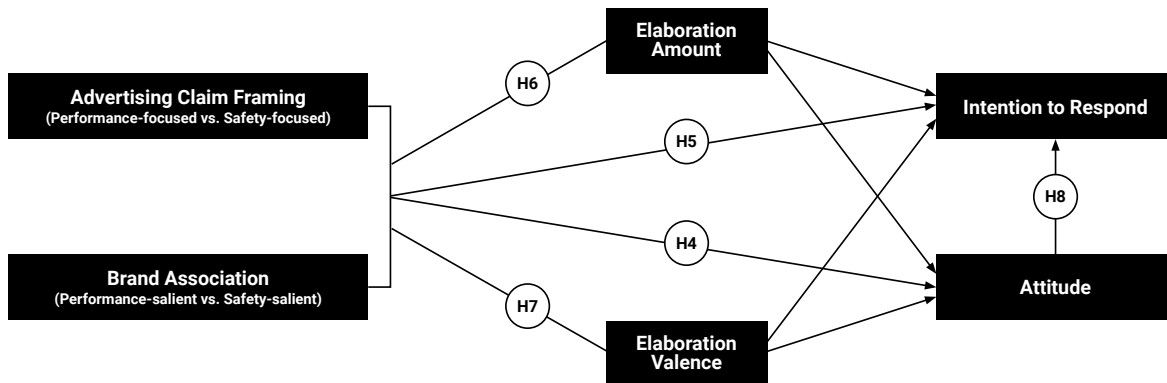


Figure 2

Interaction Effect of Brand Association and Advertising Claim Framing on Consumer Attitude toward Mobile Ad and Intention to Respond to Mobile Ad Claims



Advertising Claim Framing

Advertising claim is the “textual message or statement made in advertising about the benefits, characteristics, and/or performance of a product or service designed to persuade the customer to make a purchase” (American Marketing Association). Advertising claim framing is the strategy and manner in which the advertising claim is presented to the target audience or intended consumers (Levin & Gaeth, 1988). Message framing has been studied from many perspectives in different behavioral research — with typical framing conditions being gain vs. loss (Lee & Cho, 2021), promotion vs. prevention (Bullard & Penner, 2017), positive vs. negative (Xue, 2015), guilt vs. shame (Baek & Yoon, 2017), pride vs. guilt (Zubair et al., 2020), abstract vs. concrete (Jäger & Weber, 2020), why vs. how (Septianto & Lee, 2020), facts vs. emotions (Diefenbach et al., 2021), narrative vs. non-narrative (Wirtz & Zimbres, 2015), attribute vs. benefit (Xu & Jeong, 2019), etc.

Previous studies examining message framing effects on the effectiveness of ads have yielded conflicting findings (Jung et al., 2012). For example, some studies (e.g., Levin et al. 1998) have found that positively framed messages are more persuasive than negatively framed messages, yet other studies (e.g., Meyerowitz & Chaiken, 1987) showed that negatively framed messages were more persuasive than positively framed messages. These conflicting findings were due to the interaction of advertising claim framing and other factors such as benefit type, construal level, credibility (Jäger & Weber, 2020), emotions (Baek & Yoon, 2017; Zubair et al., 2020), self-reference on message engagement (Wirtz & Zimbres, 2015), appeal types (Xue, 2015), image valence (Lee & Cho, 2021), image vs. message congruence (Septianto & Lee, 2020), product types (Partouche et al., 2020) on consumers’ attitudes and behavioral intentions.

Regulatory Focus, Advertising Claim Framing, and Mobile Ad Response

Consumer motivation is the inner drive (Coon, 1998) that reflects goal-oriented arousal to satisfy people's needs and wants for a product, service, or experience. For this study, consumer's regulatory focus refers to the self-regulatory orientation for taking action in pursuit of a goal, being either promotion-focused or prevention-focused. Based on regulatory-focus theory (Higgins, 1998), consumer regulatory focus may influence consumers' responses to advertising messages, attitudes, intentions, and behaviors toward the advertised product or service.

Many studies found the role of individual regulatory focus as a moderator of the effect of advertising messages on consumers' attitudes toward the ad and purchase intentions (Li, 2021; Roy, 2017; Roy & Phau, 2014; Sun et al., 2021). For promotion-focused recipients, messages that describe the pleasures or positive effects of following the recommended behavior are more effective, whereas messages that describe the pains or negative effects of not following the recommended behavior are more effective for prevention-focused recipients (Cesario et al., 2013). Research has also shown that prevention-focused individuals are more likely to select product options with more superior reliability attributes, and promotion-focused individuals are more likely to select product options with more superior performance attributes (Chernev, 2004). In one of Chernev's (2004) experiments, the participants were presented with three product choice sets, including TVs, computer monitors, and cars. For cars, speed and power were used to define the performance condition, and warranty and maintenance were used for the reliability condition. Results showed that 81% of the respondents in the prevention-focused condition favored product options with superior reliability attributes (warranty and maintenance) compared to only 59% of those in the promotion-focused condition. On the contrary, 41% of the respondents in the promotion-focused condition favored product options with superior

performance attributes (speed and power) compared to only 19% of those in the prevention-focused condition.

In another experiment by Florack and Scarabis (2006), participants were presented with two different brands of sun lotions — one with a promotion-focused claim (“Brand X: For an intensive tan”) and the other with a prevention-focused claim (“Brand X: The best protection for your skin”). Prevention-focused participants preferred the brand with the prevention-focused claim, and promotion-focused participants preferred the brand with the promotion-focused claim. The above findings were consistent with regulatory focus theory (Higgins, 1998) in that when the ad claim about the product aligns with an individual’s regulatory orientation, a stronger attitude toward the advertisement and greater purchase intention should occur. In the context of shopping for cars, it is reasonable to predict that performance (fun driving experience) as a hedonic attribute of the product should motivate promotion-focused shoppers, and safety as prevention of adverse outcomes (accidents) should motivate prevention-focused shoppers. Among young car shoppers, those with promotion-focus would care more about the car’s performance measures such as handling, braking, acceleration, and ride quality, thus showing a higher level of intention to respond to the ad with a performance-focused claim. In contrast, those with prevention-focus would put their safety as their top priority and look for a reliable car with advanced accident-avoidance technologies and with the highest safety ratings, thus showing a higher level of intention to respond to the ad with a safety-focused claim.

Based on the above discussions, I propose the following hypothesis:

H1: Consumers’ regulatory focus (promotion- vs. prevention-focused) will interact with ad claim framing (performance- vs. safety-focused) to affect intentions to respond to a mobile advertising claim. Specifically,

- H1a:** Promotion-focused consumers will have greater intentions to respond to performance-focused than safety-focused mobile advertising claims.
- H1b:** Prevention-focused consumers will have greater intentions to respond to safety-focused than performance-focused mobile advertising claims.
- H1c:** Promotion-focused consumers will have greater intentions to respond to performance-focused mobile advertising claims than will prevention-focused consumers.
- H1d:** Prevention-focused consumers will have greater intentions to respond to safety-focused mobile advertising claims than will promotion-focused consumers.

The distinctive goals (promotion goals of growth and advancement or prevention goals of safety and security) prompt people to selectively pay attention to the information they need to achieve their goals (Aaker & Lee, 2006). Previous research by Lan and Monroe (2009) indicates that consumers' goals influence their attention to, attitudes toward, and processing of information presented when shopping. Several studies (Berenbaum & Latimer-Cheung, 2014; O'Malley et al., 2013) revealed that gain-framed ads attracted greater attention, produced more favorable attitudes, were recalled better, and had a more effective immediate impact on behavior than those with loss-framed ad messages. Aligning with these findings, it can be assumed that promotion-focused car shoppers would have more positive attitudes toward performance-focused advertising claims, and those prevention-focused car shoppers would have more positive attitudes toward safety-focused advertising claims. Thus, it is proposed that:

H2: Consumers' regulatory focus (promotion- vs. prevention-focused) will interact with ad claim framing (performance- vs. safety-focused) to affect attitudes toward a mobile advertising claim. Specifically,

- H2a:** Promotion-focused consumers will have more positive attitudes toward performance-focused than safety-focused mobile advertising claims.
- H2b:** Prevention-focused consumers will have more positive attitudes toward safety-focused than performance-focused mobile advertising claims.
- H2c:** Promotion-focused consumers will have more positive attitudes toward performance-focused mobile advertising claims than will prevention-focused consumers.
- H2d:** Prevention-focused consumers will have more positive attitudes toward safety-focused mobile advertising claims than will promotion-focused consumers.

Table 2

Hypothesis Table for Message-Regulatory Focus Fit > Non-Fit

			H1c, H2c	H1d, H2d
			Advertising Claim Framing	
			Performance-Focused	Safety-Focused
H1a, H2a	Regulatory Focus	Promotion-Focused	Fit	Non-Fit
H1b, H2b		Prevention Focused	Non-Fit	Fit

Regulatory Fit as a Mediator

According to researchers (Cesario et al., 2004; Lee & Aaker, 2004), the regulatory fit theory can be applied to improve the effectiveness of a persuasive message by framing it to meet the message recipient’s orientation. They discovered that eager-framed arguments were more compelling to promotion-focused message recipients than prevention-focused message

recipients, while vigilant-framed arguments were more appealing to prevention-focused message recipients than promotion-focused message recipients. Florack and Scarabis (2006) proposed that the fit between an advertising claim and a consumer's regulatory focus would have an impact on product preference in that participants would be more likely to prefer products presented in an advertisement with a claim compatible with the induced focus. Studies also showed that a "fit" between advertising message framing and consumers' chronic regulatory focus reduced risk perceptions and increased the effectiveness of health-related advertising (Kees et al., 2010); a regulatory fit advertising had a positive effect on attitude toward the ad and behavior (Henley, 2017; Kim, 2006), and consumers in the fit condition tended to possess more favorable attitudes toward the advertising and product, and higher purchase intentions than did those who were in the non-fit condition (Henley, 2017; Song, 2016).

Based on this theory, it can be expected that regulatory fit will occur when promotion-focused car shoppers see a performance-focused advertising claim addressing a performance attribute of a car, and when prevention-focused car shoppers see a safety-focused advertising claim addressing a safety attribute of a car. Thus, the interaction effect of advertising claim framing and regulatory focus on consumers' attitudes and intentions to respond can be explained by regulatory fit or non-fit, so that if the advertising claim framings are congruent with consumers' regulatory focus, consumers would have more positive attitudes toward the ads and be more eager to respond to the advertising claims. Therefore, the following hypothesis is proposed:

- H3:** The interaction effect of consumer regulatory focus (promotion- vs. prevention-focused) and advertising claim framing (performance- vs. safety-focused) on

consumers' a) attitudes toward mobile advertising claims and b) intentions to respond to mobile advertising claims is mediated by regulatory fit.

Brand Associations

Brand associations are the “linkages” that connect a brand and its product or service in consumers’ minds (Aaker, 1991; Keller, 1993), and these associations may refer to product attributes, benefits, symbols, personalities, or endorsers. For example, as the top two competitors in the sports footwear industry, Adidas is commonly associated with “soccer,” “quality,” “classic,” and “cool,” Nike is commonly associated with “Just Do it,” “heroism,” “speed,” and “Michael Jordan” (Parker, 2017). Brand associations help consumers recall the brand on account of the unique properties and physical or emotional features of its product or service (Aaker, 1991). Since a positive brand association may create positive and impactful feelings toward the brand and provide its target consumers a reason to purchase the product or service (Bhasin, 2019), marketing managers of corporations and organizations have long been striving to establish a good brand image and enhance brand associations (Ueda, 2021). Many previous studies have been conducted to investigate how to identify, define, build, recall, and measure brand associations (Aaker et al., 1980; Brandt et al., 2010; Haaijer et al., 2000; Keller, 1993; Kumar, Aaker, & Day, 2002; John et al., 2006; Till et al., 2001; Yoo & Donthu, 2001); however, very few studies investigated the interaction effect of brand association and message framing on consumer responses in the context of mobile advertising, which this study aims to investigate.

Brand Associations, Advertising Claim Framing, Elaboration, and Mobile Ad Response

Brand associations were found to be positively related to perceived quality, brand loyalty, and purchase intention of cars (Thanomsub, 2020). The brand name improves the memory

association between the brand and the advertising content's evaluative implications, as well as the advertisement's effectiveness (Baker et al., 2004), and brand association plays a vital role in consumers' purchase decisions while buying a car, with performance, safety, and brand among the top factors (Pednekar, 2013).

Ad-brand congruity refers to the information congruity between an advertisement and the established brand association (Törn & Dahlén, 2018), and there are some contradictory findings in terms of the effect of ad-brand congruity on the effectiveness of advertisements. For example, Keller (2003) embraced the importance of consistency in brand communication and suggested that successful brand management requires a consistent brand image and congruent brand communication. Lin and Shen (2012) revealed that the compatibility between message frame and product attributes resulted in more favorable ad attitudes, more favorable brand attitudes, and a higher purchase intention.

On the contrary, many researchers argued that ad-brand incongruity might bring potential benefits to brand communication as a strategy to revive interests in mature brands, excite the consumers and make them stop and think (Durgee 1999; Machleit et al., 1993; Sjödin & Törn, 2006). Incongruent brand communication may take different forms — it may include the mismatch between images and text in advertisements, between product features and product category association, between the ad message and viewers' expectations. Regardless of the form of incongruencies, Sjödin and Törn (2006) argued that the mismatch between communication and the existing brand associations would have some effects on consumer processing of the information, including attention, elaboration, emotion amplification, memory, and consumer evaluation of the incongruent element, credibility, and attitudes toward the ad and the brand. More specifically, evidence from previous research has shown that ad-brand incongruity attracts

attention (Fiske & Taylor, 1991), entices extended viewing and evaluation of the ad (Boush & Loken, 1991; Goodstein, 1993), generates more thoughts (Lane, 2000) and more positive brand attitude (Lee & Mason, 1999). Particularly for familiar and mature brands, when the ads were incongruent with established brand association, advertising led to an increase in attention, more detailed processing of brand association, more elaboration on the ads, better brand recall, and improved attitudes toward the ad (Törn & Dahlén, 2018).

Growing up with TV commercials in a country being referred to as “a nation on wheels,” college students in the United States are very familiar with all major brands, including those major global car brands such as Toyota, Nissan, Honda, Subaru, Ford, Chevrolet, GMC, and Jeep. Even though it may be impossible for an individual to own cars of all brands, each consumer would have some familiarity with the brand name, brand image, and brand associations of each of these major brands. Since all global car brands are considered familiar and mature brands, it is reasonable to assume that advertising claim framing and brand association incongruity will have similar effects.

Previous research has found that the effect of advertising messages on consumers’ intentions can be explained by the level of cognitive elaboration engaged in information processing, and a message with more detailed information causes greater attention, more cognitive elaboration, better perceived message credibility, and a significantly greater intention (Xiao et al., 2021). Based on the Elaboration Likelihood Model (Petty & Cacioppo, 1981), the viewers would either scrutinize the message, pay more attention, and put more thoughts into the message through a central route, or process the information through a peripheral route if it only requires a low level of elaboration.

Compared to other generations, Gen Zers are relatively less loyal to brands (Dimock, 2019), more familiar with mobile technology, and more likely to trust mobile ads (Van den Bergh, 2016). Since this group of consumers is at the age to own their first cars, they are motivated to process the information about compact SUVs, and they have the ability to process simple, concise, and clear mobile ad claims. In the ad-brand incongruity (non-fit) condition, that is, when the ad claim framing does not fit the perceived brand association, the viewers would be more likely to pay more attention to the ad claims (Fiske & Taylor, 1991), see more value of the ad (Boush & Loken, 1991), have more positive attitudes toward the ad (Lee & Mason, 1999). On the contrary, in the ad-brand congruity (fit) condition, that is, when the ad claim framing fits the perceived brand association, the viewers may not pay much attention to the ad, do not see much value of it, and do not have much intention to learn more about the product.

Therefore, I hypothesize the following:

H4: Brand associations (performance- vs. safety-salient) will interact with ad claim framing (performance- vs. safety-focused) to affect consumers' attitudes toward a mobile advertising claim. Specifically,

H4a: For performance-salient brands, consumers will have more positive attitudes toward safety-focused than performance-focused mobile advertising claims.

H4b: For safety-salient brands, consumers will have more positive attitudes toward performance-focused than safety-focused mobile advertising claims.

H4c: Consumers will have more positive attitudes toward a performance-focused mobile advertising claim for safety-salient than performance-salient brands.

H4d: Consumers will have more positive attitudes toward a safety-focused mobile advertising claim for performance-salient than safety-salient brands.

H5: Brand associations (performance- vs. safety-salient) will interact with ad claim framing (performance- vs. safety-focused) to affect consumers' intentions to respond to a mobile advertising claim. Specifically,

H5a: For performance-salient brands, consumers will have greater intentions to respond to safety-focused than performance-focused mobile advertising claims.

H5b: For safety-salient brands, consumers will have greater intentions to respond to performance-focused than safety-focused mobile advertising claims.

H5c: Consumers will have greater intentions to respond to a performance-focused mobile advertising claim for safety-salient than performance-salient brands.

H5d: Consumers will have greater intentions to respond to a safety-focused mobile advertising claim for performance-salient than safety-salient brands.

Table 3

Hypothesis Table for Message-Brand Association Non-Fit > Fit

			H4c, H5c	H4d, H5d
			Advertising Claim Framing	
			Performance-Focused	Safety-Focused
H4a, H5a	Brand Association	Performance-Salient	Fit	Non-Fit
H4b, H5b		Safety-Salient	Non-Fit	Fit

H6: The interaction effect of brand association (performance- vs. safety-salient) and advertising claim framing (performance- vs. safety-focused) on consumers' a)

attitudes toward mobile advertising claims and b) intentions to respond to mobile advertising claims will be mediated by the amount of elaboration.

H7: The interaction effect of brand association (performance- vs. safety-salient) and advertising claim framing (performance- vs. safety-focused) on consumers' a) attitudes toward mobile advertising claims and b) intentions to respond to mobile advertising claims will be mediated by elaboration valence.

Attitude and Intention to Respond

Studies have shown that attitude toward the advertisement had a positive relationship with attitude toward the brand and, in turn, a positive influence on behavioral intention (Wu et al., 2012), and the intention to use mobile advertising and purchase intention are influenced by customers' opinions regarding mobile advertising (Wang et al., 2020). A researcher in Tokyo found that attitude toward wireless ads determines users' behaviors intention to click the mobile ads (Okazaki, 2005), and research also showed that advertising attitude and brand attitude had a significantly positive impact on purchase intention (Yeh & Lin, 2010). These research findings suggest a positive relationship between consumers' attitudes and their behavioral intentions.

Thus, I propose the following hypothesis:

H8: Consumers' attitudes toward mobile advertising claims will positively influence their intentions to respond to mobile advertising claims.

Chapter 3. Pretests – Methods and Results

The research design process includes two pretests and two main studies (see Table 4). All data were collected through Internet-based, structured questionnaires. Two pretests were conducted to select the stimuli (ad claims and car brands) to manipulate the two independent variables: Advertising Claim Framing (performance- vs. safety-focused) through Pretest 1, and Brand Associations (attribute-balanced vs. performance- vs. safety-salient) through Pretest 2. The procedures and questionnaires of each pretest and main study can be found in Appendices B through E.

Overview and Experimental Design

The hypotheses were tested through two main studies, which were conducted as online experiment using Qualtrics. Study 1 employed a 2 (Regulatory Focus: Promotion- vs. Prevention-Focused) × 2 (Advertising Claim Framing: Performance- vs. Safety-Focused) × 2 (Brand: Attribute-Balanced Brand 1 vs. Attribute-Balanced Brand 2) between-subjects design. Study 2 employed a 2 (Brand Association: Performance- vs. Safety-Salient) × 2 (Advertising Claim Framing: Performance- vs. Safety-Focused) between-subjects design. Two attribute-balanced brands were used in study 1 to control the effect of brand association on the DVs. One performance-salient brand and one safety-salient brand were used in study 2.

Table 4

Research Design Process of Pretests and Main Studies

	Pretest 1	Pretest 2	Study 1	Study 2
Purpose	Select ad claims	Select car brands	Empirically test hypotheses 1, 2, 3, & 8	Empirically test hypotheses 4, 5, 6, 7, & 8

Design	Within-subjects design	Within-subjects design	$2 \times 2 \times 2$ between-subjects	2×2 between-subjects
Variables	Advertising Claim Framing (Performance- vs. Safety-focused)	Brand Associations (Attribute-Balanced, Performance- vs. Safety-salient)	Advertising Claim Framing (Performance- vs. Safety-focused) Consumer Regulatory Focus (Promotion- vs. Prevention-focused) Brand (Attribute-balanced brand 1 vs. brand 2)	Advertising Claim Framing (Performance- vs. Safety-focused) Brand Association (Performance- vs. Safety-salient)

Sample and Data Collection

Since the purpose of this research is to investigate young car shoppers' responses to mobile advertising claims, the sample was a non-probabilistic quota sample, consisting of U.S. consumers with equal gender representation of men and women between the ages of 19 and 25. The chosen age group represents a segment of Generation Z (born after 1996), who are old enough to drive a car in the U.S., and at the stage of owning or purchasing their first personal vehicles (Witmer, 2019).

Participants were recruited via Prolific, a third-party consumer panel sampling platform for online research, and were compensated at an hourly rate of \$12.00. With the prescreen criteria including gender balance, minimum age at 19, maximum age at 25, English as the fluent language, and U.S. as the location, approximately 14,000 Prolific participants who have been active in the past 90 days matched these criteria. To prevent participants from taking a survey more than once, participants who completed previous studies were excluded from future studies.

Pretest 1

Research Design and Purpose

The first pretest was conducted as an online experiment employing a within-subjects design. The purpose was to select the stimuli (ad claims) to be used to manipulate advertising claim framing (performance- vs. safety-focused). The objective was to measure the perceived argument strength and framing focus of ten advertising claims and select one performance-focused ad claim and one safety-focused ad claim for the main studies such that the chosen claims were similar with respect to argument strength.

Sample

The sample of the pretest was a non-probabilistic quota sample, consisting of U.S. consumers with equal gender representation and ages between 19 and 25 recruited via Prolific. A total of 60 participants who met the screening criteria completed the survey. All data was determined usable and thus kept for data analysis.

Stimuli

A list of 10 claims from a pool of 24 Edmunds car reviews (see Table 5) were selected for the pretest — 5 were related to car performance, including “pleasure to drive,” “great driving,” “great performance,” “drive wonderfully,” and “outstanding handling”; 5 were related to car safety, including “5-star safety,” “great safety features,” “excellent safety features,” “enhanced safety features,” and “top-notch safety”, referring Edmunds Car Review as the quote source (see Figure 3). As one of the most trusted review sites, Edmunds.com provides information to millions of consumers for their decision on purchasing new or used cars (Edmunds, 2013).

Table 5

List of Advertising Claims

Claims about Performance	Claims about Safety
Great ride	5 stars for the safety feature
Pleasure to drive*	Numerous safety features
Sweet ride	5-star safety*
Fantastic in handling	Great safety features*
Handles great	The safety is fantastic
Nothing compared to its performance	Excellent safety features*
Great driving*	Wonderful safety features
Great performance*	Enhanced safety features*
Smooth drive	Much safer vehicle
Smooth riding	Safe and secure
Drives wonderfully*	High mark in safety
Outstanding handling*	Top-notch safety*

Note: Claims indicated with * were selected for Pretest 1

Figure 3

Sample ad claim as stimuli

“Pleasure to drive”

— Edmunds Car Review

Procedure

A self-administered online survey (see Appendix B.2) was developed in Qualtrics for the pretest. After the participant viewed the information letter and gave consent to participate in the survey, an introduction message was shown on the screen: *A car company wants to run a mobile ad campaign, and they would like to know your thoughts about ten (10) suggested advertising claims, or written statements about the performance or safety of their Sports Utility Vehicles (SUV).* Brief definitions of performance and safety were then displayed: *Definition of 'Performance': A performance car represents a more powerful engine, superior speed, agility, and overall driving experience. A car that, with its speed and power, unleashes pure enjoyment* (Hyundai Motor Company, 2020). *Definition of 'Safety': A car with a higher safety rating is safer to drive than other cars on the road — with a higher rating on collision tests, a lower injury risk, and a higher chance to survive during a car crash* (NHTSA, n.d.).

The participants were exposed to all ten stimuli in random order. After viewing each ad claim, participants were prompted to rate the argument strength and ad claim framing focus for each stimulus, followed by demographic questions. A diagram of the pretest 1 procedure is available in Appendix B.1.

Measures

Perceived argument strength refers to consumers' "perceptions of the quality, strength, and persuasiveness of the arguments employed in a persuasive communication" (Zhao et al., 2011, p. 51). The perceived argument strength of the ad claim was measured by using a 5-item 7-point Likert scale (Cronbach's α coefficient = .92; 1 = strongly disagree; 7 = strongly agree) adapted from Zhao et al. (2011). Advertising claim framing focus was measured by using a two-

item scale developed by the author measured on a 7-point Likert scale (See Table 6 for pretest 1 measurements). Pop-up tooltips were set up so that the participants could review the definition of “performance” or “safety” when hovering over each underlined keyword. Demographic information on gender, age, car ownership, owned car brand (if applicable), and ethnicity, were collected at the end.

Table 6
Measures for Pretest 1

Goal	Variable	Measures	Source	α
		(5-item, 7-point Likert Scale; 1 = “strongly disagree”, 7 = “strongly agree”)		
Selection of Ad Claims	Perceived Argument Strength	<ul style="list-style-type: none"> This ad claim is believable. This ad claim is convincing. This ad claim will help me feel confident about a product. This ad claim is simple and clear. This ad claim is strong. 	Zhao et al. (2011)	0.92
		(2-item, 7-point Likert Scale; 1 = “strongly disagree”, 7 = “strongly agree”)		
Manipulation Check	Advertising Claim Framing	<ul style="list-style-type: none"> This ad claim is about the SUV’s performance. This ad claim is about the SUV’s safety. 	Developed by author	

Sample Description

The demographic characteristics of the sample in pretest 1 were analyzed using descriptive statistics, specifically frequencies in SPSS. The sample consisted of 30 men and 30 women aged between 19 and 25 ($M = 21.9$). In terms of car ownership, 60% of the participants

owned a car and 40% did not. The most popular brands of the cars owned by the participants were Honda, Toyota, and Chevrolet. See Table 7 for more details.

Table 7

Sample Characteristics and Frequency Distributions for Pretest 1 (n = 60)

	<i>n</i>	%
Gender		
Men	30	50.0%
Women	30	50.0%
Age		
21	13	21.7%
20	11	18.3%
24	9	15.0%
25	9	15.0%
19	8	13.3%
23	6	10.0%
22	4	6.7%
Do you currently own a car?		
Yes	36	60.0%
No	24	40.0%
Brand of the car		
-----	24	40.0%
Honda	5	8.3%
Toyota	5	8.3%
Chevrolet	4	6.7%
Ford	3	5.0%
Kia	3	5.0%
Subaru	3	5.0%
Volkswagen	3	5.0%
BMW	2	3.3%
Jeep	2	3.3%

	Nissan	2	3.3%
	Volvo	2	3.3%
	Acura	1	1.7%
	Mazda	1	1.7%
<hr/>			
Ethnic Group			
	Non-Hispanic White	32	53.3%
	Asian/Pacific Islander	10	16.7%
	Hispanic	7	11.7%
	Non-Hispanic Black	7	11.7%
	Mixed Race	4	6.7%

Scale Reliability

The reliability, validity, and one-dimensionality of the ad claim argument strength were assessed. Exploratory Factor Analysis (EFA) was conducted, and the scale's unidimensionality was confirmed.

Table 8

Factor Loadings for Ad Claim Perceived Argument Strength Scale in Pretest 1

Item	Factor Loadings
This ad claim is believable.	.77
This ad claim is convincing.	.94
This ad claim will help me feel confident about a product.	.84
This ad claim is simple and clear.	.72
This ad claim is strong.	.88

To ensure the ad claim argument strength scale reliability, Cronbach's coefficient alpha was calculated, and internal consistency was checked for each of the 10 arguments. The calculated Cronbach's α coefficients were all above 0.70, thus revealing satisfactory reliabilities

(Table 9) and internal consistency for the scale. The composite scores for the perceived argument strength were then computed by averaging the five item scores for each of the 10 ad claims.

Table 9

Scale Reliability Pretest 1

Measures	Cronbach's Alpha	N of Items
Argument Strength of "Great performance"	.89	5
Argument Strength of "5 star safety"	.91	5
Argument Strength of "Pleasure to drive"	.84	5
Argument Strength of "Great safety features"	.87	5
Argument Strength of "Excellent safety features"	.86	5
Argument Strength of "Great driving"	.86	5
Argument Strength of "Enhanced safety features"	.90	5
Argument Strength of "Drive wonderfully"	.88	5
Argument Strength of "Outstanding handling"	.87	5
Argument Strength of "Top-notch safety"	.88	5

Data Analysis and Results

The goal of the first pretest was to select a set of two advertising claims — one being performance-focused, the other being safety-focused, with equivalent level of perceived argument strength. For performance-focused claims, the mean performance focus ratings needed to be close to the maximum value of 7.0, and the mean safety focus ratings needed to be close to the minimum value of 1.0. For safety-focused claims, the mean performance focus ratings needed to be close to the minimum value of 1.0, and the mean safety focus ratings needed to be close to the maximum value of 7.0. Greater differences between the two means indicated a stronger focus. Among the 10 ad claims, five met the criteria as performance-focused claims

($M_{GP_P} = 6.62$, $M_{GP_S} = 2.00$; $M_{PTD_P} = 5.95$, $M_{PTD_S} = 2.47$; $M_{DW_P} = 6.02$, $M_{DW_S} = 2.55$; $M_{GD_P} = 5.87$, $M_{GD_S} = 2.72$; $M_{OH_P} = 5.75$, $M_{OH_S} = 3.10$), and the other five met the criteria as safety-focused claims ($M_{FSS_P} = 2.17$, $M_{FSS_S} = 6.57$; $M_{GFS_P} = 2.08$, $M_{GFS_S} = 6.55$; $M_{ENSF_P} = 2.10$, $M_{ENSF_S} = 6.60$; $M_{TNS_P} = 2.03$, $M_{TNS_S} = 6.67$; $M_{EXSF_P} = 1.97$, $M_{EXSF_S} = 6.67$).

Table 10

Means of Ad Claim Focus and Perceived Argument Strength

Claim	Advertising Claim Framing			Perceived Argument Strength
	Performance Focus (P)	Safety Focus (S)	P – S	
“Great performance” (GP)	6.62	2.00	4.62	4.40
“Pleasure to drive” (PTD)	5.95	2.47	3.48	4.52
“Drive wonderfully” (DW)	6.02	2.55	3.47	4.30
“Great driving” (GD)	5.87	2.72	3.15	4.13
“Outstanding handling” (GH)	5.75	3.10	2.65	4.64
“5 star safety” (FSS)	2.17	6.57	-4.40	5.04
“Great safety features” (GSF)	2.08	6.55	-4.47	4.72
“Enhanced safety features” (ENSF)	2.10	6.60	-4.50	4.89
“Top-notch safety” (TNS)	2.03	6.67	-4.63	4.65
“Excellent safety features” (EXSF)	1.97	6.77	-4.80	4.95

Paired samples *t*-test was conducted to compare the means to select the final two ad claims to be used in the main studies. The paired samples *t*-test results (see Table 11) revealed that the perceived performance-focus of “Pleasure to drive” ($M = 5.95$) was significantly [$t(59) = 16.14$, $p < .001$] higher than “Top-notch safety” ($M = 2.03$), and the perceived safety-focus of “Top-notch safety” ($M = 6.67$) was significantly [$t(59) = 20.43$, $p < .001$] higher than “Pleasure to drive” ($M = 2.47$). Also, the difference between the perceived argument strength of “Pleasure

to drive” ($M = 4.52, SD = 1.06$) and “Top-notch safety” ($M = 4.65, SD = 1.19$), was not statistically significant [$t(59) = -0.887, p = .379$], indicating the equivalence of perceived argument strength of these two ad claims (see Table 12). An additional paired-samples t -test was conducted to see if the perceived argument strength varied by gender. The results showed no difference between men and women (see Table 13). For male consumers, the difference between the perceived argument strength of “Pleasure to drive” ($M = 4.47, SD = 1.06$) and “Top-notch safety” ($M = 4.59, SD = 1.02$), was not statistically significant [$t(29) = -0.64, p = .526$]. Similarly, for female consumers, the difference between the perceived argument strength of “Pleasure to drive” ($M = 4.58, SD = 1.07$) and “Top-notch safety” ($M = 4.71, SD = 1.35$), was not statistically significant [$t(29) = -0.61, p = .546$]. As the overall result of pretest 1, “Pleasure to drive” and “Top-notch safety” were included in the main studies, as the performance-focused ad claim and the safety-focused ad claim, respectively.

Table 11

Paired Samples t-Test Results for the Perceived Performance/Safety Focus

Stimulus Pair	Mean Difference	SD	Std. Error Mean	<i>t</i>	<i>df</i>	<i>p</i>
PTD_performance - TNS_performance	3.92	1.88	0.24	16.14	59	<.001
PTD_safety - TNS_safety	-4.20	1.59	0.21	-20.43	59	<.001

Table 12

Paired Samples t-Test Results for the Perceived Argument Strength

Stimulus Pair	Mean Difference	SD	Std. Error Mean	<i>t</i>	<i>df</i>	<i>p</i>
Pair 1 GP_strength - EXSF_strength	-0.55	1.04	0.13	-4.11	59	< .001

Pair 2	GP_strength - TNS_strength	-0.25	0.96	0.12	-1.99	59	.051
Pair 3	GP_strength - ENSF_strength	-0.49	1.19	0.15	-3.16	59	.002
Pair 4	PTD_strength - EXSF_strength	-0.43	1.08	0.14	-3.07	59	.003
Pair 5	PTD_strength - TNS_strength	-0.12	1.08	0.14	-0.89	59	.379*
Pair 6	PTD_strength - ENSF_strength	-0.36	1.03	0.13	-2.74	59	.008
Pair 7	EXSF_strength - DW_strength	0.65	1.25	0.16	4.00	59	< .001
Pair 8	DW_strength - TNS_strength	-0.34	1.07	0.14	-2.50	59	.015
Pair 9	ENSF_strength - DW_strength	0.58	1.16	0.15	3.90	59	< .001

Table 13

Paired Samples t-Test Results for the Perceived Argument Strength, by gender

Gender	Stimulus Pair	Mean Difference	SD	Std. Error Mean	t	df	p
Men	PTD_strength - TNS_strength	-0.12	1.03	0.19	-0.64	29	.526
Women	PTD_strength - TNS_strength	-0.13	1.15	0.21	-0.61	29	.546

Pretest 2

Research Design and Purpose

The second pretest was conducted as an online experiment employing a within-subjects design. The purpose was to measure the levels of brand-performance association and brand-

safety association among a list of 14 selected car brands and to select two attribute-balanced brands for study 1 and two attribute-salient brands (one performance-salient and one safety-salient) for study 2.

Sample

The sample of the second pretest was a non-probabilistic quota sample, consisting of U.S. consumers with equal gender representation ages between 19 and 25 recruited via Prolific. Participants who completed pretest 1 were excluded from this test. A total of 118 participants, including 60 men, and 58 women, met the screening criteria and completed the survey.

Brand Selection

A list of 14 car brands representing the 17 most popular compact SUVs (Cox Automotive, 2020) with Manufacturer Suggested Retail Price (MSRP) ranging between \$22,500 and \$26,500 were selected for the pretest (see Table 14 for details). Sports Utility Vehicles (SUV) were chosen since the 2020 Q4 report by Cox Automotive revealed that shopping considerations for SUVs “overwhelmingly leads all vehicle segments” (Cox Automotive, 2021, para. 14), and 63% of all car shoppers, including young consumers, consider buying an SUV (Cox Automotive, 2021). With lower prices compared to mid-size or luxury SUVs, compact SUVs are more affordable for first-time car shoppers.

Table 14

List of Compact SUVs

Brand	Model	MSRP	Brand	Model	MSRP
Buick	Encore	23,200	Kia	Sportage	23,990
Chevrolet	Equinox	23,800	Mazda	CX-5	25,190
Ford	Escape	24,885	Mitsubishi	Outlander S	22,595

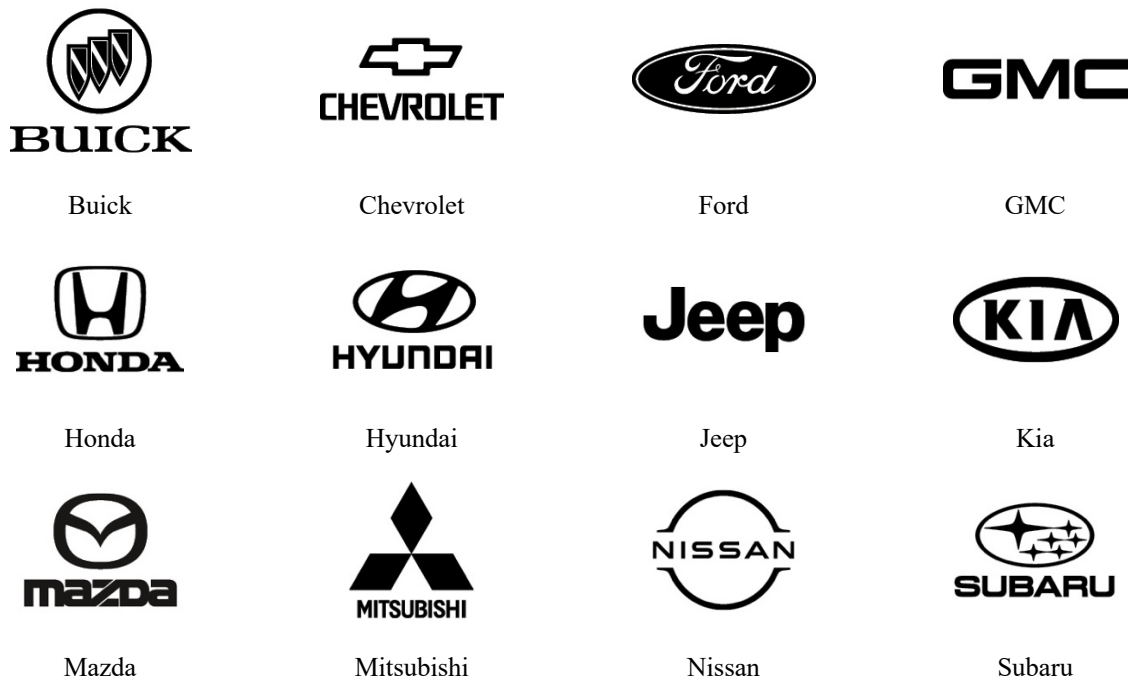
GMC	Terrain	25,000	Nissan	Rogue	25,300
Honda	CR-V	25,050	Subaru	Forester	24,495
Hyundai	Tuscon	23,550	Subaru	Outback	26,645
Hyundai	Santa Fe	26,275	Toyota	RAV4	25,950
Jeep	Compass	23,895	Volkswagen	Tiguan	24,945
Jeep	Cherokee	25,840			

Stimuli

All logo graphics were saved as 200 px by 200 px, black and white, high-quality JPEG images (see Table 15), using Adobe Photoshop as the image manipulation software. The 14 brands included Buick, Chevrolet, Ford, GMC, Honda, Hyundai, Jeep, Kia, Mazda, Mitsubishi, Nissan, Subaru, Toyota, and Volkswagen.

Table 15

Brand Logos as Stimuli





Toyota



Volkswagen

Procedure

A self-administered online questionnaire (see Appendix C.2) was developed in Qualtrics for the pretest. After the participant viewed the information letter and gave consent to participate in the survey, an introduction message was shown on the screen: *We would like to know your perceptions of the performance and safety of seven major car brands. Please read the definitions of 'performance' and 'safety' very carefully.* Brief definitions of car performance and car safety, same as for the first pretest, were displayed to give the participants a clearer idea of the meanings of these two constructs. To avoid survey fatigue and ease the respondents' load, the participants were exposed to half (7 out of 14) stimuli, and the order of presentation was randomized. After viewing each brand logo, participants were prompted to rate brand associations and brand familiarity for each brand, followed by demographic questions. A diagram of pretest 2 procedure is available in Appendix C.1.

Measures

Brand-performance association and brand-safety association were each measured by using a one-item 7-point Likert scale (1 = strongly disagree; 7 = strongly agree) adapted from Yoo et al. (2000). The item for the brand-performance association was "*(Brand) cars have high level of performance.*" The item for the brand-safety association was "*(Brand) cars have high level of safety.*" "*Please provide the reasons for your performance/safety rating of (brand) cars.*"

were asked as follow-up questions. Demographic information, including gender, age, car ownership, owned car brand (if applicable), and ethnicity, were collected at the end.

Sample Description

The demographic characteristics of the sample in pretest 2 were analyzed using descriptive statistics, specifically frequencies in SPSS (see Table 16). The sample consisted of 60 men and 58 women aged between 19 and 25 ($M = 22.3$). In terms of car ownership, 78% of the participants owned a car and 22% did not. The most popular brands of the cars owned by the participants were Toyota, Honda, and Ford.

Table 16

Sample Characteristics and Frequency Distributions for Pretest 2 (n = 118)

	<i>n</i>	%
Gender		
Male	60	50.8%
Female	58	49.2%
Age		
21	22	18.6%
20	20	16.9%
23	20	16.9%
25	20	16.9%
24	18	15.3%
22	12	10.2%
19	6	5.1%
Do you currently own a car?		
Yes	92	78.0%
No	26	22.0%
Brand of the car		
-----	26	22.0%

Toyota	19	16.1%
Honda	12	10.2%
Ford	11	9.3%
Chevrolet	7	5.9%
Subaru	7	5.9%
Hyundai	5	4.2%
Nissan	5	4.2%
Kia	4	3.4%
Volkswagen	4	3.4%
Jeep	3	2.5%
Volvo	3	2.5%
Dodge	2	1.7%
Infiniti	2	1.7%
Mazda	2	1.7%
Saturn	2	1.7%
Audi	1	0.8%
BMW	1	0.8%
Buick	1	0.8%
GMC	1	0.8%

Ethnic Group

Non-Hispanic White	66	55.9%
Asian/Pacific Islander	24	20.3%
Non-Hispanic Black	14	11.9%
Hispanic	10	8.5%
Mixed Race	2	1.7%
American Indian/Alaskan Native	1	0.8%
Other	1	0.8%

Data Analysis and Results

The goal of the second pretest was to measure the brand associations of the 14 car brands and select a set of brands — two attribute-balanced brands for main study 1, one performance-salient brand and one safety-salient brand for main study 2. The difference between a brand's perceived performance rating and perceived safety rating were calculated by subtracting the mean of the brand-safety association ratings from the mean of the brand-performance association ratings. The brand with the greatest positive difference between the two ratings was selected for the performance-salient condition. The brand with the greatest negative difference between the two ratings was selected for the safety-salient condition. For attribute-balanced brands, the difference between the mean of brand-performance association ratings and brand-safety association ratings needed to be close to 0.

By comparing the brand association means of the 14 car brands, Jeep ($M_P = 5.17$, $M_S = 3.97$, $M_{P-S} = 1.20$) met the criteria as the performance-salient brand; Kia ($M_P = 3.64$, $M_S = 4.71$, $M_{P-S} = -1.07$) met the criteria as the safety-salient brand; Chevrolet ($M_P = 4.88$, $M_S = 4.87$, $M_{P-S} = 0.02$) and GMC ($M_P = 4.54$, $M_S = 4.56$, $M_{P-S} = -0.02$) met the criteria as the attribute-balanced brands.

Table 17

Means of Brand Associations

Car Brand	N	Brand-Performance Association (P)	Brand-Safety Association (S)	 P – S
Jeep	60	5.17	3.97	1.20
Mazda	62	5.02	4.73	0.29
Mitsubishi	59	4.39	4.31	0.09
Chevrolet	60	4.88	4.87	0.02

GMC	61	4.54	4.56	-0.02
Buick	62	4.60	4.69	-0.10
Volkswagen	58	4.76	4.88	-0.12
Ford	60	4.80	5.00	-0.20
Subaru	56	4.95	5.18	-0.23
Nissan	63	4.56	4.79	-0.24
Hyundai	57	4.39	4.72	-0.33
Honda	55	4.93	5.33	-0.40
Toyota	57	5.09	5.56	-0.47
Kia	56	3.64	4.71	-1.07

Follow-up paired samples *t*-tests (Table 18) revealed that the differences between brand-performance associations and brand-safety associations were significant for both Jeep [$t(59) = 6.18, p < .001$] and Kia [$t(55) = -5.73, p < .001$]. Further, the differences between Chevrolet's brand-performance association and brand-safety association were not statistically significant [$t(59) = 0.13, p = .899$], with similar results for GMC [$t(60) = -0.10, p = .921$]. The brand-performance and brand-safety differences between Chevrolet and GMC were not statistically different either [$t(30) = -1.30, p = .205$].

Table 18

Paired Samples t-Test Results for Brand Associations

Stimulus Pair		Mean Difference	<i>SD</i>	Std. Error Mean	<i>t</i>	<i>df</i>	<i>p</i>
Pair 1	Jeep_performance - Jeep_safety	1.20	1.51	0.194	6.18	59	<.001
Pair 2	Kia_performance - Kia_safety	-1.07	1.40	0.187	-5.73	55	<.001

Pair 3	Chevrolet_performance - Chevrolet_safety	0.02	1.02	0.131	0.13	59	.899
Pair 4	GMC_performance - GMC_safety	-0.02	1.28	0.164	-0.10	60	.921
Pair 5	Chevrolet_P_S - GMC_P_S	0.73	1.80	0.324	-1.30	30	.205

Further analysis was conducted to see if the brand associations of the 14 car brands varied by gender, and the results did not show gender differences. Specifically, male respondents rated Jeep ($M_P = 5.13$, $M_S = 3.75$, $M_{P-S} = 1.38$) as the performance-salient brand, and Kia ($M_P = 3.59$, $M_S = 4.59$, $M_{P-S} = -1.00$) as the safety-salient brand. Female respondents also rated Jeep ($M_P = 5.21$, $M_S = 4.21$, $M_{P-S} = 1.00$) as the performance-salient brand, and Kia ($M_P = 3.71$, $M_S = 4.88$, $M_{P-S} = -1.17$) as the safety-salient brand.

Table 19

Means of Perceived Brand-Attribute Associations, by gender

	Car Brand	N	Performance Association (P)	Safety Association (S)	P - S
Men	Jeep	32	5.13	3.75	1.38
	Mazda	31	5.10	4.94	0.16
	Chevrolet	31	4.90	4.94	-0.03
	GMC	32	4.34	4.44	-0.09
	Mitsubishi	29	4.24	4.34	-0.10
	Nissan	30	4.70	4.83	-0.13
	Subaru	32	4.78	5.00	-0.22
	Volkswagen	28	4.75	5.11	-0.36
	Ford	30	4.70	5.10	-0.40
	Buick	28	4.29	4.71	-0.43

	Hyundai	28	4.29	4.86	-0.57
	Toyota	29	5.17	5.76	-0.59
	Honda	28	4.79	5.39	-0.61
	Kia	32	3.59	4.59	-1.00
	Jeep	28	5.21	4.21	1.00
	Mazda	31	4.94	4.52	0.42
	Mitsubishi	30	4.53	4.27	0.27
	Buick	34	4.85	4.68	0.18
	Volkswagen	30	4.77	4.67	0.10
	GMC	29	4.76	4.69	0.07
Women	Chevrolet	29	4.86	4.79	0.07
	Ford	30	4.90	4.90	0
	Hyundai	29	4.48	4.59	0.10
	Honda	27	5.07	5.26	-0.19
	Subaru	24	5.17	5.42	-0.25
	Nissan	33	4.42	4.76	-0.33
	Toyota	28	5.00	5.36	-0.36
	Kia	24	3.71	4.88	-1.17

The results from a paired samples *t*-tests (Table 20) indicated that the brand-performance and brand-safety differences between Chevrolet and GMC were not statistically different among male respondents [$t(18) = -0.67, p = .512$], or female respondents [$t(11) = -1.47, p = .171$]. Based on the overall result of pretest 2, Chevrolet and GMC were used in study 1 as the attribute-balanced brands. Jeep and Kia were used in study 2, as the performance-salient brand and the safety-salient brand, respectively.

Table 20

Paired Samples t-Test Results for the Brand Association, by gender

	Stimulus Pair	Mean Difference	SD	Std. Error Mean	<i>t</i>	<i>df</i>	<i>p</i>
Men	Chevrolet_P_S – GMC_P_S	-0.32	2.06	0.47	-0.67	18	0.512
Women	Chevrolet_P_S – GMC_P_S	-0.58	1.38	0.40	-1.47	11	0.171

Table 21

Measures for Pretest 2

Goal	Variable	Measures	Source	α
Selection of car brands	Brand Association	(2-item, 7-point Likert Scale; 1 = “strongly disagree”, 7 = “strongly agree”) <ul style="list-style-type: none"> • (Brand) cars have high level of performance. • (Brand) cars have high level of safety. 	Yoo et al. (2000)	

Chapter 4. Study 1 – Methods and Results

Research Design

This study was conducted as an online experiment employing a 2 (Regulatory Focus: promotion- vs. prevention-focused) × 2 (Advertising Claim Framing: performance- vs. safety-focused) × 2 (Brand Association: attribute-balanced brand 1 vs. attribute-balanced brand 2) between-subjects design. Situational consumer regulatory focus was manipulated in this study. “Pleasure to Drive” was used as the performance-focused ad claim, and “Top-notch Safety” were used as the safety-focused ad claim. GMC and Chevrolet were used as the two attribute-balanced brands. Dependent measures included intentions to respond to mobile ad claims and attitudes toward mobile ad claims. Brand familiarity and need for cognition (NFC) were measured as potential covariates.

Sample

The sample of the first main study was a non-probabilistic quota sample, consisting of U.S. consumers with equal gender representation with ages between 19 and 25 recruited via Prolific. Participants who completed the two pretests were excluded from this study. A total of 448 participants who met the screening criteria completed the survey.

Stimuli

A total of four mobile ads were created — performance-focused ad claim for attribute-balanced brand 1 (GMC); performance-focused ad claim for attribute-balanced brand 2 (Chevrolet); safety-focused ad claim for attribute-balanced brand 1 (GMC); safety-focused ad claim for attribute-balanced brand 2 (Chevrolet). Each mobile ad was presented on a mockup

image of an iPhone X, with a screen size being 375 pixels by 812 pixels. The mobile ad designs were created in Adobe XD. The size, color, and placement of the logos were kept consistent, as well as the font size, font weight, and font color for the advertising claims.

To minimize the effect of color preference on participants' responses to the product image in the advertisement (Lee & Barnes, 1989), and to avoid the more recognizable front view of the vehicle due to the distinctive signature car grills designs of many major brands (Hasbollah, 2020), a side-view picture of a neutral gray color SUV was used as the product image. The layout, composition, and design of all other visual elements, including font color, size, product image, and background color, were kept identical, with a "LEARN MORE" button centered at the bottom of the screen See Table 22 for a list of stimuli used in study 1.

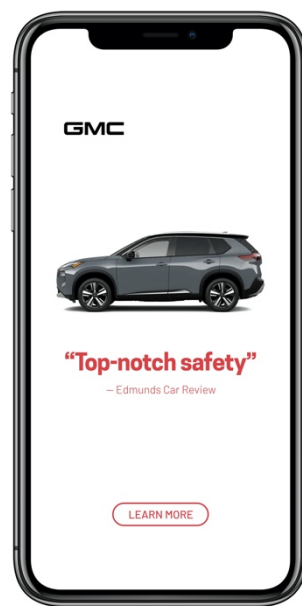
Table 22

Stimuli for Study 1

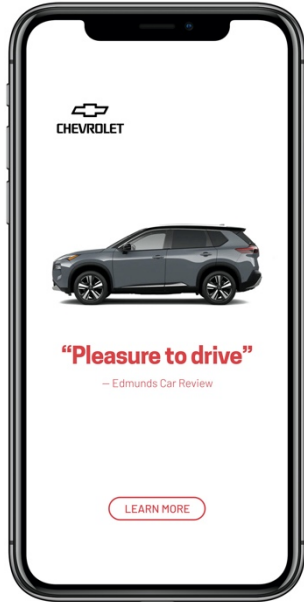
Ad Claim Framing: Performance-Focused
Brand Association: Attribute-Balanced
Brand: 1



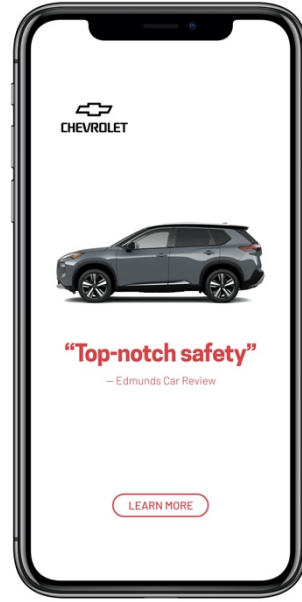
Ad Claim Framing: Safety-Focused
Brand Association: Attribute-Balanced
Brand: 1



Ad Claim Framing: Performance-Focused
Brand Association: Attribute-Balanced
Brand: 2



Ad Claim Framing: Safety-Focused
Brand Association: Attribute-Balanced
Brand: 2



Procedure

A self-administered online questionnaire (see Appendix D.2) was developed in Qualtrics. Participants were randomly assigned to one of the eight experimental conditions. After showing the study information, the participants were asked to complete a task that served as a manipulation of consumer regulatory focus adapted from a previous study (Wan et al., 2009). In the promotion-focused condition, participants were prompted with the task: *Imagine the situation that you are in the process of shopping for a new SUV. Please type five (5) positive things which could happen when you drive an SUV.* In the prevention-focused condition, participants were prompted with the task: *Imagine the situation that you are in the process of shopping for a new SUV. Please type five (5) negative things which could happen when you drive an SUV.* Following

the task, the participants were immediately prompted with manipulation check questions: *To what extent do you focus on avoiding/achieving the negative/positive outcome when shopping for an SUV?*

After seeing the following message: *Continue to imagine the situation that while you are searching for a new SUV with your mobile phone, an ad appears on your phone screen. The following questions will be based on this ad, so please look at the ad carefully when it shows up on the screen.*, the participants were exposed to one of the four mobile ads (2 advertising claim framing conditions: performance- vs. safety-focused × 2 brands: brand 1 vs. brand 2), and they were prompted to rate the intention to learn more information about the SUV, attitude toward the ad, and regulatory fit. Perception of the advertising claim framing, and brand associations were assessed through manipulation check measures, followed by measurements of brand familiarity, need for cognition (NFC) (as a personality variable to measure an individual's motivation for seeking and using information), and demographic questions. A diagram of the procedure is available in Appendix D.1.

Measures

Intention to Respond (Dependent Variable). Intention to respond to the ad claims was measured by using a three-item 7-point Likert scale (1 = strongly disagree to 7 = strongly agree) adapted from Venkatesh and Bala (2008). The items were: *Assuming I see this ad on my phone, "I intend to click on the 'Learn More' button", I predict that I would click on the 'Learn More' button", and "I plan to click on the 'Learn More' button to get more information about this SUV."*

Attitude Toward the Ad (Dependent Variable). Consumers' attitudes toward the ad were measured by using a five-item 7-point semantic differential scale adopted from Andrews and

Shimp (1990). The items were “Bad : Good”, “Harmful : Beneficial”, “Worthless : Valuable”, “Unpleasant : Pleasant”, and “Foolish : Wise”.

Regulatory Fit (Mediating Variable). Regulatory fit was measured by using a three-item 7-point Likert scale (1 = strongly disagree to 7 = strongly agree) adapted from Khajehzadeh, Oppewal, and Tojib (2014). The items were “This advertisement matches my goal”, “This advertisement feels right for me”, and “This advertisement is just right for me.”

Consumer Regulatory Focus (Manipulation check). The situational regulatory focus was measured by using a two-item 7-point Likert scale (1 = not at all to 7 = very much) adapted from Wan, Hong, and Sternthal (2009). The two items were “To what extent do you focus on avoiding the negative outcome when shopping for an SUV?” and “To what extent do you focus on achieving the positive outcome when shopping for an SUV?”

Advertising Claim Framing (Manipulation check). Advertising claim framing was checked by using a two-item 7-point Likert scale. The items were “This ad is about the SUV’s performance”, and “This ad is about the SUV’s safety.”

Brand Association (Manipulation check). Brand associations were checked by using a two-item 7-point Likert scale (1 = strongly disagree to 7 = strongly agree) adopted from Yoo et al. (2000). The item for Brand-performance association was “(Brand Name) cars have high level of performance”, and the item for Brand-safety association was “(Brand Name) cars have high level of safety”.

Brand Familiarity (Covariate). Brand familiarity was measured as a potential covariate by using a one-item 7-point bipolar scale adapted from Tam (2008). The item is “How familiar are you with this car brand?” The endpoints were labeled as “not familiar at all” and “very familiar.”

Need for Cognition (Covariate). To measure NFC, an 18-item version of the need for cognition scale (Cronbach's α coefficient = .90) developed by Cacioppo, Petty, and Kao (1984) was used, and the items were measured with a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree). See Table 23.

Table 23

Need for Cognition Measurement Items for the Main Study

Items (Need for Cognition)	Item Abbreviation
I would prefer complex to simple problems.	NFC1
I like to have the responsibility of handling a situation that requires a lot of thinking.	NFC2
Thinking is not my idea of fun.*	NFC3
I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.*	NFC4
I try to anticipate and avoid situations where there is likely a chance I will have to think in depth about something.*	NFC5
I find satisfaction in deliberating hard and for long hours.	NFC6
I only think as hard as I have to.*	NFC7
I prefer to think about small, daily projects to long-term ones.*	NFC8
I like tasks that require little thought once I've learned them.*	NFC9
The idea of relying on thought to make my way to the top appeals to me.	NFC10
I really enjoy a task that involves coming up with new solutions to problems.	NFC11
Learning new ways to think doesn't excite me very much.*	NFC12
I prefer my life to be filled with puzzles that I must solve.	NFC13
The notion of thinking abstractly is appealing to me.	NFC14
I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.	NFC15
I feel relief rather than satisfaction after completing a task that required a lot of mental effort.*	NFC16

It's enough for me that something gets the job done; I don't care how or why it works.*	NFC17
I usually end up deliberating about issues even when they do not affect me personally.	NFC18

NOTE: * Reverse coded.

Demographic Measures. Participants' demographic information was collected through questions about their gender, age, car ownership, owned car brand (if applicable), and ethnicity.

Table 24
Measures of Study 1

Goal	Variable	Measures	Source	α
Manipulation check	Situational Regulatory Focus	(2-item, 7-point Likert scale; 1 = "not at all", 7 = "very much") <ul style="list-style-type: none"> To what extent do you focus on avoiding the negative outcome when shopping for an SUV? To what extent do you focus on achieving the positive outcome when shopping for an SUV? 	Wan et al. (2009)	
DV	Intention to Respond	(3-item, 7-point Likert scale; 1 = "strongly disagree", 7 = "strongly agree") <ul style="list-style-type: none"> Assuming I see this ad on my phone, I intend to click on the "Learn More" button. Assuming I see this ad on my phone, I predict that I would click on the "Learn More" button. I plan to click on the "Learn More" button to get more information about this SUV. 	Venkatesh & Bala (2008)	0.88
DV	Attitude toward the ad	(5-item, 7-point semantic differential scale) <p>How do you feel about this ad?</p> <ul style="list-style-type: none"> bad/good harmful/beneficial worthless/valuable unpleasant/pleasant foolish/wise 	Andrew & Shimp (1990)	0.85
Mediator	Regulatory-Fit	(3-item, 7-point Likert scale; 1 = "strongly disagree", 7 = "strongly agree")	Khajehzadeh et al. (2014)	0.86

Manipulation check	Advertising Claim Framing	<ul style="list-style-type: none"> • If I am looking for an SUV, this advertisement matches my goal. • This advertisement feels right for me. • This advertisement is just right for me. (2-item, 7-point Likert scale; 1 = “strongly disagree”, 7 = “strongly agree”)	Developed by author	
Manipulation check	Brand Association	<ul style="list-style-type: none"> • This ad is about the SUV’s performance. • This ad is about the SUV’s safety. (2-item, 7-point Likert scale; 1 = “strongly disagree”, 7 = “strongly agree”)	Yoo et al. (2000)	
Covariate	Brand Familiarity	<ul style="list-style-type: none"> • (Brand Name) cars have high level of performance. • (Brand Name) cars have high level of safety. (1-item, 7-point bipolar scale; Endpoints are “not familiar at all”, and “very familiar”)	Tam (2008)	
Covariate	Need for Cognition (NFC)	How familiar are you with the (Brand Name) brand? (18-item, 7-point Likert scale; 1 = “strongly disagree”, 7 = “strongly agree”) <ul style="list-style-type: none"> • I would prefer complex to simple problems. • I like to have the responsibility of handling a situation that requires a lot of thinking. • Thinking is not my idea of fun.* • I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.* • I try to anticipate and avoid situations where there is likely a chance I will have to think in depth about something.* • I find satisfaction in deliberating hard and for long hours. • I only think as hard as I have to.* • I prefer to think about small, daily projects to long-term ones.* • I like tasks that require little thought once I’ve learned them.* • The idea of relying on thought to make my way to the top appeals to me. • I really enjoy a task that involves coming up with new solutions to problems. • Learning new ways to think doesn’t excite me very much.* • I prefer my life to be filled with puzzles that I must solve. • The notion of thinking abstractly is appealing to me. 	Cacioppo et al. (1984)	0.90

- I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.
 - I feel relief rather than satisfaction after completing a task that required a lot of mental effort.*
 - It's enough for me that something gets the job done; I don't care how or why it works.*
 - I usually end up deliberating about issues even when they do not affect me personally.
-

Analysis and Results

For data analysis, Statistical Package for the Social Sciences (SPSS) was utilized. Data analysis consisted of three phases, including preliminary analyses (data cleaning, sample profiling, measurement validity and reliability checks), manipulation check, and hypothesis tests.

Data Cleaning

For study 1, a total of 438 consumers participated and completed the survey. Nine participants did not correctly answer the attention check question (*This is an attention check question. If you are reading this, please select “Somewhat disagree” to confirm*). As a result, 429 valid data entries were used for further data analysis.

Sample Characteristics

The demographic characteristics of the sample in study 1 were analyzed using descriptive statistics, specifically frequencies in SPSS. The sample consisted of 215 male (50.1%) and 214 female (49.9%) consumers aged between 19 and 25 ($M = 22.2$). In terms of car ownership, 71.6% of the participants owned a car and 28.4% did not. The most popular brands of the cars owned by the participants were Toyota (15.6%), Honda (9.1%), and Ford (7.5%). See Table 25.

Table 25

Sample Characteristics and Frequency Distributions for Study 1 (n=429)

	<i>n</i>	%
Gender		
Male	215	50.1%
Female	214	49.9%
Age		

	23	69	16.1%
	24	68	15.9%
	21	65	15.2%
	25	65	15.2%
	22	59	13.8%
	20	54	12.6%
	19	47	11.0%
<hr/>			
Do you currently own a car?			
	Yes	307	71.6%
	No	122	28.4%
<hr/>			
Brand of the car			
	-----	122	28.4%
	Toyota	67	15.6%
	Honda	39	9.1%
	Ford	32	7.5%
	Hyundai	20	4.7%
	Nissan	20	4.7%
	Chevrolet	19	4.4%
	Jeep	15	3.5%
	Volkswagen	13	3.0%
	Kia	12	2.8%
	Subaru	11	2.6%
	Mazda	10	2.3%
	Lexus	7	1.6%
	BMW	6	1.4%
	Dodge	5	1.2%
	Volvo	5	1.2%
	Buick	4	0.9%
	Acura	3	0.7%
	Mercedes	3	0.7%
	Saturn	3	0.7%
	Tesla	3	0.7%
	Infiniti	2	0.5%
	Audi	1	0.2%

	Fiat	1	0.2%
	GMC	1	0.2%
	Mini	1	0.2%
	Pontiac	1	0.2%
	Porsche	1	0.2%
	Suzuki	1	0.2%
<hr/>			
Ethnic Group			
	Non-Hispanic White	244	56.9%
	Asian/Pacific Islander	61	14.2%
	Non-Hispanic Black	48	11.2%
	Hispanic	47	11.0%
	Mixed Race	28	6.5%
	Other	1	0.2%

Measurement Validity and Reliability

After recoding the reverse-code items (NFC3, NFC4, NFC5, NFC7, NFC8, NFC9, NFC12, NFC16, NFC17), Exploratory Factor Analysis (EFA) was utilized to test the validity of all multi-item measures, including the intention to respond, attitude toward the ad, regulatory fit, and need for cognition (NFC). The reliability (internal consistency across items) of each scale were then checked by Cronbach's alphas.

A series of exploratory factor analysis (EFA) were conducted using the procedure of the principal component analysis with a Varimax rotation on the items comprising each variable to extract a set of factors. SPSS software was used for the factor analysis. Several extraction rules such as Eigenvalue criteria (eigenvalue > 1), the Scree plot, and the cumulative percent of variance extracted were used for identifying an appropriate number of factors. Table 26 shows that attitude toward the ad, intention to respond, and regulatory fit are all unidimensional with all items with satisfactory factor loading (> .70). Table 27 shows that eight low factor loading items

(< .70) were removed from NFC, and the result from the second EFA indicates the unidimensionality of the scale with its remaining 10 items.

Table 26

Results of EFA for Measures in Study 1

Item	Factor Loadings		
	Intention (Intent)	Attitude toward Ad (Ad_Att)	Regulatory Fit (R_Fit)
Intention1	.97		
Intention2	.98		
Intention3	.97		
Ad_Attitude1		.87	
Ad_Attitude2		.86	
Ad_Attitude3		.89	
Ad_Attitude4		.86	
Ad_Attitude5		.84	
Fit1			.90
Fit2			.96
Fit3			.94
Eigenvalue	2.844	3.735	2.619
Variance Explained	94.79%	74.70%	87.31%

Table 27

Results of EFA of Need for Cognition (NFC) for Study 1

Item	Factor Loadings	
	First EFA	Second EFA
NFC1	.68	.74
NFC2	.78	.82
NFC3	.78	.76

NFC4	.77	.74
NFC5	.70	
NFC6	.72	.75
NFC7	.69	
NFC8	.58	
NFC9	.65	
NFC10	.68	.70
NFC11	.74	.76
NFC12	.66	
NFC13	.71	.76
NFC14	.69	.72
NFC15	.77	.80
NFC16	.43	
NFC17	.56	
NFC18	.36	
Eigenvalue	7.401	5.766
Variance Explained	38.96%	57.66%

To ensure the reliability of all multi-item scales, Cronbach's coefficient alpha was calculated, and internal consistency was checked for each scale. The calculated Cronbach's α coefficients were all above 0.70, thus revealing satisfactory reliabilities (see Table 28) and internal consistency for the scales. The composite scores were then computed by averaging the individual item scores for intention to respond, attitude toward the ad, regulatory fit, and need for cognition.

Table 28

Scale Reliability Study 1

Measures	Cronbach's Alpha	N of Items
-----------------	-------------------------	-------------------

Intention to Respond to Ad Claims (Intent)	.97	3
Attitude Toward the Ad (Ad_Att)	.91	5
Regulatory Fit (R_Fit)	.93	3
Need for Cognition (NFC)	.92	10

Manipulation Checks

A series of paired samples *t*-tests were used to check the manipulation of advertising claim framing, brand associations, and situational regulatory focus.

Ad Claim Framing. For the manipulation of the advertising claim framing to be successful, there should be a significantly higher mean for: a) “This ad is about the SUV’s performance” than “This ad is about the SUV’s safety” for the ad claim, “Pleasure to drive” and b) “This ad is about the SUV’s safety” than “This ad is about the SUV’s performance” for the ad claim, “Top-notch safety.”

To test if the manipulation of ad claim framing was successful, independent samples *t*-tests and paired samples *t*-tests were conducted. Results of the independent samples *t*-tests (Table 29) indicated that perceived ad claim focus of the two ad claims were significantly different, that the perceived performance focus of “Pleasure to drive” ($M = 5.46$) was significantly higher than “Top-notch safety” ($M = 2.08$), and the perceived safety focus of “Top-notch safety” ($M = 6.61$) was significantly higher than “Pleasure to drive” ($M = 3.10$). The paired samples *t*-test results (Table 30) revealed that for the performance-focused ad claim “Pleasure to drive”, the difference between its perceived performance focus ($M = 5.46, SD = 1.27$) and its perceived safety focus ($M = 3.10, SD = 1.54$) was statistically significant [$t(216) = 16.81, p < .001$]. For the safety-focused ad claim “Top-notch safety”, the difference between its perceived performance focus ($M = 2.08,$

$SD = 1.38$) and its perceived safety focus ($M = 6.61$, $SD = 0.73$) was statistically significant [$t(211) = -35.81$, $p < .001$]. Therefore, **the manipulation of the advertising claim framing was successful.**

Table 29

Independent Samples t-Test Results for Ad Claim Framing

Ad Claim Framing		<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
AF_performance	“Pleasure to drive”	217	5.46	1.27	26.42	427	< .001
	“Top-notch safety”	212	2.08	1.37			
AF_safety	“Pleasure to drive”	217	3.10	1.54	-30.14	427	< .001
	“Top-notch safety”	212	6.61	0.73			

Table 30

Paired Samples t-Test Results for Ad Claim Framing

Claim	Stimulus Pair	Mean Difference	<i>SD</i>	Std. Error Mean	<i>t</i>	<i>df</i>	<i>p</i>
“Pleasure to drive”	AF_Performance – AF_safety	2.36	2.07	0.14	16.81	216	< .001
“Top-notch safety”	AF_Performance – AF_safety	-4.53	1.84	0.13	-35.81	211	< .001

Brand Association. For the manipulation of brand associations to be successful, the means of the perceived brand-performance association and perceived brand-safety association should not be significantly different for the attribute-balanced brands, GMC and Chevrolet.

The paired samples *t*-test results revealed that the difference between GMC’s perceived brand-performance association ($M = 4.42$, $SD = .98$) and its brand-safety association ($M = 4.38$, $SD = .99$) was not statistically significant [$t(212) = 0.71$, $p = .482$]. The difference between Chevrolet’s perceived brand-performance association ($M = 4.67$, $SD = 1.03$) and its brand-safety

association ($M = 4.78$, $SD = 1.08$) was not statistically significant either [$t(215) = -1.49$, $p = .139$]. Therefore, **the manipulation of the brand association was successful**, such that both GMC and Chevrolet were perceived as attribute-balanced brands.

Table 31

Means of Brand Associations

Brand	Brand Association	N	M	SD
GMC	Brand_Performance	213	4.42	0.98
	Brand_safety	213	4.38	0.99
Chevrolet	Brand_Performance	216	4.67	1.03
	Brand_safety	216	4.78	1.08

Table 32

Paired Samples t-Test Results for Brand Associations

Brand	Stimulus Pair	Mean Difference	SD	SE Mean	t	df	p
GMC	Brand_Performance – Brand_safety	0.04	0.88	0.06	0.70	212	.482
Chevrolet	Brand_Performance – Brand_safety	-0.11	1.10	0.08	-1.49	215	.139

Interaction of Ad Claim Framing and Brand. It is expected that the interaction effect of brand and ad frame claiming on perceived performance focus and perceived safety focus should not be significant. A 2×2 ANOVA was conducted, and the results (Table 33) indicated that there was no significant direct effect of brand on perceived ad claim performance focus ($p = .085$) or perceived ad claim safety focus ($p = .925$), and there was no significant interaction effect between brand and ad claim framing on perceived ad claim performance focus ($p = .407$), or perceived ad claim safety focus ($p = .905$).

Table 33

Interaction Effect of Brand and Ad Claim Framing on Perceived Ad Focus

	Dependent Variable	df	F	p	η^2
Brand	AF_performance	1	2.97	.085	.007
	AF_safety	1	0.01	.925	.000
Ad Claim Framing (Ad_C_F)	AF_performance	1	702.76	<.001	.623
	AF_safety	1	903.87	<.001	.680
Brand \times Ad Claim Framing (Ad_C_F)	AF_performance	1	0.69	.407	.002
	AF_safety	1	0.01	.905	<.002

Regulatory Focus. For the manipulation of situational regulatory focus to be successful, participants with situational promotion-focus would have a significantly higher mean for the response to “To what extent do you focus on achieving the positive outcome when shopping for an SUV?” than to “To what extent do you focus on avoiding the negative outcome when shopping for an SUV?”, and participants with situational prevention-focus would have a significantly higher mean for the response to “To what extent do you focus on avoiding the negative outcome when shopping for an SUV?” than to “To what extent do you focus on achieving the positive outcome when shopping for an SUV?”.

The paired samples *t*-test results revealed that promotion-focused participants tended to focus more on achieving positive outcome ($M = 5.75$, $SD = 0.08$) than avoiding negative outcome ($M = 4.55$, $SD = 1.06$), and that difference was statistically significant [$t(239) = 9.46$, $p < .001$]. Those prevention-focused participants, on the other hand, tended to focus more on avoiding negative outcome ($M = 5.43$, $SD = 0.08$) than achieving positive outcome ($M = 4.50$, $SD = 0.12$), and that difference was statistically significant [$t(188) = -6.21$, $p < .001$]. Therefore, **the manipulation of the situational regulatory focus was successful.**

Table 34

Means of Regulatory Focus

Condition	Focus	N	M	SD
Promotion-Focused	R_Focus_Promotion	240	5.75	0.08
	R_Focus_Prevention	240	4.55	0.11
Prevention-Focused	R_Focus_Promotion	189	4.50	0.12
	R_Focus_Prevention	189	5.43	0.08

Table 35

Paired Samples t-Test Results for Regulatory Focus

Condition	Stimulus Pair	Mean Difference	SD	SE Mean	t	df	p
Promotion-Focused	R_Focus_Promotion – R_Focus_Safety	1.20	1.96	.126	9.46	239	< .001
Promotion-Focused	R_Focus_Promotion – R_Focus_Safety	-0.94	2.07	.151	-6.21	188	< .001

Test of Hypotheses*Interaction Effect of Regulatory Focus and Ad Claim Framing (H1-H2)*

Since there are three categorical independent variables, three continuous dependent variables, and two covariates, a three-way multivariate analysis of covariance (MANCOVA) was conducted to determine whether multiple levels of independent variables on their own or in combination have effects on the dependent variables. Consumer regulatory focus (promotion-focused vs. prevention-focused), advertising claim framing (performance-focused vs. safety-focused), and brand (brand 1 vs. brand 2) were the between-subjects factors; attitude toward the mobile ad, intention to respond to mobile ad claims, and regulatory fit were the dependent variables; need for cognition (NFC) and brand familiarity were the covariates.

The data set had no missing values, and there was adequate sample size (between 44 and 60) for each combination of the levels of the independent variables. A series of assumptions were checked to ensure that it is appropriate to use a MANCOVA to analyze the data. A Kolmogorov-Smirnov test indicates that the DVs do not follow a normal distribution ($p < .001$); thus the assumption of multivariate normality of the dependent variables was not met, yet this violation may be overlooked due to the large sample size ($N = 429$), and there was no real outlier concerns. The maximum value of the Mahalanobis distance (MD) is 15.800, which is less than the critical value (16.27) for having three dependent variables, indicating multivariate normality. Results from scatterplot matrix indicated the linear relationship between each pair of the dependent variables across each level of the independent variables. The correlations between the three DVs were .673, .664, and .690 (all below .90 and greater than .20), which indicated that the DVs were related, but not multicollinear. Additionally, the Box's M value of 54.944 was associated with a p value of .107, so the covariance matrices across the groups were assumed to be equal for the purpose of the MANCOVA.

A three-way MANCOVA was then conducted, and the result showed that the combination of intention to respond, attitude toward the ad, and regulatory fit differ by ad claim framing ($p = .032$, $\eta^2 = .019$), brand familiarity ($p < .001$, $\eta^2 = .055$), but not by regulatory focus ($p = .090$), brand ($p = .826$) or NFC ($p = .206$). There was a statistically significant interaction effect between regulatory focus and ad claim framing on the combined dependent variables ($F_{3, 417} = 2.607$, $p = .047$, Wilks' Lambda = .981, $\eta^2 = .019$), which showed a slightly weaker effect than just the ad claim framing alone ($\eta^2 = .021$). However, there was not a significant interaction effect between regulatory focus and brand ($p = .961$), or between advertising claim framing and brand ($p = .647$), or among the three independent variables ($p = .344$) on the combined

dependent variables. Results also showed that brand did not have any significant main effect on intention to respond ($p = .631$), attitude toward the ad ($p = .957$), or regulatory fit ($p = .546$), which can be explained by the fact that the two brands chosen for this study were both attribute-balanced brands.

Table 36

Multivariate Tests (with Regulatory Focus, Ad Claim Framing, and Brand as IVs)

	Wilks' Lambda	F	df	Error df	<i>p</i>	η^2
NFC	.989	1.53	3	417	.206	.011
B_Famili	.945	8.05	3	417	<.001**	.055
R_Focus	.985	2.18	3	417	.090	.015
Ad_C_F	.979	2.96	3	417	.032*	.021
Brand	.998	0.30	3	417	.826	.002
R_Focus × Ad_C_F	.981	2.61	3	417	.047*	.019
R_Focus × Brand	.999	0.10	3	417	.961	.001
Ad_C_F × Brand	.996	0.55	3	417	.647	.004
R_Focus × Ad_C_F × Brand	.992	1.11	3	417	.344	.008

NOTE: * indicates $p < .050$; ** indicates $p < .001$; B_Famili = Brand Familiarity; R_Focus = Regulatory Focus; Ad_C_F = Ad Claim Framing.

Since female consumers focus on safety, reliability, and comfort when shopping for cars (Newman, 2019), and female drivers tend to be safer than male drivers (Bakalar, 2020), another three-way MANCOVA was conducted by replacing brand by gender as an independent variable to investigate the interaction effect of gender with regulatory focus and ad claim framing on the combination of dependent variables. The result (Table 37) showed that the combination of intention to respond, attitude toward the ad, and regulatory fit differ by ad claim framing ($p = .046$), and gender ($p < .001$), but not by regulatory focus ($p = .141$). There was a statistically significant interaction effect between ad claim framing and gender on the combined dependent

variables ($F_{3, 417} = 4.44, p = .004$, Wilks' Lambda = .969, $\eta^2 = .031$), which showed a stronger effect than just the ad claim framing alone ($\eta^2 = .019$). There was also a significant interaction effect among the three independent variables on the combined dependent variables ($F_{3, 417} = 8.38, p < .001$, Wilks' Lambda = .943, $\eta^2 = .057$).

Table 37

Multivariate Tests (with Regulatory Focus, Ad Claim Framing, and Gender as IVs)

	Wilks' Lambda	F	df	Error df	<i>p</i>	η^2
NFC	.994	0.83	3	417	.481	.006
B_Famili	.925	11.30	3	417	<.001**	.075
R_Focus	.987	1.83	3	417	.141	.013
Ad_C_F	.981	2.69	3	417	.046*	.019
Gender	.935	9.71	3	417	<.001**	.06
R_Focus × Ad_C_F	.982	2.61	3	417	.051	.018
R_Focus × Gender	.987	1.89	3	417	.130	.013
Ad_C_F × Gender	.969	4.44	3	417	.004*	.031
R_Focus × Ad_C_F × Gender	.943	8.38	3	417	<.001**	.057

NOTE: * indicates $p < .050$; ** indicates $p < .001$; B_Famili = Brand Familiarity; R_Focus = Regulatory Focus; Ad_C_F = Ad Claim Framing.

To test hypothesis 1, a factorial ANCOVA was conducted to determine if consumer's intention to respond to the mobile ad differed based on the interaction of regulatory focus and ad claim framing. Intention to respond ratings were normally distributed ($skew = -.24, SE = .12$; $kurtosis = -1.11, SE = .24$). There was a significant interaction between regulatory focus and ad claim framing on intention to respond ($F_{1, 423} = 7.81, p = .005, \eta^2 = .018$). About 2% of the variance in intention to respond to ad claims was explained by the interaction of regulatory focus

and ad claim framing. Thus, **hypothesis 1 was supported**. Furthered analysis was conducted to determine if there was a significant interaction effect of regulatory focus and ad claim framing on intention to respond to the ad based on gender. After adding gender as a blocking variable, a significant interaction between regulatory focus, ad claim framing, and gender on intention to respond ($F_{1, 419} = 20.93, p < .001, \eta^2 = .048$). About 5% of the variance in intention to respond to ad claims was explained by the interaction of regulatory focus, ad claim framing and gender. In addition, a significant interaction effect was revealed among men ($F_{1, 209} = 31.50, p < .001, \eta^2 = .131$), with about 13% of the variance in intention to respond to ad claims was explained by the interaction of regulatory focus and ad claim framing. However, this interaction effect was not significant among women ($F_{1, 208} = 1.42, p = .236$).

We then used a simple main effects analysis to follow up the disordinal interaction. In the present sample, among male participants, promotion-focused consumers had significantly ($F_{1,116} = 10.232, p = .002$) greater intentions to respond to performance-focused ad claims ($M = 4.62$) than to safety-focused ad claims ($M = 3.73$). However, among female participants, promotion-focused consumers had significantly ($F_{1,120} = 4.11, p = .045$) greater intentions to respond to safety-focused ad claims ($M = 4.23$) than to performance-focused ad claims ($M = 3.55$). Thus, **hypothesis 1a was partially supported; supported among men but not among women**. See Figure 5 for the graphs of cell means.

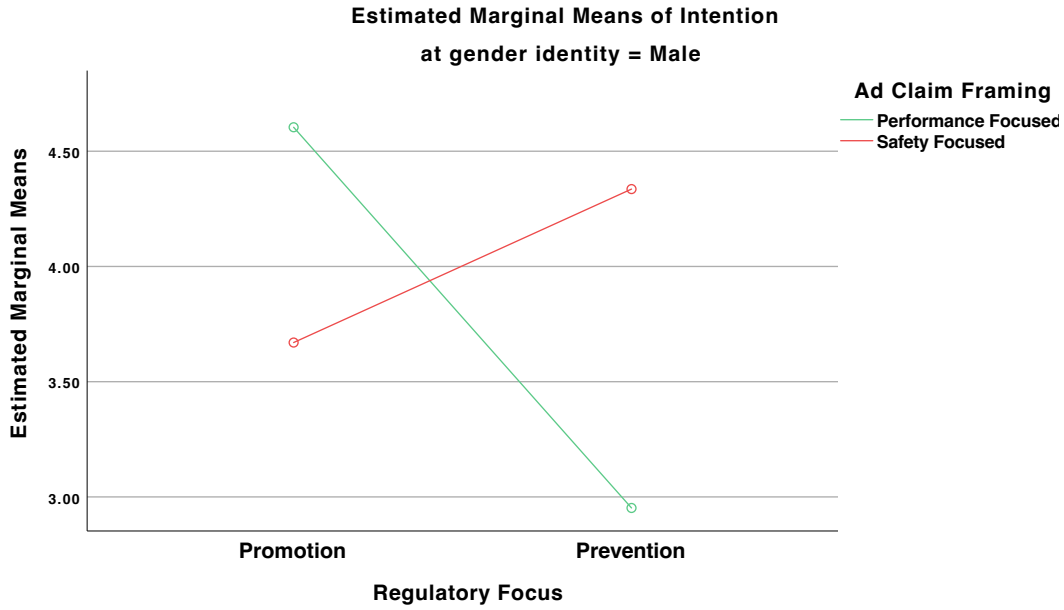
Table 38

Descriptive Statistics / Dependent Variable: Intention to Respond / By Gender

Gender	R_Focus	Ad_C_F	M	SD	N
Male	Promotion Focused	Performance Focused	4.62	1.17	61
		Safety Focused	3.73	1.81	57
		Total	4.19	1.57	118
	Prevention Focused	Performance Focused	3.03	1.68	53
		Safety Focused	4.46	1.39	44
		Total	3.68	1.71	97
	Total	Performance Focused	3.88	1.63	114
		Safety Focused	4.05	1.67	101
		Total	3.96	1.65	215
Female	Promotion Focused	Performance Focused	3.55	1.97	59
		Safety Focused	4.23	1.73	63
		Total	3.90	1.87	122
	Prevention Focused	Performance Focused	4.11	1.95	44
		Safety Focused	4.23	1.41	48
		Total	4.17	1.68	92
	Total	Performance Focused	3.79	1.97	103
		Safety Focused	4.23	1.59	111
		Total	4.02	1.79	214

Figure 4

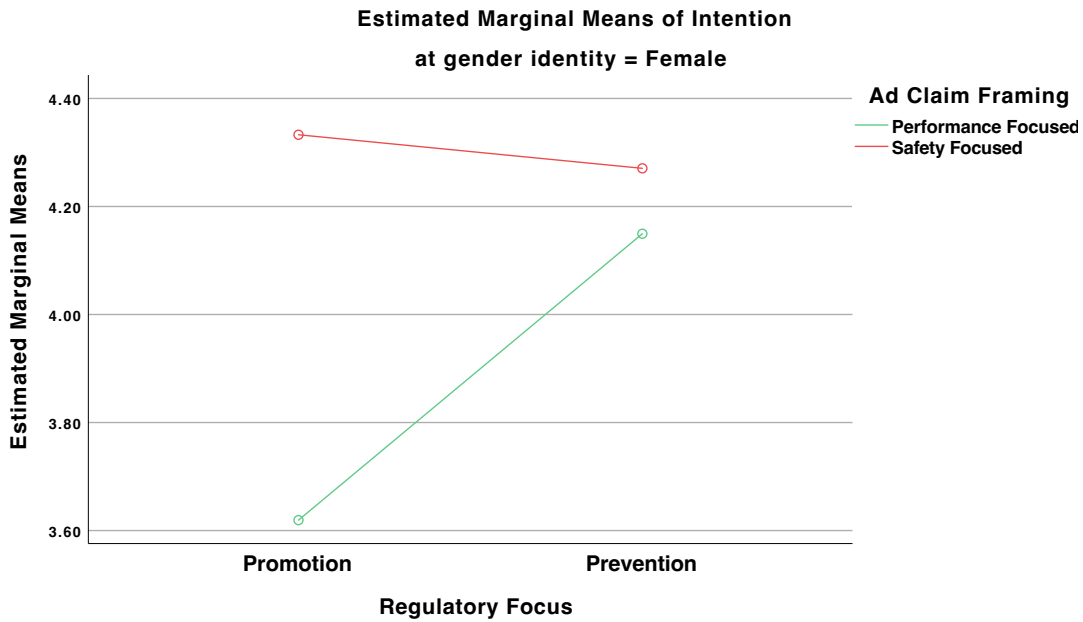
Interaction effect of Regulatory Focus × Ad Claim Framing on Intention among Men



Covariates appearing in the model are evaluated at the following values: Brand Familiarity = 4.34, Need for Cognition = 4.6047

Figure 5

Interaction effect of Regulatory Focus × Ad Claim Framing on Intention among Women



Covariates appearing in the model are evaluated at the following values: Brand Familiarity = 4.34, Need for Cognition = 4.6047

Results also showed that among prevention-focused consumers, their intentions to respond to safety-focused ad claim ($M = 4.34$) were significantly greater ($F_{1,187} = 11.46, p = .001$) than performance-focused ad claims ($M = 3.52$). Thus, **hypothesis 1b was supported**.

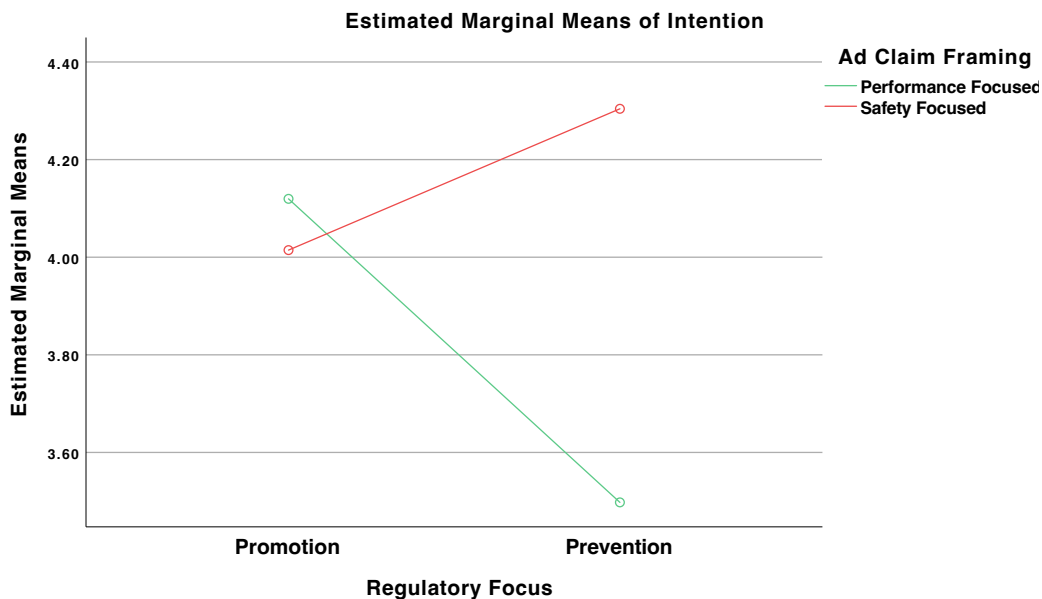
Table 39

Descriptive Statistics / Dependent Variable: Intention to Respond

R_Focus	Ad_C_F	M	SD	N
Promotion-focused	Performance-focused	4.09	1.70	120
	Safety-focused	3.99	1.78	120
	Total	4.04	1.74	240
Prevention-focused	Performance-focused	3.52	1.88	97
	Safety-focused	4.34	1.40	92
	Total	3.92	1.71	189
Total	Performance-focused	3.84	1.80	217
	Safety-focused	4.14	1.63	212
	Total	3.99	1.72	429

Figure 6

Interaction effect of Regulatory Focus × Ad Claim Framing on Intention



Covariates appearing in the model are evaluated at the following values: Brand Familiarity = 4.34, Need for Cognition = 4.6047

For performance-focused ad claims, promotion-focused consumers ($M = 4.09$) had significantly greater intentions to respond than prevention-focused consumers ($M = 3.52$), $F_{1,215} = 5.55, p = .019$. Thus, **hypothesis 1c was supported**.

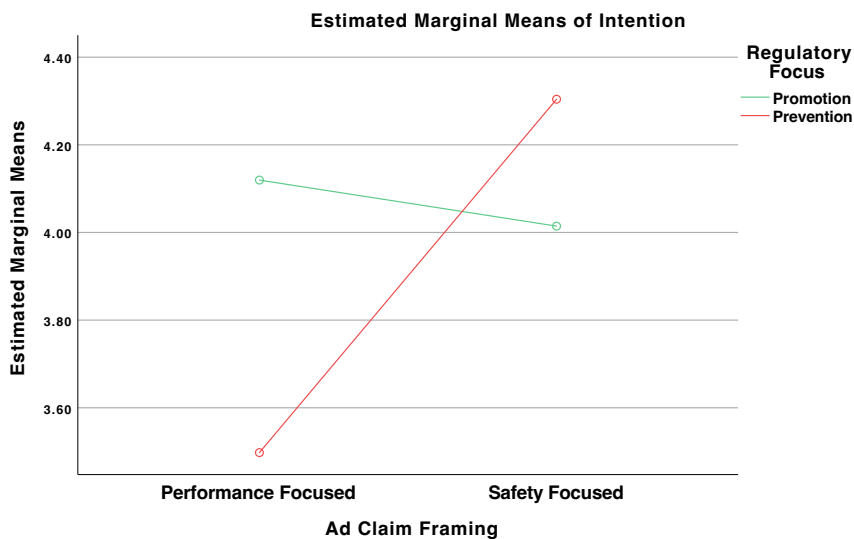
Table 40

Descriptive Statistics / Dependent Variable: Intention to Respond

Ad_C_F	R_Focus	M	SD	N
Performance-focused	Promotion-focused	4.09	1.70	120
	Prevention-focused	3.52	1.88	97
	Total	3.84	1.80	217
Safety-focused	Promotion-focused	3.99	1.78	120
	Prevention-focused	4.34	1.40	92
	Total	4.14	1.63	212
Total	Promotion-focused	4.04	1.74	240
	Prevention-focused	3.92	1.71	189
	Total	3.99	1.72	429

Figure 7

Interaction effect of Ad Claim Framing × Regulatory Focus on Intention



Covariates appearing in the model are evaluated at the following values: Brand Familiarity = 4.34, Need for Cognition = 4.6047

For safety-focused ad claims, the intentions to respond to claim did not significantly differ ($F_{1,210} = 2.40, p = .123$) between prevention-focused consumers ($M = 4.34$) and promotion-focused consumers ($M = 3.99$). However, there was a difference between genders. Prevention-focused male participants ($M = 4.46$) had a significantly ($F_{1,99} = 4.921, p = .029$) greater intention to respond to safety-focused ad claims than promotion-focused male participants ($M = 3.73$), yet there was no significant difference among female participants ($F_{1,109} < .001; p = .996$). Thus, **hypothesis 1d was partially supported; supported among men but not among women.**

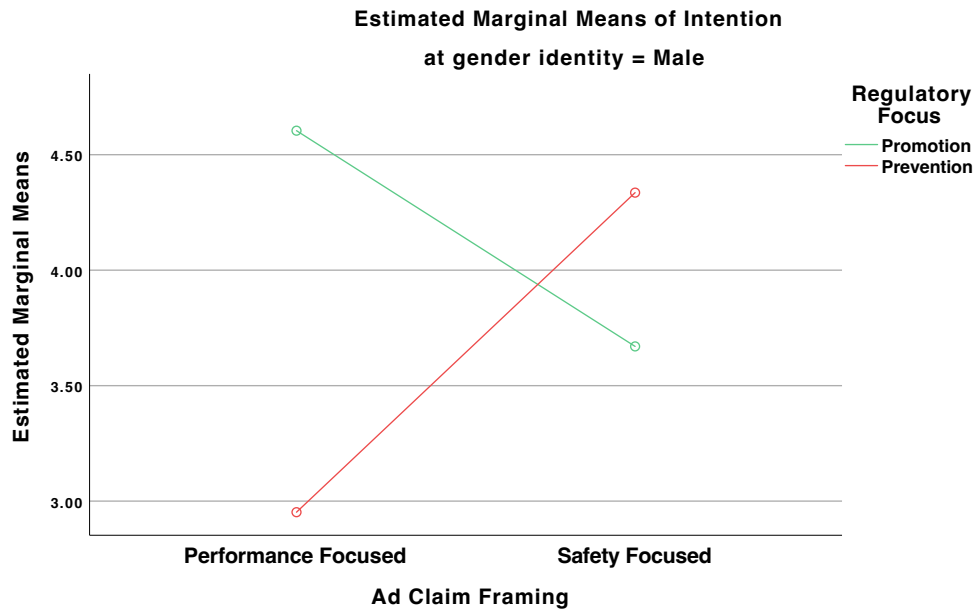
Table 41

Descriptive Statistics / Dependent Variable: Intention to Respond / By Gender

Gender	Ad Claim Framing	Regulatory Focus	M	SD	N
Male	Performance Focused	Promotion Focused	4.62	1.17	61
		Prevention Focused	3.03	1.68	53
		Total	3.88	1.63	114
	Safety Focused	Promotion Focused	3.73	1.81	57
		Prevention Focused	4.46	1.39	44
		Total	4.05	1.67	101
	Total	Promotion Focused	4.19	1.57	118
		Prevention Focused	3.68	1.71	97
		Total	3.96	1.65	215
Female	Performance Focused	Promotion Focused	3.55	1.97	59
		Prevention Focused	4.11	1.95	44
		Total	3.79	1.97	103
	Safety Focused	Promotion Focused	4.23	1.73	63
		Prevention Focused	4.23	1.41	48
		Total	4.23	1.59	111
	Total	Promotion Focused	3.90	1.87	122
		Prevention Focused	4.17	1.68	92
		Total	4.02	1.79	214

Figure 8

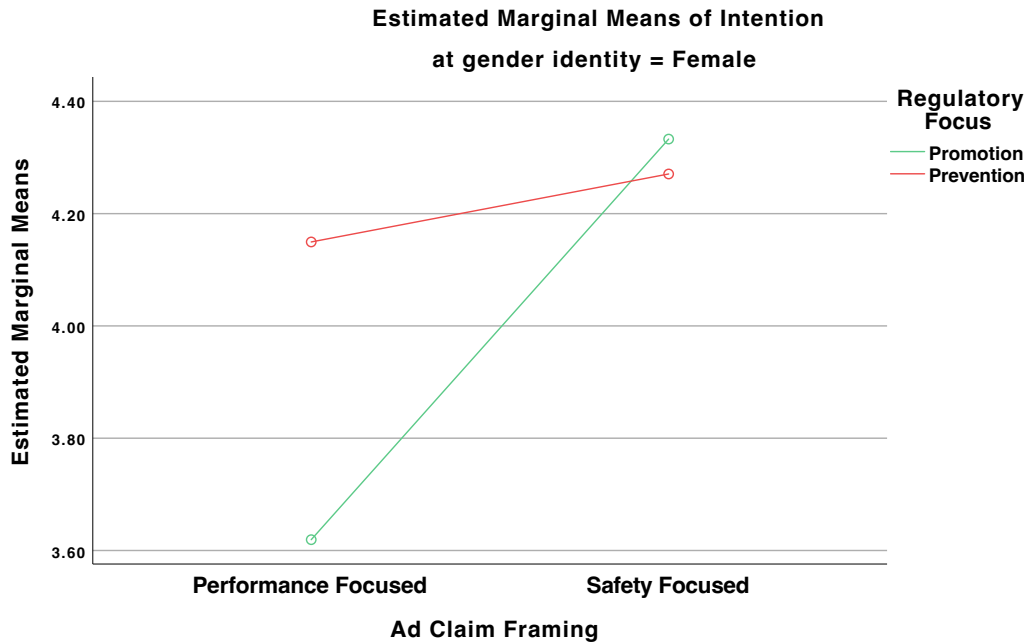
Interaction effect of Ad Claim Framing × Regulatory Focus on Intention among Men



Covariates appearing in the model are evaluated at the following values: Brand Familiarity = 4.34, Need for Cognition = 4.6047

Figure 9

Interaction effect of Ad Claim Framing × Regulatory Focus on Intention among Women



Covariates appearing in the model are evaluated at the following values: Brand Familiarity = 4.34, Need for Cognition = 4.6047

To test hypothesis 2, another factorial ANCOVA was conducted to determine if consumer's attitude toward the mobile ad differed based on the interaction of regulatory focus and ad claim framing. Attitude toward the mobile ad ratings were normally distributed ($skew = .09, SE = .12; kurtosis = -.07, SE = .24$). There was not a significant interaction between regulatory focus and ad claim framing on consumers' attitude toward the mobile ad ($F_{1, 423} = 2.47, p = .117$).

However, since there was a significant interaction effect among regulatory focus, ad claim framing and gender on the combined dependent variables ($F_{3, 419} = 8.29, p < .001, Wilks' \Lambda = .944, \eta^2 = .056$), further analysis was conducted to determine if there was a significant interaction effect of regulatory focus and ad claim framing on attitude toward the ad based on gender. A significant interaction effect was revealed among men ($F_{1, 209} = 4.75, p = .031, \eta^2 = .022$), yet not among women ($F_{1, 208} = .017, p = .896$). Thus, **hypothesis 2 was partially supported; supported among men but not among women.**

We then used a simple main effects analysis to follow up the disordinal interaction. Among promotion-focused male consumers, there was not a significant difference in attitude toward the mobile ad between performance-focused ad claim and safety-focused ad claim ($F_{1, 116} = .56, p = .457$). There was also no significant difference among promotion-focused female consumers ($F_{1, 120} = 2.61, p = .109$). Thus, **hypothesis 2a was not supported.**

Among prevention-focused male consumers, there was a significant difference in attitude toward the mobile ad between performance-focused ad claim and safety-focused ad claim ($F_{1, 95} = 5.93, p = .017$). Prevention-focused male participants had more positive attitude toward the ad with safety-focused claim ($M = 4.66$) than toward the ad with performance-focused claim ($M = 4.21$). However, there was also no significant difference among prevention-focused female

consumers ($F_{1,90} = 2.501, p = .117$). Thus, **hypothesis 2b was partially supported; supported among men but not among women**. See Table 42 for descriptive statistics, and Figure 10 and Figure 11 for the graphs of cell means.

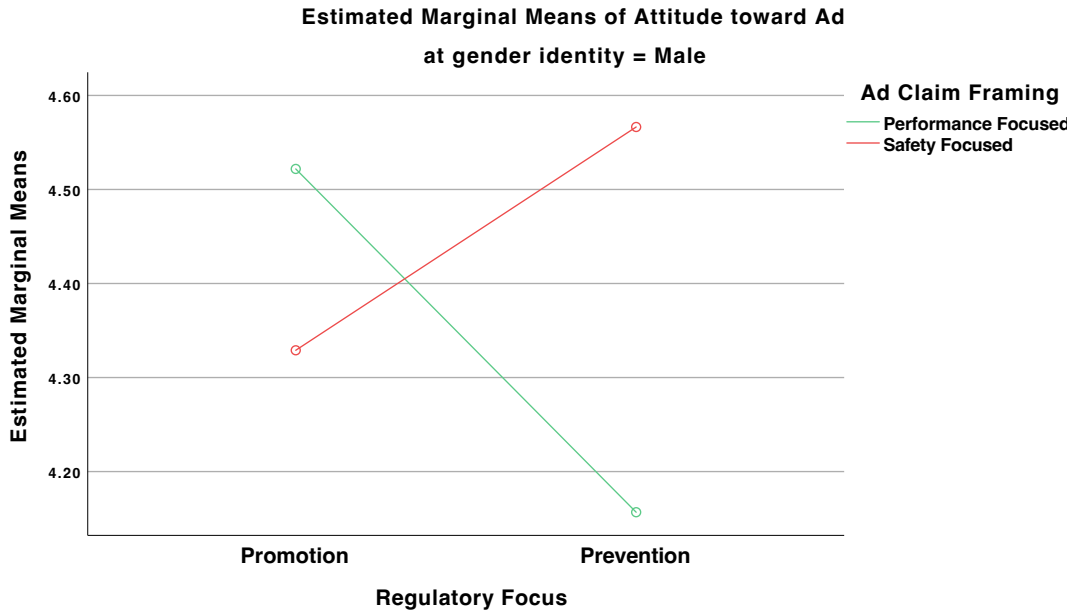
Table 42

Descriptive Statistics / Dependent Variable: Attitude toward Ad

Gender	R_Focus	Ad_C_F	M	SD	N
Male	Promotion	Performance Focused	4.53	0.95	61
		Safety Focused	4.38	1.25	57
		Total	4.46	1.11	118
	Prevention	Performance Focused	4.22	0.96	53
		Safety Focused	4.66	0.83	44
		Total	4.42	0.93	97
	Total	Performance Focused	4.38	0.97	114
		Safety Focused	4.50	1.09	101
		Total	4.44	1.03	215
Female	Promotion	Performance Focused	4.56	0.96	59
		Safety Focused	4.87	1.17	63
		Total	4.72	1.08	122
	Prevention	Performance Focused	4.74	0.99	44
		Safety Focused	5.05	0.91	48
		Total	4.90	0.96	92
	Total	Performance Focused	4.64	0.97	103
		Safety Focused	4.95	1.06	111
		Total	4.80	1.03	214

Figure 10

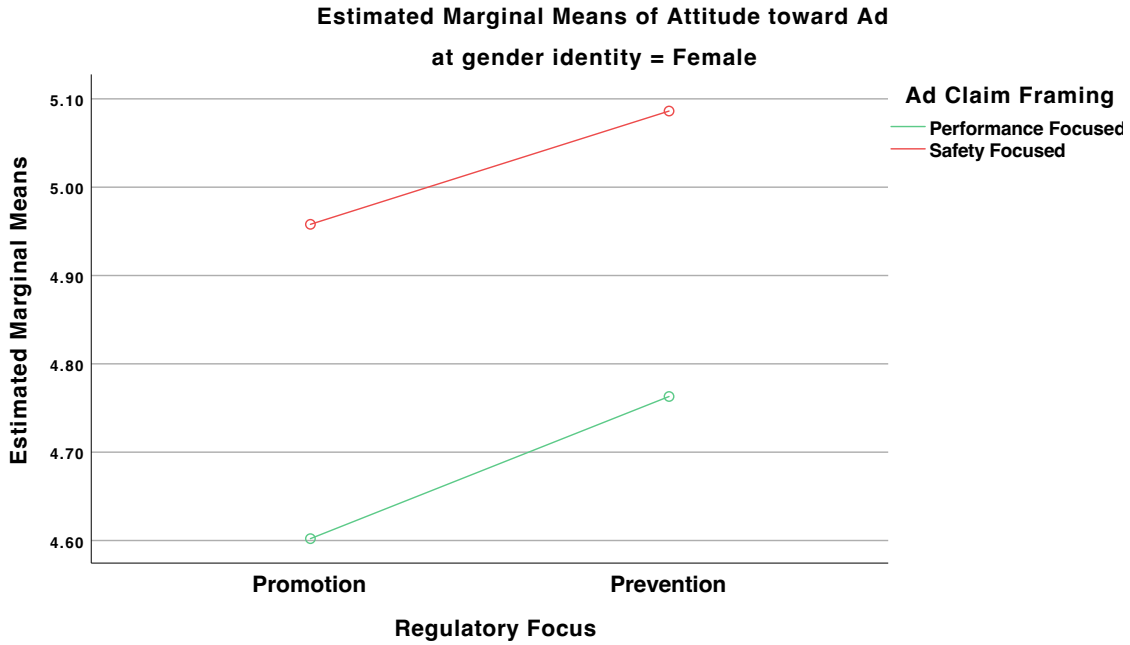
Interaction effect of Regulatory Focus × Ad Claim Framing on Attitude among Men



Covariates appearing in the model are evaluated at the following values: Brand Familiarity = 4.34, Need for Cognition = 4.6047

Figure 11

Interaction effect of Regulatory Focus × Ad Claim Framing on Attitude among Women



Covariates appearing in the model are evaluated at the following values: Brand Familiarity = 4.34, Need for Cognition = 4.6047

Promotion-focused male consumers ($M = 4.53$) had more positive attitude toward ad with performance-focused ad claim than prevention-focused male consumers ($M = 4.22$), however, the difference was not statistically different ($F_{1,112} = 3.09, p = .082$). Thus, **hypothesis 2c was not supported**. Prevention-focused male consumers ($M = 4.66$) had more positive attitude toward ad with performance-focused ad claim than promotion-focused male consumers ($M = 4.38$), however, the difference was not statistically different ($F_{1,99} = 1.70, p = .195$) either. Thus, **hypothesis 2d was not supported**. See Table 43 for descriptive statistics, and Figure 12 and Figure 13 for the graphs of cell means.

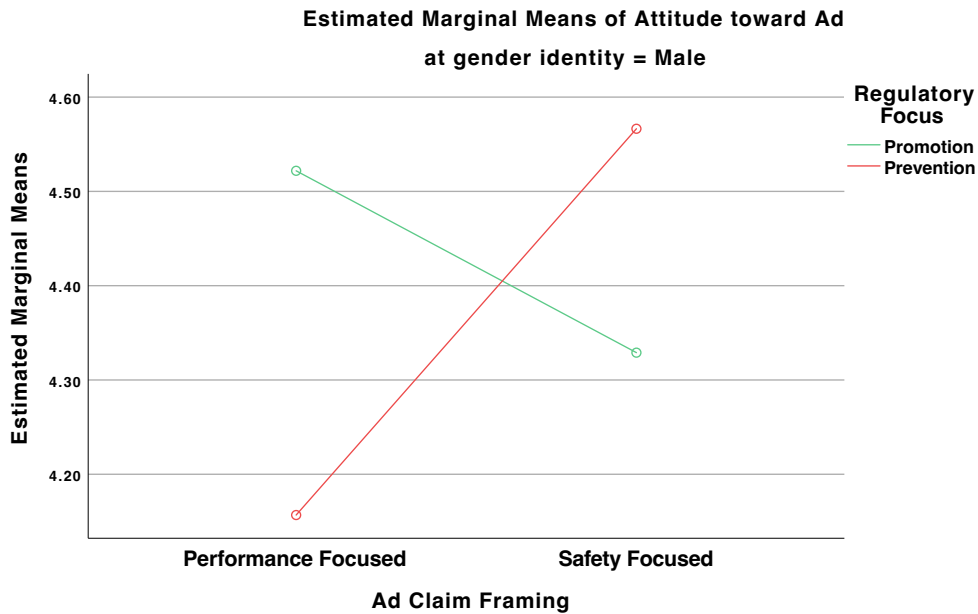
Table 43

Descriptive Statistics / Dependent Variable: Attitude toward Ad

Gender	Ad Claim Framing	Regulatory Focus	M	SD	N
Male	Performance-focused	Promotion-focused	4.53	0.95	61
		Prevention-focused	4.22	0.96	53
		Total	4.38	0.97	114
	Safety-focused	Promotion-focused	4.38	1.25	57
		Prevention-focused	4.66	0.83	44
		Total	4.50	1.09	101
	Total	Promotion-focused	4.46	1.11	118
		Prevention-focused	4.42	0.93	97
		Total	4.44	1.03	215
Female	Performance-focused	Promotion-focused	4.56	0.96	59
		Prevention-focused	4.74	0.99	44
		Total	4.64	0.97	103
	Safety-focused	Promotion-focused	4.87	1.17	63
		Prevention-focused	5.05	0.91	48
		Total	4.95	1.06	111
	Total	Promotion-focused	4.72	1.08	122
		Prevention-focused	4.90	0.96	92
		Total	4.80	1.03	214

Figure 12

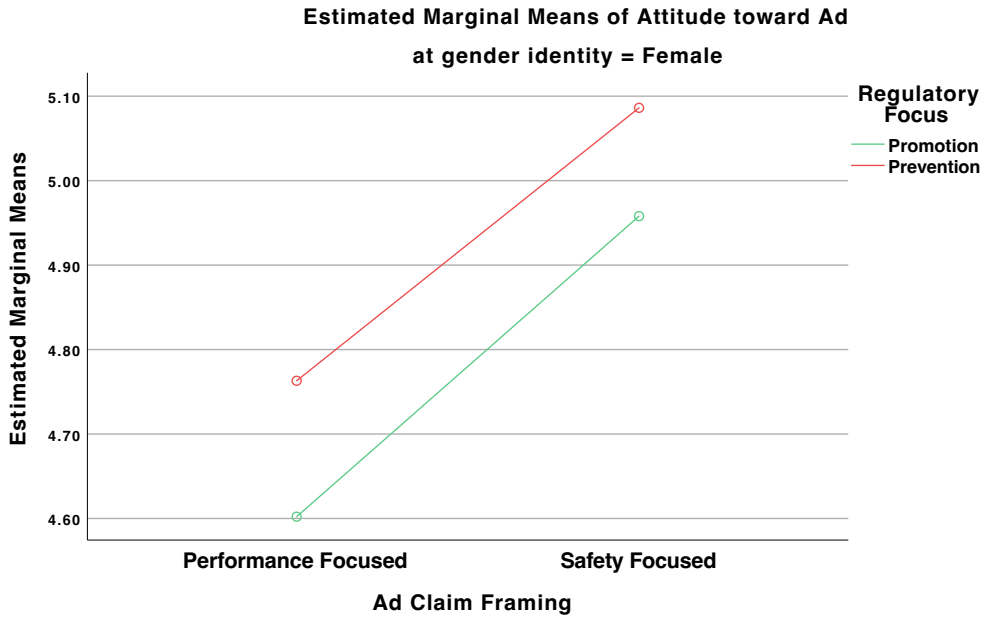
Interaction effect of Ad Claim Framing × Regulatory Focus on Attitude among Men



Covariates appearing in the model are evaluated at the following values: Brand Familiarity = 4.34, Need for Cognition = 4.6047

Figure 13

Interaction effect of Ad Claim Framing × Regulatory Focus on Attitude among Women



Covariates appearing in the model are evaluated at the following values: Brand Familiarity = 4.34, Need for Cognition = 4.6047

Mediating Effect of Regulatory Fit (H3)

Hypothesis 3 proposed that regulatory fit will mediate the relationship between the interaction effect of regulatory focus and ad claim framing on a) consumers' attitude toward the mobile ad and b) their intentions to respond to the ad claim. To test H3a, a moderated mediation analysis was run using the PROCESS macro in SPSS (Hayes, 2013) to estimate the direct and indirect effects of ad claim framing on consumers' attitude toward the ad through regulatory fit as moderated by consumers' regulatory focus. Hayes model 7 (2013) was used, with ad claim framing as the antecedent (X), attitude toward the ad as the outcome (Y), regulatory fit as the mediator (M), and regulatory focus as the moderator (W), with brand familiarity and NFC as covariates. The significance of the direct and indirect effect was evaluated by means of 5000 bootstrap samples to create bias-corrected confidence intervals (CIs; 95%). As shown in Table 44, the results revealed that there was a significant interaction effect of ad claim framing and regulatory focus on regulatory fit ($\beta = 0.53, t = 2.02, p = .044$), and regulatory fit had a significant positive effect on attitude toward the ad ($\beta = 0.51, t = 18.73, p = <.001$).

Table 44

Moderated Mediation Model with Attitude toward the Ad as DV

	β	SE	t	p	LLCI	ULCI
Mediator variable model (Regulatory Fit)						
Constant	3.62	0.69	5.26	<.001	2.27	4.98
Ad_C_F	-0.42	0.40	-1.04	.293	-1.20	0.36
R_Focus	-0.65	0.41	-1.59	.115	-1.46	0.16
Ad_C_F * R_Focus	0.53	0.26	2.02	.044	0.01	1.04
Dependent variable model (Attitude toward the Ad)						
Constant	2.49	0.21	11.64	<.001	2.07	2.91
Ad_C_F	0.06	0.07	0.86	.392	-0.08	0.21

R_Fit	0.51	0.03	18.73	<.001	0.45	0.56
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Note. Ad_C_F = ad claim framing; R_Focus = regulatory focus; R_Fit = regulatory fit; Ad_Att = attitude toward the ad; LLCI = lower limit confidence interval; ULCI = upper limit confidence interval.

More importantly, as shown in Table 45, regulatory fit mediated the interaction effect of ad claim framing and regulatory focus on consumers' attitude toward the ad, because 0 was not contained in between the lower limit confidence interval (0.01) and the upper limit confident interval (0.53).

Table 45

Direct and Conditional Indirect Effects with Attitude toward the Ad as DV

Direct effects of Ad Claim Framing on Attitude toward the Ad						
	Effect	SE	<i>t</i>	<i>p</i>	LLCI	ULCI
	0.06	0.07	0.86	.392	-0.08	0.21
Conditional indirect Effects (Ad_C_F -> R_Fit -> Ad_Att)						
Mediator	R_Focus		Effect	SE (Boot)	Boot LLCI	Boot ULCI
R_Fit	Performance Focused		0.06	0.09	-0.12	0.23
R_Fit	Safety Focused		0.32	0.10	0.14	0.51
Index of moderated mediation						
Moderator			Index	SE (Boot)	Boot LLCI	Boot ULCI
R_Focus			0.27	0.13	0.01	0.53

Note. Ad_C_F = ad claim framing; R_Focus = regulatory focus; R_Fit = regulatory fit; Ad_Att = attitude toward the ad; LLCI = lower limit confidence interval; ULCI = upper limit confidence interval.

Additional moderated mediation analysis was run using the PROCESS macro in SPSS (Hayes, 2013) to test the mediating effect of regulatory fit based on gender. The results revealed that among men, there was a significant interaction effect of ad claim framing and regulatory focus on regulatory fit ($\beta = 0.95$, $t = 2.68$, $p = .008$), and regulatory fit had a significant

positive effect on attitude toward the ad claim ($\beta = 0.52, t = 13.23, p = <.001$). In addition, regulatory fit mediated the interaction effect of ad claim framing and regulatory focus on male consumers' attitude toward the ad, because 0 was not contained in between the lower limit confidence interval (0.14) and the upper limit confident interval (0.86). However, among women, there was not a significant interaction effect of ad claim framing and regulatory focus on regulatory fit ($\beta = 0.08, t = 0.21, p = .832$). Thus, **hypothesis H3a was partially supported; supported among men but not among women.**

To test H3b, another moderated mediation analysis was run using the PROCESS macro in SPSS (Hayes, 2013) to estimate the direct and indirect effects of ad claim framing on consumers' intention to respond to the ad through regulatory fit as moderated by consumers' regulatory focus. Hayes model 7 (2013) was used, with ad claim framing (Ad_C_F) as the antecedent (X), intention to respond (Intent) to the ad as the outcome (Y), regulatory fit (R_Fit) as the mediator (M), and regulatory focus (R_Focus) as the moderator (W), with brand familiarity and NFC as covariates. The significance of the direct and indirect effect was evaluated by means of 5000 bootstrap samples to create bias-corrected confidence intervals (CIs; 95%). As shown in

Table 46, the results revealed that there was a significant interaction effect of ad claim framing and regulatory focus on regulatory fit ($\beta = 0.53, t = 2.02, p = .044$), and regulatory fit had a significant positive effect on consumers' intention to respond to the ad ($\beta = 0.81, t = 17.50, p = <.001$).

Table 46

Moderated Mediation Model with Intention to Respond to the Ad as DV

	β	SE	t	p	LLCI	ULCI
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Mediator variable model (Regulatory Fit)						
Constant	3.62	0.69	5.26	<.001	2.27	4.98
Ad_C_F	-0.42	0.40	-1.05	.293	-1.20	0.36
R_Focus	-0.65	0.41	-1.59	.115	-1.46	0.16
Ad_C_F * R_Focus	0.53	0.26	2.02	.044	0.01	1.04
Dependent variable model (Intention to Respond)						
Constant	0.49	0.37	1.33	.186	-0.24	1.21
Ad_C_F	0.02	0.13	0.19	.851	-0.22	0.27
R_Fit	0.81	0.05	17.50	<.001	0.72	0.90

Note. Ad_C_F = ad claim framing; R_Focus = regulatory focus; R_Fit = regulatory fit; Intent = intention to respond to the ad; LLCI = lower limit confidence interval; ULCI = upper limit confidence interval.

As shown in

Table 47, regulatory fit mediated the interaction effect of ad claim framing and regulatory focus on consumers' intention to respond to the ad, because 0 was not contained in between the lower limit confidence interval (0.02) and the upper limit confident interval (0.86). Thus, **hypothesis H3b was supported.**

Table 47

Direct and Conditional Indirect Effects with Intention to Respond to the Ad as DV

Direct effects of Ad Claim Framing on Intention to Respond						
	Effect	SE	<i>t</i>	<i>p</i>	LLCI	ULCI
	0.02	0.13	0.19	0.85	-0.22	0.27
Conditional indirect Effects (Ad_C_F -> R_Fit -> Intent)						
Mediator	R_Focus		Effect	SE (Boot)	Boot LLCI	Boot ULCI
R_Fit	Performance Focused		0.09	0.14	-0.20	0.36
R_Fit	Safety Focused		0.52	0.16	0.22	0.83
Index of moderated mediation						

Moderator	Index	SE (Boot)	Boot LLCI	Boot ULCI
R_Focus	0.43	0.21	0.02	0.86

Note. Ad_C_F = ad claim framing; R_Focus = regulatory focus; R_Fit = regulatory fit; Intent = intention to respond to the ad; LLCI = lower limit confidence interval; ULCI = upper limit confidence interval.

Additional moderated mediation analysis was run using the PROCESS macro in SPSS (Hayes, 2013) to test the mediating effect of regulatory fit based on gender. The results revealed that among men, there was a significant interaction effect of ad claim framing and regulatory focus on regulatory fit ($\beta = 0.95, t = 2.68, p = .008$), and regulatory fit had a significant positive effect on intentions to respond to the ad claim ($\beta = 0.84, t = 13.13, p = <.001$). In addition, regulatory fit mediated the interaction effect of ad claim framing and regulatory focus on male consumers' intentions to respond to the ad claim, because 0 was not contained in between the lower limit confidence interval (0.20) and the upper limit confident interval (1.44). However, among women, there was not a significant interaction effect of ad claim framing and regulatory focus on regulatory fit ($\beta = 0.08, t = 0.21, p = .832$). Thus, **hypothesis H3b was partially supported; supported among men but not among women.**

Effect of Attitude on Intention (H8)

Hypothesis 8 proposed a positive influence of consumers' attitude toward the mobile ad on their intentions to respond to the ad claim. A simple linear regression was calculated to predict intention to respond based on attitude toward the ad. As shown in

Table 48, a significant regression equation was found ($F_{1, 427} = 354.249, p < .001$), with an R^2 of .453. Overall, consumers' attitudes toward mobile ad positively influenced their intentions to

respond to mobile ad claims ($B = 1.11$, $\beta = 0.67$, $t = 18.82$, $p < .001$). Thus, **hypothesis 8 was supported**.

Table 48

Regressing Attitude toward Ad association on Intention to Respond to Ad Claims

Model	B	Std. Error	β	<i>t</i>	<i>p</i>
(Constant)	-1.15	0.28		-4.10	<.001
Ad_Att	1.11	0.06	0.67	18.82	<.001

Note. Ad_Att = attitude toward the ad.

Result Summary

This research hypothesized that among young car shoppers in the U.S., the **message-regulatory focus “fit” condition** (between advertising claim framing and consumers’ regulatory focus) would lead to a more positive attitude toward the mobile ad and higher intention to respond to the mobile ad, than the **message-regulatory focus “non-fit” condition**, and this interaction effect can be explained by the regulatory fit theory (Higgins, 2000, 2005). The results from study 1 showed that regulatory focus did not have a significant direct effect on consumers’ attitudes toward the mobile ad or their intention to respond to the ad. There was a non-hypothesized significant difference between the effect of ad claim framing on attitude toward the ad: the attitude toward safety-focused ad claim was more positive than toward performance-focused ad claim. There was no significant difference in the effect of ad claim framing on consumers’ intention to respond to the ad.

As hypothesized, consumer’s regulatory foci interacted with ad claim framings to affect consumer’s intention to respond to the mobile ad (H1), and their attitudes toward the ad (H2), such that when the consumer’s regulatory focus fits the ad claiming framing — a) promotion-

focused motivation + performance-focused ad claim or b) prevention-focused motivation + safety-focused ad claim, the consumers had more positive attitudes toward the ad and higher intentions to respond to the ad claims than the non-fit conditions — c) promotion-focused motivation + safety-focused ad claim or d) prevention-focused motivation + performance-focused ad claim.

The overall results indicated that promotion-focused consumers had significantly greater intentions to respond to performance-focused than safety-focused mobile ad claims; prevention-focused consumers had significantly greater intentions to respond to safety-focused than performance-focused ad claims (male participants only); promotion-focused consumers had significantly greater intentions to respond to performance-focused mobile ad claims than did prevention-focused consumers (male participants only); prevention-focused consumers had significantly greater intentions to respond to safety-focused mobile ad claims than did promotion-focused consumers (male participants only).

Table 49

The Effect of Regulatory Focus and Ad Claim Framing Fit/Non-Fit on Intention to Respond

	Fit		Non-Fit	
H1a	RF: Promotion + ACF: Performance		>	RF: Promotion + ACF: Safety
Results	Overall	Men	Women	
	4.09 > 3.99 ($p = .647$)	4.62 > 3.73 ($p = .002$)	3.55 < 4.23 ($p = .045$)	
	Fit		Non-Fit	
H1b	RF: Prevention + ACF: Safety		>	RF: Prevention + ACF: Performance
Results	Overall	Men	Women	
	4.34 > 3.52 ($p = .001$)	4.46 > 3.03 ($p < .001$)	4.23 > 4.11 ($p = .744$)	
H1c	Fit		Non-Fit	

	ACF: Performance + RF: Promotion	>	ACF: Performance + RF: Prevention
Results	Overall	Men	Women
	4.09 > 3.52 ($p = .019$)	4.62 > 3.03 ($p < .001$)	3.55 < 4.11 ($p = .151$)
H1d	Fit	>	Non-Fit
	ACF: Safety + RF: Prevention		ACF: Safety + RF: Promotion
Results	Overall	Men	Women
	4.34 > 3.99 ($p = .123$)	4.46 > 3.73 ($p = .029$)	4.228 < 4.229 ($p = .996$)

Note: Green – Supported; Orange – Not Supported; Yellow — Hypothesized direction yet not significant.

The results also revealed that prevention-focused consumers had significantly more positive attitudes toward safety-focused than performance-focused mobile ad claims (male participants only). However, promotion-focused consumers did not have significantly more positive attitudes toward performance-focused than safety-focused mobile ad claims. Promotion-focused consumers did not have significantly more positive attitudes toward performance-focused mobile ad claims than did prevention-focused consumers. Prevention-focused consumers did have more positive attitudes toward safety-focused mobile ad claims than did promotion-focused consumers. However, the difference was not statistically significant.

Table 50

The Effect of Regulatory Focus and Ad Claim Framing Fit/Non-Fit on Attitude toward Ad

	Fit	>	Non-Fit
H2a	RF: Promotion + ACF: Performance		RF: Promotion + ACF: Safety
Results	Overall	Men	Women
	4.54 < 4.64 ($p = .511$)	4.53 > 4.38 ($p = .457$)	4.56 < 4.87 ($p = .109$)
H2b	Fit	>	Non-Fit

	RF: Prevention + ACF: Safety	>	RF: Prevention + ACF: Performance
Results	Overall	Men	Women
	4.87 > 4.45 ($p = .003$)	4.66 > 4.22 ($p = .017$)	5.05 > 4.74 ($p = .117$)
H2c	Fit	>	Non-Fit
	ACF: Performance + RF: Promotion		ACF: Performance + RF: Prevention
Results	Overall	Men	Women
	4.54 > 4.45 ($p = .502$)	4.53 > 4.22 ($p = .082$)	4.56 < 4.74 ($p = .343$)
H2d	Fit	>	Non-Fit
	ACF: Safety + RF: Prevention		ACF: Safety + RF: Promotion
Results	Overall	Men	Women
	4.87 > 4.64 ($p = .129$)	4.66 > 4.38 ($p = .195$)	5.05 > 4.87 ($p = .368$)

Note: Green – Supported; Orange – Not Supported; Yellow — Hypothesized direction yet not significant.

Most of the hypotheses were either fully supported (H1, H1b, H1c) or partially supported (H1a, H1d, H2, H2b), while a few were not supported (H2a, H2c, H2d). The results revealed gender as a major factor, and those partially supported hypotheses only applied to male, but not female consumers. Consistent with the hypotheses, among male young car shoppers, when the ad claim framing fits their individual regulatory focus, they responded more positively to the ad and had higher intentions to respond to the ad claims. Message-Regulatory Focus “fit” conditions led to more positive attitudes and higher intentions to respond to the mobile as than Message-Regulatory Focus “non-fit” conditions. This study also hypothesized that the interaction effect between consumers’ regulatory focus and ad claim framing on consumers’ attitude toward the ad and intentions to respond to the ad was mediated by regulatory fit, which was supported by the results.

Table 51

Gender Differences in Hypotheses Testing Results for Study 1

Regulatory Focus & Ad Claim Framing Fit > Non-Fit								
	Intention to Respond				Attitude toward the Ad			
	H1a	H1b	H1c	H1d	H2a	H2b	H2c	H2d
Men	✓	✓	✓	✓	✓	✓	✓	✓
Women		✓				✓		✓

Note: Green – Supported; Orange – Not Supported; Yellow — Hypothesized direction yet not significant.

Chapter 5. Study 2 – Methods and Results

Research Design

This study was conducted as an online experiment employing a 2 (Brand Association: performance-salient vs. safety-salient) × 2 (Advertising Claim Framing: performance-focused vs. safety-focused) between-subjects design. The same two claims from the first study were used — “Pleasure to Drive” as the performance-focused claim and “Top-notch Safety” as the safety-focused claim. Based on the results of the second pretest, two car brands were selected for this study, including Jeep as the performance-salient brand and Kia as the safety-salient brand. Manipulations of brand association and advertising claim framing were checked.

Sample

The sample of the second main study was a non-probabilistic quota sample, consisting of U.S. consumers with equal gender representation of men and women between the ages of 19 and 25 recruited via Prolific. Participants who completed the two pretests or the first main study were excluded from this study. A total of 273 participants who met the screening criteria completed the survey.

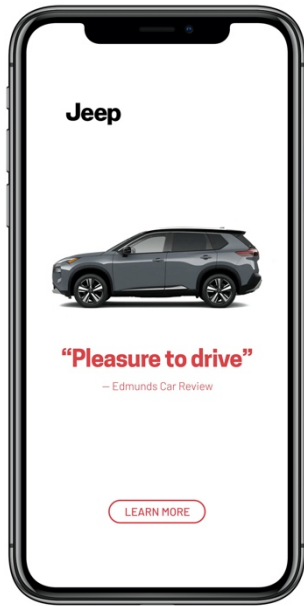
Stimuli

The stimulus development process was the same as in Study 1. A total of four mobile ads were created — performance-focused ad claim for the performance-salient brand (Jeep); safety-focused ad claim for the performance-salient brand (Jeep); performance-focused ad claim for the safety-salient brand (Kia); and safety-focused ad claim for the safety-salient brand (Kia).

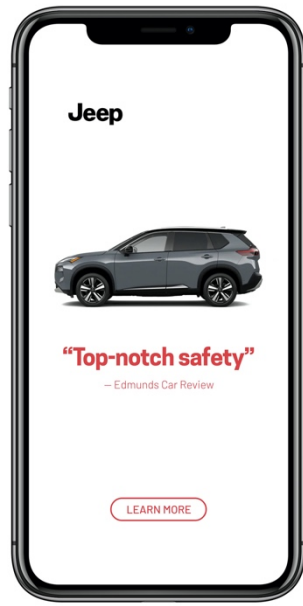
Table 52

Stimuli for Study 2

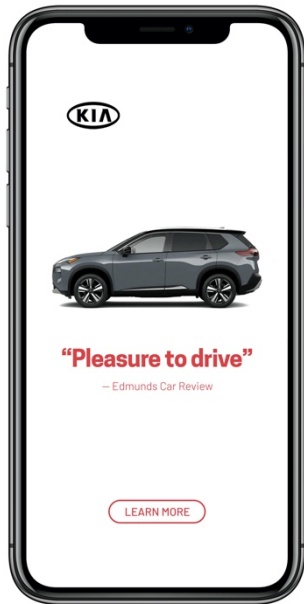
Ad Claim Framing: Performance-Focused
Brand Association: Performance-Salient



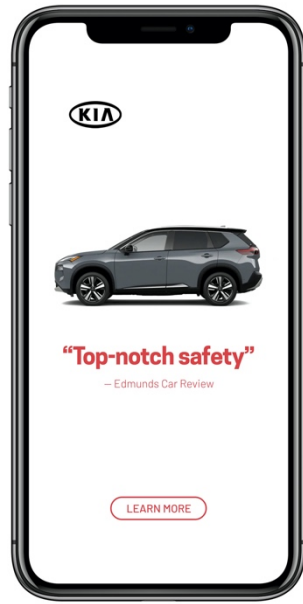
Ad Claim Framing: Safety-Focused
Brand Association: Performance-Salient



Ad Claim Framing: Performance-Focused
Brand Association: Safety-Salient



Ad Claim Framing: Safety-Focused
Brand Association: Safety-Salient



Procedure

A self-administered online questionnaire (see Appendix E.2) was developed in Qualtrics. Participants were randomly assigned to one of the four experimental conditions. After showing the study information, the participants were exposed to one of the four mobile ads and were prompted to rate the intention to learn more information about this car, followed by attitude toward the ad and elaboration measures. Advertising claim framing and brand associations were measured for manipulation checks, followed by the measurement of brand familiarity, need for cognition (NFC), and demographic questions. A diagram of the procedure is available in Appendix E.1.

Measures

Intention to respond, attitude toward the ad, advertising claim framing, brand association, brand familiarity, need for cognition, and demographic information were measured by using the same instruments as in Study 1. In addition to these measures, Study 2 also measured elaboration amount and elaboration valence. See Table 55 for a complete list of measures.

Elaboration amount (Mediating Variable). Elaboration amount was measured by using a five-item 7-point Likert scale adapted from Oh and Jasper (2006).

Table 53

Elaboration Amount Measurement Items for Study 2

Items	Item Abbreviation
<i>When I was looking at the advertisement ...</i>	
I tried to make an accurate judgment of the SUV.	Elaboration_Level1
I used a lot of mental effort to evaluate the possible value of the SUV for me.	Elaboration_Level2
I used the copy to evaluate the SUV.	Elaboration_Level3

I carefully considered the claims that the copy made about the SUV. Elaboration_Level4

I gave a lot of thought to the copy in order to judge whether the SUV will be suitable for me. Elaboration_Level5

Elaboration valence (Mediating Variable). Using the method in a study by Briñol et al. (2015), a thought-listing task was employed to reveal the number of favorable, unfavorable, neutral, or irrelevant thoughts toward the ad. The researcher collected the data from the questionnaire section for the open-ended question “Please list all the thoughts you have about this SUV, and separate thoughts with commas”, and identified the individual thoughts using the smallest meaningful text segments as the unit. The researcher worked with two graduate students and developed coding scheme (see Table 54), with thought types, definitions, and example comments for each thought type. The two graduate students performed the coding independently, and coded each thought as “favorable”, “unfavorable”, “neutral”, or “irrelevant”, depending on if and how the comments associated with evaluative response to the SUV in the ad. Their coding results were compared to check the intercoder reliability of the coding scheme based on the percentage of agreement for two raters. The initial inter-coder reliability was 73%, three researchers then discussed and assigned a final code to each of the non-agreed thought.

Table 54

Coding Scheme for Thoughts

Thought Type	Definition	Example Thoughts
Favorable Thought	Comments associated with favorable evaluative reaction towards the SUV in the advertisement.	“Looks nice”, “stylish”, “Sleek design”, “Looks safe”, “Trustworthy”, “Modern looking”
Unfavorable Thought	Comments associated with unfavorable evaluative reaction towards the SUV in the advertisement.	“Does not look appealing”, “bland”, “Low effort”, “Unreliable”, “unoriginal”, “the ad gave nothing”, “Ugly car”

Neutral Thought	Comments associated with neither favorable nor unfavorable evaluative reaction towards the SUV in the advertisement.	“Mom car”, “Simple”, “Standard”, “It’s ok”, “What’s the price?”, “What the interior looks like”, “Fairly generic looking”, “seems fine”
Irrelevant Thought	Comments not associated with any evaluative reaction towards the SUV in the advertisement.	“I’m not really a fan of SUVs”, “I don’t know anything about cars”, “I’m not familiar with the brand at all”, “How far away a dealership would be”, “I prefer more squared shape SUVs”

An index of the valence of ad-related thoughts was then calculated by dividing the difference of the number of favorable and unfavorable thoughts by the total number of ad-related thoughts. Positive index indicated favorable elaboration valence, negative index indicated unfavorable elaboration valence, and 0 indicated neutral elaboration valence.

Table 55
Measures of Study 2

Goal	Variable	Measures	Source	α
DV	Intention to Respond	(3-item, 7-point Likert Scale; 1 = “strongly disagree”, 7 = “strongly agree”) <ul style="list-style-type: none"> Assuming I see this ad on my phone, I intend to click on the “Learn More” button. Assuming I see this ad on my phone, I predict that I would click on the “Learn More” button. I plan to click on the “Learn More” button to get more information about this SUV. 	Venkatesh & Bala (2008)	0.88
DV	Attitude toward the ad	(5-item, 7-point semantic differential scale) How do you feel about this ad? <ul style="list-style-type: none"> bad/good harmful/beneficial worthless/valuable unpleasant/pleasant foolish/wise 	Andrew & Shimp (1990)	0.85
Mediator	Elaboration Amount	(5-item, 7-point Likert Scale; 1 = “strongly disagree”, 7 = “strongly agree”)	Oh & Jasper (2006)	0.88

		When I was looking at the advertisement,	
		<ul style="list-style-type: none"> • I tried to make an accurate judgement of the SUV. • I used a lot of mental effort to evaluate the possible value of the SUV for me. • I used the copy to evaluate the SUV. • I carefully considered the claims that the copy made about the SUV. • I gave a lot of thought to the copy in order to judge whether the SUV will be suitable for me. 	
Mediator	Elaboration Valence	List all the thoughts you have about this SUV: Valence index = $(N_{\text{favorable_thoughts}} - N_{\text{unfavorable_thoughts}}) / (N_{\text{favorable_thoughts}} + N_{\text{unfavorable_thoughts}} + N_{\text{neutral_thoughts}})$	Briñol et al. (2015)
Manipulation check	Advertising Claim Framing	(2-item, 7-point Likert Scale; 1 = “strongly disagree”, 7 = “strongly agree”) <ul style="list-style-type: none"> • This ad is about the SUV’s performance. • This ad is about the SUV’s safety. 	Developed by author
Manipulation check	Brand Association	(2-item, 7-point Likert Scale; 1 = “strongly disagree”, 7 = “strongly agree”) <ul style="list-style-type: none"> • (Brand Name) cars have high level of performance. • (Brand Name) cars have high level of safety. 	Yoo et al. (2000)
Covariate	Brand Familiarity	(1-item, 7-point Likert Scale; 1 = “not familiar at all”, 7 = “very familiar”) <ul style="list-style-type: none"> • How familiar are you with the (Brand Name) brand? 	Tam (2008)
Covariate	Need for Cognition (NFC)	(18-item, 7-point Likert Scale; 1 = “strongly disagree”, 7 = “strongly agree”) <ul style="list-style-type: none"> • I would prefer complex to simple problems. • I like to have the responsibility of handling a situation that requires a lot of thinking. • Thinking is not my idea of fun.* • I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.* • I try to anticipate and avoid situations where there is likely a chance I will have to think in depth about something.* • I find satisfaction in deliberating hard and for long hours. • I only think as hard as I have to.* • I prefer to think about small, daily projects to long-term ones.* 	Cacioppo et al. (1984) 0.90

- I like tasks that require little thought once I've learned them.*
 - The idea of relying on thought to make my way to the top appeals to me.
 - I really enjoy a task that involves coming up with new solutions to problems.
 - Learning new ways to think doesn't excite me very much.*
 - I prefer my life to be filled with puzzles that I must solve.
 - The notion of thinking abstractly is appealing to me.
 - I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.
 - I feel relief rather than satisfaction after completing a task that required a lot of mental effort.*
 - It's enough for me that something gets the job done; I don't care how or why it works.*
 - I usually end up deliberating about issues even when they do not affect me personally.
-

Analysis and Results

For data analysis, Statistical Package for the Social Sciences (SPSS) was utilized. Data analysis consisted of three phases, including preliminary analyses (data cleaning, sample profiling, measurement validity and reliability checks), manipulation check, and hypothesis tests.

Data Cleaning

For study 2, a total of 273 people participated and completed the survey. Eight participants did not correctly answer the attention check question (*This is an attention check question. If you are reading this, please select "Somewhat disagree" to confirm*), and their responses were deleted from the data. Another two responses from participants who were older than 25 were also deleted. As a result, 263 valid data entries were used for further data analysis.

Sample Characteristics

The demographic characteristics of the sample in study 2 were analyzed using descriptive statistics, specifically frequencies in SPSS (see

Table 56). The sample consisted of 132 male (50.2%) and 131 female (49.8%) consumers aged between 19 and 25 ($M = 22.4$). In terms of car ownership, 74.5% of the participants owned a car and 25.5% did not. The most popular brands of the cars owned by the participants were Toyota (13.7%), Honda (12.9%), Hyundai (5.3%), and Nissan (5.3%).

Table 56

Sample Characteristics and Frequency Distributions for Study 2 (n=263)

		<i>n</i>	%
Gender	Men	132	50.2%
	Women	131	49.8%
Age	24	48	18.3%
	23	46	17.5%
	25	43	16.3%
	20	42	16%
	22	38	14.4%
	21	28	10.6%
	19	18	6.8%
Do you currently own a car?	Yes	196	74.5%
	No	67	25.5%
Brand of the car	-----	67	25.5%
	Toyota	36	13.7%
	Honda	34	12.9%
	Hyundai	14	5.3%
	Nissan	14	5.3%

Chevrolet	13	4.9%
Ford	13	4.9%
Jeep	10	3.8%
Subaru	8	3%
Volkswagen	8	3%
Kia	7	2.7%
BMW	6	2.3%
Lexus	6	2.3%
Mazda	4	1.5%
Acura	3	1.1%
Dodge	3	1.1%
Volvo	3	1.1%
Buick	2	0.8%
Chrysler	2	0.8%
Mercedes	2	0.8%
Audi	1	0.4%
Cadillac	1	0.4%
GMC	1	0.4%
Infiniti	1	0.4%
Mini	1	0.4%
Pontiac	1	0.4%
Saturn	1	0.4%
Tesla	1	0.4%

Ethnic Group

Non-Hispanic White	143	54.4%
Asian/Pacific Islander	40	15.2%
Hispanic	31	11.8%
Non-Hispanic Black	25	9.5%
Mixed Race	20	7.6%
Other	3	1.1%
American Indian/Alaskan Native	1	0.4%

Measurement Validity and Reliability

After recoding the reverse-code items (NFC3, NFC4, NFC5, NFC7, NFC8, NFC9, NFC12, NFC16, NFC17), Exploratory Factor Analysis (EFA) was utilized to test the validity of all multi-item measures, including the intention to respond, attitude toward the ad, and need for cognition (NFC). The reliability (internal consistency across items) of each scale were then checked by Cronbach's alphas.

A series of exploratory factor analysis (EFA) were conducted using the procedure of the principal component analysis with a Varimax rotation on the items comprising each variable to extract a set of factors. SPSS software was used for the factor analysis. Several extraction rules such as Eigenvalue criteria (eigenvalue > 1), the scree plot, and the cumulative percent of variance extracted were used for identifying an appropriate number of factors. Table 57 shows at ad attitude, intention to respond, and elaboration amount are all unidimensional with all items with satisfactory factor loading (> .70). Table 58 shows that seven low factor loading items (< .70) were removed from NFC, and the result from the second EFA indicated the unidimensionality of the scale with its remaining 11 items.

Table 57

Results of EFA as for Measures in Study 2

Item	Factor Loadings		
	Intention (Intent)	Attitude toward Ad (Ad_Att)	Elaboration Amount (E_Amount)
Intention1	.99		
Intention2	.99		
Intention3	.99		
Ad_Attitude1		.88	
Ad_Attitude2		.85	

Ad_Attitude3		.85	
Ad_Attitude4		.86	
Ad_Attitude5		.85	
Elaboration_Level1			.79
Elaboration_Level2			.74
Elaboration_Level3			.83
Elaboration_Level4			.88
Elaboration_Level5			.90
Eigenvalue	2.922	3.692	3.426
Variance Explained	97.40%	73.84%	68.53%

Table 58

EFA and Cronbach's α of Need for Cognition (NFC) in Study 2

Item	Factor Loadings	
	First EFA	Second EFA
NFC1	.73	.75
NFC2	.82	.85
NFC3	.83	.83
NFC4	.84	.81
NFC5	.67	
NFC6	.77	.79
NFC7	.61	
NFC8	.60	
NFC9	.67	
NFC10	.76	.79
NFC11	.76	.79
NFC12	.72	.70
NFC13	.72	.76
NFC14	.70	.73

NFC15	.81	.82
NFC16	.42	
NFC17	.57	
NFC18	.28	
Eigenvalue	7.401	6.769
Variance Explained	48.47%	61.52%

To ensure the reliability of all multi-item scales, Cronbach's coefficient alpha was calculated, and internal consistency was checked for each scale. The calculated Cronbach's α coefficients were all above 0.70, thus revealing satisfactory reliabilities (see Table 59) and internal consistency for the scales. The composite scores were then computed by averaging the individual item scores for brand attitude, intention to respond, attitude toward the ad, elaboration amount, chronic regulatory focus, and need for cognition.

Table 59
Scale Reliability Study 2

Measures	Cronbach's Alpha	N of Items
Intention to Respond to Ad Claims (Intent)	.99	3
Attitude Toward the Ad (Ad_Att)	.91	5
Elaboration Amount (E_Amount)	.88	5
Need for Cognition (NFC)	.94	11

Manipulation Checks

A series of paired samples *t*-tests were used to check the manipulation of advertising claim framing and brand associations.

Ad Claim Framing. For the manipulation of the advertising claim framing to be successful, there should be a significantly higher mean for “This ad is about the SUV’s performance” than “This ad is about the SUV’s safety” for “Pleasure to drive” ad claim, and a significantly higher mean for “This ad is about the SUV’s safety” than “This ad is about the SUV’s performance” for “Top-notch safety” ad claim.

To test if the manipulation of ad claim framing was successful, independent samples *t*-tests and paired samples *t*-tests were conducted. Results of the independent samples *t*-tests (Table 60) indicated that perceived ad claim focus of the two ad claims were significantly different. The perceived performance focus of “Pleasure to drive” ($M = 5.70$) was significantly higher than “Top-notch safety” ($M = 2.27$), and the perceived safety focus of “Top-notch safety” ($M = 6.55$) was significantly higher than “Pleasure to drive” ($M = 2.53$). The paired samples *t*-test results (Table 61) revealed that for the performance-focused ad claim “Pleasure to drive”, the difference between its perceived performance focus ($M = 5.70, SD = 1.16$) and its perceived safety focus ($M = 2.53, SD = 1.26$) was statistically significant [$t(130) = 20.80, p < .001$]. For the safety-focused ad claim “Top-notch safety”, the difference between its perceived performance focus ($M = 2.27, SD = 1.34$) and its perceived safety focus ($M = 6.55, SD = 0.76$) was statistically significant [$t(131) = -29.44, p < .001$]. Therefore, **the manipulation of the advertising claim framing was successful.**

Table 60

Independent Samples t-Test Results for Ad Claim Framing

	Ad Claim Framing	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
AF_performance	“Pleasure to drive”	131	5.70	1.16	22.254	261	<.001
	“Top-notch safety”	232	2.27	1.34			
AF_safety	“Pleasure to drive”	131	2.53	1.26	-33.337	261	<.001

“Top-notch safety” 132 6.55 0.76

Table 61

Paired Samples t-Test Results for Ad Claim Framing

Claim	Stimulus Pair	Mean Difference	SD	SE Mean	t	df	p
“Pleasure to drive”	AF_Performance – AF_safety	3.18	1.747	.153	20.80	130	<.001
“Top-notch safety”	AF_Performance – AF_safety	-4.27	1.667	.145	-29.44	131	<.001

Brand Association. For the manipulation of brand associations to be successful, the means of Jeep’s perceived performance should be significantly higher than the means of Jeep’s perceived safety, and the means of Kia’s perceived safety should be significantly higher than the means of Kia’s perceived performance. Also, the means of Jeep’s perceived performance should be significantly higher than the means of Kia’s perceived performance, and the means of Kia’s perceived safety should be significantly higher than the means of Jeep’s perceived safety.

The paired samples *t*-test results revealed that Jeep’s perceived brand-performance association ($M = 5.53, SD = 1.00$) was significantly [$t(130) = 11.33, p < .001$] higher than its perceived brand-safety association ($M = 4.16, SD = 1.051$), and Kia’s perceived brand-safety association ($M = 5.33, SD = 0.88$) was significantly [$t(131) = -14.62, p < .001$] higher than its perceived brand-performance association ($M = 4.02, SD = 0.94$).

An ANOVA was conducted to compare the means of brand associations between the two brands. Perceived brand-performance ratings and perceived brand-safety ratings were normally distributed. Jeep’s perceived brand-performance was significantly higher than Kia’s ($F_{1, 261} = 124.60, p < .001$), and Kia’s perceived brand-safety association was significantly higher than

Jeep's ($F_{1, 261} = 96.39, p < .001$). Therefore, **the manipulation of the brand association was successful**, such that Jeep was perceived as a performance-salient brand, whereas, Kia was perceived as a safety-salient brand.

Table 62

Paired Samples t-Test Results for Brand Associations

Brand	Stimulus Pair	Mean Difference	SD	SE Mean	t	df	p
Jeep	Brand_Performance – Brand_safety	1.19	1.20	.105	11.33	130	<.001
Kia	Brand_Performance – Brand_safety	-1.32	1.04	.090	-14.62	131	<.001

Table 63

Means of Brand Associations

Brand	Brand Association (B_Assoc)	N	M	SD
Jeep	Brand_Performance	131	5.35	1.00
	Brand_safety	131	4.16	1.05
Kia	Brand_Performance	132	4.02	0.94
	Brand_safety	132	5.33	0.88

Interaction of Ad Claim Framing and Brand Association. It is expected that the interaction effect of brand association and ad claim framing on perceived performance focus and perceived safety focus should not be significant. A 2×2 ANOVA was conducted, and the results (Table 64) indicated that there was no significant direct effect of brand association on perceived ad claim performance focus ($p = .535$) or perceived ad claim safety focus ($p = .726$), and there was no significant interaction effect between brand association and ad claim framing on perceived ad claim performance focus ($p = .124$), or perceived ad claim safety focus ($p = .395$).

Table 64

Interaction Effect of Brand Association and Ad Claim Framing on Perceived Ad Focus

	Dependent Variable	df	F	p	η^2
B_Assoc	AF_performance	1	0.39	.535	.001
	AF_safety	1	0.12	.726	.000
Ad_C_F	AF_performance	1	773.07	<.001	.657
	AF_safety	1	1106.08	<.001	.810
B_Assoc × Ad_C_F	AF_performance	1	2.39	.124	.009
	AF_safety	1	0.73	.395	.003

Test of Hypotheses*Interaction Effect of Brand Association and Ad Claim Framing (H4-H5)*

Since there are two categorical independent variables, four continuous dependent variables, and two covariates, a multivariate analysis of covariance (MANCOVA) was conducted to determine whether multiple levels of independent variables on their own or in combination have effects on the dependent variables. Brand association (performance-salient vs. safety-salient), advertising claim framing (performance-focused vs. safety-focused) were the between-subjects factors; attitude toward the mobile ad, intention to respond to mobile ad claims, elaboration amount, and elaboration valence were the dependent variables; need for cognition (NFC) and brand familiarity were the covariates.

The data set has no missing values, and there was adequate sample size (between 65 and 66) for each combination of the levels of the independent variables. A series of assumptions were checked to ensure that it is appropriate to use a MANCOVA to analyze the data. A Kolmogorov-

Smirnov test indicates that the DVs do not follow a normal distribution ($p < .001$); thus the assumption of multivariate normality of the dependent variables was not met, yet this violation may be overlooked due to the large sample size ($N = 263$), and there was no real outlier concerns. Results from scatterplot matrix indicated the linear relationship between each pair of the dependent variables across each level of the independent variables. The correlations between the three DVs were .65, .41, .51, and .35 (all below .90 and greater than .20), which indicated that the DVs were related, but not multicollinear. Additionally, the Box's M value of 25.372 was associated with a p value of .129, so the covariance matrices across the groups were assumed to be equal for the purpose of the MANCOVA.

A MANCOVA was then conducted, and the result showed that the combination of intention to respond, attitude toward the ad, elaboration amount, and elaboration valence differed by NFC ($p = .001$, $\eta^2 = .073$), also by brand familiarity ($p < .001$, $\eta^2 = .112$), but not by brand association ($p = .234$), or ad claim framing ($p = .384$). There was not a statistically significant interaction effect between brand association and ad claim framing on the combined dependent variables ($p = .252$).

Table 65

Multivariate Tests (with Brand Association and Ad Claim Framing as IVs)

	Wilks' Lambda	F	df	Error df	p	η^2
NFC	.927	4.87	4	246	<.001**	.073
B_Famili	.888	7.73	4	246	<.001**	.112
B_Assoc	.978	1.40	4	246	.234	.022
Ad_C_F	.983	1.05	4	246	.384	.017
B_Assoc \times Ad_C_F	.979	1.35	4	246	.252	.021

NOTE: * indicates $p < .05$; ** indicates $p < .001$; B_Famili = Brand Familiarity; B_Assoc = Brand Association; Ad_C_F = Ad Claim Framing.

Since gender played an important role in study 1, another MANCOVA was conducted by adding gender as an independent variable to investigate the interaction effect of gender with brand association and ad claim framing on the combination of dependent variables. The result (Table 66) showed that the combination of intention to respond, attitude toward the ad, and elaboration amount differ by brand familiarity ($p < .001$) and NFC ($p = .004$), but not by brand association ($p = .231$), ad claim framing ($p = .372$), or gender ($p = .960$). However, there was a significant interaction effect among the three independent variables (brand association, ad claim framing and gender) on the combined dependent variables ($F_{4, 242} = 3.659, p = .006$, Wilks' Lambda = .943, $\eta^2 = .057$).

Table 66

Multivariate Tests (with Brand Association, Ad Claim Framing, Gender as IVs)

	Wilks' Lambda	F	df	Error df	p	η^2
B_Famili	.897	6.91	4	242	<.001**	.103
NFC	.938	4.00	4	242	.004*	.062
B_Asso	.977	1.41	4	242	.231	.023
Ad_C_F	.983	1.07	4	242	.372	.017
Gender	.997	0.16	4	242	.960	.003
B_Asso × Ad_C_F	.978	1.34	4	242	.257	.022
B_Asso × Gender	.995	0.32	4	242	.867	.005
Ad_C_F × Gender	.982	1.12	4	242	.346	.018
B_Assoc × Ad_C_F × Gender	.943	3.66	4	242	.006*	.057

NOTE: * indicates $p < .05$; ** indicates $p < .001$; B_Famili = Brand Familiarity; B_Assoc = Brand Association; Ad_C_F = Ad Claim Framing.

To test hypothesis 4, a factorial ANCOVA was conducted to determine if consumers' attitude toward the mobile ad differed based on the interaction of brand association and ad claim framing. There was not a significant interaction between brand association and ad claim framing

on consumers' attitude toward the mobile ad ($F_{1, 257} = 2.80, p = .095$). However, since there was a significant interaction effect among brand association, ad claim framing and gender on the combined dependent variables, another factorial ANCOVA was conducted to determine if consumer's attitude toward the mobile advertising claims differed based on the interaction of brand association, ad claim framing, and gender. Attitude toward the mobile ad ratings were normally distributed ($skew = .08, SE = .15; kurtosis = -.09, SE = .30$). A significant interaction between brand association, ad claim framing, and gender on consumers' attitude toward the ad claim framing ($F_{1, 253} = 12.14, p < .001, \eta^2 = .046$). About 5% of the variance in consumers' attitude toward the ad claims was explained by the interaction of brand association, ad claim framing and gender. A significant interaction effect was revealed among male consumers ($F_{1, 126} = 11.11, p = .001, \eta^2 = .081$), yet not among female consumers ($F_{1, 125} = 2.02, p = .157$). Thus, **hypothesis 4 was partially supported.**

For the performance-salient brand (Jeep), among male participants, there was a significant difference in attitude toward the mobile ad between performance-focused ad claim and safety-focused ad claim ($F_{1,126} = 6.80, p = .010$). Male participants had more positive attitude toward the ad with safety-focused claim ($M = 4.78$) than toward the ad with performance-focused claim ($M = 3.99$). However, among female participants, there was not a significant difference ($F_{1,125} = 1.88, p = .173$) between their attitude toward the ad with performance-focused claim and the one with performance-focused claim. Thus, **hypothesis 4a was partially supported.**

For the safety-salient brand (Kia), among male participants, there was a significant difference in attitude toward the mobile ad between performance-focused ad claim and safety-focused ad claim ($F_{1,126} = 4.56, p = .035$). Male participants had more positive attitude toward the

ad with performance-focused claim ($M = 4.71$) than toward the ad with safety-focused claim ($M = 4.06$). However, among female participants, there was not a significant difference ($F_{1,125} = 0.43, p = .515$) between their attitude toward the ad with performance-focused claim and the one with performance-focused claim. Thus, **hypothesis 4b was partially supported.**

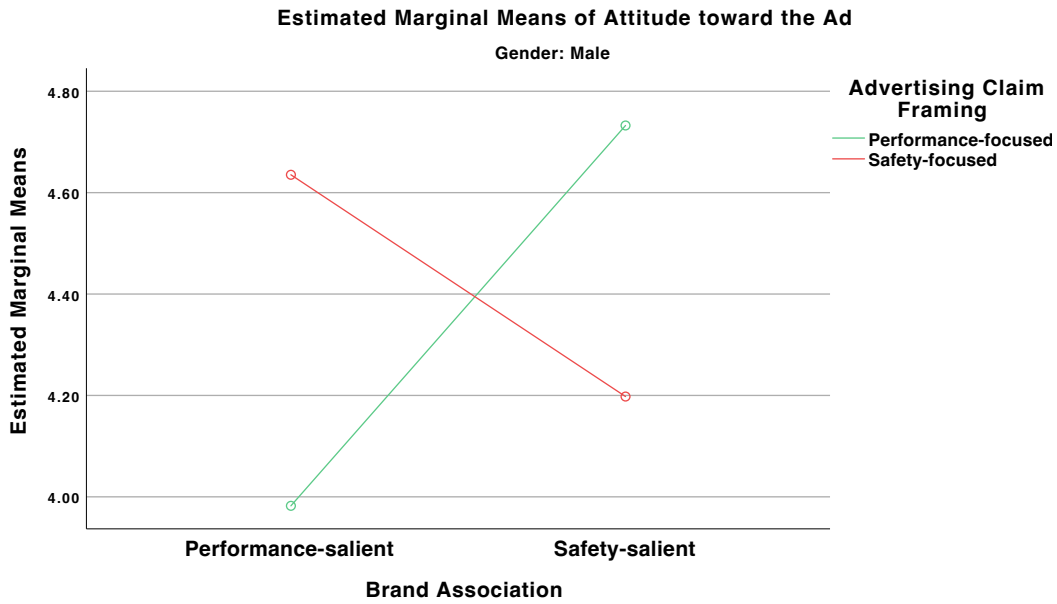
Table 67

Descriptive Statistics / Dependent Variable: Attitude toward Ad

Gender	Brand Association	Ad Claim Framing	M	SD	N
Men	Performance Salient	Performance Focused	3.99	1.18	32
		Safety Focused	4.78	0.98	34
		Total	4.40	1.15	66
	Safety Salient	Performance Focused	4.71	1.12	35
		Safety Focused	4.06	0.99	31
		Total	4.40	1.10	66
	Total	Performance Focused	4.37	1.20	67
		Safety Focused	4.43	1.05	65
		Total	4.40	1.12	132
Women	Performance Salient	Performance Focused	4.65	0.70	33
		Safety Focused	4.24	0.96	32
		Total	4.45	0.85	65
	Safety Salient	Performance Focused	4.33	1.06	31
		Safety Focused	4.54	1.06	35
		Total	4.44	1.06	66
	Total	Performance Focused	4.49	0.90	64
		Safety Focused	4.40	1.02	67
		Total	4.45	0.96	131

Figure 14

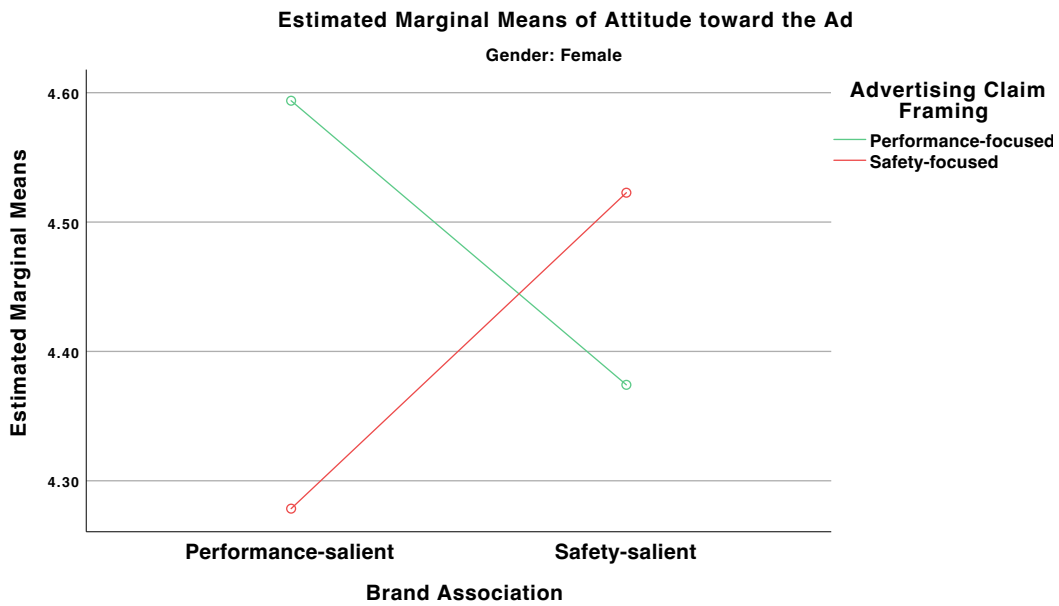
Interaction effect of Brand Association × Ad Claim Framing on Attitude among Men



Covariates appearing in the model are evaluated at the following values: Brand Familiarity = 4.54, NFC = 4.6756

Figure 15

Interaction effect of Brand Association × Ad Claim Framing on Attitude among Women



Covariates appearing in the model are evaluated at the following values: Brand Familiarity = 4.62, NFC = 4.3400

For performance-focused ad claims, among male participants, there was a significant difference in attitude toward the mobile ad claim between performance-salient brand and safety-salient brand ($F_{1,126} = 9.20, p = .003$). Male participants had more positive attitude toward the ad claim for safety-salient brand ($M = 4.71$) than toward the ad claim for performance-salient brand ($M = 3.99$). However, among female participants, there was not a significant difference ($F_{1,125} = 0.90, p = .344$) between their attitude toward the ad for performance-salient brand and the one for safety-salient brand. Thus, **hypothesis 4c was partially supported; supported among men but not among women.**

For the safety-focused ad claims, among male participants, there was a marginally significant difference in attitude toward the mobile ad claim between performance-salient brand and safety-salient brand ($F_{1,126} = 2.85, p = .094$). Male participants had more positive attitude toward the ad claim for performance-salient brand ($M = 4.78$) than toward the ad claim for safety-salient band ($M = 4.06$). However, among female participants, there was not a significant difference ($F_{1,125} = 1.14, p = .287$) between their attitude toward the ad for performance-salient brand and the one for safety-salient brand. Thus, **hypothesis 4d was partially supported; supported among men but not among women.**

Table 68

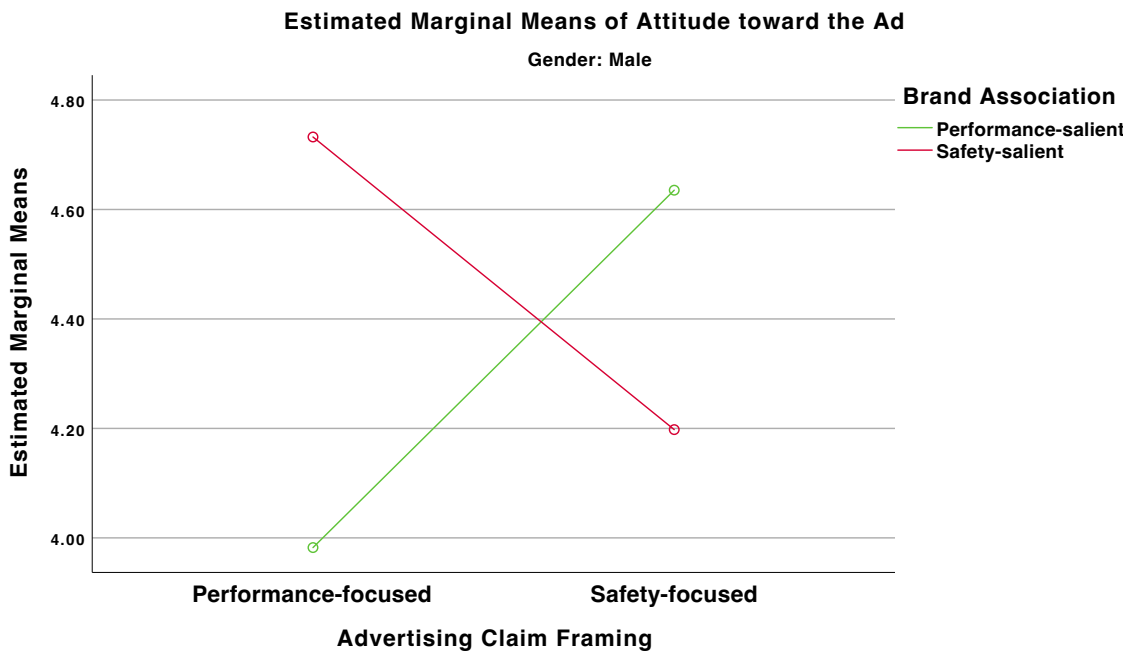
Descriptive Statistics / Dependent Variable: Attitude toward Ad

Gender	Ad Claim Framing	Brand Association	M	SD	N
Men	Performance Focused	Performance Salient	3.99	1.18	32
		Safety Salient	4.71	1.12	35
		Total	4.37	1.20	67
	Safety Focused	Performance Salient	4.78	0.98	34
		Safety Salient	4.06	0.99	31
		Total	4.43	1.05	65

Total		Performance Salient	4.40	1.15	66
		Safety Salient	4.40	1.10	66
		Total	4.40	1.12	132
Women	Performance Focused	Performance Salient	4.65	0.70	33
		Safety Salient	4.33	1.06	31
		Total	4.49	0.90	64
	Safety Focused	Performance Salient	4.24	0.96	32
		Safety Salient	4.54	1.06	35
		Total	4.40	1.02	67
	Total	Performance Salient	4.45	0.85	65
		Safety Salient	4.44	1.06	66
		Total	4.45	0.96	131

Figure 16

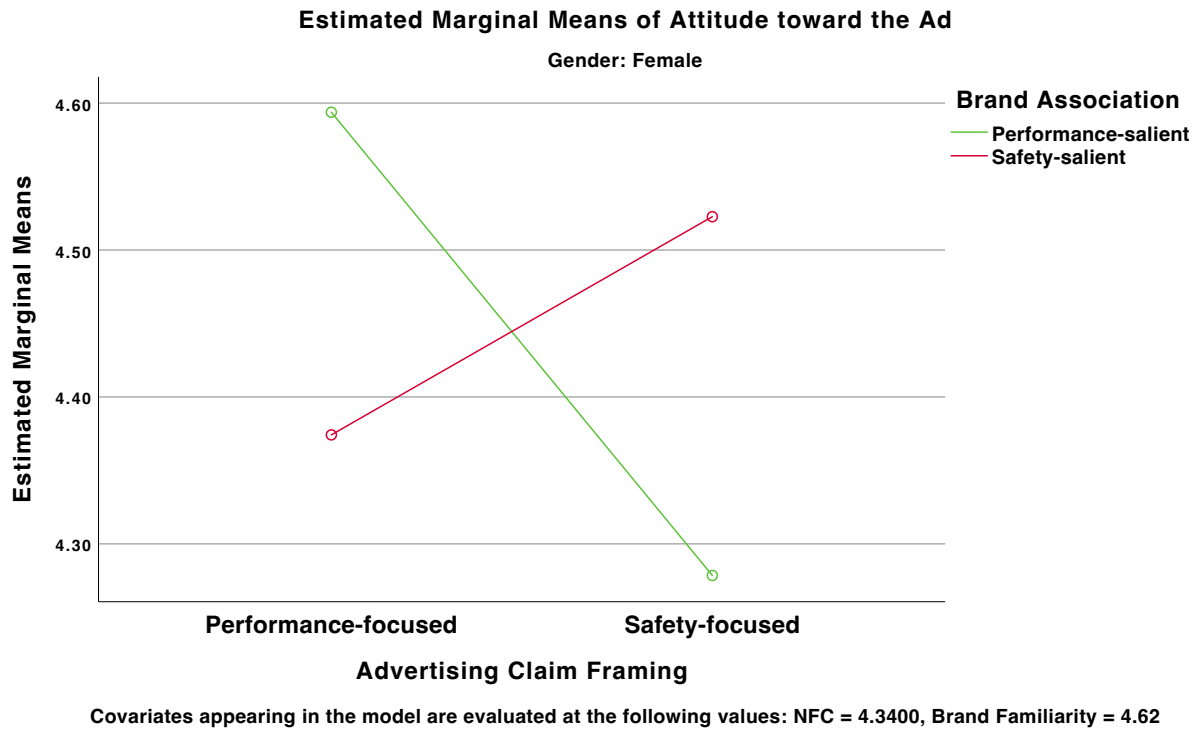
Interaction effect of Brand Association × Ad Claim Framing on Attitude among Men



Covariates appearing in the model are evaluated at the following values: NFC = 4.6756, Brand Familiarity = 4.54

Figure 17

Interaction effect of Brand Association × Ad Claim Framing on Attitude among Women



To test hypothesis 5, a factorial ANCOVA was conducted to determine if consumers' intentions to respond to the mobile ad differed based on the interaction of brand association and ad claim framing. There was not a significant interaction between brand association and ad claim framing on consumers' intentions to respond to the mobile ad ($F_{1, 257} = 2.04, p = .154$). However, since there was a significant interaction effect among brand association, ad claim framing and gender on the combined dependent variables, another factorial ANCOVA was conducted to determine if consumers' intentions to respond to the mobile ad claims differed based on the interaction of brand association and ad claim framing. Intention to respond to the mobile ad ratings were normally distributed ($skew = .24, SE = .15; kurtosis = -1.34, SE = .30$). A

significant interaction between brand association, ad claim framing, and gender on consumers' intentions to respond to the mobile ad claims ($F_{1, 253} = 10.63, p = .001, \eta^2 = .040$). About 4% of the variance in consumers' intentions to respond to the mobile ad claims was explained by the interaction of brand association, ad claim framing and gender. A significant interaction effect was revealed among male consumers ($F_{1, 126} = 11.93, p < .001, \eta^2 = .086$), yet not among female consumers ($F_{1, 125} = 1.21, p = .273$). Thus, **hypothesis 5 was partially supported**.

For the performance-salient brand (Jeep), among male participants, there was a significant difference in intentions to respond to the mobile ad between performance-focused ad claim and safety-focused ad claim ($F_{1,126} = 5.50, p = .021$). Male participants had greater intention to respond to the ad with safety-focused claim ($M = 4.16$) than to the ad with performance-focused claim ($M = 3.06$). However, female participants had significantly ($F_{1,125} = 4.46, p = .037$) greater intention to respond to the ad with performance-focused claim ($M = 3.99$) than to the ad with safety-focused claim ($M = 2.83$). Thus, **hypothesis 5a was partially supported**.

For the safety-salient brand (Kia), among male participants, there was a significant difference in intentions to respond to the mobile ad between performance-focused ad claim and safety-focused ad claim ($F_{1,126} = 6.59, p = .011$). Male participants had greater intention to respond to the ad with performance-focused claim ($M = 3.69$) than to the ad with safety-focused claim ($M = 2.48$). However, among female participants, there was not a significant difference ($F_{1,125} = 0.31, p = .578$) between their intentions to respond to the ad with performance-focused claim and the one with performance-focused claim. Thus, **hypothesis 5b was partially supported**.

Table 69

Descriptive Statistics / Dependent Variable: Intention to Respond

Gender	Brand Association	Ad Claim Framing	M	SD	N
Men	Performance Salient	Performance Focused	3.06	1.96	32
		Safety Focused	4.16	1.53	34
		Total	3.63	1.82	66
	Safety Salient	Performance Focused	3.69	1.84	35
		Safety Focused	2.48	1.56	31
		Total	3.12	1.80	66
	Total	Performance Focused	3.39	1.91	67
		Safety Focused	3.36	1.75	65
		Total	3.37	1.82	132
Women	Performance Salient	Performance Focused	3.99	1.75	33
		Safety Focused	2.83	1.79	32
		Total	3.42	1.85	65
	Safety Salient	Performance Focused	3.29	1.91	31
		Safety Focused	3.21	1.95	35
		Total	3.25	1.92	66
	Total	Performance Focused	3.65	1.85	64
		Safety Focused	3.03	1.87	67
		Total	3.33	1.88	131

Figure 18

Interaction effect of Brand Association × Ad Claim Framing on Intention among Men

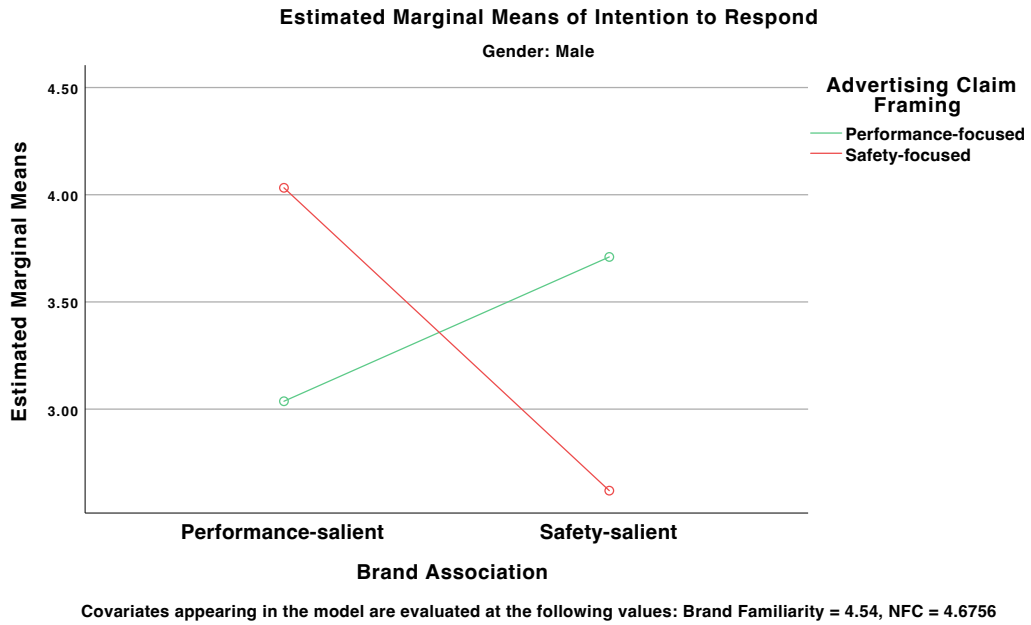
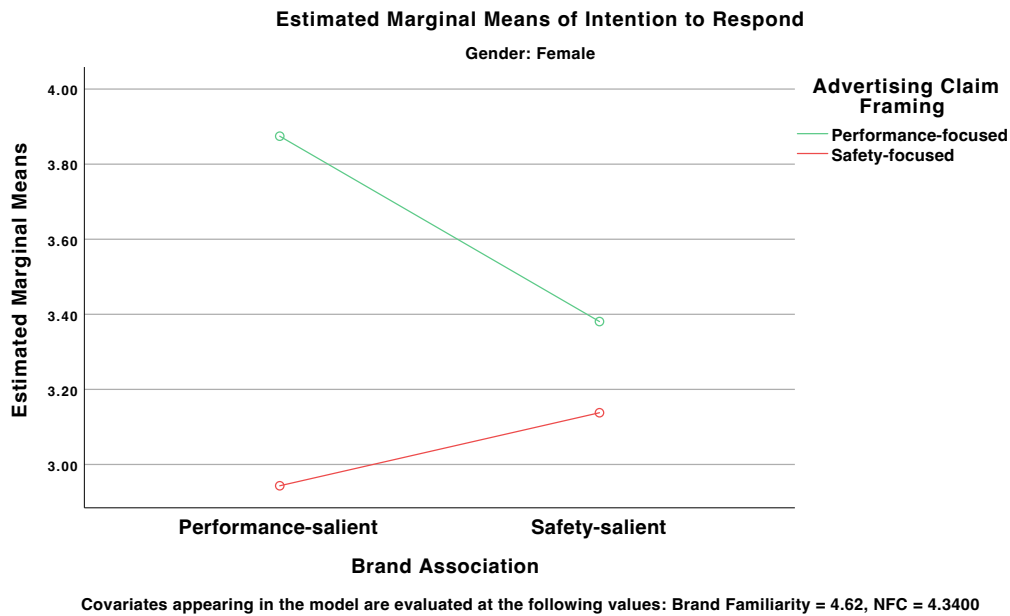


Figure 19

Interaction effect of Brand Association × Ad Claim Framing on Intention among Women



For performance-focused ad claims, among male participants, there was not a significant difference in consumers' intentions to respond to the mobile ad claim between performance-salient brand and safety-salient brand ($F_{1,126} = 2.58, p = .111$). There was also no significant difference among female participants ($F_{1,125} = 1.24, p = .267$) between their intentions to respond to the ad claim for performance-salient brand and the one for safety-salient brand. Thus, **hypothesis 5c was not supported.**

For safety-focused ad claims, among male participants, there was a significant difference in intentions to respond to the mobile ad between performance-focused ad claim and safety-focused ad claim ($F_{1,126} = 10.33, p = .002$). Male participants had greater intention to respond to the ad for performance-salient brand ($M = 4.16$) than to the ad for safety-salient brand ($M = 2.48$). However, among female participants, there was not a significant difference ($F_{1,125} = 0.20, p = .658$) between their intentions to respond to the ad for performance-focused brand and the one for safety-salient brand. Thus, **hypothesis 5d was partially supported; supported among men but not among women.**

Table 70

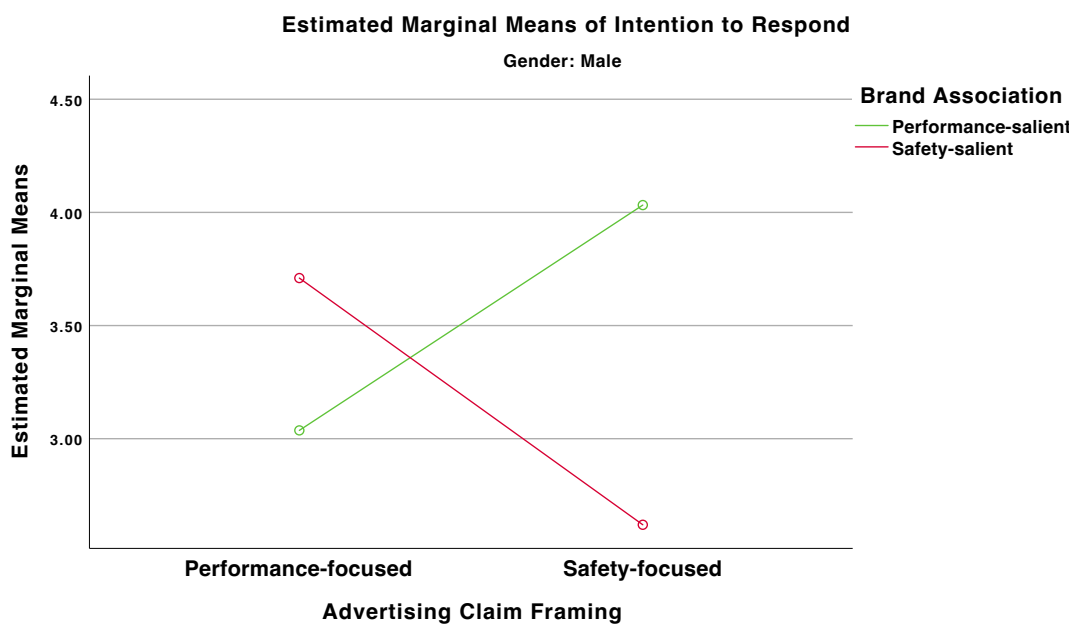
Descriptive Statistics / Dependent Variable: Intention to Respond

Gender	Ad Claim Framing	Brand Association	M	SD	N
Men	Performance Focused	Performance Salient	3.06	1.96	32
		Safety Salient	3.69	1.84	35
		Total	3.39	1.91	67
	Safety Focused	Performance Salient	4.16	1.53	34
		Safety Salient	2.48	1.56	31
		Total	3.36	1.75	65
	Total	Performance Salient	3.63	1.82	66
		Safety Salient	3.12	1.80	66
		Total	3.37	1.82	132

Women	Performance Salient	Performance Salient	3.99	1.75	33
		Safety Salient	3.29	1.91	31
		Total	3.65	1.85	64
	Safety Salient	Performance Salient	2.83	1.79	32
		Safety Salient	3.21	1.95	35
		Total	3.03	1.87	67
Total	Performance Salient	3.42	1.85	65	
	Safety Salient	3.25	1.92	66	
	Total	3.33	1.88	131	

Figure 20

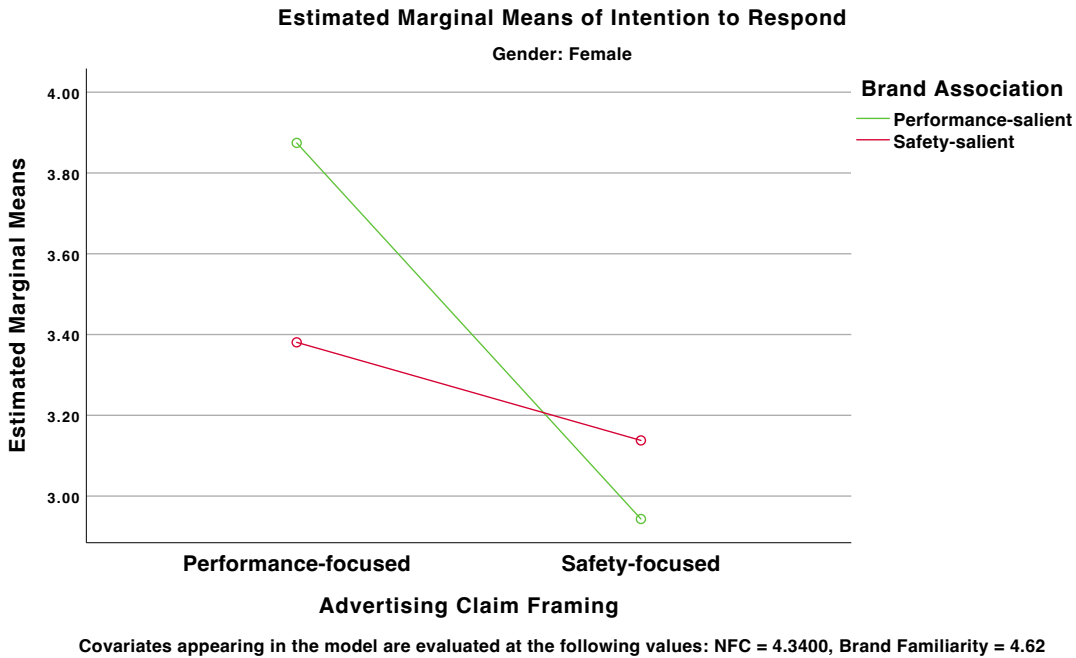
Interaction effect of Brand Association × Ad Claim Framing on Intention among Men



Covariates appearing in the model are evaluated at the following values: NFC = 4.6756, Brand Familiarity = 4.54

Figure 21

Interaction effect of Brand Association × Ad Claim Framing on Intention among Women



Mediating Effect of Elaboration Amount (H6)

Hypothesis 6 proposed that elaboration amount will mediate the relationship between the interaction effect of brand association and ad claim framing on a) consumers’ attitude toward the mobile ad and b) their intentions to respond to the ad claim. To test H6a, a moderated mediation analysis was run using the PROCESS macro in SPSS (Hayes, 2013) to estimate the direct and indirect effects of ad claim framing on consumers’ attitude toward the ad through elaboration amount as moderated by brand association. Hayes model 7 (2013) was used, with ad claim framing as the antecedent (X), attitude toward the ad as the outcome (Y), elaboration amount as the mediator (M), and brand association as the moderator (W), with brand familiarity and NFC as covariates. The significance of the direct and indirect effect was evaluated by means of 5000 bootstrap samples to create bias-corrected confidence intervals (CIs; 95%). The results revealed

that there was not a significant interaction effect of ad claim framing and brand association on elaboration amount ($\beta = -0.49, t = -1.64, p = .102$), however, elaboration amount had a significant positive effect on attitude toward the ad ($\beta = 0.28, t = 5.81, p < .001$).

Additional moderated mediation analysis was run using the PROCESS macro in SPSS (Hayes, 2013) to test the mediating effect of regulatory fit based on gender. As shown in Table 71, among men, the results revealed that there was a significant interaction effect of ad claim framing and brand association on elaboration amount ($\beta = -1.10, t = -2.75, p = .007$), and elaboration amount had a significant positive effect on attitude toward the ad ($\beta = 0.31, t = 4.10, p < .001$).

Table 71

Moderated Mediation Model with Attitude toward the Ad as DV among men

	β	SE	t	p	LLCI	ULCI
Mediator variable model (Elaboration Amount)						
Constant	0.26	1.116	0.23	.817	-1.950	2.467
Ad_C_F	1.91	.631	3.03	.003	.663	3.161
B_Assoc	1.68	.624	2.69	.008	.443	2.911
Ad_C_F * B_Assoc	-1.10	.400	-2.75	.007	-1.889	-.307
Dependent variable model (Attitude toward the Ad)						
Constant	3.33	.548	6.07	<.001	2.243	4.413
Ad_C_F	-0.03	.174	-0.18	.861	-.374	.313
E_Amount	0.31	.076	4.10	<.001	.160	.459

Note. Ad_C_F = ad claim framing; B_Assoc = brand association; E_Amount = elaboration amount; Ad_Att = attitude toward the ad; LLCI = lower limit confidence interval; ULCI = upper limit confidence interval.

More importantly, as shown in Table 72, elaboration amount mediated the interaction effect of ad claim framing and brand association on male consumers' attitude toward the ad,

because 0 was not contained in between the lower limit confidence interval (-.771) and the upper limit confident interval (-.059).

Table 72

Direct and Conditional Indirect Effects with Attitude toward the Ad as DV among men

Direct effects of Ad Claim Framing on Attitude toward the Ad						
	Effect	SE	<i>t</i>	<i>p</i>	LLCI	ULCI
	-0.030	.174	-0.18	.861	-.374	.313
Conditional indirect Effects (Ad_C_F -> E_Amount -> Ad_Att)						
Mediator	B_Assoc		Effect	SE (Boot)	Boot LLCI	Boot ULCI
E_Amount	Performance Salient		.252	.117	.067	.521
E_Amount	Safety Salient		-.088	.111	-.346	.085
Index of moderated mediation						
Moderator			Index	SE (Boot)	Boot LLCI	Boot ULCI
B_Assoc			-.340	.185	-.771	-.059

Note. Ad_C_F = ad claim framing; B_Assoc = brand association; E_Amount = elaboration amount; Ad_Att = attitude toward the ad; LLCI = lower limit confidence interval; ULCI = upper limit confidence interval.

However, among women, there was not a significant interaction effect of ad claim framing and brand association on elaboration amount ($\beta = 0.20, t = 0.45, p = .657$). Thus, **hypothesis H6a was partially supported; supported among men but not among women.**

To test H6b, another moderated mediation analysis was run using the PROCESS macro in SPSS (Hayes, 2013) to estimate the direct and indirect effects of ad claim framing on consumers' intention to respond to the ad through elaboration amount as moderated by brand association. Hayes model 7 (2013) was used, with ad claim framing (Ad_C_F) as the antecedent (X), intention to respond (Intent) to the ad as the outcome (Y), elaboration amount (E_Amount)

as the mediator (M), and brand association (B_Assoc) as the moderator (W), with brand familiarity and NFC as covariates. The significance of the direct and indirect effect was evaluated by means of 5000 bootstrap samples to create bias-corrected confidence intervals (CIs; 95%). The results revealed that there was not a significant interaction effect of ad claim framing and brand association on elaboration amount ($\beta = -0.49, t = -1.64, p = .102$), however, elaboration amount had a significant positive effect on attitude toward the ad ($\beta = 0.60, t = 7.26, p < .001$).

Additional moderated mediation analysis was run using the PROCESS macro in SPSS (Hayes, 2013) to test the mediating effect of regulatory fit based on gender. As shown in

Table 73, among men, the results revealed that there was a significant interaction effect of ad claim framing and brand association on elaboration amount ($\beta = -1.10, t = -2.75, p = .007$), and elaboration amount had a significant positive effect on consumers' intention to respond to the ad ($\beta = 0.63, t = 5.00, p = <.001$).

Table 73

Moderated Mediation Model with Intention to Respond to the Ad as DV among men

	β	SE	t	p	LLCI	ULCI
Mediator variable model (Elaboration Amount)						
Ad_C_F * B_Assoc	-1.10	.400	-2.75	.007	-1.889	-.307
Dependent variable model (Intention to Respond)						
E_Amount	0.63	.125	5.00	<.001	.378	.872

Note. Ad_C_F = ad claim framing; B_Assoc = brand association; E_Amount = elaboration amount; LLCI = lower limit confidence interval; ULCI = upper limit confidence interval.

As shown in

Table 74, elaboration amount mediated the interaction effect of ad claim framing and brand association on male consumers' intention to respond to the ad, because 0 was not contained in between the lower limit confidence interval (-1.473) and the upper limit confident interval (-.143).

Table 74

Direct and Conditional Indirect Effects with Intention to Respond to the Ad as DV among men

Direct effects of Ad Claim Framing on Intention to Respond						
	Effect	SE	<i>t</i>	<i>p</i>	LLCI	ULCI
	-.196	.287	-.68	.495	-.764	.372
Conditional indirect Effects (Ad_C_F -> E_Amount -> Intent)						
Mediator	B_Assoc		Effect	SE (Boot)	Boot LLCI	Boot ULCI
E_Amount	Performance Salient		.509	.214	.162	.992
E_Amount	Safety Salient		-.178	.216	-.669	.179
Index of moderated mediation						
Moderator			Index	SE (Boot)	Boot LLCI	Boot ULCI
B_Assoc			-.687	.336	-1.473	-.143

Note. Ad_C_F = ad claim framing; B_Assoc = brand association; E_Amount = elaboration amount; Intent = intention to respond to the ad; LLCI = lower limit confidence interval; ULCI = upper limit confidence interval.

However, among women, there was not a significant interaction effect of ad claim framing and brand association on elaboration amount ($\beta = 0.20$, $t = 0.45$, $p = .657$). Thus, **hypothesis H6b was partially supported; supported among men but not among women.**

Mediating Effect of Elaboration Valence (H7)

Hypothesis 7 proposed that elaboration valence will mediate the relationship between the interaction effect of brand association and ad claim framing on a) consumers' attitude toward the

mobile ad and b) their intentions to respond to the ad claim. To test H7a, a moderated mediation analysis was run using the PROCESS macro in SPSS (Hayes, 2013) to estimate the direct and indirect effects of ad claim framing on consumers' attitude toward the ad through elaboration valence as moderated by brand association. Hayes model 7 (2013) was used, with ad claim framing as the antecedent (X), attitude toward the ad as the outcome (Y), elaboration valence as the mediator (M), and brand association as the moderator (W), with brand familiarity and NFC as covariates. The significance of the direct and indirect effect was evaluated by means of 5000 bootstrap samples to create bias-corrected confidence intervals (CIs; 95%). As shown in Table 75, the results revealed that elaboration valence had a significant positive effect on attitude toward the ad ($\beta = .833, t = 6.343, p = <.001$). However, there was a not a significant interaction effect of ad claim framing and brand association on elaboration valence ($\beta = -0.19, t = -0.84, p = .400$), thus, **hypothesis 7 was not supported.**

Table 75

Moderated Mediation Model with Attitude toward the Ad as DV

	β	SE	t	p	LLCI	ULCI
Mediator variable model (Elaboration Valence)						
Ad_C_F * B_Assoc	-0.19	.225	-0.84	.400	-.636	.256
Dependent variable model (Attitude toward the Ad)						
E_Valenc	.833	.131	6.343	<.001	.573	1.093

Note. Ad_C_F = ad claim framing; B_Assoc = brand association; E_Valenc = elaboration valence; LLCI = lower limit confidence interval; ULCI = upper limit confidence interval.

Effect of Attitude on Intention (H8)

Hypothesis 8 proposed a positive influence of consumers' attitude toward the mobile ad on their intentions to respond to the ad claim. A simple linear regression was calculated to predict intention to respond based on attitude toward the ad. A significant regression equation was found ($F_{1, 261} = 186.71, p < .001$), with an R^2 of .417. Overall, consumers' attitudes toward mobile ad positively influenced their intentions to respond to mobile ad claims ($B = 1.15, \beta = .646, t = 13.66, p < .001$). Thus, **hypothesis 8 was supported**.

Table 76

Regressing Attitude toward Ad association on Intention to Respond to Ad Claims

Model	B	Std. Error	β	<i>t</i>	<i>p</i>
(Constant)	-1.72	.381		-4.50	<.001
Ad_Att	1.15	.084	.646	13.66	<.001

Note. Ad_Att = attitude toward the ad.

Results Summary

This research hypothesized that among young car shoppers in the U.S., the **message-brand “non-fit” condition** between advertising claim framing and the brand association would lead to more positive attitudes toward the mobile ad and higher intentions to respond to the ad claim, than the **message-brand “fit” condition**, and this interaction effect can be explained by the Elaboration Likelihood Model (Petty & Cacioppo, 1981). The results from study 2 showed that neither brand association nor ad claim framing had a significant direct effect on consumers' attitudes toward the mobile ad or their intentions to respond to the ad. As hypothesized, brand associations interacted with ad claim framings to affect consumers' attitudes toward the mobile

ad (H4), and their intentions to respond to the ad (H5), in such that when the brand association does not fit the ad claiming framing — a) performance-focused brand + safety-focused ad claim or b) safety-focused brand + performance-focused ad claim, the consumers had more positive attitudes toward the ad and higher intentions to respond to the ad claims than the fit conditions — c) performance-focused brand + performance-focused ad claim or d) safety-focused brand + performance-focused ad claim.

The hypotheses testing results indicated that for performance-salient car brands, such as Jeep, male consumers had more positive attitudes toward safety-focused than performance-focused mobile advertisements. For safety-salient car brands, such as Kia, male consumers had more positive attitudes toward performance-focused than safety-focused mobile ads. However, in both brand association conditions, female consumers had more positive attitudes toward safety-focused than performance-focused mobile ads.

Table 77

The Effect of Brand Association and Ad Claim Framing Fit/Non-Fit on Attitude toward Ad

H4a	Non-Fit	>	Fit
	BA: Performance + ACF: Safety		BA: Performance + ACF: Performance
Results	Overall	Men	Women
	4.52 > 4.33 ($p = .278$)	4.78 > 3.99 ($p < .001$)	4.24 < 4.65 ($p = .678$)
H4b	Non-Fit	>	Fit
	BA: Safety + ACF: Performance		BA: Safety + ACF: Safety
Results	Overall	Men	Women
	4.53 > 4.31 ($p = .253$)	4.71 > 4.06 ($p = .016$)	4.33 < 4.54 ($p = .417$)
H4c	Non-Fit		Fit

	ACF: Performance + BA: Safety	>	ACF: Performance + BA: Performance
Results	Overall	Men	Women
	4.53 > 4.33 ($p = .272$)	4.71 > 3.99 ($p = .003$)	4.33 < 4.65 ($p = .334$)
H4d	Non-Fit	>	Fit
	ACF: Safety + BA: Performance		ACF: Safety + BA: Safety
Results	Overall	Men	Women
	4.52 > 4.31 ($p = .258$)	4.78 > 4.06 ($p = .094$)	4.24 < 4.54 ($p = .287$)

Note: Green – Supported; Orange – Not Supported; Yellow — Hypothesized direction yet not significant.

The results also revealed that overall, for safety-salient brands, consumers had a greater intention to respond to performance-focused than safety-focused ad claims, even though the difference was only statistically significant among male consumers, not female consumers. For performance-salient brands, male consumers had greater intentions to respond to safety-focused than to performance-focused ad claims. However, female consumers had greater intentions to respond to performance-focused than safety-focused ad claims.

Table 78

The Effect of Brand Association and Ad Claim Framing Fit/Non-Fit on Intention to Respond

H5a	Non-Fit	>	Fit
	BA: Performance + ACF: Safety		BA: Performance + ACF: Performance
Results	Overall	Men	Women
	3.52 < 3.53 ($p = .955$)	4.16 > 3.06 ($p = .014$)	2.83 < 3.99 ($p = .011$)
H5b	Non-Fit	>	Fit
	BA: Safety + ACF: Performance		BA: Safety + ACF: Safety
Results	Overall	Men	Women
	3.50 > 2.87 ($p = .050$)	3.69 > 2.48 ($p = .006$)	3.29 > 3.21 ($p = .886$)
H5c	Non-Fit		Fit

	ACF: Performance + BA: Safety	>	ACF: Performance + BA: Performance
Results	Overall	Men	Women
	3.50 < 3.53 ($p = .920$)	3.69 > 3.06 ($p = .111$)	3.29 < 3.99 ($p = .267$)
H5d	Non-Fit	>	Fit
	ACF: Safety + BA: Performance		ACF: Safety + BA: Safety
Results	Overall	Men	Women
	3.52 > 2.87 ($p = .040$)	4.16 > 2.48 ($p = .002$)	2.83 < 3.21 ($p = .658$)

Note: Green – Supported; Orange – Not Supported; Yellow — Hypothesized direction yet not significant.

Consistent with the findings in study 1, the results from study 2 revealed gender as a major factor, and hypotheses 4 and 5 were only supported among male but not female consumers. The testing results revealed that overall, female young car shoppers responded more positively to performance-focused ad claims than safety-focused ad claims, when the car brand is performance-salient. Consistent with the hypotheses, when the brand association does not fit the ad claim framing, male car shoppers had a higher amount of elaboration, which in turn, responded more positively to the ad and had greater intention to respond to the ad claims. Message-Brand “non-fit” conditions led to more positive attitudes and higher intentions to respond to the mobile as than Message-Brand “fit” conditions.

Table 79

Gender Differences in Hypotheses Testing Results for Study 2

Brand Association & Ad Claim Framing Non-Fit > Fit								
Attitude toward the Ad					Intention to Respond			
	H4a	H4b	H4c	H4d	H5a	H5b	H5c	H5d
Men	✓	✓	✓	✓	✓	✓	✓	✓
Women						✓		✓

Note: Green – Supported; Orange – Not Supported; Yellow — Hypothesized direction yet not significant.

This study hypothesized that the interaction effect between brand association and ad claim framing on consumers' attitudes toward the ad and intentions to respond to the ad was mediated by both elaboration amount (supported) and elaboration valence (not supported).

The results can be interpreted that when the brand association and ad claim framing did not fit, the ad led to more thoughts and a higher level of cognitive elaboration engaged in information processing, which in turn, led to more positive attitudes and greater intentions to respond to the ad claims. Elaboration valence positively influenced consumers' attitude toward the ad. However, the interaction of brand association and ad frame claim framing did not have a significant effect on elaboration valence, which means, consumers had mixed positive or negative thoughts when the ad claim framing fits the brand association or not.

Table 80

Hypotheses Testing Results

	Hypotheses	Result	Note
H1	Consumers' regulatory focus (promotion- vs. prevention-focused) will interact with ad claim framing (performance- vs. safety-focused) to affect intentions to respond to a mobile advertising claim.	S	
H1a	Promotion-focused consumers will have greater intentions to respond to performance-focused than safety-focused mobile advertising claims.	P/S	Men only
H1b	Prevention-focused consumers will have greater intentions to respond to safety-focused than performance-focused mobile advertising claims.	S	
H1c	Promotion-focused consumers will have greater intentions to respond to performance-focused mobile advertising claims than will prevention-focused consumers.	S	
H1d	Prevention-focused consumers will have greater intentions to respond to safety-focused mobile advertising claims than will promotion-focused consumers.	P/S	Men only
H2	Consumers' regulatory focus (promotion- vs. prevention-focused) will interact with ad claim framing (performance- vs. safety-focused) to affect attitudes toward a mobile advertising claim.	P/S	Men only
H2a	Promotion-focused consumers will have more positive attitudes toward performance-focused than safety-focused mobile advertising claims.	N/S	
H2b	Prevention-focused consumers will have more positive attitudes toward safety-focused than performance-focused mobile advertising claims.	P/S	Men only
H2c	Promotion-focused consumers will have more positive attitudes toward performance-focused mobile advertising claims than will prevention-focused consumers.	N/S	

H2d	Prevention-focused consumers will have more positive attitudes toward safety-focused mobile advertising claims than will promotion-focused consumers.	N/S	
H3a	The interaction effect of consumer regulatory focus (promotion- vs. prevention-focused) and ad claim framing (performance- vs. safety-focused) on consumers' attitudes toward mobile advertising claims is mediated by regulatory fit.	P/S	Men only
H3b	The interaction effect of consumer regulatory focus (promotion- vs. prevention-focused) and ad claim framing (performance- vs. safety-focused) on consumers' intentions to respond to mobile advertising claims is mediated by regulatory fit.	P/S	Men only
H4	Brand associations (performance- vs. safety-salient) will interact with ad claim framing (performance- vs. safety-focused) to affect consumers' attitudes toward a mobile advertising claim.	P/S	Men only
H4a	For performance-salient brands, consumers will have more positive attitudes toward safety-focused than performance-focused mobile advertising claims.	P/S	Men only
H4b	For safety-salient brands, consumers will have more positive attitudes toward performance-focused than safety-focused mobile advertising claims.	P/S	Men only
H4c	Consumers will have more positive attitudes toward a performance-focused mobile advertising claim for safety-salient than performance-salient brands.	P/S	Men only
H4d	Consumers will have more positive attitudes toward a safety-focused mobile advertising claim for performance-salient than safety-salient brands.	P/S	Men only
H5	Brand associations (performance- vs. safety-salient) will interact with ad claim framing (performance- vs. safety-focused) to affect consumers' intentions to respond to a mobile advertising claim.	P/S	Men only
H5a	For performance-salient brands, consumers will have greater intentions to respond to safety-focused than performance-focused mobile advertising claims.	P/S	Men only

H5b	For safety-salient brands, consumers will have greater intentions to respond to performance-focused than safety-focused mobile advertising claims.	P/S	Men only
H5c	Consumers will have greater intentions to respond to a performance-focused mobile advertising claim for safety-salient than performance-salient brands.	N/S	
H5d	Consumers will have greater intentions to respond to a safety-focused mobile advertising claim for performance-salient than safety-salient brands.	P/S	Men only
H6a	The interaction effect of brand association (performance- vs. safety-salient) and advertising claim framing (performance- vs. safety-focused) on consumers' attitudes toward mobile advertising claims will be mediated by the amount of elaboration.	P/S	Men only
H6b	The interaction effect of brand association (performance- vs. safety-salient) and advertising claim framing (performance- vs. safety-focused) on consumers' intentions to respond to mobile advertising claims will be mediated by the amount of elaboration.	P/S	Men only
H7a	The interaction effect of brand association (performance- vs. safety-salient) and advertising claim framing (performance- vs. safety-focused) on consumers' attitudes toward mobile advertising claims will be mediated by elaboration valence.	N/S	
H7b	The interaction effect of brand association (performance- vs. safety-salient) and advertising claim framing (performance- vs. safety-focused) on consumers' intentions to respond to mobile advertising claims will be mediated by elaboration valence.	N/S	
H8	Consumers' attitudes toward mobile advertising claims will positively influence their intentions to respond to mobile advertising claims.	S	

Note: S — Supported; N/S — Not Supported; P/S — Partially Supported

Chapter 6. Discussion and Implications

In this chapter, the findings from this research are discussed in context to the theoretical framework and supporting literature, followed by theoretical and practical implications, limitations, and recommendations for future research.

Discussion

As proposed, findings in this study demonstrate that there was an interaction effect of consumer regulatory focus, brand association, and ad claim framing on Gen Zers' attitude toward the mobile ad about SUVs and their intention to respond to the mobile ad claims. However, proposed interaction effects were evident among male but not female consumers.

Study 1 shows that when the male Gen Z consumers' regulatory foci fit the ad claim framings, they have more positive attitudes toward the mobile advertising claims, and have greater intentions to respond to the ad claims than if their regulatory foci do not fit the ad claim framings. These findings are in line with previous studies (e.g., Aaker & Lee, 2006; Chernev, 2004; Lan & Monroe, 2009; Li, 2021; Roy, 2017; Roy & Phau, 2014; Sun et al., 2021) that people selectively pay attention to the information they need to achieve their goals, and individual regulatory focus moderates the effect of advertising messages on consumer's attitude toward the ad and purchase intentions, in such promotion-focused individuals are more likely to select products with more superior performance attributes, and prevention-focused individuals are more likely to choose products with more superior reliability attributes.

Study 2 demonstrates that attribute-salient brands have significant interaction effects with ad claim framings on male consumers' responses to mobile ads about SUVs. When the SUV brand's attribute associations do not fit the ad claim framings, the male Gen Z consumers have

more positive attitudes toward the mobile advertising claims, and have greater intentions to respond to the ad claims than if the brand's attribute associations do not fit the ad claim framings. These findings are in line with previous studies (e.g., Baker et al., 2004; Pednekar, 2013; Thanomsub, 2020) that brand associations are related to perceived quality and purchase intentions of cars, and influence the effectiveness of advertising messages. The mismatch between communication and brand associations had effects on consumers' processing of the information, their evaluation of the product, and attitudes towards the ad (Sjödin & Törn, 2006). More specifically, ad-brand incongruity attracts attention, improves the evaluation of the ad, and generate more thought and more positive attitudes, especially for mature brands (e.g., Boush & Loken, 1991; Fiske & Taylor, 1991; Goodstein, 1993, Törn & Dahlén, 2018).

Gender was not included as a moderating factor in the conceptualization of the hypotheses. However, the testing results from Study 1 revealed that overall, the impact of the fit of regulatory focus and ad claim framing on ad responses was significant among male Gen Zers. Female Gen Zers responded more positively to safety-focused ad claims than to performance-focused ad claims, regardless of their individual regulatory focus. This result is supported by previous studies regarding the behavioral differences between men and women on how they process information and respond to advertising or marketing messages. In general, men tend to choose high-risk adventures (Kim & Seo, 2019), and women tend to seek safety (Meyers-Levy & Loken, 2015). Gender has been found to play a significant role in personal traits such as regulatory focus, which were more relevant for men than for women (Bryła, 2021). Some studies suggested that compared to men, women prefer prevention over promotion framed messages (Petrovici et al., 2019), respond more favorably to vigilant messages (Jacks & Lancaster, 2015),

and have higher intentions to respond to prevention-focused marketing messages (McKay-Nesbitt et al., 2013).

There is also a difference in how men and women respond to incongruent products, brands, or messages. In the current project (Study 2), for safety-salient brands, male consumers had a greater intention to respond to incongruent (performance-focused than safety-focused) ad claims, however, this difference was not statistically significant among female consumers. Further, for performance-salient brands, while male consumers again had greater intentions to respond to incongruent (safety-focused than to performance-focused) ad claims; female consumers showed greater response to congruent (performance-focused than safety-focused) ad claims. Incongruent ad claims call for greater elaboration among men, as demonstrated in the current study. In a similar vein, Chang (2007) found that advertising messages involving more evaluation effort led to more favorable ad evaluation and greater purchase intention among men. In another study, Noseworthy et al. (2011) argued that with superior visuospatial perception than men, women can absorb more details of objects and identify incongruent products more quickly, yet there was no difference between genders when processing congruent products. Edens and McCormick (2000) found that female adolescents remembered more detailed facts and identified explicit advertising claims more often than male adolescents. The above evidence suggests that women may be more adept at identifying incongruencies in ad claims. However, as pointed out by Törn and Dahlén (2008), the positive effects of ad-brand incongruity on brand evaluation, ad attitude, and purchase intention are not guaranteed, and these effects would only take place if the consumers were able to resolve the incongruity. Unlike men, women may have perceived such incongruent messages as manipulative and responded with negative ad evaluation and reduced purchase intentions.

Overall, the results showed that regulatory focus, brand association and ad claim framings have significant interaction effects on consumers' attitude toward and intention to respond to mobile ad claims among male, but not among female Gen Zers. This important finding suggests that brand managers and marketers should utilize gender-specific communication strategies in their mobile advertising when targeting Gen Z consumers.

Theoretical Implications

This research provides valuable insights into the impact of ad claim framing, consumer regulatory focus, brand association, and gender on ad attitude and intention to respond to mobile ad claims. It contributes to the extant literature on consumer motivation, persuasive communication, mobile advertising, branding, communication strategy, information processing, cognitive elaboration, consumer attitude, decision-making, and purchase intention and provides support to Regulatory Focus Theory (Higgins, 1998), Regulatory Fit Theory (Cesario et al., 2004), and Elaboration Likelihood Model (Petty & Cacioppo, 1981).

Regulatory Focus Theory (Higgins, 1998) suggests that situational regulatory focus can be manipulated through message framing. Promotion-focused consumers regulate their attitude and behaviors toward approaching gains — in this research context, promotion-focused Gen Zers responded positively toward the performance-focused SUV ads. On the contrary, prevention-focused consumers regulate their attitude and behaviors toward avoiding losses — in this research context, prevention-focused Gen Zers responded positively toward the safety-focused SUV ad. The findings also support Regulatory Fit Theory (Higgins, 2000, 2005), which postulates that when consumers' motivational orientations “fit” the strategies they use to pursue their goals, they would feel right about and be more eager to engage in the activity. In this research context, when the fit between consumers' regulatory foci and mobile ad claims occurred

— the Gen Zers felt right about the mobile ad claims; thus, they had greater intentions to learn more about the SUVs.

This study supports Higgin's (1998) Regulatory Focus Theory by showing that consumers' situational regulatory focus can be manipulated and be differentiated as either a promotion-focus or prevention-focus, in such that promotion-focused young car shoppers regulate their attitude and behavior intentions toward pursuing performance, while those with prevention focus regulate their attitude and behavior intentions toward pursuing safety. The findings that message-regulatory focus fit has a positive influence on male Gen Z consumers' attitudes toward and intentions to respond to ad claims also provide support to Regulatory Fit Theory. This study extends the applicability of the theories to the mobile advertising context for the automobile industry, targeting Gen Z U.S. consumers.

This research finding also supports Elaboration Likelihood Model (Petty & Cacioppo, 1981), which postulates that consumers' attitude formation, attitude change, and persuasion occur through either the central route or peripheral route. The central route involves a higher level of elaboration, and the attitudes formed through the central route will be more influential in guiding behaviors. In this research context, the findings suggest that when the brand-attribute associations do not match or fit the ad claim framings about the SUVs, Gen Zers elaborate more on the ad claims and have more positive attitudes toward the ad and higher intentions to respond to the ad claims than the brand-attribute association match or fit the ad claim framings. The results also confirmed the mediating role of elaboration amount in the relationship between message-brand fit and attitude and intention to respond to mobile ads, and concluding that elaboration amount, instead of elaboration valence, is the underlying mechanism for such a relationship.

The most significant contribution of this research is to demonstrate the different effects of message-regulatory fit/non-fit and message-brand fit/non-fit on consumers' responses to mobile ad claims and their intention to respond to the ad claims. Specifically, the first study connects the literature on persuasive communication and consumer motivation regarding the fit between consumers' regulatory focus and advertising messages, while the second study connects the literature on persuasive communication and brand perception regarding the non-fit between brand association and advertising messages. Moreover, as the consistent construct in both studies, advertising claim framing ties the three theoretical frameworks together and sheds some light on some inconsistent findings from the previous studies. This research also contributes to the branding literature by defining and measuring brand-attribute associations, as well as the method to identify the nuances between attribute-balanced brands and attribute-salient brands.

In summary, this research further extends the understanding of consumer responses to mobile advertising messages by shedding light on the relationship between consumer regulatory focus, ad claim framing, and brand association. The findings confirm that message-regulatory fit and message-brand fit are the explanations for the consumer responses, thus closing critical gaps in branding and consumer behavior literature and providing new insights in the theories.

Practical Implications

This study provides practical implications for marketers, retailers, and brand managers to develop gender-specific marketing strategies to positively influence consumers' attitudes toward their products and services. The finding of this study demonstrates how male and female Gen Zers may respond to mobile advertising messages very differently. Male Gen Z consumers have more positive attitudes toward the mobile ad and greater intentions to respond when the ad claim aligns with their individual regulatory focus. Furthermore, brand association interacts with the ad

claim in such that when the perceived brand association does not align with the ad claim, the male Gen Z consumers have more positive responses to the ad. On the contrary, female Gen Zers tend to respond more positively to ad claims focusing on safety aspects than on performance aspects of the product, regardless of their regulatory focus, and these consumers will respond more positively to the ad claims when the ad messages are congruent with the brand associations.

As consumers' attitudes toward the ad and their intentions to respond to the ad claim can be directly related to their purchase decisions, it will be very critical for the markets and retailers to tailor the mobile advertising strategies based on the association between the brand and its most important brand attributes, the gender identity of the consumers, as well as their motivations. Modern technologies such as location-based targeting and consumer data tracking/analysis allow digital marketers to implement various communication strategies targeting specific groups of consumers. The findings of this study suggest that the fit/non-fit between consumer regulatory focus and ad claim framing, and the fit/non-fit between brand-attribute association and ad claim framing should be considered as influencing factors in mobile advertising. Brand managers and marketers must consider gender differences and utilize gender-specific mobile advertising messages when targeting Gen Z consumers to enhance the effectiveness of their products and services' communication and marketing strategies.

Limitations

Despite efforts to ensure the validity of the results, the study has some limitations due mainly to methodological issues. A limitation of this research is that the experiment used one product category and four car brands. It focuses only on products that are both utilitarian (with practical functions) and high-involvement (expensive, which demands deliberation) — Sports

Utility Vehicles, so the findings may not be entirely applicable to other types of products, for example, high-involvement utilitarian products such as branded appliances.

This study used a mockup mobile phone ad as the stimuli, which may compromise the internal validity since the experience of viewing a mockup image and receiving an actual ad on a personal mobile device is different. In order to keep the consistency of the stimuli in all conditions, the same image of a side-view photograph of a generic SUV in color gray was used. However, since the SUVs of each car brand have different side-view body shapes, which may be recognizable by consumers who are very familiar with that brand, this discrepancy may cause mistrust of the advertising message, which in turn, affects their attitudes toward the ad.

The questionnaire completion process was self-paced, and the participants took the online questionnaire in different places without a time limit and using personal devices with various combinations of screen size, brightness, and color contrast settings that may be uncontrollable by the researcher. A couple of participants reported through open-ended questions that they were not able to see the ad image, which could be caused by unstable internet connections, or the incorrect privacy settings for their web browsers. Also, this study only asked the participants to self-report their intentions to respond to the mobile ad, rather than tracking the actual responding action, which may be a more accurate indicator of their purchase intentions.

Even though it was intended to have equal representation of gender in the study, and gender was set as a balanced criterion on the panel sampling platform, several consumers who participated in the main studies identified themselves as neither men nor women, which caused a slightly unbalanced gender representation in the final sample. Using a filter question at the beginning of the survey will be recommended to ensure male and female participants are equally represented.

Recommendations for Future Research

For future studies, researchers may consider including products and services from different categories and various brands so that the findings can be more generalized. It will be more effective to send stimuli directly to the participants' mobile phones to create a more realistic scenario and get more insights into consumer behaviors through utilizing technologies such as eye-tracking.

Since the results showed that gender is a major factor in how consumers respond to performance-focused or safety-focused ad claims, future studies should include gender as a moderating factor and systematically examine how consumers with different gender identities (including non-binary) would respond to advertising messages differently. Also, future studies can include consumers from other countries to enhance the external validity of the findings and participants from a broader range of age groups to test the differences between generations.

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Appendix A.

Information Letter for the Pretests and Main Studies

(NOTE: DO NOT AGREE TO PARTICIPATE UNLESS AN IRB APPROVAL STAMP WITH CURRENT DATES HAS BEEN APPLIED TO THIS DOCUMENT.)

INFORMATION LETTER

for a Research Study entitled

“Consumer Response to Mobile Advertising”

You are invited to participate in a research study to survey consumers’ responses to mobile advertising. The study is being conducted by Wei Wang, a Ph.D. candidate, under the direction of Dr. Veena Chattaraman, Professor, in the Department of Consumer and Design Sciences at Auburn University. You are invited to participate because you are a U.S. consumer aged 19-25.

What will be involved if you participate? Your participation is completely voluntary. If you decide to participate in this research study, you will be asked to complete an online survey. Your total time commitment will be approximately 10 to 15 minutes. However, before participating in the survey, your eligibility for being able to participate in the survey will be assessed. To be eligible to participate, you need to be a U.S. resident aged 19-25.

Are there any risks or discomforts? There are no known risks in participating in the current study.

Are there any benefits to yourself or others? There are no direct personal benefits to you for participating in this study. However, your participation may benefit in advancing research in the area of mobile advertising.

Will you receive compensation for participating? To thank you for your time, you will be compensated for participating in this study through the panel company. The panel company will provide instructions regarding how to redeem your compensation.

Are there any costs? There are no costs involved in participating in this study.

If you change your mind about participating, you can withdraw at any time by closing your browser window. Participants' identities are never known to researchers so once you have submitted anonymous data, the data cannot be withdrawn since it will be unidentifiable to the researchers. Your decision about whether or not to participate or to stop participating will not jeopardize your future relations with Auburn University or the College of Human Sciences.

Any data obtained in connection with this study will remain anonymous. We will protect your privacy and the data you provide by assigning you with a random code during data collection, which will not be linked to any of your identifiable personal information. Additionally, only the researchers will have access to the data. Information collected through your participation may be used for academic journal publications and/or professional presentations.

If you have questions about this study, please contact Wei Wang at (334)552-1697 or wangwe1@auburn.edu, or Dr. Veena Chattaraman at (334)844-3258 or vzc0001@auburn.edu.

If you have questions about your rights as a research participant, you may contact the Auburn University Office of Research Compliance or the Institutional Review Board by phone (334)-844-5966 or e-mail at IRBadmin@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE IF YOU WANT TO PARTICIPATE IN THIS RESEARCH PROJECT. IF YOU DECIDE TO PARTICIPATE, PLEASE CLICK ON THE "NEXT" BUTTON BELOW. YOU MAY PRINT A COPY OF THIS LETTER TO KEEP.

Wei Wang
Investigator

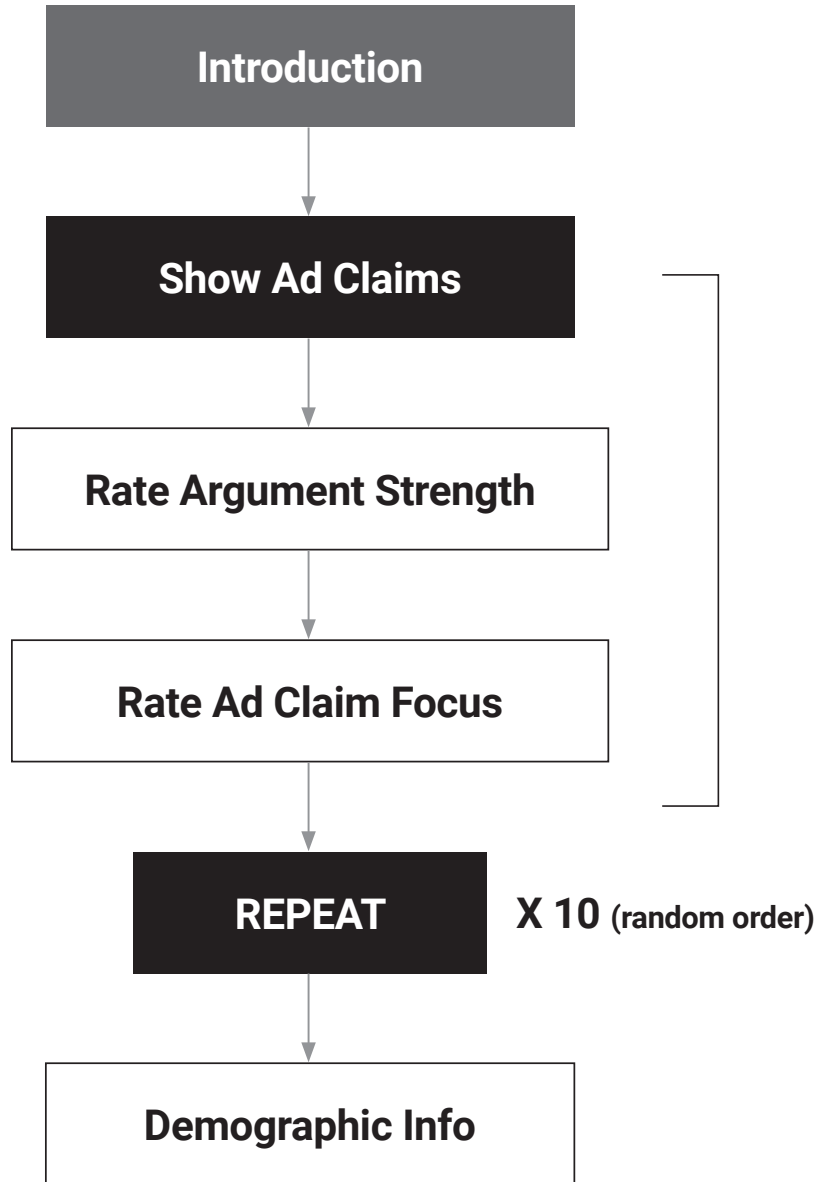
Dr. Veena Chattaraman
Co-Investigator

The Auburn University Institutional Review Board has approved this document for use from
05/10/2022 to ----- . Protocol #22-226 EX 2205

The Auburn University Institutional
Review Board has approved this
Document for use from
05/10/2022 to -----
Protocol # 22-226 EX 2205

Appendix B.1.

Pretest 1 Procedure



Appendix B.2.

Pretest 1 Instrument

DIRECTION: A car company wants to run a mobile ad campaign, and they would like to know your thoughts about ten (10) suggested advertising claims, or written statements about the performance or safety of their Sports Utility Vehicles (SUV). Please read the definitions of “performance” and “safety” very carefully.

Definition of “Performance”

A performance car represents a more powerful engine, superior speed, agility, and overall driving experience. A car that, with its speed and power, unleashes pure enjoyment.

Definition of “Safety”

A car with a higher safety rating is safer to drive than other cars on the road — with a higher rating on collision tests, a lower injury risk, and a higher chance to survive during a car crash.

(Show ad claim)

“Great performance”

— Edmunds Car Review

We would like to know your perception of this ad claim. Please indicate your level of agreement with the following statement.

Statements	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
This ad claim is believable.	1	2	3	4	5	6	7
This ad claim is convincing.	1	2	3	4	5	6	7
This ad claim will help me feel confident about a product.	1	2	3	4	5	6	7

This ad claim is simple and clear.	1	2	3	4	5	6	7
This ad claim is strong.	1	2	3	4	5	6	7

DIRECTION: Please indicate your level of agreement with each of the following statements.

Statements	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
This ad is about the SUV's performance.	1	2	3	4	5	6	7
This ad is about the SUV's safety.	1	2	3	4	5	6	7

DEMOGRAPHIC INFORMATION

DIRECTION: This part of the survey is about your **demographic information**. Please answer the following questions by checking the appropriate selection or writing up your answer.

1. To which **gender** identity do you most identify with?

- Male
- Female
- Other _____

2. What is your **age**? _____ (years old)

3. Do you currently **own** a car?

- Yes
- No (skip to Question #5)

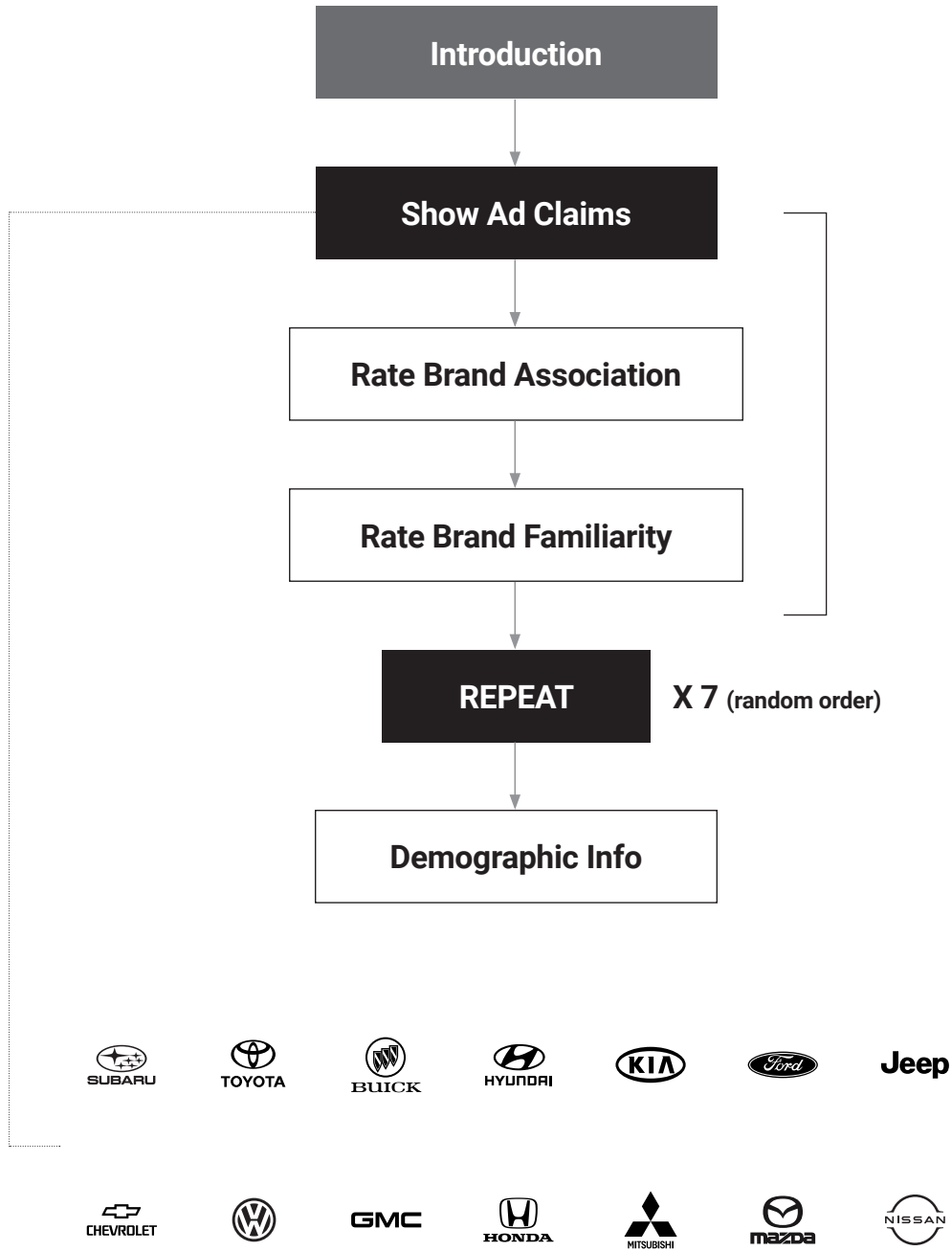
4. What is the **brand** of the car you currently drive? _____

5. Which of the following **ethnic groups** do you consider yourself to belong to?

- American Indian/Alaskan Native
- Asian/Pacific Islander
- Hispanic
- Non-Hispanic Black
- Non-Hispanic White
- Mixed Race
- Other

Thank you very much for your participation in this study!

Appendix C.1.
Pretest 2 Procedure



Appendix C.2.

Pretest 2 Instrument

DIRECTION: We would like to know your perceptions of the performance and safety of seven (7) major car brands. Please read the definition of “performance” and “safety” very carefully.

Definition of “Performance”

A performance car represents a more powerful engine, superior speed, agility, and overall driving experience. A car that, with its speed and power, unleashes pure enjoyment.

Definition of “Safety”

A car with a higher safety rating is safer to drive than other cars on the road — with a higher rating on collision tests, a lower injury risk, and a higher chance to survive during a car crash.

(Show logo)



DIRECTION: Please indicate your level of agreement with the following statement.

Statements	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
(Brand Name) cars have high level of performance.	1	2	3	4	5	6	7

Please provide the reasons for your **performance** rating of (Brand Name) cars.

DIRECTION: Please indicate your level of agreement with the following statement.

Statements	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
(Brand Name) cars have high level of safety.	1	2	3	4	5	6	7

Please provide the reasons for your **safety** rating of (Brand Name) cars.

How **familiar** are you with the **(Brand Name) brand**?

Not familiar at all	1	2	3	4	5	6	7	Very Familiar
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DEMOGRAPHIC INFORMATION

DIRECTION: This part of the survey is about your **demographic information**. Please answer the following questions by checking the appropriate selection or writing up your answer.

1. To which **gender** identity do you most identify with?

- Male
- Female
- Other _____

2. What is your **age**? _____ (years old)

3. Do you currently **own** a car?

- Yes
- No (skip to Question #5)

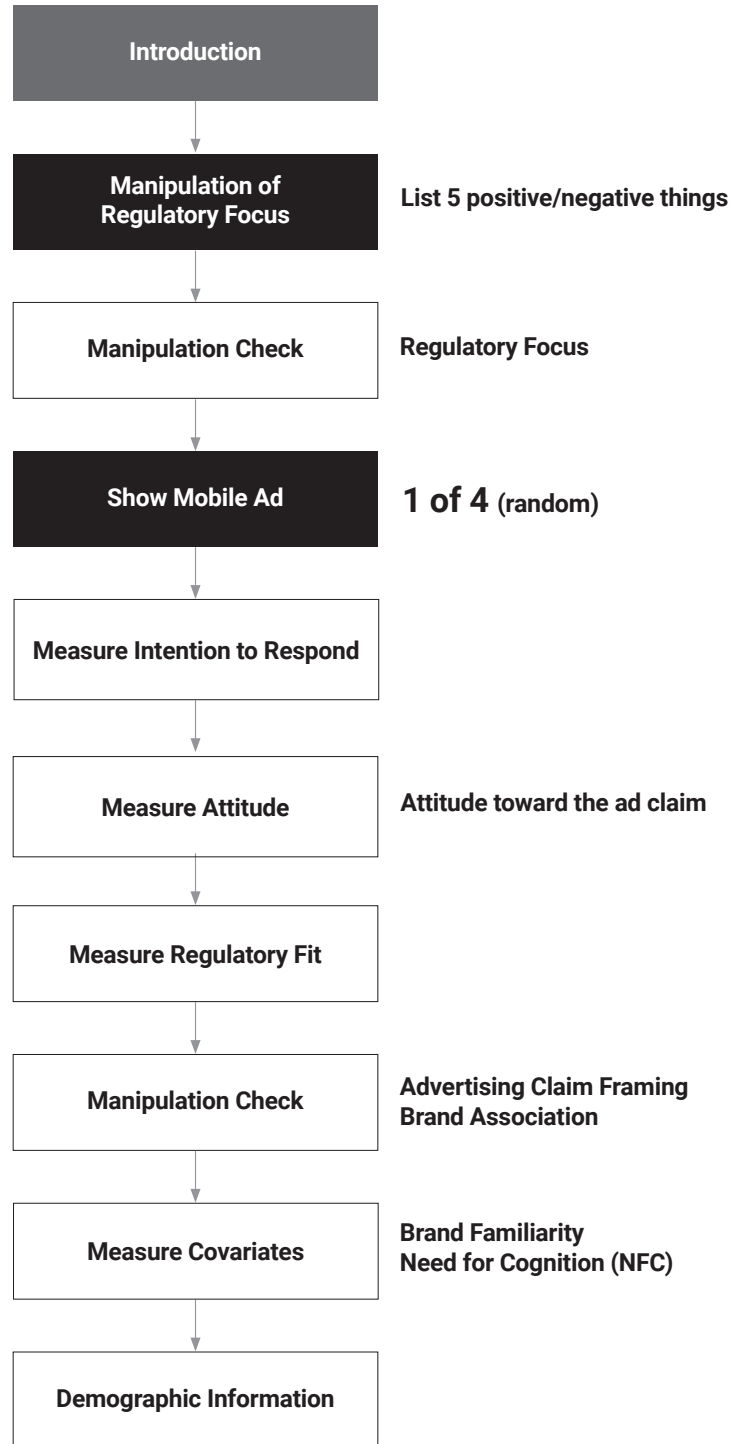
4. What is the **brand** of the car you currently drive? _____

5. Which of the following **ethnic groups** do you consider yourself to belong to?

- American Indian/Alaskan Native
- Asian/Pacific Islander
- Hispanic
- Non-Hispanic Black
- Non-Hispanic White
- Mixed Race
- Other

Thank you very much for your participation in this study!

Appendix D.1. Study 1 Procedure



Appendix D.2.

Study 1 Instrument

DIRECTION: Imagine the situation that you are in the process of shopping for a new Sport Utility Vehicle (SUV). Please type **five (5) positive/negative things** which could happen when you drive an SUV.

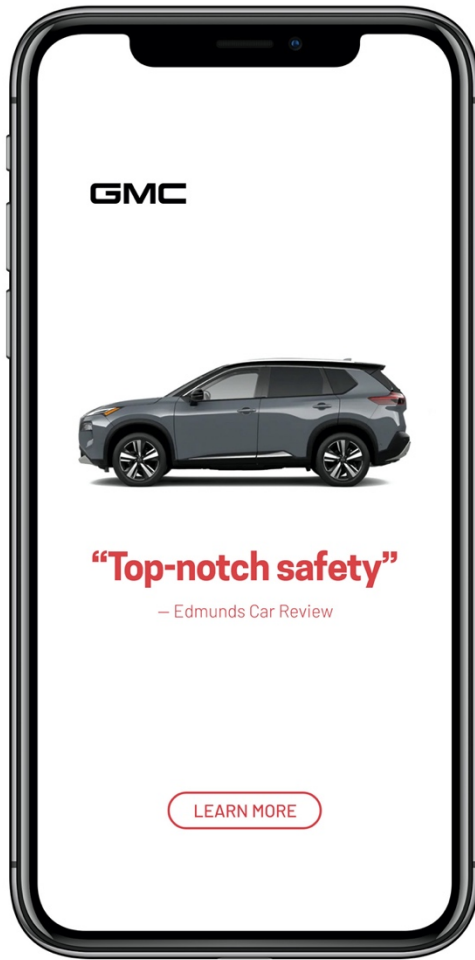
- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

DIRECTION: Continue to imagine the situation that you are in of shopping for a new SUV. Please answer the following questions.

Questions	Not at all	Very little	Little	Neutral	Some	Rather much	Very Much
To what extent do you focus on avoiding the negative outcome when shopping for an SUV?	1	2	3	4	5	6	7
To what extent do you focus on achieving the positive outcome when shopping for an SUV?	1	2	3	4	5	6	7

DIRECTION: Continue to imagine the situation that while you are searching for a new SUV with your mobile phone, an ad appears on your phone screen. The following questions will be based on this ad, so please look at the ad carefully when it shows up on the screen.

(Show ad)



DIRECTION: The following set of statements relates to the **intention to learn more information** about this SUV. Please indicate your level of agreement with each of the following statements.

Statements	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
Assuming I see this ad on my phone, I intend to click on the “Learn More” button.	1	2	3	4	5	6	7
Assuming I see this ad on my phone, I predict that I would click on the “Learn More” button.	1	2	3	4	5	6	7

I plan to click on the “Learn More” button to get more information about this SUV.	1	2	3	4	5	6	7
------------------------------------------------------------------------------------	---	---	---	---	---	---	---

DIRECTION: How do you **feel** about this **ad**?

Bad	1	2	3	4	5	6	7	Good
Harmful	1	2	3	4	5	6	7	Beneficial
Worthless	1	2	3	4	5	6	7	Valuable
Unpleasant	1	2	3	4	5	6	7	Pleasant
Foolish	1	2	3	4	5	6	7	Wise

DIRECTION: Please indicate your level of agreement with each of the following statements.

Statements	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
If I am shopping for an SUV, this advertisement matches my goal.	1	2	3	4	5	6	7
This advertisement feels right for me.	1	2	3	4	5	6	7
This advertisement is just right for me.	1	2	3	4	5	6	7

DIRECTION: Please read the definition of “performance” and “safety” very carefully.

Definition of “Performance”

A performance car represents a more powerful engine, superior speed, agility, and overall driving experience. A car that, with its speed and power, unleashes pure enjoyment.

Definition of “Safety”

A car with a higher safety rating is safer to drive than other cars on the road — with a higher rating on collision tests, a lower injury risk, and a higher chance to survive during a car crash.

Please indicate your level of agreement with each of the following statements.

Statements	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
This ad is about the SUV’s performance.	1	2	3	4	5	6	7
This ad is about the SUV’s safety.	1	2	3	4	5	6	7



DIRECTION: Please indicate your level of agreement with the following statement.

Statements	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
(Brand Name) cars have high level of performance.	1	2	3	4	5	6	7

Please provide the reasons for your **performance** rating of (Brand Name) cars.

--

DIRECTION: Please indicate your level of agreement with the following statement.

Statements	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
(Brand Name) cars have high level of safety.	1	2	3	4	5	6	7

Please provide the reasons for your **safety** rating of (Brand Name) cars.

--

How **familiar** are you with the **(Brand Name) brand**?

Not familiar at all	1	2	3	4	5	6	7	Very Familiar
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DIRECTION: We would like to know your **general behaviors when processing information**. Please indicate your level of agreement with each of the following statements.

Statements	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
I would prefer complex to simple problems.	1	2	3	4	5	6	7
I like to have the responsibility of handling a situation that requires a lot of thinking.	1	2	3	4	5	6	7
Thinking is not my idea of fun.*	1	2	3	4	5	6	7
I would rather do something that requires little thought than	1	2	3	4	5	6	7

something that is sure to challenge my thinking abilities.*							
I try to anticipate and avoid situations where there is likely a chance I will have to think in depth about something.*	1	2	3	4	5	6	7
I find satisfaction in deliberating hard and for long hours.	1	2	3	4	5	6	7
I only think as hard as I have to.*	1	2	3	4	5	6	7
I prefer to think about small, daily projects to long-term ones.*	1	2	3	4	5	6	7
I like tasks that require little thought once I've learned them.*	1	2	3	4	5	6	7
The idea of relying on thought to make my way to the top appeals to me.	1	2	3	4	5	6	7
I really enjoy a task that involves coming up with new solutions to problems.	1	2	3	4	5	6	7
Learning new ways to think doesn't excite me very much.*	1	2	3	4	5	6	7
I prefer my life to be filled with puzzles that I must solve.	1	2	3	4	5	6	7
The notion of thinking abstractly is appealing to me.	1	2	3	4	5	6	7
This is an attention check question. If you are reading this, please select "Somewhat agree" to confirm.	1	2	3	4	5	6	7

I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.	1	2	3	4	5	6	7
I feel relief rather than satisfaction after completing a task that required a lot of mental effort.*	1	2	3	4	5	6	7
It's enough for me that something gets the job done; I don't care how or why it works.*	1	2	3	4	5	6	7
I usually end up deliberating about issues even when they do not affect me personally.	1	2	3	4	5	6	7

DEMOGRAPHIC INFORMATION

DIRECTION: This part of the survey is about your **demographic information**. Please answer the following questions by checking the appropriate selection or writing up your answer.

1. To which **gender** identity do you most identify with?

- Male
- Female
- Other _____

2. What is your **age**? _____ (years old)

3. Do you currently **own** a car?

- Yes
- No (skip to Question #5)

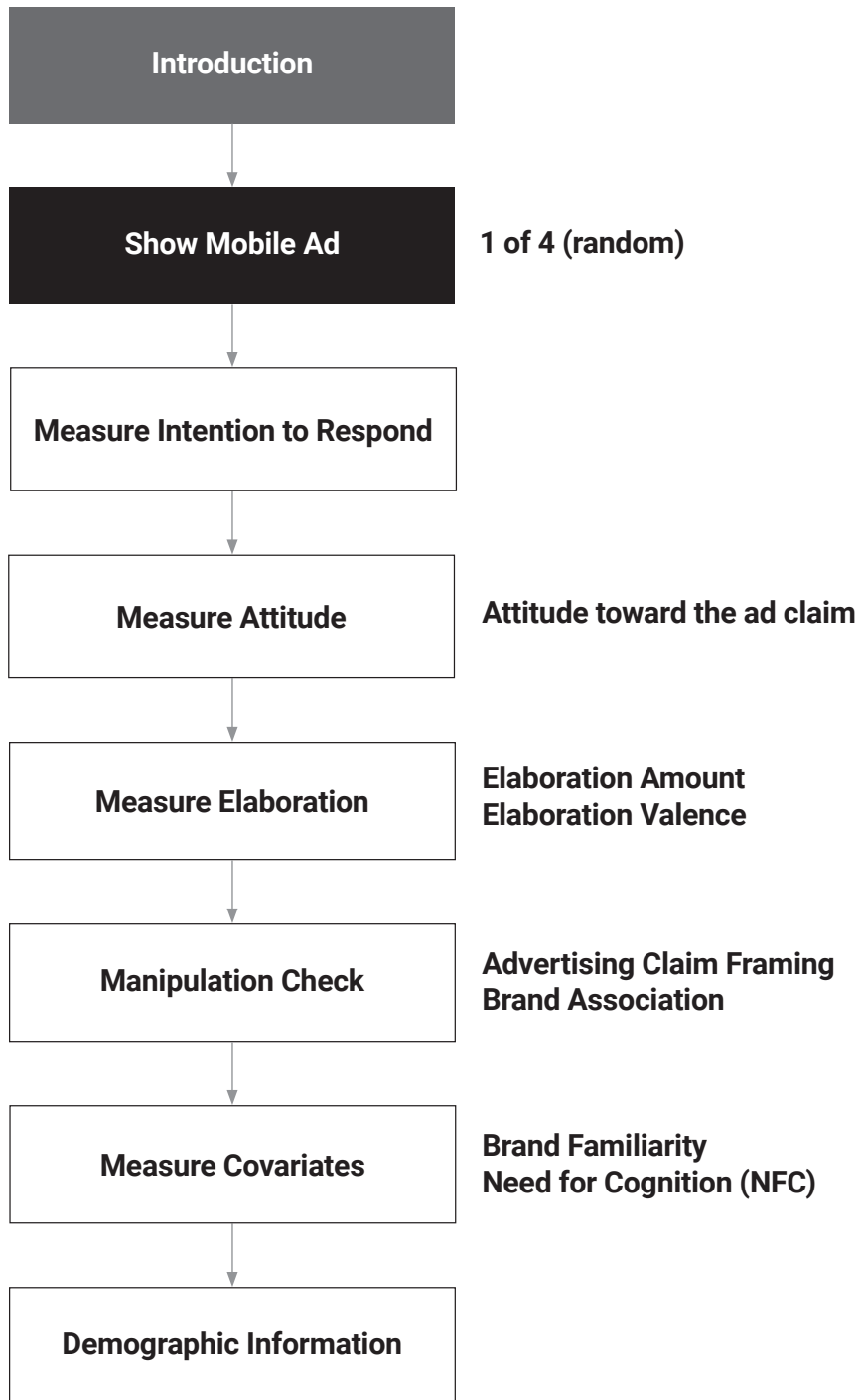
4. What is the **brand** of the car you currently drive? _____

5. Which of the following **ethnic groups** do you consider yourself to belong to?

- American Indian/Alaskan Native
- Asian/Pacific Islander
- Hispanic
- Non-Hispanic Black
- Non-Hispanic White
- Mixed Race
- Other

Thank you very much for your participation in this study!

Appendix E.1.
Study 2 Procedure



Appendix E.2.

Study 2 Instrument

DIRECTION: Imagine the situation that while you are searching on the internet for a new Sport Utility Vehicle (SUV) with your mobile phone, an ad appears on your phone screen. The following questions will be based on this ad, so please look at the ad carefully when it shows up on the screen.

(Show ad)



DIRECTION: The following set of statements relates to the **intention to know more information about this SUV**. Please indicate your level of agreement with each of the following statements.

Statements	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
Assuming I see this ad on my phone, I intend to click on the “Learn More” button.	1	2	3	4	5	6	7
Assuming I see this ad on my phone, I predict that I would click on the “Learn More” button.	1	2	3	4	5	6	7

I plan to click on the “Learn More” button to get more information about this SUV.	1	2	3	4	5	6	7
------------------------------------------------------------------------------------	---	---	---	---	---	---	---

DIRECTION: How do you **feel** about this **ad**?

Bad	1	2	3	4	5	6	7	Good
Harmful	1	2	3	4	5	6	7	Beneficial
Worthless	1	2	3	4	5	6	7	Valuable
Unpleasant	1	2	3	4	5	6	7	Pleasant
Foolish	1	2	3	4	5	6	7	Wise

DIRECTION: Please indicate your level of agreement with each of the following statements.

When I was looking at the advertisement,

Statements	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
I tried to make an accurate judgement of the SUV.	1	2	3	4	5	6	7
I used a lot of mental effort to evaluate the possible value of the SUV for me.	1	2	3	4	5	6	7
I used the copy to evaluate the SUV.	1	2	3	4	5	6	7
I carefully considered the claims that the copy made about the SUV.	1	2	3	4	5	6	7

I gave a lot of thought to the copy in order to judge whether the SUV will be suitable for me.	1	2	3	4	5	6	7
------------------------------------------------------------------------------------------------	---	---	---	---	---	---	---

DIRECTION: Please list **all** the **thoughts** you have about **this SUV**, and separate thoughts with commas.

DIRECTION: Please read the definition of “performance” and “safety” very carefully.

Definition of “Performance”

A performance car represents a more powerful engine, superior speed, agility, and overall driving experience. A car that, with its speed and power, unleashes pure enjoyment.

Definition of “Safety”

A car with a higher safety rating is safer to drive than other cars on the road — with a higher rating on collision tests, a lower injury risk, and a higher chance to survive during a car crash.

Please indicate your level of agreement with each of the following statements.

Statements	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
This ad is about the SUV’s performance.	1	2	3	4	5	6	7
This ad is about the SUV’s safety.	1	2	3	4	5	6	7

Jeep

DIRECTION: Please indicate your level of agreement with the following statement.

Statements	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
(Brand Name) cars have high level of performance.	1	2	3	4	5	6	7

Please provide the reasons for your **performance** rating of (Brand Name) cars.

DIRECTION: Please indicate your level of agreement with the following statement.

Statements	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
(Brand Name) cars have high level of safety.	1	2	3	4	5	6	7

Please provide the reasons for your **safety** rating of (Brand Name) cars.

How **familiar** are you with the **(Brand Name) brand**?

Not familiar at all	1	2	3	4	5	6	7	Very Familiar
---------------------	---	---	---	---	---	---	---	---------------

DIRECTION: We would like to know your **general behaviors when processing information**. Please indicate your level of agreement with each of the following statements.

Statements	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
I would prefer complex to simple problems.	1	2	3	4	5	6	7
I like to have the responsibility of handling a situation that requires a lot of thinking.	1	2	3	4	5	6	7
Thinking is not my idea of fun.*	1	2	3	4	5	6	7
I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.*	1	2	3	4	5	6	7
I try to anticipate and avoid situations where there is likely a chance I will have to think in depth about something.*	1	2	3	4	5	6	7
I find satisfaction in deliberating hard and for long hours.	1	2	3	4	5	6	7
I only think as hard as I have to.*	1	2	3	4	5	6	7
I prefer to think about small, daily projects to long-term ones.*	1	2	3	4	5	6	7

I like tasks that require little thought once I've learned them.*	1	2	3	4	5	6	7
The idea of relying on thought to make my way to the top appeals to me.	1	2	3	4	5	6	7
I really enjoy a task that involves coming up with new solutions to problems.	1	2	3	4	5	6	7
Learning new ways to think doesn't excite me very much.*	1	2	3	4	5	6	7
I prefer my life to be filled with puzzles that I must solve.	1	2	3	4	5	6	7
The notion of thinking abstractly is appealing to me.	1	2	3	4	5	6	7
This is an attention check question. If you are reading this, please select "Somewhat agree" to confirm.	1	2	3	4	5	6	7
I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.	1	2	3	4	5	6	7
I feel relief rather than satisfaction after completing a task that required a lot of mental effort.*	1	2	3	4	5	6	7
It's enough for me that something gets the job done; I don't care how or why it works.*	1	2	3	4	5	6	7

I usually end up deliberating about issues even when they do not affect me personally.	1	2	3	4	5	6	7
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DEMOGRAPHIC INFORMATION

DIRECTION: This part of the survey is about your **demographic information**. Please answer the following questions by checking the appropriate selection or writing up your answer.

1. To which **gender** identity do you most identify with?

- Male
- Female
- Other _____

2. What is your **age**? _____ (years old)

3. Do you currently **own** a car?

- Yes
- No (skip to Question #5)

4. What is the **brand** of the car you currently drive? _____

5. Which of the following **ethnic groups** do you consider yourself to belong to?

- American Indian/Alaskan Native
- Asian/Pacific Islander
- Hispanic
- Non-Hispanic Black
- Non-Hispanic White
- Mixed Race
- Other

Thank you very much for your participation in this study!