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Does Your Boss Prefer Iced Tea Advertisements? The Effect of Feeling Powerful on Consumers' Preference for Cold Advertisements

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ABSTRACT

Advertisements that incorporate temperature-related cues are common in the marketplace. However, when and for whom marketers should use these temperature-based appeals in their ads is still unclear. To fill this research gap, we examine the effect of consumers' feelings of power on preferences for cold versus warm advertisements. Through the lens of embodied cognition, we find that consumers who feel powerful have a stronger preference for ads that incorporate cold imagery. We argue that the positive relationship between feelings of power and preference for cold ads is mediated by a consumer's motivation to maintain social distance and processing fluency. Further, this effect is attenuated for those with low independent self-construal. Our findings introduce a new perspective to help managers understand how the use of cold ads can be attractive to target consumers.

Advertisements that incorporate temperature-related cues are common in the marketplace, from Coca-Cola's famous polar bear commercials to Little Caesar's "Hot-N-Ready" slogan, or Carnival Cruise Line promotions. Although practitioners suggest that incorporating warm and cold temperature cues in ads significantly impacts the consumer decision-making process and preference formation (Cheema and Patrick 2012; Williams and Bargh 2008), when and for whom marketers should use these temperature-based appeals in their advertising is still unclear. For example, while Corona beer ads usually incorporate a tropical environment (e.g., a warm beach with palm trees in the background), Bud Light beer incorporates snowy winter scenes and ice cubes. In a similar vein, La Croix and Bubly sparkling water advertise using warm colors and imagery, while Voss and Perrier sparkling water use cold colors and imagery in their ads (see Figure 1). So, we ask: Why is there an inconsistency in marketing strategy, even within the same product category? Is it the case that certain types of consumers prefer different temperature cues? In general, under what conditions should marketers incorporate warm versus cold cues or imagery in their ads? While answering these questions will potentially improve the effectiveness and conversion rate of ads and make products more appealing, these questions have not been sufficiently addressed in the advertising literature.

We attempt to fill this gap in the literature by examining a group of consumers that is relatively common in the marketplace: those consumers experiencing an increased feeling of power. Feeling powerful is a pervasive experience in everyday life (Garbinsky, Klesse, and Aaker 2014; Rucker and Galinsky 2008). Individuals can experience an increased feeling of power when engaging in common daily events such as interviewing a new employee, advising a student or subordinate, or just sitting in a tall chair (Garbinsky, Klesse, and Aaker 2014).

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Figure 1. Examples of cold/warm ads. From top to bottom, brands using cold temperature images in their ads are Adidas, Bud Light, Voss, and Volkswagen Audi. Brands using warm temperature cues are Old Spice, Corona, La Croix, and Toyota.

Culturally, power is always associated with coldness. We describe powerful individuals with words that conjure cold imagery—for example, using the word *cold-blooded* to describe cruel emperors and leaders. In addition, previous research suggests that powerful individuals are more likely to be persuaded by competence-based (versus warmth-based) messages (Dubois, Rucker, and Galinsky 2016) and that cool ambient scents are commonly used in luxury retail stores (Madzharov, Block, and Morrin 2015). While these results are interesting, they are proxy effects that do not provide direct evidence of a relationship between experiencing increased feelings of power and a preference for advertisements that incorporate cold-themed imagery or cues.

Thus, in the current article, we examine the relationship between increased feelings of power and a preference for cold-themed ads. We defined cold-themed ads (hereafter called cold ads) as ads that include design elements, imagery, or cues that are easily interpreted as cold temperatures. For example, an ad might incorporate a cold color, ice cubes, or a snow-covered mountain. Similarly, we defined warm ads as ads that include design elements, imagery, or cues that are easily interpreted as warm temperatures. We propose that, compared to those individuals who are feeling powerless, individuals experiencing increased feelings of power will report an increased preference for cold ads, and that this effect is driven by their motivation to create and maintain social

distance, as well as increased processing fluency of cold ads. Moreover, we propose that this effect is dependent on one's independent self-construal, such that the effect of feeling powerful on preference for cold ads exists for consumers with high independent self-construal but is attenuated for those with low independent self-construal.

Our research has numerous theoretical and practical implications for advertising theory and practice. We extend the temperature cues in advertising literature by introducing a new antecedent, feelings of power (both as an individual difference and as a manipulated state), and examine how increased feelings of power influence preference for cold ads. While past research has focused on the effects of ambient temperature cues on consumer preference, in the current research we incorporate temperature cues into the design of the ad itself, conceptualizing these cues as elements of a marketing communication effort rather than a physiologically experienced environmental cue. We suggest that temperature cues incorporated into marketing communications should systematically affect the ad preference for a specific group of consumers: those experiencing increased feelings of power. In addition, the current research also examines a special motivation, the motivation to maintain social distance, and ad processing fluency as the underlying process of the effect of feelings of power on preference for cold ads, which enriches both power and temperature cues literature. Taken together, our research describes both an interesting theoretical phenomenon and makes specific suggestions for incorporating that phenomenon into marketing communication efforts.

The remainder of this article is organized as follows: First, we review the relevant literature on temperature cues and power and then generate predictions about how one's feelings of power influence preference for cold ads via a desire to maintain social distance from others and processing fluency of cold ads. Next, we present the results of five studies that support our hypothesized relationship between feelings of power and preference for cold ads, the mediating effect of one's desire to maintain social distance and processing fluency, and the moderation of these effects by the level of independent self-construal. Finally, we conclude with a discussion of the theoretical and practical implications of our findings.

Conceptual Development

Temperature Cues

Extant research suggests that physiologically experienced warm or cold temperatures can significantly impact consumer decision making. For example, warm environments activate consumers' social identities and feelings of warmth toward others, increasing the likelihood they will choose gifts for their friends rather than for themselves (Williams and Bargh 2008). Further, warm physical temperatures can increase consumers' reliance on heuristic processing and decrease cognitive performance when making complex choices (Cheema and Patrick 2012).

Besides focusing on the effects of physical temperature cues, much research examines how temperature cues might be used as elements of advertising or retail design. For example, colors have been used to represent different temperatures within marketing communications. Specifically, individuals tend to associate colors like red and orange with warmth while associating colors like blue and green with cold (Choi, Rangan, and Singh 2016). Incorporating temperature-representative colors in marketing communications has been shown to impact consumers' decision making. For example, Baker and Cameron (1996) found that warm colors increase consumers' perceived wait time in a service context, resulting in more negative perceptions of the service experience. In an advertising context, researchers have found that warm colors generate more attention than cool colors (Moore, Stammerjohan, and Coulter 2005), while cool colors increase feelings of calm compared to warm colors (Bellizzi and Hite 1992). In addition, cold (versus warm) images (such as images depicting ice, frost, or snow) used in charity ads decreased individuals' donation intentions (Choi, Rangan, and Singh 2016). Finally, Rotman, Lee, and Perkins (2017) found that consumers felt less regret after viewing ads that incorporated cold temperature elements (e.g., an Alaska cruise and cold beverages). In the retailing context, Baek, Choo, and Lee (2018) demonstrated that a visually warm retail space increased consumers' perceptions of a store's intimacy and product assortment similarity, leading to increased approach behaviors.

In the current research, we predict that one's feelings of power influence preference for cold ads, and this effect is mediated by one's motivation to maintain social distance and processing fluency. In the following sections, we first review the relevant literature on physical/social temperature and power and then generate our hypotheses.

The Association between Physical Temperature and Social Temperature

Previous research on embodied cognition has established an association between physical and social

warmth or coldness (Bargh and Shalev 2012; IJzerman and Semin 2009, 2010; Williams and Bargh 2008; Zhong and Leonardelli 2008). These findings are based on the notion that humans interpret the physical experience of temperature through the lens of their early childhood experiences (Bargh and Shalev 2012). Specifically, children whose parents hold them close to their bodies (physical warmth) and provide a loving, nurturing environment (social warmth) generate a strong mental association between physical temperature and social temperature (Bargh and Shalev 2012). The relationship between physical and social temperature can affect cognition and behavior without awareness. For example, Williams and Bargh (2008) found that people holding a cup of warm (versus iced) coffee evaluated others as more generous, caring, and more likely to choose gifts for friends rather than for themselves. In addition, IJzerman and Semin (2009) found that sitting in a warm (versus cold) room made participants feel socially closer to the experimenter, while Steinmetz and Mussweiler (2011) found that sitting in a warm (versus cold) environment induced people to assimilate self-evaluations toward a target individual. Further, this relationship between physical and social temperature is bidirectional in nature, suggesting that close or distant social relations can also influence individuals' sense of ambient temperature (Ijzerman and Semin 2010; Zhong and Leonardelli 2008). For example, Zhong and Leonardelli (2008) found that people who experienced social distance (i.e., feeling lonely or being socially excluded) estimated the room temperature to be colder, while Ijzerman and Semin (2010) found that closer social distance (i.e., increased similarity between two people) increased estimation of ambient room temperature. This relationship between physical and social temperature is expressed from a metaphorical perspective as well, specifically, that individuals use physical temperature to express social closeness (Fay and Maner 2012). For example, individuals use metaphors such as a "warm friendship" or a "cold shoulder" to demonstrate the relationship between physical temperature and psychological intimacy (IJzerman and Semin 2009; Lakoff and Johnson 1980).

In a marketing context, researchers also examined the relationship between physical temperature and social distance (Hong and Sun 2012; Huang et al. 2014; Lee, Rotman, and Perkins 2014; Zwebner, Lee, and Goldenberg 2014). For example, Zwebner, Lee, and Goldenberg (2014) proposed a "temperature premium," suggesting that physical warmth primes the concept of emotional warmth, resulting in an increase in the estimation of a product's value. From a self-regulatory perspective, Lee, Rotman, and Perkins (2014) found that social consumption settings are associated with warmth, so physically colder consumers prefer social consumption settings. Conversely, solitary consumption settings are associated with coldness, so physically warmer consumers prefer solitary consumption settings. This suggests that consumers seek psychological temperature as a substitute for physical temperature to achieve homeostasis. Taken together, this extant literature suggests an important relationship between physical and social temperature. Specifically, cold temperatures are linked to increased social distance, while warm temperatures are linked to increased social closeness.

While previous research has already described the effects of temperature cues on consumer perceptions and behaviors and the association between physical temperature and social temperature, there is little focus on individual differences that are critical for market segmentation and targeting, and it is not clear who might be most persuaded by ads that include such temperature cues. Building on research that highlights the importance of matching consumer characteristics to advertising imagery (Erdogan, Baker, and Tagg 2001), we argue that investigating when and for whom to incorporate temperature cues in advertising is critical for effective marketing communication. Next, we examine a common individual experience, feelings of increased power, and articulate how feeling powerful can change perceptions of ads that incorporate different temperature cues.

Power

Power is defined as asymmetric control over valued resources in social relations (Emerson 1962; Galinsky, Gruenfeld, and Magee 2003). While power has long been argued to be a component of social hierarchy (Rucker, Galinsky, and Dubois 2012), prior research has shown that power is also a psychological state representing a subjective perception of one's feeling of power (Rucker and Galinsky 2008; 2009). This subjective feeling of power stems from two different sources. The first source is one's general, status-driven state of power, which depends on one's resources, social status, and respect from others (Mourali and Nagpal 2013). The second source of power is the result of contextual factors, where feelings of power vary depending on the situation or environment (Rucker and Galinsky 2009). As a pervasive and fundamental psychological experience in everyday life,

power has broad implications for how people think, feel, and behave (Galinsky, Gruenfeld, and Magee 2003; Mourali and Nagpal 2013). For example, powerful individuals tend to be more self-focused (Rucker, Dubois, and Galinsky 2011) and more approach oriented (Keltner, Gruenfeld, and Anderson 2003), to think more abstractly (Smith and Trope 2006), and to take more risks (Anderson and Galinsky 2006). Further, individuals who feel powerful tend to be more optimistic (Anderson and Galinsky 2006) and are associated with a stronger action orientation (Galinsky, Gruenfeld, and Magee 2003) compared to those who feel powerless. Finally, feeling powerful increases individuals' self-sufficiency, leading them to prefer working alone rather than working with others (Lammers et al. 2012).

Within consumer behavior, previous research has examined how increased feelings of power influence consumer preference and choice. For example, powerful (versus powerless) consumers save more money (Garbinsky, Klesse, and Aaker 2014) and are more likely to switch products or brands (Jiang, Zhan, and Rucker 2014). These findings explain the influence of power on consumption via two types of motivation. First, consumers are motivated to behave in ways that maintain their current state of (high) power. For example, to maintain these feelings of power, high-power consumers save more money compared to low-power consumers (Garbinsky, Klesse, and Aaker 2014). In this case, by saving money, powerful individuals increase their available resources, which increases their optionality and thus their ability to maintain power. Second, one's feelings of power motivate approach (versus avoidance) tendencies. For example, powerful individuals are more likely to take actions (Galinsky, Gruenfeld, and Magee 2003), take risks (Anderson and Galinsky 2006), and perceive rewards (versus punishments), and they are less likely to experience negative emotions (Anderson and Berdahl 2002). Because high-power consumers are more action oriented, they are more likely to switch brands (Jiang, Zhan, and Rucker 2014) and are more likely to select their preferences rather than reject their dislikes when making consumption decisions (Mourali and Nagpal 2013). The behaviors resulting from the second type of motivation are usually not related to maintaining power, because the essence of power is in controlling valuable resources. More important, both of the motivations examined in the previous research are self-related and cannot fully explain the motivation powerful individuals have when interacting with others in a social context.

In summary, extant research suggests that feeling powerful (or feeling not powerful) is an important antecedent to consumption behavior, cognitive processes, and attitude formation. We extend this literature by examining how feeling powerful influences the perception of ads that include temperature-based cues. Further, we explain the relationship between feeling powerful and ad perception from an embodied cognition perspective, specifically by a desire to create and maintain social distance.

Feeling Powerful and Desire to Maintain Social Distance

Social distance is a form of psychological distance that refers to the psychological closeness you feel to other individuals (Stephan, Liberman, and Trope 2011). Extant research focused on whether feeling powerful influences individual behaviors that increase social distance, such as working alone or refusing to help others (Inesi, Gruenfeld, and Galinsky 2012; Lammers et al. 2012; Lammers and Stapel 2009; Magee and Smith 2013). In the current research, we focus on how feeling powerful influences an individual's motivation to create and maintain social distance. We argue that feeling powerful increases consumers' motivation to create and maintain social distance for two reasons. The first reason focuses on the valuable resources powerful individuals possess. Classical definitions of power focus on one's ability to control resources and outcomes (Anderson and Galinsky 2006). Based on the definition of power, high-power individuals possess more valuable resources and have a stronger influence over the events in their lives. In contrast, powerless individuals' resources are controlled by powerful counterparts, and their lives are also strongly influenced by powerful individuals. Thus, powerful individuals have less motivation to affiliate with low-power counterparts because they have valuable resources and they can control their lives. This decrease in motivation to socially affiliate can be interpreted as increased motivation to maintain social distance (Magee and Smith 2013). The second reason focuses on the positive self-perception that powerful individuals have. Powerful individuals view themselves as highly sufficient and important compared to powerless individuals (Lammers et al. 2012). Thus, powerful individuals rely more on themselves rather than others (Overbeck and Droutman 2013; Rucker, Dubois, and Galinsky 2011). This reliance on self rather than others should manifest in increased motivation to maintain social distance from others. For example,

they prefer to work alone rather than collaborate with others (Lammers et al. 2012). Taken together, these two arguments lead us to propose that experiencing an increased feeling of power increases consumers' motivation to create and maintain social distance.

Social Distance and Preference for Cold Ads

We propose that when consumers are motivated to create and maintain social distance, they have a stronger preference for cold ads because the match between a desire for social distance (a "cold" motivation) and the cold imagery in the ad makes the ads easier (more fluent) to process.

First, as described previously, cognitive linkages between physical and social perceptions of temperature are well established in the psychology (Bargh and Shalev 2012; IJzerman and Semin 2009, 2010; Williams and Bargh 2008; Zhong and Leonardelli 2008), linguistics (Lakoff and Johnson 1980), and marketing (Hong and Sun 2012; Huang et al. 2014; Lee, Rotman, and Perkins 2014; Zwebner, Lee, and Goldenberg 2014) literatures. Specifically, cold temperatures are linked to increased social distance, while warm temperatures are linked to increased social closeness. In this section, we proposed that viewing a cold (warm) ad results in effects similar to physically experiencing a cold (warm) environment and as a consequence, viewing a cold (warm) ad could also signal social distance (closeness). According to research examining cross-modal correspondences, a sensory feature, or attribute, in one modality either physically present or merely imagined is associated with a sensory feature in another sensory modality (Spence and Parise 2012). For example, Halali, Meiran, and Shalev (2017) found that both physically touching a cold therapeutic pad and viewing a snowy landscape picture have a similar effect on participants' cognitive control, resulting in better performance on an antisaccade task. In addition, smelling a warm or cold scent results in effects similar to physically experiencing a warm or cold environment (Barbera et al. 2018). In light of these findings, we suggest that when consumers view an ad that features cold imagery, they may associate it with the feelings of being in a physically cold environment. As a result, they may perceive the cold ad imagery as a symbol of social distance.

Further, because powerful individuals (versus powerless individuals) have a stronger motivation to maintain social distance, a match generates between this "cold" motivation and the "cold" imagery in an ad, which leads to an increased processing fluency of the information in the ad. As previous research has demonstrated that individuals often misattribute enhanced processing fluency to liking (Bi, Perkins, and Sprott 2021; Novemsky et al. 2007; Reber, Schwarz, and Winkielman 2004), we suggest that this fluency should increase preference for those ads.

Based on this discussion, we propose the following hypotheses:

H1: Compared to consumers feeling powerless, consumers feeling powerful will report an increased preference for cold (versus warm) ads.

H2: The relationship between feeling powerful and preference for cold (versus warm) ads is mediated by the motivation to maintain social distance and processing fluency of cold ads. Specifically, consumers feeling powerful (versus powerless) are strongly motivated to maintain social distance, which increases processing fluency and preference for cold ads.

The Moderating Effect of Independent Self-Construal

Independent self-construal refers to a view of the self as unique and distinguished from others by internal qualities and other distinctive features (Singelis 1994). Previous research has demonstrated that people high in independent self-construal endorse more individualistic values such as freedom and independence (Gardner, Gabriel, and Lee 1999), are more promotion focused (Cross, Hardin, and Gercek-Swing 2011), engage in more self-enhancement activities (Markus and Kitayama 1991), and adapt more direct communication (Singelis 1994) and dominating strategies in interpersonal conflicts (Zhang, Ting-Toomey, and Oetzel 2014). When independent self-construal is made salient, people tend to establish their exclusivity and differentiate themselves from others (Das and Roy 2019; Markus and Kitayama 1991). Because being different from others is important to individuals with independent self-construal, they are more likely to join in activities that will set them apart from others (Yang, Stamatogiannakis, and Chattopadhyay 2015). In light of these findings, we suggest that those high in independent self-construal might use social distance as a strategy to distinguish themselves from others. For powerful individuals, high independent self-construal should reinforce the relationship between feeling powerful and the desire to maintain social distance. Thus, for powerful individuals with high independent self-construal, their preference for cold ads should still exist. However, for individuals with

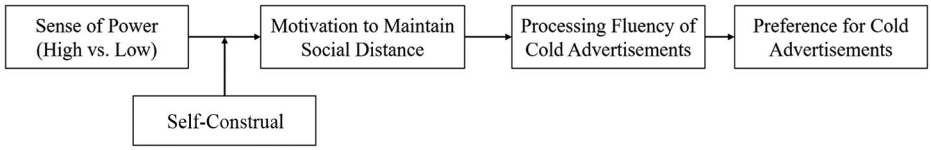

Figure 2. Theoretical framework.

low independent self-construal, distinguishing themselves from others is not as important. Those low in independent self-construal are more likely to emphasize connection with and assimilation toward others (Kemmelmeier and Oyserman 2001) and seek continuity of their social ties (Markus and Kitayama 1991). The motivation to keep social distance is not essential for them. Thus, the motivation to keep social distance is not essential for powerful people with low independent self-construal and, as a consequence, their preference for cold ads should be attenuated. Stated formally:

H3: Independent self-construal moderates the effect of feeling powerful on preference for cold ads. Specifically, the effect of feeling powerful on preference for cold ads will be attenuated for individuals with low independent self-construal.

The theoretical framework of this research is shown in Figure 2.

Research Overview

We conducted five studies to test our hypotheses. First, Studies 1(a) through 1(c) experimentally demonstrated the relationship between increased feelings of power and preference for cold ads. Specifically, Study 1(a) measured individuals' current feelings of power, while Studies 1(b) and 1(c) manipulated feelings of power using different methods. Next, Study 2 confirmed consumers' motivation to maintain social distance and processing fluency as the processes underlying the relationship between feelings of power and preference for cold ads. Finally, Study 3 examined the moderating role of independent self-construal.

Study 1

Study 1 sought to examine the effect of feelings of power on consumers' preference for cold ads. Study 1 included three experiments: 1(a), 1(b), and 1(c). In Study 1(a), we operationalized feelings of power by measuring power as an individual difference variable and then measured consumer attitudes toward a cold (versus warm) ad. In Study 1(b), we created ads designed to manipulate feelings of power and then measured consumers' preference for a water bottle presented in an ad that included either a cold- or warm-themed background. In Study 1(c), we included a control condition to confirm that it is feeling powerful, rather than feeling powerless, driving the relationship between feelings of power and preference for cold ads.

Study 1(a)

Method and Procedure

For Study 1(a), 147 students (M_{age} = 19.79, 64.6% female) from a Chinese university were recruited to participate in a consumer behavior survey for financial compensation. To examine the relationship between individual differences in feelings of power and preference for a cold (versus warm) ad, participants were randomly assigned to conditions in a single-factor (advertising appeal: warm versus cold) between-subjects design with feelings of power measured as an individual difference variable.

Upon arrival to the lab, participants were informed that they would be completing an advertisement evaluation task. Participants were shown a coffee ad manipulated with different backgrounds. In the warm ad condition, participants were presented with a coffee mug ad using a sunny beach as its background, while in the cold ad condition, participants were presented with the same coffee mug in front of a snow-covered mountain (see Appendix A). Participants then reported their attitude toward the mug ad (adapted from Garcia-Collart, Serin, and Sinha 2020): "What is your overall evaluation of this advertisement?" Responses were measured on a semantic differential scale with the following anchors: 1 = *Unfavorable/Bad/Dislike*, 7 = *Favorable/Good/Like* (Cronbach's α = .92). A pretest (n = 67) indicated that cold and warm ads differed only in perceived coldness (F (1, 65) = 165.48, $p < .001$) but were the same in brand attitude (F (1, 65) = 0.37, p = .55), ad attitude (F (1, 65) = 0.05, p = .83), and perceived status (F (1, 65) < 0.01, $p > .10$; summarized pretest results of Studies 1 through 3 are described in Appendix B). Next, participants were asked to complete a "life and personality survey," with a semantic differential scale measuring generalized feelings of

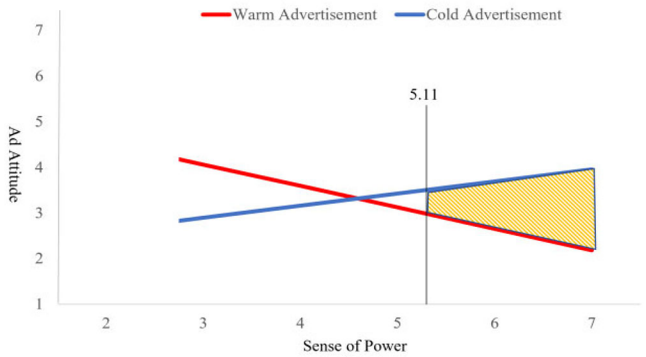

Figure 3. The interaction between feelings of power and attitude toward cold versus warm ads in Study 1(a).

power (e.g., "I can get people to listen to what I say"; 1 = *Strongly disagree*, 7 = *Strongly agree*; Cronbach's $\alpha = 0.62$; Anderson and Galinsky 2006). After completion, participants were thanked, paid for their participation, and then debriefed.

Study 1a Results

We used the PROCESS macro (*Warm ad* = 1, *Cold ad* = 2) in SPSS (Hayes 2017) to examine the relationship between feelings of power and attitude toward cold (versus warm) ads. After controlling the effect of feelings of power ($\beta = -1.20$, $t = -2.49$, $p = .014$) and advertising appeal ($\beta = -3.37$, $t = -2.16$, $p = .032$), we observed a significant interaction between feelings of power and advertising temperature cue, indicating that increased feelings of power were positively related to attitudes toward the cold ad ($\beta = 0.74$, $t\ (143) = 2.39$, $p = .018$).

Next, we performed a Johnson–Neyman floodlight analysis (Spiller et al. 2013) to identify regions where the effect of the independent variable (feelings of power) on the dependent variable (ad attitude) was significant. Specifically, we observed a significant positive relationship between feelings of power and ad attitude when the value of feelings of power was higher than 5.11 (50.34% of the sample). These results were consistent with our hypothesis that individuals who report increased feelings of power also report more positive attitudes toward cold (versus warm) ads. However, for participants feeling low power (lower than 4 on the scale) there was no significant interaction. We interpret this finding as support for our theorizing that the effects we observe on ad preference are driven by feelings of power, rather than feelings of powerlessness. We directly test this assumption in Study 1(c). Figure 3 is a graphical representation of our floodlight analysis.

Study 1(b)

Study 1(b) improved on Study 1(a) in two important ways. First, rather than measure feelings of power, we experimentally manipulated feelings of power directly via the ad participants saw. Second, in Study 1(a), advertising appeal was a between-subjects factor, where we provided participants with either the warm or cold ad. Conversely, in Study 1(b), we asked participants to evaluate both the warm and cold ads at the same time.

Participants and Design

In Study 1(b), 151 American participants (M_{age} = 40.00, 53.6% female) recruited from Amazon.com's Mechanical Turk (MTurk) were randomly assigned to a high-power condition or low-power condition.

Procedure and Measures

Study 1(b) consisted of two tasks. First, we asked participants to complete an ad evaluation task. We provided participants with a made-up ad from the American Psychological Association (APA). We told participants that APA supported numerous activities and programs that benefit society and improve mental health. We used this ad to manipulate feelings of power (see Appendix C). In the high-power condition, the ad showed a confident man in a suit and a slogan that read "TODAY I FEEL POWERFUL" (adapted from Rucker, Dubois, and Galinsky 2011). Below the slogan, we presented participants with a call to "Record your powerful moment" and a "#POWERFULMOMENT" hashtag. In the low-power condition, the ad showed a man in a suit covering his face with his hands, accompanied by the slogan "TODAY I FEEL POWERLESS." Below the slogan we presented participants with a call to "Record your powerless moment" and a "#POWERLESSMOMENT" hashtag. After viewing the ad, participants completed a single-item measure of feelings of power as our manipulation check: "How powerful do you feel right now?"

Responses were measured on a Likert-type scale anchored at 1 = *Very powerless* and 7 = *Very powerful*.

Next, participants completed an ad evaluation task. We presented participants with two ads for the water bottle brand Contigo. The two ads were identical in all aspects except the background: The cold advertisement depicted snow, while the warm advertisement showed an image of a fireplace (see Appendix A). Pretest ($n = 63$) results indicated that cold and warm ads differed only in perceived coldness (F (1, 61) = 127.87, $p < .001$) but were the same in brand attitude (F (1, 61) = 0.11, $p = .74$), ad attitude (F (1, 61) = 0.32, $p = .57$), and perceived status (F (1, 61) = 2.75, $p = .10$; see Appendix B). After viewing both ads, participants were asked to indicate their relative preference between the warm ad and the cold ad on a Likert-type scale anchored at 1 = *Definitely prefer the warm advertisement* and 7 = *Definitely prefer the cold ad*. Finally, participants were debriefed and paid for their participation.

Results

A one-way analysis of variance (ANOVA) of the power manipulation on participants' current feelings of power was significant (F (1, 149) = 52.83, $p <$ .001). Specifically, after viewing the powerful ad, participants felt more powerful ($M = 5.26$, $SD = 1.45$) compared to those who viewed the powerless ad ($M = 3.40$, $SD = 1.65$). Thus, our manipulation of feelings of power was successful.

Next, we conducted a one-way ANOVA of feelings of power on participants' relative preference for the warm versus the cold ad. The results revealed a significant effect of power (F (1, 149) = 4.23, $p = .042$); participants who viewed the powerful ad had a higher preference for the water bottle ad with the cold background compared to participants who viewed the powerless ad ($M_{powerless} = 2.91$, $SD = 1.89$; $M_{powerful} = 3.57$, $SD = 2.00$). Thus, hypothesis 1 was supported.

Although we found a significant effect of feeling powerful on preference for cold ads, the preference mean scores in both powerful and powerless conditions were below the midpoint. One possible reason is that the manipulation of power we used in this study is viewing different ads. The background color used in the powerful ad is cold, which might increase preference for a warm ad. Thus, to rule out the potential influences of color in the power manipulation, in the following studies we asked participants to recall a powerful/powerless experience or imagine themselves as the boss/employee to manipulate the sense of power.

Study 1(c)

Study 1(c) improved on Study 1(b) by including a control condition. The inclusion of a control condition addresses a potential alternative explanation for the results observed in Study 1(b): that feeling powerless, rather than powerful, is driving our observed effect. Our theoretical explanation for the relationship between increased feelings of power and preference for cold ads rests on the notion that feeling powerful motivates consumers to maintain or increase social distance from others, which increases the processing fluency of cold ads. On the other hand, consumers who are feeling powerless should not be motivated to maintain social distance from others. Thus, we predict that consumers experiencing feelings of power will prefer cold ads compared to those who feel powerless, and those who feel powerless will not differ from the control (no power manipulation) condition.

Participants and Design

In Study 1(c), 150 American participants (M_{age} = 40.67, 50.7% female) recruited from MTurk were randomly assigned to one of three conditions (power condition: high power/low power/control) in a single-factor design. Ad preference served as the within-subject dependent variable.

Procedure and Measures

Study 1(c) consisted of two tasks. In the first task, participants were instructed to recall and write down an experience in which they had felt powerful (powerful condition), or in which they had felt powerless (powerless condition), or a summary of their activities from the day before (control condition; adapted from Rucker, Dubois, and Galinsky 2011). A pretest ($n = 58$) indicated that after recalling a powerful experience, participants felt more powerful ($M = 5.44$, $SD = 0.98$) than after recalling a powerless experience ($M = 2.77$, $SD = 1.90$, F (1, 56) = 47.68, $p < .001$).

Next, participants viewed two ads for the Contigo brand: one with snow as the background (cold ad) and one with a fireplace as the background (warm ad; see Appendix A). Participants were asked to report their relative preference between these two ads (1 = *Definitely prefer the warm ad*, 7 = *Definitely prefer the cold ad*). After that, participants were asked to complete some demographic questions, debriefed, and thanked for their participation.

Results

A one-way ANOVA on water bottle ad preference was significant (F (2, 147) = 4.58, $p = .012$).

Specifically, when recalling a powerful experience, participants reported more favorable attitudes toward the cold ad ($M = 4.23$, $SD = 2.01$) than those who recalled a powerless experience ($M = 3.08$, $SD = 2.01$, F (1, 147) = 8.00, p = .005) and those in the control condition ($M = 3.31$, $SD = 2.05$, F (1, 147) = 5.24, p = .023). In addition, no differences were found between participants in the powerless condition and those in the control condition (F (1, 147) = 0.29, p = .59).

Studies 1(a) through 1(c) Discussion

Using three substudies, Study 1 provides support for our hypothesized relationship between feelings of power and preference for cold ads. Our results were obtained using both measures of feelings of power in Study 1(a) and two different manipulations of power in Study 1(b) and Study 1(c). Taken together, our results suggest that the preference observed for cold ads is driven by increased feelings of power rather than feelings of powerlessness. Overall, these findings provide evidence for the existence of a relationship between feelings of increased power and a preference for cold ads. In addition, we also conducted an experiment by changing the background color instead of the background imagery of the presented ads. The results replicated the findings of Study 1: that participants in the powerful condition had a higher preference for the cold ad compared to the powerless condition (for more details, see Supplemental Online Appendix A).

Next, we examine the mechanism underlying our observed relationship between feelings of power and cold ad preference (i.e., the mediating roles of motivation to maintain social distance and processing fluency) to better understand the relationship between feelings of power and cold ad preference.

Study 2

Study 2 aimed to examine the mechanism underlying our observed relationship between feelings of power and cold ad preference. We predicted that feeling powerful increases motivation to create and maintain social distance, which leads to the ease of processing the cold ads and results in an increased preference for cold ads (hypothesis 2).

Method

Participants and Design

For Study 2, a total of 155 American registered users (M_{age} = 40.05, 58.7% female) of MTurk participated for compensation. Participants were randomly assigned to either a high-power or low-power condition in a single-factor experiment.

Procedure and Measures

Study 2 consisted of two ostensibly unrelated tasks. The first was an imagination task used to manipulate feelings of power. Specifically, we asked participants to imagine themselves as a boss or an employee in a company (Rucker, Dubois, and Galinsky 2011). In the high-power condition, we asked participants to imagine themselves as the boss in a company and that they controlled and supervised the work of their employees. In the low-power condition, we asked participants to imagine themselves as a junior employee in the company, and that they were required to follow their boss's instructions. After imagining their assigned scenario, participants completed a manipulation check question of power: "How powerful do you feel right now?" Responses were made on a Likert-type scale anchored at 1= *Very powerless* and 7 = *Very powerful*. Following the power manipulation, participants reported their motivation to keep and maintain social distance by responding to one item: "As a boss/an employee in this company, I would like to keep a distance with others." This was also a Likert-type scale, this time anchored at 1 = *Strongly disagree* and 7 = *Strongly agree* (adapted from Szymkowiak et al. 2021).

Next, participants completed an ad evaluation task. Similar to Study 1(b), we presented participants with two ads for the Contigo brand: one with snow as the background (cold ad) and another one with a fireplace as the background (warm ad). After viewing both ads, participants were first asked to report their relative perceived fluency between the warm ad versus the cold ad. Responses were provided on a Likert scale anchored at 1 = *Ad 1 (warm advertisement) is easier to process* and 7 = *Ad 2 (cold advertisement) is easier to process* (Graf, Mayer, and Landwehr 2018). Participants then reported their relative preference for the warm ad versus the cold ad on a Likert scale, this time anchored at 1 = *Definitely prefer ad 1 (warm advertisement)* and 7 = *Definitely prefer ad 2 (cold advertisement)*. Finally, participants were debriefed and paid for their responses.

Results and Discussion

Manipulation Check

As expected, participants in the powerful condition felt more powerful than those in the powerless

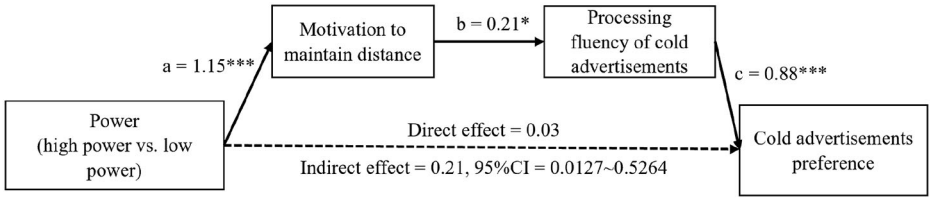

Figure 4. Mediation analysis of Study 2; $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

condition ($M_{\text{high-power}} = 5.66$, $SD = 1.18$; $M_{\text{low-power}} = 2.73$, $SD = 1.56$; F (1, 153) = 169.43, $p < .001$). Thus, our manipulation of feelings of power was successful.

Motivation to Maintain Social Distance

A one-way ANOVA on motivation to maintain social distance indicated a significant effect of feelings of power (F (1, 153) = 17.70, $p < .001$). Specifically, participants indicated that they were more motivated to maintain social distance in the powerful condition ($M = 4.49$, $SD = 1.72$) versus the powerless condition ($M = 3.34$, $SD = 1.69$).

Processing Fluency

Consistent with our prediction, participants in the powerful condition reported increased processing fluency of the cold ad ($M = 4.64$, $SD = 1.83$) compared to the powerless condition ($M = 3.97$, $SD = 1.96$; F (1, 153) = 4.68, $p = .032$).

Cold Ad Preference

Consistent with previous studies, participants in the powerful condition preferred the cold ad more ($M = 4.51$, $SD = 2.09$) compared those participants in the powerless condition ($M = 3.85$, $SD = 2.09$; F (1, 153) = 3.89, $p = .050$).

Mediation Test

We tested the sequential mediating roles of motivation to maintain social distance and processing fluency using the bootstrapping approach suggested by Hayes (2017), Model 6. We used our power manipulation as the independent variable, motivation to maintain social distance as the first mediator, processing fluency as the second mediator, and preference for the cold ad as the dependent variable. Our results suggested successful mediation, such that participants in the powerful condition were more motivated to maintain social distance ($\beta = 1.15$, $t = 4.21$, $p < .001$), which then increased processing fluency ($\beta = 0.21$, $t = 2.19$, $p = .030$) and preference for the cold ad ($\beta = 0.88$, $t = 22.81$, $p < .001$). The sequential mediating effect was positive and had a 95% confidence interval (CI) that excluded zero (indirect effect = 0.21, 95% CI = [0.0127, 0.5264], Figure 4). After accounting for the mediating process, power had no direct effect on cold ad preference ($\beta = 0.03$, $t = 0.18$, $p > .10$). In addition, neither the path Power → Fluency → Preference for cold ad ($\beta = 0.36$, 95% CI = [−0.2771, 0.9809] nor the path Power → Motivation to maintain social distance → Preference for cold ad ($\beta = 0.10$, 95% CI = [−0.0249, 0.2652] was significant. To further confirm the directionality of these effects, we examined the sequential mediation model in reverse (the order of motivation to maintain social distance and fluency switched); the model no longer held (indirect effect: $\beta = 0.008$, 95% CI = [−0.0029, 0.0277]). Thus, both hypotheses 1 and 2 were supported.

Discussion

Study 2 examined the mediating roles of motivation to maintain social distance and processing fluency in the relationship between feelings of power and consumers' preference for cold ads. We replicated our previous finding that feeling powerful makes cold ads more appealing and further found support for motivation to maintain social distance and fluency as the underlying process: As feelings of power increase, motivation to maintain social distance gets stronger, leading to increased perceived processing fluency and preference for cold ads.

Study 3

Study 3 examined independent self-construal as a potential moderator of our focal effect of feelings of power on preference for cold ads (hypothesis 3). Specifically, we hypothesized that the relationship between feelings of power and preference for cold ads would be weaker for participants with low independent self-construal.

Method and Procedure

For Study 3, a total of 307 ($M_{\text{age}} = 39.33$, 51.8% female) American registered users of MTurk participated for monetary compensation. Participants were

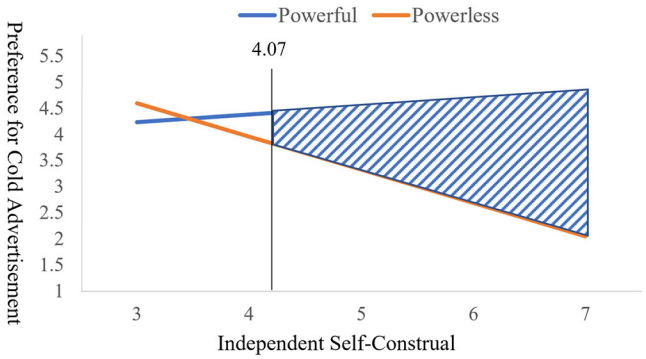

Figure 5. Results of Study 3.

randomly assigned to either the high-power condition or the low-power condition. Specifically, participants completed the same recall task used in Study 1(c) to manipulate feelings of power. Participants were instructed to recall and write down an experience in which they had power over others (high-power condition) or in which someone else had power over them (low-power condition; Rucker and Galinsky 2008), followed by a power manipulation check question.

Next, and same as in Study 1(b), we presented participants with two ads for the Contigo brand (see Appendix A). After viewing both ads, participants were asked to report their relative preference for the warm ad versus the cold ad (1 = *Definitely prefer the warm advertisement*, 7 = *Definitely prefer the cold advertisement*). Next, we measured participants' independent self-construal using a 7-point Likert-type scale: an example items includes "I can talk openly with a person who I meet for the first time, even when this person is much older than I am" (1 = *Strongly disagree*, 7 = *Strongly agree*; Cronbach's $\alpha = 0.82$; Singelis 1994). Similar to Simpson, White, and Laran's (2018) research, we calculated a self-construal index such that higher scores reflect higher levels of independence self-construal.

Results and Discussion

Manipulation Check

As expected, participants felt more powerful when they recalled a powerful experience compared to a powerless experience ($M_{\text{high-power}} = 4.97$, $SD = 1.25$; $M_{\text{low-power}} = 2.95$, $SD = 1.64$; F (1, 305) = 144.73, $p < .001$). Thus, our manipulation of feelings of power was successful.

Hypothesis Test

A one-way ANOVA of feelings of power on preference for cold ads was significant (F (1, 305) = 6.95, $p = .009$). Specifically, when recalling a powerful experience, participants reported a higher relative preference for cold ads ($M = 4.42$, $SD = 1.99$) compared to those who recalled a powerless experience ($M = 3.81$, $SD = 2.05$). Thus, similar to previous studies, hypothesis 1 was supported.

We then applied the Johnson–Neyman technique (PROCESS Model 1; Hayes 2017; Spiller et al. 2013) to examine the moderating effect of independent self-construal. After controlling the effect of feelings of power ($\beta = -2.73$, $t = -1.64$, $p = .10$) and the effect of self-construal ($\beta = -1.43$, $t = -2.35$, $p = .02$), we found a significant interaction between feelings of power and self-construal on consumers preference for the cold ad ($\beta = 0.78$, $t = 0.79$, $p = .043$). In support of hypothesis 3, feeling powerful increased preference for the cold ad only for those participants with higher independent self-construal (when $M > 4.07$; 57.32% of the full sample; $\beta = 0.47$, SE = .24, $p < .05$; see Figure 5).

Discussion

Study 3 examined an important moderator, independent self-construal, of our focal effect that feeling powerful increases consumers' preference for cold ads. Specifically, we found that the focal relationship between feelings of power and preference for cold ads disappeared for consumers with lower independent self-construal. These findings lend additional support for the underlying mechanism of the motivation of maintaining social distance. Specifically, because individuals with high independent self-construal are likely to be motivated to maintain social distance as a way to distinguish themselves from others compared to individuals with low independent self-construal, we should observe the proposed relationship between feeling powerful and preference for cold ads for those high independent self-construal individuals. However, for powerful individuals with low independent self-construal, the proposed effect should be attenuated.

General Discussion

Our research examines how feelings of power influence consumer preference for cold ads. We report five studies that provide consistent evidence for our proposition that consumers feeling powerful prefer cold ads. We examine this relationship by both measuring trait power in Study 1(a) and manipulating feelings of state power in Studies 1(b), 1(c), 2, and 3. Further, the relationship between feelings of power and preference for cold ads is mediated by one's motivation to maintain social distance and processing fluency (Study 2). This is consistent with extant findings from the embodied cognition literature, where individuals will use warm products to mitigate feelings of psychological distance (e.g., Lee, Rotman, and Perkins 2014). In addition, we find that this proposed effect is attenuated when consumers have a low independent self-construal.

Theoretical Contribution

Despite a growing research stream that examines the effects of ambient temperature cues on consumer behavior, when and why consumers engage with products that incorporate temperature cues has received limited attention in the advertising literature. To our knowledge, no literature exists that examines the effects of feelings of power on preference for advertising that incorporates temperature-related cues or imagery. Our research differs from and extends the extant literature on temperature cues and feelings of power in several respects.

First, our research enriches the existing literature that examines the effects of temperature cues in print and online advertising. Previous research has demonstrated that advertising backgrounds can significantly influence consumer attitudes, such that consumers generate positive attitudes toward ads with simple rather than complex backgrounds (Stevenson, Bruner, and Kumar 2000) or have more luxurious perceptions toward ads with vertical rather than horizontal background orientations (van Rompay et al. 2012). In our research, we find that even though the products in ads are not physically cold, participants reported increased processing fluency and preference toward the ads if cold temperature cues were embedded in an ad's background. We argue that cold temperature cues can signal social distancing, which leads to increased processing fluency of cold ads for those people who feel powerful. Thus, temperature cues in the ad backgrounds used in our studies have the same effect as objects with actual physical temperatures (e.g., holding a cold mug, Zhong and Leonardelli 2008; staying in a cold room, Zwebner, Lee, and Goldenberg 2014). The current research provides a new independent variable, feelings of power, and explores its effect on preference for ads with special temperature cues. Most extant research focuses on how temperature cues influence consumers' cognition, affection, and downstream behaviors (Choi, Rangan, and Singh 2016; Moore, Stammerjohan, and Coulter 2005; Rotman, Lee, and Perkins 2017). However, research examining when and for whom marketers should use temperature-based cues in ads is relatively rare (Sokolik, Magee, and Ivory 2014). In the current research, we manipulate our antecedent of interest, feelings of power, while keeping product and brand attitudes consistent across all studies. This design also allowed us to rule out alternative explanations (e.g., whether our effects were driven by the perceived price of products used in the ads).

Second, the current research contributes to the extant literature examining the downstream effects of feelings of power. Distinct from previous research, our research focuses on how feelings of power influence individuals' interpersonal motivation and subsequent consumption behavior. By showing that feeling powerful increases consumers' preference for cold ads, the current research identifies a novel motivation related to feelings of power, which also leads to increased processing fluency of cold ads. Previous research has demonstrated that individuals who feel powerful are motivated to maintain their current state (Garbinsky, Klesse, and Aaker 2014) and exhibit increased approach tendency (Anderson and Berdahl 2002; Galinsky, Gruenfeld, and Magee 2003). We demonstrate that powerful consumers are motivated to maintain social distance, resulting in a preference for cold ads because of the increased processing fluency. We argue that the motivation to maintain social distance is different from the motivation to maintain a sense of power because published definitions of power focus on the control of valuable resources over others. However, social distance is not a valuable resource in a broad sense. In addition, we suggest that the motivation to maintain social distance is different from approach motivation because approach motivation is an internal, self-related motivation while a desire to maintain social distance usually requires a social context. Thus, our findings increase understanding of the influence of feelings of power on consumption behavior by introducing a new mediator from an embodied perspective.

Third, our research also outlines a novel fluency effect, demonstrating that processing fluency of cold temperature cues embedded in ads increases due to individuals' feelings of power. Previous research has already demonstrated numerous fluency effects, such as the temporal landmark–product location fluency effect (Bi, Perkins, and Sprott 2021), construal level–brand–consumer relationship fluency effect (Connors et al. 2021), and relationship accessibility–regulatory focus fluency effect (Fei, You, and Yang 2020). Adding to this previous research, we find that feelings of power increase individuals' motivation to maintain social distance, resulting in increased processing fluency of cold ads. When consumers can more easily process cold ads, they have a stronger preference for cold ads.

Finally, we examine an important moderator of our focal effect, independent self-construal, finding that only those high in independent self-construal exhibit an increased preference for cold ads when feeling powerful. This makes sense, as those high in independent self-construal tend to behave in ways that create distinction or separation from others, while those low in independent self-construal tend to seek out communal relationships and maintain the continuity of their social ties (Das and Roy 2019; Kemmelmeier and Oyserman 2001; Markus and Kitayama 1991). Our results suggest that a lack of independent self-construal attenuates the relationship between feelings of power and preference for cold ads, rather than increased independent self-construal. This is consistent with previous research that describes a relationship between power and self-sufficiency or self-importance (Lammers et al. 2012), reliance on self over reliance on others (Overbeck and Droutman 2013; Rucker, Dubois, and Galinsky 2011), and a preference to work alone instead of with others (Lammers et al. 2012). Taken together, we suggest that considering this individual difference (level of independent self-construal) is critical to fully understanding the relationship between feelings of power and preference for cold ads.

Managerial Implications

Our research suggests numerous important managerial implications. We provide a new perspective to help managers understand how the use of cold ads can be effective for targeting potential consumers. Based on our findings, powerful consumers prefer cold ads (i.e., advertising background that incorporates snow scenes or other cold colors); however, this effect is attenuated when independent self-construal is reduced. Our findings are important for marketing managers in a number of useful ways. First, it suggests that adding cold appeals to ads can increase powerful consumers' processing fluency of those ads. In the current article, we use cold imagery in ad backgrounds to represent coldness. The cold background imagery might be snow or an icy mountain, or simply a "cold" software image filter. In the current research, we used both design strategies. Specifically, in Studies 1, 2, and 3, we employed different background imagery across cold and warm ads, while in the supplementary experiment of Study 1, we used the same background image but changed the color via a software filter. Our consistent findings across these studies support the generalizability of our proposed effect of feelings across both design strategies.

In addition, our research also provides guidance for marketing managers attempting to target a potential market segment and describes an advertising strategy for making ads more appealing to that segment. For example, for individuals who regularly experience feelings of power (e.g., those with high socioeconomic status, who play a dominant role at work, or who possess information that can be shared or withheld from others; Rucker, Galinsky, and Dubois 2012), incorporating cold attributes into ads that target them should increase effectiveness and reduce communication cost. In addition, we also suggest that viewing manipulated ads can increase feelings of power, which marketers could then use together with cold advertising cues, as shown in Study 1(b). Moreover, for brands that attempt to signal or increase consumer power (e.g., athletic brands or luxury brands), adapting cold ads could prove persuasive. As a test of the external validity of this strategy, we conducted an observational field study (for details, see Supplemental Online Appendix B) that found luxury brands were more likely to include colder (versus warmer) colors on their websites. Thus, the focal effect proposed in the current research provides guidelines for both marketing segmentation and branding strategies.

Finally, our research highlights ways to manipulate consumers' sense of power that can be used in the marketplace, especially online advertising. Similar to Rucker and colleagues, we manipulated power using elements of the message embedded in an ad in Study 1(b) (i.e., TODAY I FEEL POWERFUL), a method available for marketing managers interested in manipulating feelings of power. Also, our findings in Study 3 indicate that independent self-construal moderates our focal finding, suggesting important implications for brands employing cold ads. Specifically, for

consumers with high independent self-construal, such as those individuals likely to mention individual characteristics or achievements, using cold ads for consumers who feel powerful should be effective. However, among consumers with relatively low independent self-construal, using cold ads for consumers who are feeling powerful might not be effective.

Limitations and Future Directions

While we have attempted to be as thorough as possible in exploring the relationship between feelings of power and preference for cold ads, several limitations to our research need to be acknowledged. First, Park and Hadi (2020) demonstrated that cold ads could increase product evaluations through status signaling and increased perceptions of luxury, while Zwebner, Lee, and Goldenberg (2014) argued that warm temperature cues could increase product evaluation by increasing emotional warmth. To address these conflicting findings, we kept product attitudes and perceptions of brand status consistent while changing only the temperature cues across our manipulated ads. Thus, we are confident that those who are feeling powerful are using the cold cues in our ads, which signal social distance, rather than the product itself. However, it may be the case that an ad is designed to both signal status (a luxury brand) and the desire to socially connect with others. In this case, which motivation is more influential? Future research should compare and contrast these motivations within the context of perceived ad temperature. In addition, previous research has described two motivations related to feeling powerful: the desire to maintain power (Garbinsky, Klesse, and Aaker 2014) and approach tendencies (Mourali and Nagpal 2013). In the current research, we examined another motivation—the motivation to create and maintain social distance. However, it is unclear which of these motivations is most influential on perceptions and behavior. Future research should describe additional moderators and identify under what conditions each source of motivation is most influential.

Second, previous research suggests that subjective feelings of power stem from two distinct sources: a general, status-driven state of power and a contextual, environmental factors–driven state of power (Mourali and Nagpal 2013). Thus, it may be the case that social status moderates the effect of the contextual state of power on preference for cold ads. Specifically, is our proposed effect stronger or weaker for high-status (versus low-status) individuals? Future research should examine this potential moderator.

Third, in Study 2, we measured motivation to maintain social distance and processing fluency through a single-item scale. Although previous research has already demonstrated that the single-item scale of fluency is as valid and sufficient as the multi-item measure (Graf, Mayer, and Landwehr 2018), the single-item measure might still introduce measurement error. Future research should compare the effectiveness of using multiple items with using a single item to measure motivation to maintain social distance and processing fluency.

Finally, while our effects were consistent across student and online samples, as well as samples from different countries (China and the United States), it is unclear whether these effects will still hold across countries dominated by cold versus warm weather. For example, would consumers living in extremely cold climes (e.g., Norway) have the same reaction when viewing a cold ad compared to consumers living in tropical climates? Future research should extend our findings by examining the moderating effect of environmental conditions on the relationship between feelings of power and preference for cold advertisements.

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Appendix A. Stimuli used in Studies 1 through 3

Studies	Warm Advertisements	Cold Advertisements
1(a)		
	Translation of the slogan: "Enjoy Every Drop of Your Coffee"	
1(b), 1(c), 2, and 3		
Supplementary study in Study 1		

Appendix B. Pretest results

		Study 1(a) ($n = 67$)		Studies 1(b), 1(c), 2, and 3 ($n = 63$)		Supplementary Study in Study 1 ($n = 65$)	
Variables	Measurement	Warm	Cold	Warm	Cold	Warm	Cold
Perceived coldness	The background of this advertisement shows coldness (1 = *Strongly disagree*, 7 = *Strongly agree*)	1.56 (1.26)	6.09[b] (1.61)	2.32 (1.56)	6.25[b] (1.19)	2.06 (1.46)	3.85[b] (1.60)
Brand attitude	What is your overall attitude toward this brand? (1 = *Unfavorable/Negative/Dislike*, 7 = *Favorable/Positive/Like*)	4.99 (1.57)	4.76[a] (1.56)	4.92 (1.16)	4.81[a] (1.46)	4.58 (1.11)	4.53[a] (1.50)
Ad attitude	What is your overall attitude toward this advertisement? (1 = *Unfavorable/Bad/Dislike*, 7 = *Favorable/Good/Like*)	4.88 (1.68)	4.80[a] (1.51)	5.03 (1.40)	4.81[a] (1.65)	4.64 (1.30)	4.66[a] (1.45)
Perceived status	Purchasing the product in the ad will improve my social status (1 = *Strongly disagree*, 7 = *Strongly agree*)	3.00 (1.83)	3.00[a] (1.77)	2.32 (1.35)	2.66[a] (1.52)	3.06 (1.44)	2.79[a] (1.47)
Perceived price	The product shown in the advertisement is expensive (1 = *Strongly disagree*, 7 = *Strongly agree*)	3.62 (1.65)	3.94[a] (1.48)	3.03 (1.66)	3.66[a] (1.31)	3.78 (1.29)	3.28[a] (1.42)

Note. Numbers in parentheses are standard deviations.
[a]Indicates no significant differences between warm and cold ads ($p > .05$).
[b]Indicates significant differences between warm and cold ads.

Appendix C. Power manipulation used in Study 1(b)

High Power Ad

Low Power Ad