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The authors examine how consumers' regulatory focus affects their information search behavior and decision-making process. The results show that uninvolved research participants rely on their regulatory focus as a filter to process information selectively. Participants paid more attention to and based their product evaluation on product information that is relevant to their regulatory concerns, but only when they were not motivated to process information. This regulatory fit effect on evaluation seems to be driven by the perceptual salience of fit versus nonfit information and is more consistent with heuristic than with systematic processing of information.

## The Role of Regulatory Focus in Preference Construction

Recent research on regulatory focus theory suggests that consumers' evaluation of products and brand choice decisions are influenced by their regulatory goal (Higgins 2002). More specifically, their attitude toward a product is more favorable when product benefits *fit* their regulatory goal (Aaker and Lee 2001; Cesario, Grant, and Higgins 2004). For example, Aaker and Lee (2001) find that an advertisement for Welch's grape juice that emphasizes vitamin C, energy, and great taste is more effective than one that emphasizes antioxidants and cardiovascular disease prevention, but only when the advertisement targets individual consumers who are likely to be promotion focused; the reverse is true when the advertisement targets prevention-focused, family-oriented consumers (Lee, Aaker, and Gardner 2000). These findings suggest that companies should emphasize the achievement of potential gains when targeting consumers who are promotion focused but emphasize the avoidance of potential losses when targeting consumers who are prevention focused. However, for companies whose target segment includes both promotion- and prevention-focused consumers, the implication from extant literature is less clear. Should these companies emphasize both potential gains and losses in the same message to appeal to the different consumers, or will a mixed message dilute the persuasiveness of the advertisement? To help answer these questions, this article examines the process by which people with different regulatory foci construct their

preferences when they encounter mixed appeals that contain both promotion- and prevention-focused information.

The regulatory fit effect on persuasion is a robust finding that has been consistently observed across different operationalizations of regulatory focus using different target stimuli (e.g., Cesario, Grant, and Higgins 2004; Lee and Aaker 2004). However, participants in these studies were passive recipients of information who responded to different persuasive messages presented to them. That is, research participants with distinct regulatory foci were asked to evaluate products or make brand choice decisions based on information that addresses either promotion concerns (i.e., information that focuses on the presence or absence of positive outcomes) or prevention concerns (i.e., information that focuses on the presence or absence of negative outcomes; e.g., Aaker and Lee 2001; Lee and Aaker 2004). Thus, an interesting question is, Will people with distinct regulatory focus selectively seek out information that fits their regulatory goal when they are presented with both promotion and prevention information, or will they process both types of information indiscriminantly? That is, given the constructive nature of preferences and beliefs (Payne, Bettman, and Johnson 1992), is the regulatory fit effect on persuasion a passive experience of consumers "feeling right" when the information they are considering is relevant to their regulatory goal, or is the effect the result of active selective attention to information relevant to their regulatory focus? The objective of the current research is to investigate the role of regulatory focus in the consumer's constructive decision process (Payne, Bettman, and Johnson 1992). Our goal is to shed light on the mechanism underlying the regulatory fit effect on persuasion when both fit and nonfit information are present. Specifically, we investigate how consumers' regulatory focus may affect their information search strategies and preference construction.

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### THEORETICAL BACKGROUND

It has been argued that consumer preferences in response to a judgment or choice task are often constructed; that is, preferences do not come readily from a list in memory, nor are they generated by some invariant algorithm (Payne, Bettman, and Johnson 1992). Preferences are inherently constructive because decision tasks are often complex, involving many alternatives, each with many attributes. Furthermore, although people may have full knowledge of the set of alternatives from which to choose, they are less certain about how they may feel about the values of each alternative. Thus, people construct their preferences using different trade-off strategies depending on the specific task at hand (e.g., judgment versus choice), the context (e.g., what information is available?), their decision goal (e.g., accuracy versus minimal efforts), and various individual differences (e.g., expertise). These strategies may vary in terms of the extent of processing (e.g., elaborative versus shallow; Craik and Lockhart 1972), the style of reasoning (e.g., holistic versus analytic; Peng and Nisbett 1999), the decision rule adopted (e.g., compensatory versus noncompensatory; Payne, Bettman, and Johnson 1993), the nature of comparison between options (e.g., alternative versus attribute based; Russo and Doshier 1983), and the style of processing (e.g., consistent versus selective; Payne 1976).

From a motivational perspective, the consensus is that people who are motivated are more likely to allocate cognitive resources to information search activities and to engage in systematic, compensatory decision making (Chaiken 1980; Payne, Bettman, and Johnson 1993; Petty and Cacioppo 1986). However, we propose that the influence of motivation on information processing is not limited to the extent of elaboration in which people engage. Our view is that motivation may also affect the type of information that people search for and rely on to make judgments and decisions. Specifically, we argue that people's regulatory focus (Higgins 1997), which serves as a fundamental driver of attitudes and behaviors, plays an important role in directing people's attention to information that fits their regulatory orientation.

#### *The Regulatory Fit Effects*

According to regulatory focus theory, promotion-focused people strive to realize their ideals and aspirations to address their needs for growth and advancements; thus, they approach their goals with eagerness and are sensitive to gains and nongains. In contrast, prevention-focused people strive to fulfill their duties and obligations to address their needs for safety and security; they approach their goals with vigilance and are sensitive to losses and nonlosses (Higgins 1997). Although any goal may be pursued with an approach or an avoidance strategy, approach strategies that strive toward gains fit better with a promotion focus than do avoidance strategies that guard against nongains. In contrast, avoidance strategies that guard against losses fit better with a prevention focus than do approach strategies that strive toward nonlosses. This is because more eagerness is involved in the pursuit of gains than in the avoidance of nongains, and more vigilance is involved in the avoidance of losses than in the pursuit of nonlosses (Idson, Liberman, and Higgins 2000).

It has been suggested that people feel more positive and are more motivated when they use strategies that fit their

regulatory focus (Idson, Liberman, and Higgins 2000). Studies have shown that participants are more persuaded and more discerning between strong and weak arguments when the message frame fits their regulatory focus (e.g., Aaker and Lee 2001; Lee and Aaker 2004). Participants also perform better on laboratory tasks in fit than in nonfit conditions (e.g., Shah, Higgins, and Friedman 1998). Furthermore, a fit between people's regulatory focus and the strategy they use to achieve their goal has been shown to increase the perceived value of objects (Higgins et al. 2003), enhance the correctness of moral judgments (Camacho, Higgins, and Luger 2003), and garner more support for an after-school program (Cesario, Grant, and Higgins 2004).

Although the effect of regulatory fit on persuasion has been a robust finding, it is not clear whether participants would actively create fit by seeking out and attending to fit versus nonfit information if conditions of regulatory fit were not experimentally induced. In a typical study demonstrating the regulatory fit effect, participants are instructed to adopt either an eagerness or a vigilance strategy, or they are presented with product information that addresses either promotion or prevention concerns. The results would show that participants assign higher values to or develop more positive attitudes toward the target when the strategy they adopt or the information they review fits their regulatory goal. However, in most day-to-day situations, consumers are likely to encounter both promotion- and prevention-focused information. Will consumers actively seek out information or elect to adopt strategies that fit their regulatory goal?

According to the constructive preference view, people's processing capacity is limited, and thus selectivity of information is often necessary (Payne, Bettman, and Johnson 1992). Research on dissonance theory (e.g., Festinger 1957) and information search (e.g., Johnston 1996; Jonas et al. 2001) suggests that people often search for information that confirms their prior attitudes, initial decisions, or commitment to an alternative. Thus, people may be more likely to attend selectively to information that addresses their regulatory concerns when their processing capacity is constrained.

If people do selectively process regulatory fit versus nonfit information in limited cognitive capacity conditions, an interesting question that follows is, Does such selectivity lead to enhanced or diminished persuasion? Previous research has shown that people in regulatory fit conditions are more motivated in their goal pursuit activities (Idson, Liberman, and Higgins 2000). Thus, it is plausible that people who actively search for information that addresses their regulatory concerns will be more motivated to elaborate on the information relevant to regulatory focus and, in turn, be more influenced by the information.

However, it has also been suggested that the regulatory fit effect on persuasion is the result of people feeling right when they use strategies that fit their regulatory focus. In turn, people attribute this feeling-right experience to higher values of objects when they are not aware that their positive feeling comes from regulatory fit. For example, Cesario, Grant, and Higgins (2004, Study 3) first induced regulatory fit (versus nonfit) among their participants and then asked them to evaluate some arguments related to an after-school program. They found that participants in the fit condition judged the arguments to be more persuasive than did par-

ticipants in the nonfit condition. However, when participants were told that “sometimes thinking about using the right means to attain each goal can make people ‘feel right’ about their goal pursuit” and then were asked to indicate how right they felt about their goal pursuit, the regulatory fit effect disappeared. Presumably, participants were confused about the source of their feeling-right experience and attributed it to the merits of the after-school program. They adjusted their response when they became aware of the source of their positive experience to correct for the bias (Higgins et al. 2003; Lee 2004). Thus, it is conceivable that when people play an active role in creating regulatory fit, they may recognize the source of their positive feeling and thus adjust their response downward to correct for the potential bias. If this is the case, the feeling right effect on persuasion may not be observed when people actively filter out nonfit information in evaluating products. Conversely, correcting initial responses is resource demanding. When processing capacity is limited, people may not have sufficient resources to correct for their initial response bias or even to recognize the source of their positive feeling, in which case the regulatory fit effect may still be observed.

Thus, the objective of the current research is twofold: to examine the role of regulatory focus in the constructive decision process and to investigate the robustness of the regulatory fit effect in high- and low-involvement conditions. In particular, our goal is to shed light on the effect of regulatory focus by examining how people in high- versus low-involvement conditions respond to persuasive messages containing both promotion- and prevention-focused information.

Previous findings showing that the regulatory fit effect is driven by participants’ experience of fluent processing (Lee and Aaker 2004) or feeling right (Cesario, Grant, and Higgins 2004; Higgins et al. 2003) suggest that the fit effect is the result of heuristic processing. Our view is that when people are not motivated to process information, they rely on their regulatory focus as a filter to select relevant information for processing, and they pay more attention to information that addresses their regulatory concerns. In particular, promotion-focused people will selectively seek out and elaborate on information that addresses concerns about growth and advancement, whereas prevention-focused people will seek out and elaborate on information that addresses concerns about safety and security. In turn, this selectivity of attention leads to more favorable attitudes in regulatory fit conditions. In contrast, people who are motivated to process information are likely to attend to information more systematically in general, independent of regulatory focus relevance. The implication is that the regulatory fit effect is observed only when people are processing information heuristically but not when they are highly involved in the decision process. We designed two studies to investigate the regulatory fit effect on product evaluation and to seek direct evidence for the selective attention hypothesis in low-involvement conditions.

H<sub>1</sub>: Participants are more likely to search for and elaborate on information that fits their regulatory focus in low-involvement conditions than in high-involvement conditions.

H<sub>2</sub>: Participants are more likely to attend to and be more persuaded by information that fits their regulatory focus in

low-involvement conditions than in high-involvement conditions.

To summarize, this research explores the manner in which people process information that is compatible versus incompatible with their regulatory goal. Specifically, we examine how involvement moderates the regulatory fit effect on brand attitude (Study 1 and 2) and further investigate the mechanism underlying the regulatory fit effect in the consumer’s constructive decision process (Study 2).

### STUDY 1

The objective of Study 1 was to examine the robustness of the regulatory fit effect on persuasion. Previous research shows that a persuasive appeal is more effective when the content of the appeal fits participants’ regulatory focus (e.g., Aaker and Lee 2001; Cesario, Grant, and Higgins 2004). We extend these results to examine whether the regulatory fit effect may be observed when both promotion- and prevention-focused information are available. Our hypothesis is that people will selectively seek out information that fits their regulatory focus when their processing capacity is limited. In turn, this selective attention leads to the regulatory fit effect on persuasion. Thus, we used a 2 (involvement: high versus low) × 2 (regulatory focus: promotion versus prevention) × 2 (feature type: promotion versus prevention) mixed design, in which feature type was a within-participant factor.

In this study, we primed participants with either a promotion or a prevention focus and then presented them with descriptions of two toothpastes (A and B). Toothpaste A has strong promotion but weak prevention product claims, and Toothpaste B has strong prevention but weak promotion product claims. We asked participants to evaluate the two toothpastes and to indicate which of the two they would choose. Extending previous research, our prediction was that participants in the low-involvement conditions would evaluate the toothpastes on the basis of the product claims that fit their regulatory focus. That is, promotion-focused participants would prefer the toothpaste with the strong rather than the weak promotion features, whereas prevention-focused participants would prefer the toothpaste with the strong rather than the weak prevention features. However, participants in the high-involvement condition would rely on both types of product features for product evaluation and brand choice decisions. Thus, we predicted that the regulatory fit effect would be moderated in high-involvement conditions when participants were motivated to process information systematically.

### Method

*Stimuli development.* A total of 52 undergraduate students from the same subject pool as those in the main experiment participated in a pretest. We gave participants the definition of promotion- and prevention-focused product features. We defined promotion-focused features as those designed to bring about benefits that concern positive outcomes. We told participants that these are features that could help people attain accomplishments and advancement when they use the product and that people would feel cheerful when these features are present and disappointed when they are absent. We cited a powerful engine as an example of promotion-focused features of a car because it might

enable people to enjoy the excitement and adventure of driving a fast car. We defined prevention-focused features as those designed to bring about benefits that concern negative outcomes. These are features that could help people avoid potential costs and losses when they use the product, and people would feel relieved when these features are present and tense when they are absent. We cited an antilock brake as an example of prevention-focused features when considering a car because it might reduce the probability of a collision and make people feel safe and secure. We then told participants that the experimenter was interested in their opinions about toothpastes. We presented them with a list of features related to toothpastes and asked them to classify each feature into one of three categories: promotion focused, prevention focused, or neutral (for those features that were neither promotion nor prevention focused).

We selected target features on the basis of the frequency with which each feature was categorized across all participants. We retained only those features that at least 80% of the participants characterized as promotion or prevention focused. Then, we selected three promotion features (breath freshening, teeth whitening, tooth enamel strengthening) and three prevention features (cavity prevention, gingivitis prevention, plaque control) as the target features. We described each feature as either a strong benefit claim (e.g., it freshens your breath with perilla seed extract, grapefruit seed extract, and natural essential oils of orange and mint) or a weak benefit claim (e.g., it freshens your breath). We then developed two descriptions of Toothpastes A and B (for a list of the features, see the Appendix). Toothpaste A had three strong promotion claims and three weak prevention claims, and Toothpaste B had three strong prevention claims and three weak promotion claims.

*Procedure.* We gave 51 undergraduate participants (24 females) the cover story that they were participating in a college student survey, and we randomly assigned them to one of the two regulatory focus conditions. In line with the work of Higgins and colleagues (1994), we asked participants in the promotion-focus condition to write about their hopes and aspirations and those in the prevention-focus condition to write about their duties and responsibilities.

Then, in an ostensibly different task, we told participants that a manufacturer was in the process of developing an advertising campaign for a new brand of toothpaste. We told participants in the high-involvement condition that the toothpaste was targeted exclusively to college students and would soon be launched in the local market; furthermore, we told them that the study was conducted among a few selected groups to receive important feedback on the toothpaste before the launch. We told participants in the low-involvement condition that the toothpaste was still in the development stage and that the manufacturer was conducting a survey on a huge sample to receive preliminary feedback.

We then presented participants with the description of one toothpaste and asked them to evaluate the toothpaste on a four-item seven-point scale (1 = “dislike very much, very unfavorable, very unattractive, very bad,” and 7 = “like very much, very favorable, very attractive, very good”). We repeated the same procedure for the second toothpaste. Then, participants made a choice between the two toothpastes. We counterbalanced the order of the two toothpastes across all participants.

After participants chose between the two toothpastes, we presented them with all the strong feature claims and asked them to evaluate each of the features on a seven-point scale (1 = “not at all attractive,” and 7 = “very attractive”). The features were evaluated as generic features of the product category rather than as the features of a particular brand. We also asked participants to indicate how they processed the product information using a four-item seven-point scale (1 = “not at all involved, not at all interested, skimmed it quickly, paid little attention,” and 7 = “very involved, very interested, read it carefully, paid a lot of attention”). Finally, participants responded to some miscellaneous questions.

## Results

*Manipulation check.* We averaged the four involvement items to form an involvement index ( $\alpha = .95$ ). The results of a 2 (regulatory focus)  $\times$  2 (involvement) analysis of variance (ANOVA) showed that participants in the high-involvement condition paid more attention to and were more interested in the product information than were those in the low-involvement condition ( $M = 4.9$  versus  $3.4$ ;  $F(1, 47) = 11.06$ ,  $p < .01$ ), providing evidence that our involvement manipulation was successful.

*Attitude.* We averaged participants' evaluations of the toothpastes on the four items to form a brand attitude index for each of the two toothpastes ( $\alpha_A = .95$  and  $\alpha_B = .96$ ). We hypothesized that promotion-focused participants would evaluate the toothpaste with the strong promotion claims more favorably than the toothpaste with the strong prevention claims, and the reverse would be true for prevention-focused participants. However, this regulatory fit effect would be observed only when participants were not motivated to process the information. We analyzed participants' attitudes toward the toothpastes using a 2 (regulatory focus)  $\times$  2 (involvement)  $\times$  2 (toothpaste) repeated measures ANOVA, in which toothpaste was a within-participant factor. The results showed that participants evaluated the toothpaste with the strong promotion claims more favorably than the toothpaste with the strong prevention claims ( $M = 5.1$  versus  $4.5$ ;  $F(1, 47) = 11.45$ ,  $p < .01$ ). Furthermore, promotion-focused participants evaluated Toothpaste A (with the strong promotion claims;  $M = 5.4$ ) more favorably than Toothpaste B (with the strong prevention claims;  $M = 4.5$ ;  $F(1, 24) = 21.3$ ,  $p < .001$ ); they also evaluated Toothpaste A more favorably than did prevention-focused participants ( $M = 4.7$ ;  $t(47) = 2.45$ ,  $p < .05$ ; see Table 1).

More central to our hypothesis, we observed the predicted three-way interaction among regulatory focus, involvement, and toothpaste ( $F(1, 47) = 12.43$ ,  $p < .01$ ; see Figure 1). Subsequent analyses conducted separately for the two involvement conditions showed a regulatory focus  $\times$  toothpaste interaction in the low-involvement condition ( $F(1, 23) = 12.67$ ,  $p < .01$ ), providing support for our hypothesis that people are more persuaded by product information that fits their regulatory focus. The results of planned contrasts showed that promotion-focused participants evaluated Toothpaste A more favorably than did prevention-focused participants ( $M = 5.7$  versus  $4.6$ ;  $t(23) = 2.37$ ,  $p < .05$ ). The reverse was true for Toothpaste B ( $M = 4.3$  versus  $5.2$ ;  $t(23) = 1.57$ ,  $p > .10$ ). For the high-involvement condition, participants evaluated Toothpaste A more favorably than Toothpaste B ( $M = 5.0$  versus  $4.3$ ;  $F(1, 24) = 17.26$ ,  $p < .001$ ), regardless of their regulatory focus. Consistent with our prediction, we observed the regu-

**Table 1**  
BRAND ATTITUDE AS A FUNCTION OF INVOLVEMENT AND REGULATORY FOCUS

	High Involvement		Low Involvement	
	Promotion Prime	Prevention Prime	Promotion Prime	Prevention Prime
<i>Study 1</i>				
Toothpaste A	5.2 (1.3) n = 13	4.8 (1.0) n = 13	5.7 (1.1) n = 13	4.6 (1.2) n = 12
Toothpaste B	4.7 (1.1) n = 13	3.9 (.8) n = 13	4.3 (1.5) n = 13	5.2 (1.3) n = 12
<i>Study 2</i>				
Toothpaste A	4.6 (1.0) n = 15	5.0 (.9) n = 15	5.4 (.9) n = 14	4.5 (.6) n = 14
Toothpaste B	4.3 (.9) n = 15	4.9 (.9) n = 15	4.8 (1.0) n = 14	5.0 (.8) n = 14

Notes: Toothpaste A has strong promotion claims and weak prevention claims, and Toothpaste B has strong prevention claims and weak promotion claims. Standard deviations are in parentheses.

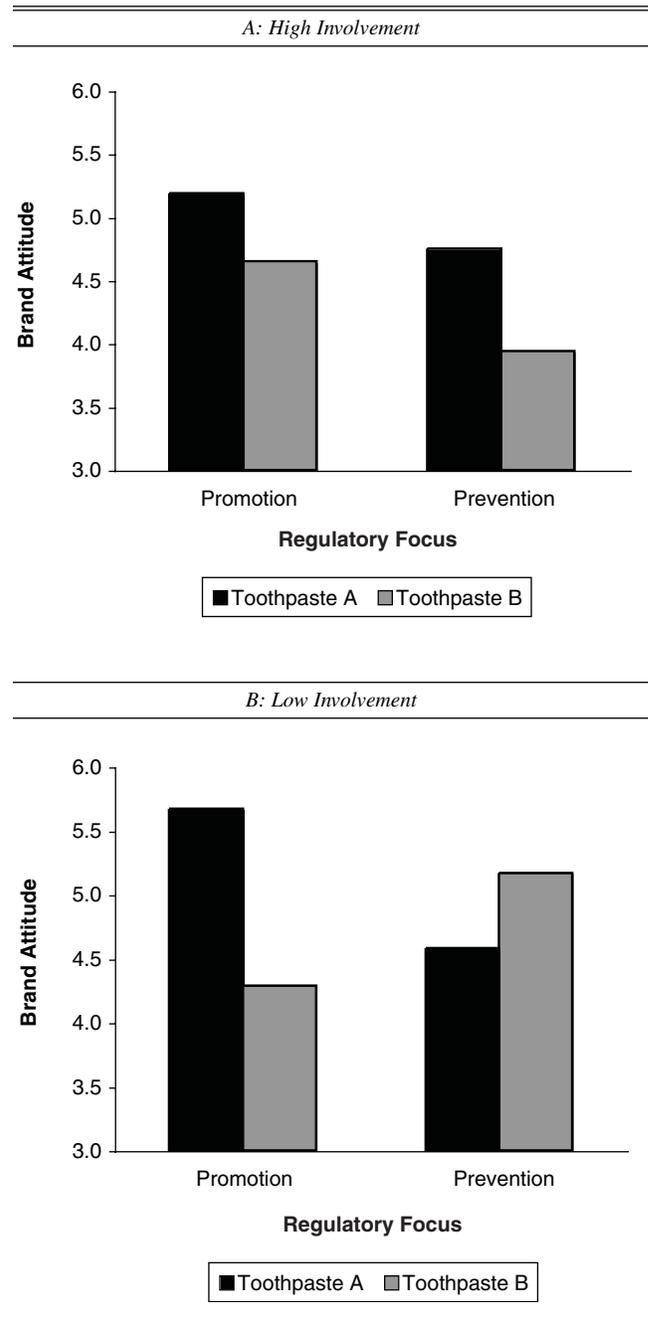
latory fit effect only when participants were not motivated to expend cognitive resources; the effect disappeared when participants were motivated to process information.

**Choice.** We asked participants to indicate which of the two toothpastes they preferred. We coded the choice data as binary (1 = Toothpaste A, 0 = Toothpaste B) and analyzed them using logistic regression. The results showed that in the low-involvement condition, 92.3% of the promotion-focused participants chose Toothpaste A (with strong promotion claims) compared with only 33.2% of the prevention-focused participants ( $b = 3.18$ ,  $\chi^2(1) = 6.93$ ,  $p < .01$ ), who were more likely to choose the toothpaste with the strong prevention claims. However, brand choice did not differ as a function of participants' regulatory focus in the high-involvement condition ( $\chi^2 < 1$ ); more than 84% of the participants chose Toothpaste A.

**Feature attractiveness.** If participants relied more on features that fit their regulatory focus in their evaluation, they should find strong product claims that address their regulatory concerns to be more attractive than those that do not. Thus, we hypothesized that participants would evaluate features that are compatible with their regulatory concerns more favorably than incompatible features in low-involvement conditions but not in high-involvement conditions. We analyzed participants' feature attractiveness ratings using a 2 (regulatory focus)  $\times$  2 (involvement)  $\times$  2 (feature type) repeated measures ANOVA, in which feature type was a within-participant factor. The results showed that promotion-focused participants perceived the product features as more attractive in general than did their prevention-focused counterparts ( $M = 4.9$  versus  $4.3$ ;  $F(1, 47) = 6.63$ ,  $p < .05$ ). In addition, participants evaluated promotion features more favorably than prevention features ( $M = 4.8$  versus  $4.4$ ;  $F(1, 47) = 5.59$ ,  $p < .05$ ).

Central to our hypothesis, the results showed a three-way interaction among regulatory focus, involvement, and feature type ( $F(1, 47) = 10.53$ ,  $p < .01$ ). Subsequent analyses showed the predicted regulatory focus  $\times$  feature type interaction in the low-involvement condition ( $F(1, 23) = 10.45$ ,  $p < .01$ ). Participants primed with a promotion focus con-

**Figure 1**  
STUDY 1: BRAND ATTITUDE AS A FUNCTION OF INVOLVEMENT AND REGULATORY FOCUS



sidered promotion features more attractive than prevention features ( $M = 5.2$  versus  $4.3$ ;  $t(12) = 2.83$ ,  $p < .05$ ), whereas participants primed with a prevention focus considered prevention features more attractive than promotion features ( $M = 4.6$  versus  $4.0$ ;  $t(11) = 1.76$ ,  $p = .10$ ).

In the high-involvement condition, in general, promotion-focused participants evaluated the features more favorably than did prevention-focused participants ( $M = 5.1$  versus  $4.2$ ;  $F(1, 24) = 4.73$ ,  $p < .05$ ). In addition, participants evaluated promotion features more favorably than prevention features ( $M = 4.9$  versus  $4.4$ ;  $F(1, 24) = 7.94$ ,  $p < .01$ ). We did not observe the critical regulatory fit effect on

brand attitude when participants were motivated to process information.

*Mediation analyses.* To further investigate the mechanism underlying the regulatory fit effect on persuasion, we conducted mediation analyses to examine whether the regulatory fit effect on brand attitudes in the low-involvement condition was mediated by perceived attractiveness of the product features. Because feature type and toothpaste were both within-participant factors, we calculated a relative feature attractiveness index by dividing participants' attractiveness ratings of promotion features by their ratings of prevention features. We also calculated a relative brand attitude index by dividing participants' attitude toward Brand A (which has the more attractive promotion features) by their attitude toward Brand B (which has the more attractive prevention features). The results of two separate regression analyses showed a regulatory focus effect on brand attitude ( $b = .26$ ;  $t(23) = 3.18$ ,  $p < .01$ ) and on perceived feature attractiveness ( $b = .21$ ;  $t(23) = 2.93$ ,  $p < .01$ ). However, when regulatory focus and feature attractiveness were both included in the model as predictors of brand attitude, we observed only the feature attractiveness effect ( $b = .96$ ;  $t(22) = 7.75$ ,  $p < .001$ ), and the effect of regulatory focus on attitude became nonsignificant ( $b = .05$ ;  $t(22) = 1.09$ ,  $p > .20$ ). Thus, conditions necessary for mediation were satisfied (Baron and Kenny 1986). A Sobel test further confirmed that feature attractiveness mediated the effect of regulatory focus on brand attitude in low-involvement conditions ( $z = 2.74$ ,  $p < .01$ ).

### Discussion

The results of Study 1 suggest that people who are not motivated to process information place more weight on features that fit their regulatory focus when they review product information that includes both fit and nonfit feature claims. Participants in the low-involvement condition evaluated the toothpaste more favorably when its positioning addressed their regulatory concerns. They were also more likely to choose the toothpaste whose strong claims fit their regulatory goal. However, this pattern of results disappeared when participants were motivated to process information. It appears that the regulatory fit effect on evaluation in the low-involvement condition was mediated by participants' perceived attractiveness of the product features that were relevant to their regulatory focus. That is, participants placed more weight on the product features that fit their regulatory focus; they evaluated products possessing strong (weak) compatible product claims more (less) favorably than those possessing strong (weak) incompatible product claims.

These results identify task involvement as a moderator of the regulatory fit effect, and the findings are consistent with a selective attention under a constrained cognitive capacity hypothesis. In particular, feature attractiveness was shown to be a mediator of the regulatory fit effect; presumably, participants paid more attention to features that fit their regulatory focus, rendering the fit features more attractive than the nonfit features. However, there is no direct evidence that participants in the low-involvement conditions were indeed selectively paying more attention to fit versus nonfit information when evaluating the two brands of toothpaste. It is also not clear whether the features that address participants' regulatory concerns were considered more

diagnostic and thus weighted more heavily in the evaluation of the toothpastes or whether the features were perceived as more attractive because they fit participants' regulatory focus. Furthermore, one of the four items we used to assess brand attitude is attractiveness, and we asked participants to evaluate feature attractiveness after evaluating the two brands. Thus, participants' feature attractiveness ratings might simply reflect their brand attitude ratings. We designed Study 2 to address these issues and to further investigate consumers' constructive decision process in high- and low-involvement conditions.

### STUDY 2

The objectives of Study 2 were to demonstrate the robustness of the boundary conditions we observed in Study 1 and to shed light on the mechanism underlying the regulatory fit effect. The design and procedure were similar to those of Study 1, but there were two major changes: First, to address the concern that participants' feature attractiveness ratings may simply reflect their brand attitude ratings, we dropped the attractiveness item from the brand attitude scale. Second, we included two additional measures to observe participants' information search process directly: the type of features they chose to attend to and the extent to which they processed each type of feature. As in Study 1, we used a 2 (involvement: high versus low)  $\times$  2 (regulatory focus: promotion versus prevention)  $\times$  2 (feature type: promotion versus prevention) mixed design, in which feature type was a within-participant factor. We predicted that participants in low-involvement conditions would pay more attention to the features that fit their regulatory focus. They would also spend more time processing fit than nonfit information.

### Method

*Stimuli and procedure.* We randomly assigned 58 undergraduate participants (33 females) to the different conditions. The stimuli were identical to those we used in Study 1. Participants went through the same priming procedures for regulatory focus. Then, in an ostensibly different task that participants would perform using the computer, we told participants that a manufacturer in the process of developing an advertising campaign for a new brand of toothpaste was interested in their opinion. We also used the same involvement manipulation as in Study 1.

We asked participants to imagine that they were shopping for toothpaste at an online drugstore. We told them that product information on the different toothpastes would be available to them for comparison and that their task was to indicate which dimensions they would like to review to evaluate the different brands. Six dimensions (teeth whitening, cavity prevention, breath freshening, plaque prevention, enamel strengthening, and gingivitis prevention) were presented on the computer screen, and participants were told to choose four of the six dimensions with which they wished to compare the brands by clicking on the check box in front of each dimension. The program would issue a warning if participants attempted to select a fifth dimension. Participants could change their selections by clicking on a selected dimension to deselect it. Participants confirmed their final selection by clicking on a "submit" button. The specific features that participants finally selected were recorded.

Then participants continued to the next screen, where information on two brands of toothpastes was available. They were asked to review the product information and to evaluate the toothpastes. The toothpastes were positioned side by side on the computer screen; we counterbalanced the order of the toothpastes (Toothpastes A and B and Toothpastes B and A) across all participants. However, the information was not presented in direct view. Rather, participants saw six boxes on the screen, with a label that described the information in each box (teeth whitening, cavity prevention, breath freshening, plaque prevention, enamel strengthening, and gingivitis prevention). We told participants that they could review information on any or all six features of the two toothpastes by moving the mouse cursor over each box. The information in each box would appear when participants moved the cursor over the box, and the content would disappear when participants moved the cursor away from the box, so that placing the cursor over the box was the only way for participants to review information on any particular dimension. We also told participants that they would not be able to return to this screen after they proceeded to the next screen. The time (in milliseconds) each box stayed open was recorded.

After reviewing the information, participants proceeded to the next screen to evaluate the two toothpastes and responded to some miscellaneous measures, including the involvement check measures. The measures were identical to those in Study 1, except that we measured the attitude toward the products with a three-item seven-point scale (1 = "dislike very much, very unfavorable, very bad," and 7 = "like very much, very favorable, very good") to reduce potential overlap between the attitude measure and the feature attractiveness measure.

### Results

*Manipulation check.* We averaged the four involvement items to form an involvement index ( $\alpha = .95$ ). The results of a 2 (regulatory focus)  $\times$  2 (involvement) ANOVA revealed that participants in the high-involvement condition were more involved than participants in the low-involvement condition ( $M = 5.0$  versus  $4.0$ ;  $F(1, 54) = 6.05$ ,  $p < .05$ ), suggesting that the involvement manipulation was successful.

*Feature selection.* We asked participants to select four of six dimensions to compare across different brands. We designed three of the dimensions to address promotion concerns (e.g., teeth whitening) and the remaining three to address prevention concerns (e.g., plaque prevention). For each participant, we calculated the proportion of promotion-focused dimensions selected and computed its arcsine transformation. We then analyzed the transformed scores with a 2 (regulatory focus)  $\times$  2 (involvement) ANOVA. The results showed the predicted regulatory fit effect ( $F(1, 54) = 5.45$ ,  $p < .05$ ); that is, promotion-focused participants were more likely to evaluate the brands based on promotion features than were the prevention-focused participants ( $M = 2.2$  versus  $1.9$ ), whereas prevention-focused participants were more likely to rely on prevention features than were their promotion-focused counterparts ( $M = 2.1$  versus  $1.8$ ). This main effect was qualified by the predicted regulatory focus  $\times$  involvement interaction ( $F(1, 54) = 5.45$ ,  $p < .05$ ). Subsequent planned contrasts

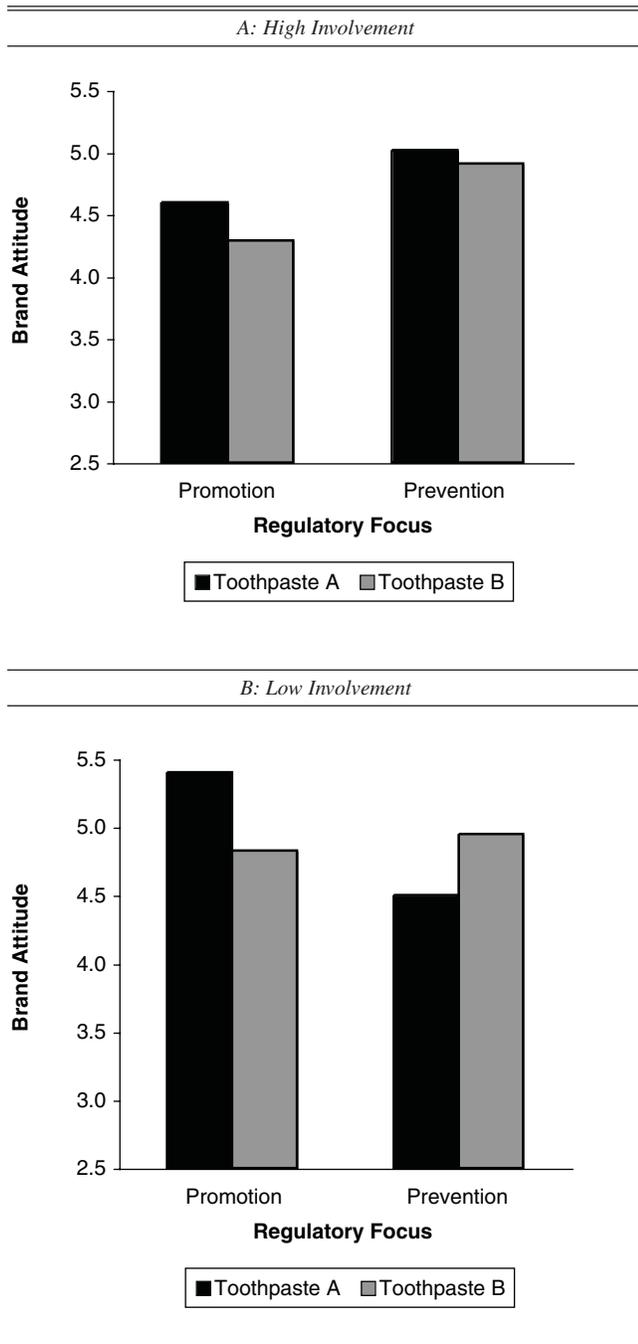
showed that the regulatory fit effect occurred only in the low-involvement condition. Specifically, promotion-focused participants in the low-involvement condition selected more promotion than prevention features ( $M = 2.4$  versus  $1.6$ ;  $t(13) = 3.12$ ,  $p < .01$ ), whereas prevention-focused participants selected more prevention than promotion features ( $M = 2.3$  versus  $1.7$ ;  $t(13) = 1.75$ ,  $p = .10$ ). High-involvement participants were equally likely to select promotion- and prevention-focused dimensions as the basis of comparison, regardless of their primed regulatory focus. These results suggest that when people are not motivated to process information, they rely on their regulatory focus as a filter to select information for preference construction. This selectivity in attention is less likely when they are more involved in the task.

*Extent of information processing.* We measured the extent of information processing by the time participants spent reviewing the promotion versus prevention features of the toothpastes. We predicted that promotion-focused participants would spend more time processing promotion features, whereas prevention-focused participants would spend more time processing prevention features, especially when they were not involved in the task. We analyzed the time that participants spent reviewing the two types of features using a 2 (regulatory focus)  $\times$  2 (involvement)  $\times$  2 (feature type) repeated measures ANOVA, in which feature type was a within-participant factor. Central to our hypothesis, we observed the predicted three-way interaction among regulatory focus, feature type, and involvement ( $F(1, 54) = 11.78$ ,  $p < .01$ ). Subsequent analyses showed the predicted regulatory focus  $\times$  feature type interaction in the low-involvement condition ( $F(1, 26) = 14.11$ ,  $p < .001$ ). Participants primed with a promotion focus spent more time reviewing promotion than prevention features ( $M = 29.4$  seconds versus  $15.2$  seconds;  $t(13) = 3.86$ ,  $p < .01$ ), whereas prevention-focused participants spent more time reviewing prevention than promotion features ( $M = 30.0$  seconds versus  $14.0$  seconds;  $t(13) = 2.24$ ,  $p < .05$ ). However, participants in the high-involvement condition seemed to spend more time processing promotion than prevention features ( $M = 20.2$  seconds versus  $17.0$  seconds;  $F(1, 28) = 3.08$ ,  $p < .10$ ), regardless of their regulatory focus. Consistent with our predictions, we observed the regulatory fit effect on the extent of information processing only when participants were not motivated to process information.

*Attitude.* We averaged participants' evaluations of the toothpastes on the three items to form a brand attitude index for each of the two toothpastes ( $\alpha_A = .88$  and  $\alpha_B = .89$ ). We predicted that we would observe the regulatory fit effect in the low-involvement condition but not in the high-involvement condition. A 2 (regulatory focus)  $\times$  2 (involvement)  $\times$  2 (toothpaste) repeated measures ANOVA, in which toothpaste was a within-participant factor, showed the predicted three-way interaction among regulatory focus, involvement, and toothpaste ( $F(1, 54) = 4.52$ ,  $p < .05$ ; see Figure 2). Subsequent analyses conducted for the two involvement conditions showed the predicted regulatory fit effect in the low-involvement condition, replicating the effect we observed in Study 1 ( $F(1, 26) = 11.14$ ,  $p < .01$ ). Promotion-focused participants evaluated Toothpaste A more favorably than Toothpaste B ( $M = 5.4$  versus  $4.8$ ;  $t(13) = 2.43$ ,  $p < .05$ ), whereas prevention-focused partici-

Figure 2

STUDY 2: BRAND ATTITUDE AS A FUNCTION OF INVOLVEMENT AND REGULATORY FOCUS



pants evaluated Toothpaste B more favorably than Toothpaste A ( $M = 5.0$  versus  $4.5$ ;  $t(13) = 2.30$ ,  $p < .05$ ). For the high-involvement condition, participants evaluated Toothpaste A more favorably than Toothpaste B ( $M = 4.8$  versus  $4.6$ ;  $F(1, 28) = 3.06$ ,  $p < .10$ ), regardless of their regulatory focus. Consistent with our prediction, we observed the regulatory fit effect only when participants were not motivated to process information (see Table 1).

*Feature attractiveness.* We analyzed participants' feature attractiveness ratings using a 2 (regulatory focus)  $\times$  2 (involvement)  $\times$  2 (feature type) repeated measures ANOVA, in which feature type was a within-participant factor. We observed a regulatory focus  $\times$  feature type interaction ( $F(1, 54) = 10.70$ ,  $p < .01$ ); that is, promotion-focused participants evaluated promotion features as more attractive than prevention features ( $M = 5.3$  versus  $5.1$ ;  $t(27) = 1.71$ ,  $p = .10$ ), whereas prevention-focused participants evaluated prevention features as more attractive than promotion features ( $M = 5.2$  versus  $4.8$ ;  $t(27) = 2.88$ ,  $p < .01$ ).

Central to our hypothesis, we observed the three-way interaction among regulatory focus, involvement, and feature type ( $F(1, 54) = 6.94$ ,  $p < .05$ ). Subsequent analyses revealed the predicted regulatory focus  $\times$  feature type interaction only in the low-involvement condition ( $F(1, 26) = 14.17$ ,  $p < .001$ ). Prevention-focused participants perceived prevention features to be more attractive than promotion features ( $M = 5.4$  versus  $4.5$ ;  $t(13) = 3.67$ ,  $p < .01$ ), whereas promotion-focused participants perceived promotion features to be more attractive than prevention features ( $M = 5.8$  versus  $5.4$ ;  $t(13) = 1.65$ ,  $p > .10$ ).

*Mediation analyses.* To further investigate the mechanisms underlying the regulatory fit effect, we conducted mediation analyses to examine whether the regulatory fit effect on brand attitudes in low-involvement conditions was mediated by participants' selective processing of fit versus nonfit information or by the perceived attractiveness of product features that fit their regulatory focus. Because feature type and toothpaste were both within-participant factors, we calculated a relative brand attitude index by dividing participants' attitude toward Brand A (which has the strong promotion features) by their attitude toward Brand B (which has the strong prevention features). We similarly computed a relative extent of processing index and a relative feature attractiveness index. A series of regression analyses showed that regulatory focus was a predictor of both brand attitude ( $b = .11$ ;  $t(26) = 3.33$ ,  $p < .01$ ) and processing time ( $b = .74$ ;  $t(26) = 2.86$ ,  $p < .01$ ). When we included regulatory focus and processing time in the model as predictors of brand attitude, we observed both effects ( $b_{\text{regulatory focus}} = .07$ ;  $t(25) = 2.08$ ,  $p < .05$ ;  $b_{\text{processing time}} = .05$ ;  $t(25) = 2.03$ ,  $p = .05$ ). That regulatory focus remained a predictor of brand attitude when we included processing time in the model suggests that the regulatory fit effect was not mediated by the extent of feature processing (Baron and Kenny 1986).

A different set of mediation analyses examining feature attractiveness as a mediator showed the effect of regulatory focus on the relative feature attractiveness index ( $b = .12$ ;  $t(26) = 3.65$ ,  $p < .01$ ). When we included both regulatory focus and feature attractiveness in the model as predictors of brand attitude, we observed only the effect of feature attractiveness ( $b = .41$ ;  $t(25) = 2.23$ ,  $p < .05$ ), and the effect of regulatory focus became nonsignificant ( $b = .06$ ;  $t(25) = 1.61$ ,  $p > .10$ ). Thus, all conditions necessary for mediation were satisfied (Baron and Kenny 1986). A Sobel test showed that feature attractiveness was indeed a mediator of the regulatory fit effect on brand attitude ( $z = 1.90$ ,  $p = .05$ ).

It could be argued that processing time may have an indirect effect on brand attitude by way of feature attractiveness. However, this conjecture was not supported, because

processing time was not a predictor of feature attractiveness ( $b = .03$ ;  $t(26) = 1.22$ ,  $p > .20$ ).

### Discussion

The results of Study 2 replicate the findings of Study 1, showing that the moderating effect of involvement on the effect of regulatory fit is robust. Our data on participants' selective attention and their extent of information processing are consistent with the constructive preference view that people pay selective attention to only a subset of information when they are not motivated to expend cognitive resources. Whereas high-involvement participants spent as much time processing fit versus nonfit information, those in the low-involvement condition spent more time processing fit than nonfit information. Note that even though processing time had an effect on evaluation, the effect was small ( $b = .05$ ,  $p < .05$ ) and independent of the regulatory fit effect. It was participants' perceived attractiveness of the product features that mediated the effect of regulatory fit on brand attitudes.

We replicated the regulatory fit effect on information selectivity using similar procedures in a different study in which we asked participants to assess the attractiveness of two job offers. We also replicated the regulatory fit effect on processing time in another study using vacation destinations as the target product category. Taken together, these results provide clear evidence that people selectively attend to product information that fits their regulatory focus when they are not motivated to process information. The irony is that even though these consumers may spend more time reviewing fit than nonfit information, their evaluation of the products is driven more by their perceived attractiveness of the features than by the extent of information processing in which they engage. To the extent that longer processing time should lead to better comprehension and appreciation of the feature benefits, the current results suggest that participants who were less motivated to process information did not rely on the diagnosticity of the information as much as they relied on the perceptual salience of the product features that fit their regulatory focus as the basis of their judgment.

### GENERAL DISCUSSION

The current research contributes to the regulatory focus literature on several fronts. It extends previous findings by demonstrating that the effect of regulatory fit on persuasion may be observed with mixed appeals, that is, when the message contains information that is relevant to both promotion and prevention rather than information that focuses on either promotion or prevention concerns, as used in previous research.

In addition, the data across two studies provide convergent evidence that the effect of regulatory fit on persuasion is moderated by involvement, suggesting that the fit effect is the result of heuristic processing and not systematic processing of fit versus nonfit information. People who are not motivated to process information are more likely to process information selectively. Our data suggest that consumers rely on their regulatory focus as a guide when allocating scarce cognitive resources. These uninvolved consumers are also less likely to be aware of the potential bias of feeling right or processing fluency or to expend cognitive resources

to correct their initial response (Lee 2004; Schwarz 2004). Thus, we observed the regulatory fit effect on judgment only among low-involvement participants but not among those motivated to process information. Note that the null effect we observed in the high-involvement condition in Study 1 may be due to participants engaging in systematic processing of all information presented or to participants adjusting their responses to correct for the potential bias (Higgins et al. 2003). However, that participants in Study 2 did not show a selectivity bias in their processing of the information suggests that the null effect is more the result of systematic processing than a correction for potential bias.

Our results are consistent with Evans and Petty's (2003) finding that the regulatory fit effect is moderated by participants' need for cognition. In their study, participants with distinct regulatory focus were asked to evaluate a new breakfast product after reviewing an advertising message that contained either strong or weak arguments. The message was framed as either a promotion- or a prevention-focused appeal. Participants' evaluation of the product was more strongly affected by argument quality when the message fit their regulatory focus, but only for those with a low need for cognition. Participants who had a high need for cognition had more favorable attitudes when the arguments were strong than when they were weak, regardless of regulatory fit.

The interpretation that the regulatory fit effect is reflective of heuristic versus systematic processing is also consistent with the source confusion account of the regulatory fit effect (Higgins et al. 2003). According to this view, people feel right when they use a goal pursuit strategy that is compatible with their regulatory orientation. This feeling-right experience may be attributed to certain objects when people do not recognize the source of this feeling, resulting in higher values placed on these objects. When people are made aware of the source of their positive experience, the regulatory fit effect disappears (Cesario, Grant, and Higgins 2004; Higgins et al. 2003).

In addition to demonstrating the boundary conditions for the regulatory fit effect, the current research also reveals the mechanism underlying such an effect: People rely on their regulatory focus as a filter to process information selectively to construct their preference when cognitive resources are limited (Payne, Bettman, and Johnson 1992). In particular, we observed significant regulatory fit effects on both processing time and perceived feature attractiveness in Study 2. However, the regulatory fit effect on brand evaluation was mediated only by participants' perceived attractiveness of product features and not by the extent of their processing.

Our results on the regulatory fit effect imply a different mechanism from the one that Aaker and Lee (2001) discuss. In their studies, participants recalled more fit than nonfit information and were more discerning between strong and weak arguments when the information fit their regulatory goal. These results suggest that participants were processing fit information systematically. The current studies extend Aaker and Lee's (2001) findings by providing evidence that the regulatory fit effect is not the result of systematic processing, even though some of the results are consistent with motivated information processing. Both feature selection and processing time data in Study 2 could be construed as

evidence for a systematic processing account of the regulatory fit effect; that is, participants paid more attention to feature information that fit their regulatory focus, and in turn, this selective attention influenced their evaluation of the product. Yet this conclusion was not supported by the results of the mediation analyses we conducted using processing time as a mediator. Rather, the regulatory fit effect we observed was mediated by perceived attractiveness of the features. This pattern of findings is similar to Lee and Aaker's (2004; Experiment 5) results, in that participants in fit versus nonfit conditions generated more support reasons to drink Welch's grape juice, but the number of support reasons did not mediate participants' attitude toward the product. Instead, product evaluation was mediated by participants' perceived processing fluency of the advertisement. Thus, the current results provide clarification for the mechanism underlying the regulatory fit effects reported in extant literature.

Note that we are not arguing that people are not more motivated in regulatory fit conditions. Idson, Liberman, and Higgins's (2000) participants who experienced regulatory fit indicated that they were more motivated in a self-report measure than those who experienced regulatory nonfit. Indeed, better recall, better discrimination, the generation of support arguments, and more extensive processing are all evidence in support of motivated processing in regulatory fit conditions. Our results simply suggest that when people are not motivated to process information, they rely on their regulatory focus to screen out information that is irrelevant to their regulatory concerns and to construct their preferences on the basis of the perceptual salience of the selected information rather than the diagnosticity of the information (Feldman and Lynch 1988). The reason we did not observe the regulatory fit effect in the high-involvement condition in our studies may be because participants were presented with both promotion- and prevention-focused information. Those who were motivated to process information paid equal attention to both fit and nonfit information. Further research should investigate conditions in which people's preferences in fit versus nonfit conditions are constructed through systematic versus heuristic processing.

To the marketing managers and advertisers who are concerned with the positioning of their marketing communications, our results indicate that it may be optimal to include product benefits that address both promotion and prevention concerns in the advertising message, especially when consumers are not likely to pay much attention to the message. Promotion-focused consumers would selectively pay attention to benefits that address growth and advancement concerns, and prevention-focused consumers would pay attention to benefits that address safety and security concerns. The inclusion of both types of benefits in the message may enable a firm to target a heterogeneous segment. However, other important questions remain. For example, are consumers more persuaded by appeals that address just their regulatory concerns or by mixed appeals that address both promotion and prevention concerns? Does it matter if consumers are processing the appeals systematically or heuristically? The effectiveness of pure versus mixed appeals when consumers engage in systematic versus heuristic processing awaits further research.

## APPENDIX: PRODUCT FEATURES USED IN THE STUDIES

### Promotion-Focused Features

#### Strong Claims

- It has natural polishers (bamboo, silica, and calcium carbonate) to whiten your teeth.
- It freshens your breath with perilla seed extract, grapefruit seed extract, and natural essential oils of orange and mint.
- It strengthens tooth enamel with high potency Ester C liquid, a complex of calcium, sodium, magnesium, zinc ascorbates, and L-ascorbic acid.

#### Weak Claims

- It whitens your teeth.
- It freshens your breath.
- It strengthens tooth enamel.

### Prevention-Focused Features

#### Strong Claims

- It contains three primary enzymes (glucose oxidase, lactoperoxidase, and lysozyme), which help prevent gingivitis.
- It prevents cavities with tea tree oil, which helps to inhibit the growth of decay and plaque-causing bacteria.
- It has a special ingredient (Calprox), which helps you fight plaque buildup.

#### Weak Claims

- It prevents gingivitis.
- It prevents cavities.
- It fights plaque buildup.

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