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A Metacognitive Model of the Effects of Susceptibility to Persuasion Self-Beliefs on Advertising Effects

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This study postulates that people’s beliefs about their own susceptibility to persuasion efforts can influence advertising effects. It thus represents the first explication of the process by which self-beliefs determine advertising effects, through their influence on the subjective experience of the ease of being persuaded. Integrating three research streams (metacognition, persuasion knowledge, and cognitive correction), the current study proposes a model of three influence patterns, which are contingent on whether people perceive the advertising message to be high in manipulative intent and whether people are motivated to be accurate in their judgments. If advertising messages are low in manipulative intent, such that the persuasion seems acceptable, susceptibility self-beliefs influence people’s attitudes toward the advertised products or issues (i.e., expected effects). If advertising messages are high in manipulative intent, such that persuasion seems unacceptable, people exhibit suppression (no effects) if they have weak accuracy motives, but they exhibit overcorrection (opposite effects) if they are strongly motivated to be accurate. Five studies test these predictions and reveal some demographic characteristics associated with self-beliefs about susceptibility to persuasion. The findings thus have important implications for advertising practitioners.

A persuadable person, exposed to a variety of advertising messages throughout the day, might think (even if unconsciously), “I am a persuadable person, and I feel like I cannot resist this ad.” The resulting response to these thoughts might be “It would be neat to have this product,” “I need to work harder to avoid this temptation,” or “I hate the idea of being manipulated by another worthless product.” These various responses represent different scenarios in which people’s thoughts about being persuaded affect the ultimate influence of the persuasion, in line with metacognition research devoted

to “the study of thinking about thinking, or thoughts about thoughts” (Briñol, Rucker, et al. 2004, p. 84).

Metacognition research suggests the need to investigate how thinking about thinking might affect people’s judgments and responses to persuasion in particular (Schwarz 2004). Metacognition has a pervasive influence (Jost, Kruglanski, and Nelson 1998); it also can be spontaneous and occur even in low elaboration conditions (Briñol, Rucker, et al. 2004), such as in response to advertising. This study therefore posits that people’s beliefs about whether they are persuadable and whether their experiences with being persuaded (i.e., easily or with difficulty) influence their responses to advertising messages. Briñol, Rucker, et al. (2004) suggest that people think about their own ability to resist persuasion, which may determine their attitudes toward a featured persuasion target; in a news editorial context, they affirm that self-beliefs influence persuasion effects. Winkielman et al. (2003) argue that, during metacognitive processes, subjective experiences strongly influence message effects. However, Briñol, Rucker, et al. (2004) do not test for such subjective experiences. In parallel and as an extension of their work, this study proposes a three-step process model by which people’s beliefs about their susceptibility to persuasion affects their subjective experience of the ease of being persuaded, which determines their evaluations of advertised products or advocated issues.

With a coherent model, this study also illustrates that, depending on both message (manipulative nature) and consumer (motives to be accurate) factors, self-beliefs can lead to different responses. When people attend to their own thinking, their default response matches the subjective thinking experiences that have been triggered by their self-beliefs. For example, if people believe they are highly susceptible to persuasion and find that an advertisement persuades them easily, they respond in accordance with their belief about their persuasion susceptibility by expressing more favorable attitudes toward the featured products or issues, generating expected effects. Yet people also monitor and control their mental processes (Dunlosky and Metcalfe 2009) and assess the appropriateness of their thinking (Petty et al. 2007). To the degree that they do

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not perceive their own metacognitive thinking as appropriate, perhaps because it biases their judgments, they may try to correct the influence of such thinking (Wegener and Petty 1997).

In this sense, people may perceive differing manipulative intents of various advertising messages. To the degree they believe an advertising message has high/low manipulative intent, they should find it unacceptable/acceptable to be persuaded by that message. As long as they think that a message is low in manipulative intent and that being persuaded is acceptable, they will not engage in correction and should express attitudes in the expected directions, or the *expected effects*. In contrast, if a message is high in manipulative intent, and being persuaded by a message appears unacceptable, they try to reduce the influence that their own beliefs in their susceptibility to persuasion exerts on their attitudes toward the advocated issue. The messages then have *no effects*. Finally, people who engage in motivated processing (e.g., to be accurate) tend to be sensitive to the validity of subjective influences (Petty, Wegener, and White 1998), so they may overcorrect. Especially if they find a message high in manipulative intent, people with a motive to be accurate should shift their attitudes away from the expected direction and generate *opposing effects*.

In theorizing about and testing these effects, this article contributes to extant advertising literature in several important ways. First, it provides the first description of a three-step process by which self-beliefs about susceptibility to persuasion affect judgments by triggering different subjective experiences of the ease of being persuaded. This model is highly pertinent to advertising, because consumers' self-beliefs about their own susceptibility to persuasion may be especially accessible when they are viewing advertising, which is inherently persuasive in nature. Second, this study integrates insights from three research streams (metacognition, persuasion knowledge, and cognitive correction) to demonstrate that self-belief-triggered subjective experiences can generate three possible effects: belief consistent (or expected), suppression (no effects), or overcorrection (opposite effects). Third, the proposed process model (Figure 1)—detailing how an advertising message's manipulative intent and people's motivation to make accurate judgments determine the effects of self-beliefs on attitudes toward the advertised target—can serve as a foundation for further research that seeks to explore other metacognitive processes. Fourth, this research identifies several demographic characteristics that are associated with such self-beliefs, offering notable implications for advertising practitioners who seek to design messages to target consumers with varying levels of persuasion susceptibility.

METACOGNITION

Social psychologists distinguish primary from secondary cognition. Primary cognition refers to evaluations of and thoughts about social and physical objects, whereas secondary

cognition involves reflections on the primary cognition (e.g., Briñol and DeMarree 2012). Secondary cognition thus involves thinking about thinking, or metacognition. According to Jost, Kruglanski, and Nelson (1998), social metacognition includes “(a) beliefs about one's own mental states and processes as well as beliefs about those of other people, (b) momentary sensations as well as enduring folk theories, and (c) descriptive beliefs about how the mind works and normative beliefs about how it ought to work” (p. 137). These three metacognitive domains and their interactions can explain how metacognition affects judgments, as well as advertising effects.

First, people have enduring beliefs about their own mental states and abilities, which serve as cues for their judgments (Bandura 1991; Briñol, Rucker, et al. 2004; Ferrari 1996) or enable them to interpret their momentary experiences (Jost, Kruglanski, and Nelson 1998). In a task experiment, Ehrlinger and Dunning (2003) told participants that the task pertained to an ability they believed they had, or one they believed they did not have, and found that the participants evaluated their own performance better in the former case, even though they all worked on the same task. The current study examines susceptibility to persuasion as an important type of self-belief that might function as a cue when people respond to advertising messages and evaluate advertised products or advocated issues.

Second, metacognition pertains to momentary sensations, such as fleeting feelings or subjective experiences, which can be interpreted readily according to naive theories. Subjective experiences consist of three categories (cognitive, affective, and bodily; Bless and Forgas 2000), though cognitive subjective experiences, including feelings of familiarity or knowing, ease of retrieval, and fluent information processing, are prominent. Feelings about the ease of being persuaded, as investigated in the present research, constitute one type of cognitive subjective experience. People hold lay beliefs or naive theories about how human minds work (Wegener and Petty 1995). Such naive theories interact with fleeting subjective experiences. Therefore, when subjective feelings or experiences arise (e.g., familiarity, certainty, knowing, processing fluency; Clore and Parrott 1994; Smith 1994; Smith 2000; Winkielman et al. 2003), people apply naive theories (e.g., “This is familiar, so it must be famous”) to interpret their subjective experiences and develop their judgments.

Third, people think about their thought process and apply their beliefs about how the mind works to interpret it. For example, when people consider their confidence in message-triggered thoughts, they experience different degrees of confidence in their thinking, then develop inferences that match their interpretations of those experiences (Briñol, Petty, and Tormala 2004). Normative beliefs about how the mind works also help people monitor their own thought processes, prompting them to make corrections if necessary (Wegener and Petty 1997; Wegener et al. 2012).

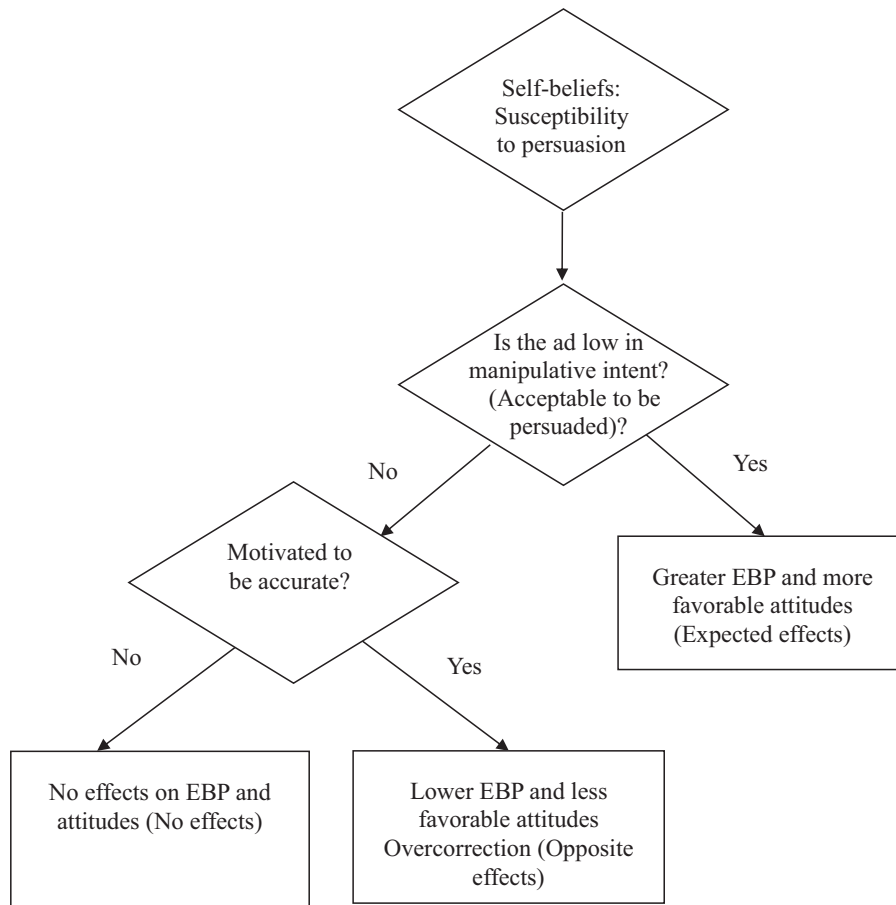


FIG. 1. Three-step, belief-triggered, metacognition model of the influence of self-beliefs. Note: EBP stands for “ease of being persuaded.”

Metacognition thus should contribute meaningfully to persuasion research (Tormala and Petty 2004)—including providing insights into how it affects responses to advertising messages.

METACOGNITION AND PERSUASION

As Winkielman et al. (2003) argue, when people form evaluative judgments, they rely on various processes and draw on a wide range of information. First, they might develop judgments based on declarative information (e.g., stimuli content) or experiential information (e.g., emotion triggered by the stimulus), which are both content based. Second, they might use experiential information that does not derive from stimulus content, such as subjective fluency experiences in processing (Schwarz 1998, 2004) or thinking about reasoning or feelings in the process (Dunning 2012; Huntsinger and Clore 2012). In parallel, in contexts in which people process advertising messages, in addition to content-based inputs, two types of metacognitive input likely influence their judgments and thus the effects of the persuasive messages: subjective experiences

with processing the advertising message and thinking about their thought process (i.e., being persuaded).

Subjective Experiences in Processing Persuasive Information

Of the different subjective experiences, processing fluency is the most salient for the processing of persuasive messages. Processing fluency, or “the ease or difficulty with which new, external information can be processed” (Schwarz 2004, p. 338), is informative and affects judgments, because people have naive theories about what thinking experiences indicate (Aarts and Dijksterhuis 1999; Schwarz 1998, 2004). That is, they first experience ease or difficulty in processing a persuasive message, then apply naive theories to explain why they experienced it and formulate attitudes toward the featured target accordingly.

Depending on which theories they apply, processing fluency could result in different inferences, such as truth, confidence, likelihood, intelligence, fame, or favorable attitudes (Alter and Oppenheimer 2009). In an advertising context, processing fluency may result in more favorable attitudes toward the advertised products. For example, in narrative

advertising studies, participants who experience greater fluency in comprehending the narrative express more favorable attitudes toward the advertised product (Chang 2009, 2013). Exposures to an advertising storyboard for ketchup that depicts a prototypical setting (fast-food restaurant) rather than a non-prototypical one (e.g., supermarkets) also generate higher conceptual fluency, leading to more favorable subsequent ratings of the featured product (Lee and Labroo 2004).

Unfortunately, other subjective experiences (e.g., ease of being persuaded) have not been well addressed in the advertising literature. The subjective experiences of the difficulty or ease of being persuaded can be metacognitive responses, though; subjective experiences of the ease of being persuaded may indicate that the communicated issue deserves support (e.g., “This ad persuades me easily, so I should have favorable attitudes toward the advertised product”).

Thinking about Being Persuaded

People’s thinking about their thought processes with regard to persuasive messages, or thinking about being persuaded, has drawn relatively little attention, though some research indicates that people think about being persuaded and apply their beliefs about how persuasion works to interpret the process. Friestad and Wright (1994, p. 3) argue that people acquire persuasion knowledge, which enables them to “recognize, analyze, interpret, evaluate, and remember persuasion attempts and to select and execute coping tactics believed to be effective and appropriate”; in a subsequent study, Friestad and Wright (1995) find that people also recognize which persuasive strategies are most effective in influencing them.

During persuasion, people’s awareness of the processes or tactics might help them interpret their thinking about their thinking or about being persuaded. In Tormala and Petty’s (2004) study, when people resist strong as opposed to weak arguments, they become more certain of their initial attitudes, likely because reflecting on their resistance triggers such effects. Similarly, Briñol, Rucker, et al. (2004) find that people’s beliefs about their own resistance to persuasion influence their attitudes toward the advocated issues: People think about their resistance to persuasion and develop attitudes toward the featured target in accordance with these beliefs. However, no direct empirical evidence has confirmed whether self-beliefs about resistance to persuasion actually alter people’s thinking about being persuaded. The current study seeks to test this possibility.

SUSCEPTIBILITY TO PERSUASION AS A SELF-BELIEF

Every day, people are bombarded with all sorts of persuasive messages. Through their daily experiences or in comparisons with pertinent others, they develop different self-beliefs about the degree of their resistance or susceptibility to these ubiquitous persuasion attempts (Briñol, Rucker, et al. 2004).

As noted previously, self-beliefs—such as those about their degree of susceptibility to persuasion—can affect secondary cognition (Jost, Kruglanski, and Nelson 1998) or influence persuasion (Briñol, Rucker, et al. 2004). Even if personality-related self-beliefs are not based in reality, they can affect responses to persuasion. In two of Briñol, Rucker, et al.’s (2004) studies, participants’ belief that it was difficult for them to resist persuasion led them to exhibit greater attitude changes. Then in their third study, these authors used Albarracín and Wyer’s (2000) false feedback approach to manipulate participants’ beliefs about their resistance to persuasion. When people were led to believe that their persuasion susceptibility was high, they generated more attitude change. Thus, self-beliefs about resistance or susceptibility to persuasion, rather than personality per se, influence persuasion effects.

The process explored in this stream of research involves two steps: People hold different self-beliefs, then make judgments on the basis of these self-beliefs. Research into subjective experiences in processing persuasive messages suggests another two-step process, which begins when people experience subjective ease or difficulty, then adopt a naive theory to interpret their experiences. The present study integrates both these streams of research to propose a three-step process: First, people have different self-beliefs about susceptibility to persuasion. Second, those beliefs (e.g., “I am an easy-to-persuade person”) trigger different subjective experiences of the ease of being persuaded (EBP) (e.g., “I find myself being persuaded by the advertisement easily”). Third, subjective thinking experiences with EBP further affect their judgments based on naive theories (e.g., “I find this advertisement persuades me easily and thus I should like the product”). The first hypothesis therefore pertains to the influence of self-beliefs on judgments and the mediating role of subjective EBP:

H1a: People who believe themselves to be more susceptible to persuasion generate more favorable attitudes toward an advocated target.

H1b: Subjective EBP mediates the relationship between self-beliefs and attitudes toward an advocated target.

FACTORS THAT MODERATE THE INFLUENCE OF METACOGNITION

In addition to thinking about thinking, people assess the contents of their thoughts (Petty et al. 2007) because they have normative beliefs about “how one ought to think or what one ought to think about” (Jost, Kruglanski, and Nelson 1998, p. 147). People assess whether their thought content is appropriate, fair, or desirable, and, as Petty et al. (2007) note, the valence of the thought assessment does not necessarily correspond with the valence of the thought content. For example, some people may generate positive thoughts about a product endorsed by celebrities, but their beliefs about marketing practices (i.e., endorsers being

paid to express positive opinions) may lead them to evaluate such positive thoughts as undesirable. In other words, positive thoughts about a product do not necessarily lead to greater persuasion, after accounting for people's thoughts about persuasion. Jost, Kruglanski, and Nelson (1998) also indicate that people hold normative beliefs about what sorts of responses are appropriate in different circumstances and use their metacognition as judgment inputs only if it is appropriate to do so.

When a thought is assessed as inappropriate, in the sense that it can bias subsequent judgments, the thinker likely tries to suppress or modify it or its influence on subsequent judgments, leading to correction (Petty, Wegener, and White 1998; Petty et al. 2007; Wegener and Petty 1995). Corrections triggered by thought assessments appear to stem from naive theories or lay perceptions of bias (Wegener, Dunn, and Tokusato 2001), such that people hold several theories regarding how certain factors affect them. Correction occurs if they identify a factor as biasing and are motivated to eliminate its influence. Those who strongly believe that a factor biases their responses engage in a greater degree of correction (Wegener and Petty 1995). Yet these corrections do not always increase accuracy, because people may overcorrect and "adjust judgments of the target farther than the biasing agent or agents had influenced assessments without the correction—leading to a bias in judgment opposite to the uncorrected bias" (Wegener and Petty 1997, p. 143). For example, when people believe that a positive/negative context renders a target more negative/positive and are instructed to eliminate its possible influence, they express more positive/negative attitudes toward the target than when they rate it without a context (Wegener and Petty 1997).

The flexible correction model attempts to explain such theory-based corrections when people assess their own thoughts. The model that Petty and Wegener (1993) propose, which pertains to corrections of metacognition in general, postulates that when people find no bias their attitude toward the target reflects their original responses, but if they believe a bias is operating, they make corrections (Wegener, Dunn, and Tokusato 2001; see also Wegener, Petty, and Dunn 1998). In this model, situational and individual factors alter the degree to which people are motivated and able to engage in corrections (Petty et al. 2007; Wegener, Dunn, and Tokusato 2001). A general principle also underlying this stream of research is that correction requires motivation and ability. Correction is more likely when people are capable, such as when the bias is salient and can be easily detected (Stapel, Martin, and Schwarz 1998). It also is more likely when people are motivated, such as when they receive explicit instructions to eliminate bias (Petty and Wegener 1993; Petty, Wegener, and White 1998).

However, no empirical evidence of corrections for self-beliefs has appeared in prior literature. Rather, in an extension of prior research, this article proposes that people attend to their thought processes about the potential influence of their susceptibility to persuasion. In so doing, they then assess whether it is necessary to correct for that potential influence. In the context of advertising persuasion, various message factors may affect the degree to which people perceive that "being persuaded simply because they are susceptible" is unacceptable. Specifically, if people have developed perceptions of different types of advertising messages, they may regard being persuaded by certain messages as less acceptable or desirable than being persuaded by others. In particular, people may find it less acceptable to be persuaded by advertisements with high manipulative intent.

Message Characteristics: Are Messages High in Manipulative Intent?

Advertising messages vary in the perceived manipulative intent they evoke, such that receivers perceive that the persuader is attempting to manipulate, or unfairly persuade, them to varying levels (Campbell 1995). Such perceptions constitute inferences of manipulative intent (MI), defined as "inferences that the advertiser is attempting to persuade by inappropriate, unfair, or manipulative means" (Campbell 1995, p. 228). People generally understand persuasion and the tactics related to it (Friestad and Wright 1994), so they develop perceptions of the MI of different tactics (Campbell 1995). Certain message cues, tactics, or appeals are associated with greater perceived MI than others (Boudewyns, Turner, and Paquin 2013; Campbell 1995; Hibbert et al. 2007; Kirmani and Zhu 2007). As prior research shows, perceptions of high MI in a message lead to boomerang effects or persuasion resistance (Campbell 1995; Reinhart et al. 2007; Sagarin et al. 2002) because they affect appropriateness judgments during the persuasion process. For example, people with high susceptibility to persuasion may find "being persuaded simply because they are susceptible" less desirable or acceptable if the advertising messages provoke high, versus low, perceptions of MI. They then become more likely to correct or remove the possible influence of their self-beliefs.

If people seek to eliminate the possible influence of a biasing factor (e.g., self-beliefs about their susceptibility to persuasion) when an advertising message is high in MI—because such a message makes it unacceptable to be persuaded—the proposed mediation process that moves from self-beliefs to target attitudes, through the influence of the subjective thinking experience of the ease of being persuaded, should not hold in a high MI setting. In contrast, when a message is low in MI, and being persuaded seems more acceptable, people are not as motivated to make corrections or suppress EBP, so the mediation process should emerge. Formally:

H2a: Inferences about an advertising message's MI moderate the influences of self-beliefs on target attitudes. If a message is low in MI, people who believe they have high susceptibility to persuasion generate more favorable target attitudes than those who believe they have low susceptibility to persuasion. If a message is high in MI, people with high and low susceptibility to persuasion do not generate different target attitudes.

H2b: If an advertising message is low in MI, subjective experiences of EBP mediate the relationship between self-beliefs and target attitudes.

Situation Factors: When People Are Motivated to Be Accurate

People may be motivated to guard against biases, such as when they seek to make accurate assessments, but such attempts may result in overcorrection. Prior research suggests that when people engage in effortful processing, they overcorrect for the influence of biases and generate effects that are opposite the expected directions (Schwarz and Bless 1992; Wegener and Petty 1997). However, motivated processing, rather than the effortful scrutiny of information, accounts for overcorrection. For example, when Petty, Wegener, and White (1998) instructed participants not to be biased by a dislikeable source, those in a high-elaboration condition generated overcorrections and exhibited more favorable attitudes toward the dislikeable source than toward a likable source. If participants in a high-elaboration condition did not receive such instructions, such that they were not strongly motivated to be accurate, source likability did not affect their attitudes. This line of research suggests that being motivated to be accurate may determine whether people simply suppress or else overcorrect for the influence of self-beliefs when they encounter a message high in MI that causes them to believe it is unacceptable to be persuaded.

Specifically, if an advertising message is high in MI, people who are motivated to be accurate exert greater effort to eliminate the biasing influence of their self-beliefs and thus generate overcorrections that lead to opposite effects. For the same message, people who are not motivated to be accurate might seek to remove the biasing influences of their self-beliefs. But these unmotivated people attend less to their own thinking and likely only suppress the possible bias without overcorrecting for it. In contrast, because being vulnerable to benign messages (i.e., low-MI messages) is not a concern, people do not seek to remove the influence of metacognition, regardless of their motives; they are not motivated to remove a bias that is legitimate (Fleming, Wegener, and Petty 1999; Wegener and Petty 1997). Therefore:

H3: Motivation to be accurate moderates the interaction effect of self-beliefs about susceptibility to persuasion and message type on target attitudes. If an advertising message is high in MI, motivated people who believe that they are susceptible to persuasion generate more negative target attitudes than those who believe they are not

susceptible. For unmotivated people, self-beliefs about their susceptibility to persuasion do not affect target attitudes. If an advertising message is low in MI, self-beliefs affect attitudes.

OVERVIEW OF STUDIES

Five studies test the hypotheses that constitute the proposed moderated mediation model. Studies 1, 2A, and 2B measure existing self-beliefs to test hypotheses 1 and 2; Studies 3A and 3B manipulate self-beliefs to test hypotheses 1 through 3. Different sources might contribute to perceptions of an advertising message's MI, so the different studies rely on unique sources: the context (Study 2A), brand credibility (Study 2B), advertised targets or topics (Study 3A), and advertising types (Study 3B). All ads can be found in the online appendix, available on the publisher's website.

STUDY 1

Design, Stimuli, and Procedures

To test hypothesis 1 and demonstrate that EBP is a unique construct, distinct from ad persuasiveness, Study 1 manipulates one between-subject factor (presence versus absence of a distraction task after measuring EBP but before measuring target attitudes). Asking participants to rate their target attitudes right after they provide their EBP might create demand characteristics and an artificial correlation, so including this factor provides a test of this potential influence. The 167 participants (50.6% men) were recruited from a university in East Asia and paid for their participation. When they signed up for the study, they rated their own susceptibility to persuasion, along with some filler items. By measuring their self-beliefs at this stage, the study design avoided asking such questions right before exposing the participants to the stimuli, which could have created demand characteristics. At this stage, the participants also indicated a specific time slot they were able to attend a laboratory experiment that was scheduled for about a week later.

When they arrived at the laboratory on the specified date, the participants learned that the research sought to explore how people read magazine articles. They were asked to read a magazine segment, composed of one filler article about the importance of forests and an advertisement promoting organic food by an organic food association. The advertisement highlighted the benefits of eating organic food, which should prompt relatively low MI perceptions. To ensure the study was believable, after reading the filler article, participants rated filler scales. Specifically, in the no-distraction condition, after reading the advertisement, they rated their subjective experience of EBP while reading, their attitudes toward organic food, and the MI of the advertisement. In the distraction task condition, participants learned that there was a second session to the study,

designed to test their literacy. That is, after reading the magazine segment and rating their EBP, participants were told that they had finished the first session and would continue to the second session, in which they would read a magazine article and circle all typographic errors. Then they were informed that the moderator had forgotten to ask them to rate some items for the advertisement they read in the first session, so they provided their attitudes toward the product, the MI of the advertisement, and whether they found it acceptable to be persuaded by the advertisement.

Measures

The measures in this study all relied on 7-point scales. With regard to their self-beliefs about their susceptibility to persuasion, participants rated themselves on Briñol, Rucker, et al.'s (2004) Resistance to Persuasion Scale, which includes, for example, "It is hard for me to change my ideas" and "I usually do not change what I think after a discussion" (Cronbach's $\alpha = .86$). Because the focus in the current study is on susceptibility to persuasion, rather than resistance, the responses were rotated and averaged so that higher scores indicated higher susceptibility. The measure of manipulative intent came from Campbell (1995), with six items (e.g., "The advertiser tried to manipulate the audience in ways that I don't like") (Cronbach's $\alpha = .84$). They also rated whether they found it acceptable to be persuaded by the advertisement, using two items: "It is acceptable to be persuaded by the ad" and "I find it okay for me to be persuaded by the ad" (Pearson $r = .87$, $p < .01$).

Participants next rated their attitudes toward organic food on Crites, Fabrigar, and Petty's (1994) issue attitude scale: "I like [XX]," "I feel positive toward [XX]," "[XX] is desirable," and "[XX] is good" (Cronbach's $\alpha = .93$). They rated their subjective experience of being easily persuaded using a scale that began with the stem: "Please focus on how you feel when you read the ad, and to what degree do you think that the following experiences describe how you felt." Then seven items indicated: "While reading the ad, I experienced difficulty in resisting/counterarguing the message," "I found myself being easily influenced by the message," "I found the ad persuaded me easily," and "I am feeling vulnerable/susceptible/weak in resistance to its influence" (Cronbach's $\alpha = .95$). Finally, the measure of ad persuasiveness included the following items: "The message was persuasive/effective/compelling/convincing" (Cronbach's $\alpha = .91$). These measures have been identified by Dillard, Weber, and Vail (2007) as the most common items for measuring the perceived effectiveness of persuasive messages.

Results and Findings

An initial test confirmed the assumption that participants found the experimental advertisement low in MI and believed

it was acceptable to be persuaded by it. The averaged ratings for MI were 3.18 ($SD = .91$), significantly lower than the midpoint of the scale (4), $t(175) = 12.80$, $p < .01$. Participants also found it acceptable to be persuaded by the advertisement ($M = 4.89$, $SD = .93$) at a level significantly higher than the midpoint of the scale (4), $t(175) = 12.59$, $p < .01$. The measures of MI and the acceptability of being persuaded by the advertisement were significantly and negatively correlated (Pearson $r = -.64$, $p < .01$). The exploratory factor analyses (EFA) show that the items reflecting the three key variables (EBP, ad persuasiveness, and brand attitudes) converge into three distinct factors. In the test of the measurement model, confirmatory factor analyses (CFA) establish acceptable model fit (e.g., confirmatory fit index [CFI] = .95).

As predicted in hypothesis 1a, in a regression analysis with all the predictors mean centered, self-belief emerges as a significant predictor of target attitudes, $\beta = .26$, $t(175) = 3.60$, $p < .01$, and explains a significant proportion of variance in those attitudes, $R^2 = .07$, $F(1, 175) = 12.93$, $p < .01$. To compare the betas of the self-belief scores in the two conditions, the distraction conditions were coded as either 1 (present) or 0 (absent). Then target attitudes were regressed on the condition (presence/absence of distraction task), EBP, and their interaction term. The interaction is not significant, $\beta = .14$, $t(175) = 1.33$, $p = .19$, indicating that the betas for self-belief in the distraction present versus absent conditions do not differ significantly. This finding signals the low possibility that the reported effects are caused by demand characteristics, as might be triggered by asking participants to rate the two scales in close proximity.

The test of the simple mediation of the indirect effects of the independent variable (self-beliefs) on the dependent variable (target attitudes) through changes in the mediator (subjective EBP) relied on Hayes's (2013) bootstrapping approach (model 4; resamples = 5,000). The results confirm the mediation model (95% confidence interval [CI]: .08, .27), in support of hypothesis 1b. Another analysis (model 7) reveals a similar pattern of findings, regardless of whether the distraction task appears (95% CI: .05, .29) or does not (95% CI: .06, .32) between the measures of EBP and target attitudes.

Discussion

These findings confirm that self-beliefs trigger subjective EBP, which is significantly associated with attitudes toward the featured target, and generate the expected effects. The proposed mediating process emerges, regardless of whether the measure of brand attitudes immediately follows the EBP measure or comes after a distraction task. Therefore, the significant relation is not caused by measurement proximity. In addition, both the EFA and CFA confirm that EBP, ad persuasiveness, and target attitudes represent three distinct constructs.

STUDY 2A

Design, Stimuli, and Procedures

To provide a test of hypothesis 2, this experiment manipulates one between-subject factor (articles suggesting advertising messages are usually high versus low in MI). Participants also rated their beliefs about their susceptibility to persuasion when they signed up for the study, similar to the procedures in Study 1. Participants, 80 men and 80 women, were recruited from a university in East Asia and assigned randomly to the two manipulated conditions. Participants were instructed to read a magazine segment with two articles and a target advertisement. The first article primed readers' beliefs about whether advertising intends to manipulate consumers. In the low-MI condition ($N = 80$), the article emphasized the positive functions of advertising, citing its purpose to inform consumers and help them make more informed decisions and noting that consumers would be lost without such information. In the high-MI condition ($N = 80$), the article criticized advertising, suggesting it was often misleading and that its primary purpose was to manipulate consumers to purchase something. The second article was the filler article used in Study 1.

The persuasive stimulus was an advertisement for a sponsorship, toward which people likely feel ambivalent. That is, sponsored causes benefit society and thus may be perceived positively, but consumers also likely recognize the self-interests that might prompt sponsorships (i.e., to enhance favorable attitudes toward the brand). Therefore, depending on the priming, the same advertisement could be interpreted differently. In this study, the advertisement indicated that a (fictional) suntan lotion brand, Pure, had sponsored a beach-cleaning activity and invited consumers to participate. After reading it, participants rated their attitudes toward the sponsoring brand, their subjective experience of EBP, and the MI of the advertisement.

Measures

The measures in this study relied on 7-point scales. To ensure that the articles in the two conditions led people to perceive the ad as low/high in MI, participants completed the MI scale from Study 1 (Cronbach's $\alpha = .72$). Because participants might vary in their interest in the product category (suntan lotion) or sponsored activity (beach cleaning), their existing concerns about the product category and activity also were analyzed as covariates, each tapped by one item: "I care about products like suntan lotion/activities like beach cleaning."

Participants rated their attitudes toward the brand using three semantic differential items from Miniard et al. (1991) (*Favorable/Unfavorable*, *Like very much/Dislike very much*, *Positive/Negative*) (Cronbach's $\alpha = .95$). Participants also rated their subjective experience of EBP using the first four items in the scale reported in Study 1 (Cronbach's $\alpha = .87$).

Results and Findings

As a manipulation check, an analysis of variance (ANOVA) indicated that the same advertising messages were perceived as higher in MI in the high-MI article condition ($M = 4.26$, $SD = 1.04$) than in the low-MI article condition ($M = 3.84$, $SD = .92$), $F(1, 159) = 7.31$, $p < .01$, $\eta^2 = .04$. For this study, the high- and low-MI messages differ only in a relative sense; they refer to higher- and lower-MI messages in actuality. However, for succinctness, this article uses the terms high- and low-MI messages.

The test of hypothesis 2a regressed brand attitudes on the covariates (step 1) and on the three predictors (step 2): self-beliefs, primed conditions (low MI = 1, high MI = -1), and their interaction. All the predictors were mean centered. The results indicate that the model is significant, $R^2 = .15$, $F(5, 154) = 5.39$, $p < .01$, and the interaction offers a significant predictor of brand attitudes, $\beta = .17$, $t(159) = 2.33$, $p = .02$, in support of hypothesis 2a (see Table 1). In the low-MI condition, the influence of self-beliefs on brand attitudes is significant, $\beta = .28$, $t(78) = 2.55$, $p = .01$, whereas in the high-MI condition, it is not, $\beta = -.04$, $t(78) = -.34$, $p = .74$.

The test of the moderated mediation proposed in hypothesis 2b relied on Hayes's (2013) bootstrapping methodology (model 7). Bootstrapping (resamples = 5,000) shows that message type moderates the indirect effect, such that the effect is significant among those assigned to the low-MI condition (95% CI: .01, .38) but not among those in the high-MI condition (95% CI: $-.23$, .13), in support of hypothesis 2b.

TABLE 1
Hierarchical Multiple Regression Analyses Predicting Perceived Influence on Subjective EBP and Target Attitudes, Studies 2A and 2B

Predictor	Attitudes toward the Target	
	ΔR^2	β
Study 2A ($N = 160$)		
Step 1	.10**	
Concern about suntan lotion		.31**
Concern about beach cleaning		.07
Step 2	.05*	
Self-beliefs (S)		.10
MI (M)		.12
S \times M		.17*
Total R^2	.15**	
Study 2B ($N = 195$)		
Self-beliefs (S)		.27**
MI (M)		.20**
S \times M		.13*
Total R^2	.13**	

Discussion

Study 2A employed an advertisement that leveraged the brand's sponsorship, which was interpreted as high or low in MI as a function of the contextual editorial content. As expected, when they perceived the message to be high in MI and thus considered it less acceptable for them to be persuaded, the effects of participants' self-beliefs were attenuated. Only when they perceived the message to be low in MI, and thus considered it more acceptable to be persuaded, did their self-beliefs generate the expected effects. However, advertisers have little control over what other information and context consumers encounter when interacting with advertising, so for greater practical relevance Study 2B manipulates the credibility of an actual brand and reveals that advertising messages can be perceived to be high or low in MI due to the brand's own low or high credibility.

STUDY 2B

Design, Stimuli, and Procedures

This experiment manipulated the level of MI of advertising messages by assigning participants to read one of two actual blog articles: one by Jillee suggesting Dawn dishwashing liquid is a credible brand (<http://www.onegoodthingbyjillee.com/uses-for-dawn-dish-soap>) or an article written by a guest contributor named Elisha of My Health Maven, posted on McFarland's HeartySoul, suggesting it is not (<http://thehearty.soul.com/dangerous-dish-soap/>). Jillee's article, titled "28 Ways to Use Dawn Dish Soap That Will Make Your Life Easier," summarizes some clever or ingenious ways consumers could use Dawn dishwashing liquid. Elisha's article, "How to Spot Dangerous Chemicals in Dish Soap and Find Something Better," details chemicals commonly found in dish soap and reveals that 42 varieties of Dawn liquid dish soap were rated as potentially hazardous to people's health or the environment. These articles should influence perceptions of the MI of the advertising messages that describe Dawn's wildlife-saving campaign, in which Dawn donates to wildlife rescue efforts for every bottle bought and registered online. The three advertisements feature identical copy but promote different versions of the product (i.e., original/blue, orange/orange, and apple blossom/green).

Respondents were recruited from Amazon's Mechanical Turk (MTurk) and totaled 210 U.S. participants (53.6% men), with acceptance rates higher than 97%. They were paid US\$1 for their participation. However, only those responses from the 195 participants who completed the survey and passed two attention checks were included in the analyses. A software program, created for this study, assigned participants randomly to the four different conditions.

They were told that the study consisted of three unrelated tasks. The first task involved rating value and lifestyle scales, in which context they completed the susceptibility to

persuasion scale and some filler scales. In the second task, participants were instructed to read a blog article and then rate the article. Finally, they were told to browse an e-magazine segment as if they were browsing it at home. This segment featured the three advertisements for Dawn. After this task, participants rated their attitudes toward Dawn, their subjective experience of EBP, the MI of the advertisements, whether it was acceptable to be persuaded by the advertisements, and brand credibility.

Measures

The measures in this study came from Study 1 and were rated on 5-point scales. For manipulation checks, participants rated the MI of the ads (Cronbach's $\alpha = .86$) and the degree to which they found being persuaded by such a message acceptable (Cronbach's $\alpha = .90$). Participants also indicated their brand attitudes (Cronbach's $\alpha = .84$) and subjective experience of EBP while reading the ad, using the same scale as in Study 1 (Cronbach's $\alpha = .88$). For the credibility of the brand, this study used Erdem and Swait's (2004) five-item scale (e.g., "This brand delivers what it promises"). Finally, they provided demographic information, including gender (female = 1, male = 0), birth year, level of education,¹ and income.¹

Results and Findings

In the manipulation check, the ANOVA indicated that, compared with the credible condition, Dawn earned lower ratings in the less credible condition ($M_{\text{high}} = 4.08$, $SD = .58$, $M_{\text{low}} = 3.51$, $SD = .93$; $F(1, 193) = 23.37$, $p < .01$, $\eta^2 = .12$), its advertising messages were perceived as higher in MI ($M_{\text{high}} = 2.91$, $SD = .73$; $M_{\text{low}} = 3.17$, $SD = .84$; $F(1, 193) = 5.25$, $p = .02$, $\eta^2 = .03$), and participants found it less acceptable to be persuaded by them ($M_{\text{high}} = 3.11$, $SD = .92$; $M_{\text{low}} = 3.40$, $SD = .81$; $F(1, 193) = 5.41$, $p = .02$, $\eta^2 = .03$). The test of hypothesis 2a regressed brand attitudes on the three mean-centered predictors: self-beliefs, primed conditions (low MI = 1, high MI = -1), and their interaction. The model is significant, $R^2 = .13$, $F(2, 192) = 9.23$, $p < .01$, and the interaction offers a significant predictor of brand attitudes, $\beta = .13$, $t(194) = 1.95$, $p = .05$ (Table 1). In the low-MI condition, the influence of self-beliefs on brand attitudes is significant, $\beta = .46$, $t(91) = 4.87$, $p < .01$, whereas in the high-MI condition, it is not, $\beta = .12$, $t(100) = 1.22$, $p = .23$. These results confirm hypothesis 2a.

A moderated mediation analysis (Hayes 2013, model 7, 5,000 bootstraps) of the link between self-beliefs and attitudes, through EBP for high-MI versus low-MI messages, reveals that, consistent with the theorizing, the effect of self-beliefs on attitudes is mediated by EBP for low-MI messages (95% CI: .01, .18) but not for high-MI messages (95% CI: -.01, .10). These results again support hypothesis 2b.

Discussion

Study 2B employed real ads that leveraged Dawn's wildlife saving campaign, which participants perceived as high or low in MI when they had read articles about Dawn not being or being a credible brand. As expected, when they read the low-credibility story, participants perceived the advertising message as higher in MI and considered it less acceptable for them to be persuaded by the campaign, such that the effects of their self-beliefs were attenuated. Only when they read the high-credibility story, perceived the message as low in MI, and considered it more acceptable to be persuaded did their self-beliefs generate the expected effects. Therefore, Study 3 goes on to the next step, namely, to test whether people's motivation to be accurate might moderate the interaction between their self-beliefs and a message's MI level.

STUDY 3A

Design and Stimuli

This experiment featured a three-factor between-subject design. The first between-subject factor was participants' self-beliefs. Beliefs, rather than reality, affect people's responses, so whether self-beliefs are measured or manipulated should exert an influence. Because Studies 1, 2A, and 2B measured existing self-beliefs, Study 3A took a different approach and manipulated self-beliefs through a false feedback approach (Albarracín and Wyer 2000). In laboratory studies, participants first rated the susceptibility to persuasion scale (Cronbach's $\alpha = .85$), as in the previous studies. Then, depending on the condition to which they had been assigned randomly, a message on the computer screen indicated that among those who had taken the survey, their ratings were ranked in the top/bottom 20%, indicating that it was difficult/easy for them to resist persuasion and thus that they were susceptible/not susceptible to persuasion influence.

The second between-subject factor pertained to message type (high versus low in MI). A pretest ($N = 40$) helped identify pro-health public service announcements (PSAs) as low in MI and product advertising as high in MI. In this pretest, participants were asked to think about a typical product advertisement or a typical health advertisement and rate how it made them feel, using an MI scale with altered wording (e.g., "This type of ad tries to manipulate the audience in ways that I don't like"). The respondents regarded the MI of product advertising ($M = 4.10$, $SD = .92$) as higher than that of health advertising ($M = 3.16$, $SD = 1.26$), $t(39) = 4.26$, $p < .01$, and believed that it was less acceptable to be affected by product ($M = 4.29$, $SD = 1.25$) than by health-promoting ($M = 5.34$, $SD = 1.37$) advertising, $t(39) = 3.65$, $p < .01$. Thus, in the low/high-MI condition, participants read and rated their responses to a pro-health PSA/product advertisement. The health-promoting PSA suggested the

importance of a balanced diet; the product advertisement promoted Diamond, a fictitious brand of bottled water, by suggesting it offered good quality.

The third between-subject factor was motivation to be accurate. In the motivated condition, participants had to evaluate whether the advertisement could achieve its purpose (i.e., encourage people to adopt a balanced diet or purchase the advertised product). They were told that their evaluations were important because the sponsor/advertiser would decide whether to use the advertisement according to their evaluations, so they should try to provide the most accurate responses possible. In the unmotivated condition, participants did not receive this instruction; they were told only to view the advertisement as they would if they were flipping through a magazine at home.

Participants and Procedures

A total of 319 participants (49.8% men) were recruited from a university in East Asia and paid for their participation. When they arrived at the laboratory, they were told that the study was composed of two sessions run by two different professors. The first session, conducted on computers, would explore college students' values, lifestyles, and self-perceptions. They rated a variety of scales, including susceptibility to persuasion, and received feedback about how vulnerable they were to persuasion. The second session would examine how people read magazine articles. They were asked to read a magazine segment, composed of one filler article and the target advertisement. After reading the advertisement, they rated their subjective experience of EBP and attitudes toward the advertised target. As manipulation checks, they rated the MI of the advertisement, the degree to which they elaborated on the advertisement to provide accurate judgments, and their vulnerability to media persuasion.

Measures

The measures used in this study were rated on 7-point scales. To check the message type, participants rated the MI of the advertisements (Cronbach's $\alpha = .93$). Regarding the accuracy motives, participants rated two items: "I evaluated the ad in a manner so that I could offer accurate assessment" and "I elaborated on the ad to provide accurate judgment" (Cronbach's $\alpha = .77$). Finally, participants rated their vulnerability to media persuasion in different domains, using 10 items developed for this study (e.g., "Advertising affects my product choice," "Programs about local gourmet restaurants prompt me to visit them," "Discussions about products on blogs affect my product choice," Cronbach's $\alpha = .88$). By measuring vulnerability to media persuasion for the manipulation check, this study avoided asking participants to rate the same scale twice, which might raise their suspicion about

the manipulation. The rationale for using the vulnerability to media persuasion scale was that if people were manipulated to believe that they were vulnerable to persuasion, they should express higher susceptibility to media persuasion too. Participants rated their subjective experience of EBP while reading the advertisement, as in Study 2A (Cronbach's $\alpha = .88$), and their attitudes toward the promoted issues (balanced diet or bottled water) (Cronbach's $\alpha = .91$), using the scale in Study 1.

Results and Findings

As expected, an ANOVA confirmed that message type had a significant effect on perceived MI, $F(1, 316) = 34.08, p < .01, \eta^2 = .09$, such that the product advertisement ($M = 4.39, SD = 1.20$) generated higher ratings than the prohealth PSA ($M = 3.59, SD = 1.13$). An ANOVA also confirmed that those in the motivated condition ($M = 5.46, SD = .89$) rated their accuracy motive higher than those in the unmotivated condition ($M = 5.25, SD = 1.08$), $F(1, 316) = 3.75, p < .05, \eta^2 = .01$. Also as expected, the respondents told that they were susceptible to persuasion ($M = 4.51, SD = 1.01$) rated themselves higher on vulnerability to media persuasion than those who believed they were less susceptible ($M = 4.17, SD = .95$), $F(1, 316) = 9.87, p < .01, \eta^2 = .03$.

The ANOVA that served to test hypothesis 1a revealed that those who believe it is easy for them to be persuaded generate more favorable attitudes ($M = 4.83, SD = 1.21$) than those who hold beliefs that it is difficult for them to be persuaded ($M = 4.47, SD = 1.24$), $F(1, 311) = 6.53, p = .01, \eta^2 = .02$ (see Table 2). The bootstrap results (resamples = 5,000) confirm the mediation model (95% CI: .16, .55), replicating the support for hypothesis 1b.

Consistent with the predictions of hypothesis 2a, the interaction between self-beliefs and message type on attitudes is significant, $F(1, 311) = 11.35, p = .01, \eta^2 = .04$. Simple effect tests reveal that when participants perceive a message as

low in MI, those who believe that it is easy for them to be persuaded ($M = 5.20, SD = 1.02$) generate more favorable attitudes than those who believe that it is difficult ($M = 4.43, SD = 1.17$), $F(1, 155) = 20.03, p = .01, \eta^2 = .11$. In contrast, but as expected, when participants perceive a message as high in MI, their self-beliefs do not affect their attitudes, $F(1, 156) = .30, p = .59, \eta^2 < .01, M_{\text{susceptible}} = 4.38, SD = 1.27; M_{\text{unsusceptible}} = 4.50, SD = 1.30$. The bootstrap analysis (model 7, 5,000 resamples) indicates a conditional indirect effect of self-beliefs on attitudes that is significantly mediated by EBP in the low-MI message conditions (95% CI: .07, .29) but not in the high-MI message conditions (95% CI: -.17, .15), in support of hypothesis 2b.

For the prediction in hypothesis 3—namely, that the motivation to be accurate moderates the interaction effect between self-beliefs and message types on target attitudes—the ANOVA reveals a significant three-way interaction, $F(1, 311) = 3.86, p = .05, \eta^2 = .01$. As predicted, when the message is high in MI, the interaction between motivation to be accurate and message type is significant, $F(1, 156) = 8.56, p = .01, \eta^2 = .05$. Among those with a motive to be accurate, the boomerang effect of self-beliefs is significant, exhibiting overcorrection, $M_{\text{susceptible}} = 3.96, SD = 1.26; M_{\text{unsusceptible}} = 4.65, SD = 1.38; F(1, 78) = 5.43, p = .02, \eta^2 = .07$. Among those without a motive to be accurate, though, the influence of self-beliefs is not significant, suggesting suppressing effects, $M_{\text{susceptible}} = 4.83, SD = 1.14; M_{\text{unsusceptible}} = 4.36, SD = 1.22, F(1, 78) = 3.18, p = .08, \eta^2 = .04$. When a message is low in MI, only the main effect of self-beliefs is significant, $F(1, 155) = 20.03, p = .01, \eta^2 = .11$, and the interaction is not, $F(1, 155) = .12, p = .74, \eta^2 < .01$. These findings support hypothesis 3.

Discussion

Study 3A manipulated self-beliefs and the motivation to be accurate and exposed participants to messages with high or

TABLE 2
Results of ANOVA, Studies 3A and 3B

	Attitudes toward the Target					
	Study 3A			Study 3B		
	<i>F</i>	<i>p</i>	η^2	<i>F</i>	<i>p</i>	η^2
Self-belief (S) (H1a)	6.53	.01	0.02	3.61	.06	0.02
Message MI type (M)	7.61	.01	0.02	6.60	.01	0.03
Motive to be accurate (A)	2.48	.12	0.01	.01	.91	0.01
S × M (H2a)	11.35	.01	0.04	4.56	.03	0.02
S × A	5.82	.02	0.02	2.77	.10	0.01
M × A	.35	.56	0.01	1.84	.18	0.01
S × M × A (H3)	3.86	.05	0.01	5.27	.03	0.03

Note: The effects in bold are expected to be significant in the hypotheses.

low MI; the findings support the proposed model. As expected, when it was not acceptable to be persuaded, because the message was high in MI, people with a motive to be accurate generated overcorrection, showing contrasting effects, whereas those without such a motive to be accurate removed the effects of self-beliefs, revealing no effects. However, the product and health advertising differ in other characteristics, beyond MI, which may confound the findings. To address this issue, Study 3B tests the proposed theoretical framework using different types of advertising messages for the same brand, which evoke high versus low perceived MI. This test has greater implicative value for advertisers, who commonly ponder which promotion strategies to adopt for their campaigns.

STUDY 3B

Design and Stimuli

The experiment featured a three-factor between-subject design. The first between-subject factor was participants' self-beliefs, manipulated as in Study 3A. The second between-subject factor pertained to message type (high versus low in MI). A pretest ($N = 45$) helped identify three cause-related marketing (CRM; wildlife rescue) advertisements as low in MI ($M = 2.73$, $SD = .68$, 5-point scale) and three product advertisements as high in MI ($M = 3.25$, $SD = .92$), all for Dawn dishwashing liquid, $F(1, 43) = 4.69$, $p < .01$, $\eta^2 = .10$. Each set of three advertisements includes identical copy, such that they vary only in the product version (original, orange, apple blossom). The copy for the CRM read, "1 bottle = \$1 to save wildlife. Dawn is chosen to clean animals caught in oil spills because it's tough, yet gentle," whereas the copy for the product advertisements stated, "Last night's cheesy slice on dishes is tough. Dawn is tougher. Cleans 2 x more greasy dishes." Finally, the third between-subject factor was motivation to be accurate, manipulated the same way as in Study 3A.

Participants and Procedures

A total of 215 U.S. participants (53.4% men) with acceptance rates higher than 97% were recruited from MTurk and paid US\$1 for their participation. The software program assigned participants randomly to eight different conditions. Only the responses of the 194 participants who completed the survey and passed the two attention checks were included. The procedures mimicked those for Study 3A, except that participants rated their attitudes toward the advertised target first, then rated their subjective experience of EBP.

Measures

The measures in this study were rated on 5-point scales. The participants rated the MI of the advertisements (Cronbach's $\alpha = .86$) and whether it was acceptable to be

persuaded by them (Cronbach's $\alpha = .89$). With regard to the manipulation of self-beliefs, they rated the vulnerability to media persuasion scale from Study 3A (Cronbach's $\alpha = .88$). For the accuracy motives, participants also completed the scale from Study 3A (Cronbach's $\alpha = .77$). Participants rated their brand attitudes (Cronbach's $\alpha = .90$) and their subjective experience of the ease of being persuaded (Cronbach's $\alpha = .91$) using the scales from Study 1. They also provided demographic information, as in Study 2B.

Results and Findings

As expected, the ANOVA confirmed that message type had a significant effect on perceived MI, $F(1, 192) = 7.38$, $p < .01$, $\eta^2 = .04$, such that the product advertisements ($M = 3.19$, $SD = .90$) generated higher ratings than CRM messages ($M = 2.89$, $SD = .67$). Moreover, it was less acceptable to be persuaded by product ($M = 3.56$, $SD = .87$) than by CRM ($M = 3.81$, $SD = .65$) advertisements, $F(1, 192) = 5.35$, $p = .02$, $\eta^2 = .03$. An ANOVA also confirmed that those in the motivated condition ($M = 3.95$, $SD = .77$) rated their accuracy motive higher than those in the unmotivated condition ($M = 3.58$, $SD = .97$), $F(1, 192) = 8.74$, $p < .01$, $\eta^2 = .04$. Also as expected, respondents who were told that they were susceptible to persuasion ($M = 3.30$, $SD = .82$) rated themselves higher on vulnerability to media persuasion than those who believed they were less susceptible ($M = 3.01$, $SD = .90$), $F(1, 192) = 5.59$, $p = .02$, $\eta^2 = .03$.

The ANOVA that served to test hypothesis 1a revealed that those who believe it is easy for them to be persuaded generate more favorable attitudes ($M = 3.86$, $SD = .71$) than those who believe it is difficult for them to be persuaded ($M = 3.70$, $SD = .69$) (see Table 2). However, the difference only approaches significance, $F(1, 186) = 3.61$, $p = .06$, $\eta^2 = .02$, likely because Study 3B includes two variables that should moderate the influence of self-beliefs on target attitudes. Still, the bootstrapping analysis (model 4, 5,000 resamples) confirms the mediating role of EBP (95% CI: .01, .10) in support of hypothesis 1b.

Consistent with the predictions of hypothesis 2a, the interaction between self-beliefs and message type on attitudes is significant, $F(1, 186) = 4.56$, $p = .03$, $\eta^2 = .02$. Simple effect tests reveal that when participants perceive a message as low in MI, those who believe it is easy for them to be persuaded generate more favorable attitudes ($M = 4.11$, $SD = .71$) than those who believe that it is difficult ($M = 3.72$, $SD = .60$), $F(1, 87) = 8.00$, $p < .01$, $\eta^2 < .01$. In contrast, but as expected, when participants perceive a message as high in MI, their self-beliefs do not affect their attitudes, $F(1, 99) = .03$, $p = .87$, $\eta^2 < .01$, $M_{\text{susceptible}} = 3.66$, $SD = .66$; $M_{\text{unsusceptible}} = 3.68$, $SD = .76$. The bootstrap analysis (model 7, 5,000 resamples) indicates that the conditional indirect effect of self-beliefs on attitudes is significantly mediated by EBP in the low-MI message conditions (95% CI: .01, .17)

but not in the high-MI message conditions (95% CI: $-.04, .08$).

For the test of hypothesis 3, an ANOVA indicates a significant three-way interaction, $F(1, 186) = 5.27, p = .03, \eta^2 = .03$. As predicted, when the message is high in MI, the interaction between motivation to be accurate and message type is significant, $F(1, 99) = 8.06, p < .01, \eta^2 = .07$. Among those with a motive to be accurate, the boomerang effect of self-beliefs is significant, producing overcorrection, $M_{\text{susceptible}} = 3.52, SD = .59; M_{\text{unsusceptible}} = 3.93, SD = .77; F(1, 49) = 4.53, p = .04, \eta^2 = .09$. Among those without a motive to be accurate though, the influence of self-beliefs is not significant, suggesting suppressing effects, $M_{\text{susceptible}} = 4.07, SD = .85; M_{\text{unsusceptible}} = 3.61, SD = .68, F(1, 50) = 3.55, p = .07, \eta^2 = .07$. When a message offers low MI, only the main effect is significant; the interaction is not, $F(1, 87) = .20, p = .66, \eta^2 < .01$. These findings support hypothesis 3.

It also is important for advertisers to consider which demographic characteristics might be most closely associated with greater susceptibility to persuasion. An additional analysis, combining the data from participants who provided their demographic information in Studies 2B and 3B ($N = 361$), regressed susceptibility to persuasion on four demographic factors: gender, age, education, and income, $R^2 = .04, F(1, 356) = 3.25, p < .01$. These results reveal that women, $\beta = .11, t(359) = 2.15, p = .03$, and higher education levels, $\beta = .13, t(359) = 2.37, p = .02$, are significant, positive predictors, but age, $\beta = -.10, t(359) = -1.85, p = .07$, and income, $\beta = -.05, t(359) = -.92, p = .36$, do not produce any significant variance.

Discussion

Study 3B replicated the Study 3A findings by manipulating high/low-MI messages using advertisements that leverage CRM or promote products for the same brand. Because the responses of the MTurk participants do not differ significantly from those of the student samples in terms of quality (Kees et al. 2017) but the demographic composition is more diverse (Buhrmester, Kwang, and Gosling 2011), participants in Studies 2B and 3B provide more insights regarding which demographic characteristics appear most associated with a susceptibility to persuasion. Women and those with more education tend to be more vulnerable to persuasion.

GENERAL DISCUSSION

Findings and Contributions

The findings of this study support the proposed model. People with different self-beliefs about their susceptibility to persuasion indicate different degrees of the subjective

experience of the ease of being persuaded when they process advertising messages, and those experiences determine the persuasion effects. The interaction between self-beliefs and message type has a significant influence on target attitudes. Specifically, when people perceive that an advertisement is low in MI and find it acceptable to be persuaded, those who believe that it is difficult for them to resist persuasion generate the expected effects, revealing attitudes congruent with their self-beliefs. In contrast, when people perceive that an advertisement is high in MI and find it unacceptable to be persuaded, those who believe that it is easy or difficult for them to resist persuasion express similar attitudes, indicating a suppressing effect. The findings remain consistent regardless of whether the participants' self-beliefs are measured (Studies 1, 2A, and 2B) or manipulated (Studies 3A and 3B).

Being motivated to be accurate also determines whether people suppress or overcorrect the influence of self-beliefs when they infer that an advertising message is high in MI and consider it unacceptable to be persuaded. Consistent with the model's predictions, motivated participants engage in overcorrection, generating effects that are opposite the predictions of their self-beliefs. Those without a motive to be accurate engage in corrections by suppressing the influence of their self-beliefs. As a result, the influence of self-beliefs on target attitudes is not significant. In contrast, when people infer a low MI in the advertising message and find it acceptable to be persuaded, the expected effects emerge regardless of their motive to be accurate.

Corrections can be triggered by various factors, including message topics, types, or editorial contexts. Prior research has established that people resist persuasive messages that feature certain content or appeals (Boudewyns, Turner, and Paquin 2013; Campbell 1995; Hibbert et al. 2007). The implicit assumption in this line of research is that people have accumulated sufficient knowledge regarding whether they should resist certain persuasive topics or appeals and constantly monitor message content to decide how they should respond. Similarly, Studies 3A and 3B reveal that people have knowledge that certain advertising topics or appeals tend to be high in MI, and they guard against such influences, to reduce biased effects of their metacognitive thinking. Even the same messages can encourage different degrees of correction in different contexts. Studies 2A and 2B provided different editorial content to prime participants to perceive the same message as high or low in MI, then documented the suppression of meta-beliefs in the former condition but positive effects of meta-beliefs in the latter.

This article also offers empirical evidence of the process by which self-beliefs about susceptibility to persuasion affect target attitudes, through an influence on the subjective experiences of the ease of being persuaded. This extension integrates multiple streams of research, linking self-beliefs to subjective experiences, and it shows that belief-triggered subjective

experiences have a mediating role. The mediation of the indirect effects of self-beliefs on target attitudes through changes in subjective experiences emerge only when a message is low in MI and participants thus find it acceptable to be persuaded, confirming the proposed three-step psychological process.

Implications for Practitioners

Participants with certain demographic characteristics (e.g., women, those with more education) appear more susceptible to persuasion. Advertisers may benefit when targeting these consumer segments, though the current findings also suggest that they should work to reduce the threat of possible boomerang effects. According to Study 2B, advertisers should seek to increase their brand credibility, which reduces the MI of their advertising messages. They also need to select campaign strategies that are perceived as low in MI, such as those referring to CRM. Consumers develop knowledge about whether it is acceptable to be convinced by certain forms of persuasion, as documented in Studies 3A and 3B. Prior research also suggests that some message appeals provoke perceptions of high MI (e.g., guilt appeals, comparative appeals; Chang 2007; Cotte, Coulter, and Moore 2005), so advertisers targeting persuadable consumers should avoid these forms of persuasion.

Further Research Directions

In addition to MI, people encounter advertising messages that differ on other important characteristics, such as associated ideology, verisimilitude, or source credibility. These other characteristics may affect people's acceptance of the influence. For example, with regard to message-associated ideology, Democratic Party supporters would perceive it unacceptable to be influenced by the political advertisements by candidates of the Republican Party, and vice versa. If they realized the difficulty of resisting such persuasive messages, these message recipients may attempt to correct the influence of their self-beliefs. Research should examine these different message characteristics and how they might trigger corrections.

Other types of self-beliefs deserve research attention. For example, people may differ in their perceived product knowledge, which might trigger varying degrees of subjective processing fluency and affect judgments of advertised products. People may differ in their degree of sentimentality too; such beliefs likely affect their subjective experiences of emotion when they view an emotional advertisement and thus their judgments of the advertisement and product.

Prior research suggests that self-concepts are malleable (Markus and Kunda 1986); people act differently in different contexts because different social roles and situational cues affect them. Self-beliefs, as part of self-concepts, can be malleable too. Although the proposed model started with people's beliefs about their susceptibility to persuasion, researchers

should consider whether other antecedents, such as processing goals or situational cues, affect the activation of self-beliefs.

This research notes three possible effects (expected effects, no effects, and opposite effects). Further empirical research could establish which naive theories lead specifically to the different inference processes behind each effect. First, in situations in which belief-triggered subjective experiences generate expected effects, people likely apply related naive theories (e.g., "Because I am experiencing EBP, this advocated issue should gain my support") to interpret their subjective experiences. Second, in situations with suppressed or overcorrected influences of self-beliefs, another naive theory (e.g., "Persuadable persons can be persuaded to a greater degree, and it is important to remove this biasing influence") may play an important role. The typology of persuasion-related naive theories warrants research attention as well.

According to this study, a motive to be accurate triggers overcorrections. Research should explore other situational or personal variables that also might lead to overcorrections. For example, need for cognition affects elaboration on one's own thinking and thus may encourage bias corrections (Petty et al. 2007). Personalities or orientations that enhance self-awareness or self-inferences—such as mindfulness (Hofmann et al. 2005), private self-consciousness (Fenigstein, Scheier, and Buss 1975), or self-monitoring (Snyder 1974)—also may increase attention to thinking. Whether they increase bias (over)corrections remains to be tested.

Limitations

The findings should be interpreted according to their limitations. First, the present research assumes that subjective thinking experiences with the ease of being persuaded affect people's judgments, in accordance with naive theories (e.g., "I find this message persuades me easily, so it is effective, and this issue should have my support"). However, no direct evidence confirms this assumption. Second, the proposed model includes attitudes toward the advertised target but not behavioral intentions. Third, demand characteristics may be triggered by some study procedures. For example, the manipulation of self-beliefs in Studies 3A and 3B may have made those beliefs salient. Fourth, the product and health advertising in Study 3A differ in other characteristics, beyond MI, which may confound the findings.

Conclusions

This article explores the influence of metacognition in advertising contexts. The proposed model, which is strongly situated within prior literature, specifies how self-beliefs can generate three patterns of effects on attitudes toward a target featured in a persuasive message. Findings across five studies provide convergent evidence in support of the proposed model and establish that messages' manipulative intent and consumers' motivation to be accurate are two moderators, with the

subjective experience of the ease of being persuaded as a mediator, in this process.

NOTES

1. The education levels were as follows: no schooling completed D 1; nursery school to 12th grade, no diploma D 2; high school graduate, high school diploma or equivalent D 3; some college, no degree D 4; associate's degree D 5; bachelor's degree D 6; master's degree D 7; doctoral degree D 8.
2. The income levels were as follows: \$0–\$14,999 D 1; \$15,000–\$34,999 D 2; \$35,000–\$49,999 D 3; \$50,000–\$64,999 D 4; \$65,000–\$84,999 D 5; more than \$84,999 D 6.

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SUPPLEMENTAL DATA

Supplemental data for this article can be accessed at www.tandfonline.com/ujoa.

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