

Research Note

# The role of regulatory fit on the attraction effect<sup>☆</sup>

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## Abstract

We show that adding entrant brands to a choice set comprising of a predominantly promotion brand and a predominantly prevention brand can make *both* promotion and prevention-oriented consumers susceptible to the attraction effect. If an entrant targets the brand possessing superior promotion (prevention) feature, the resulting dominance relationship allows the promotion (prevention) focused consumers to sustain their regulatory focus. Entrant brands (and the associated dominance heuristic) therefore contribute to decision value by allowing both promotion and prevention-focused consumers pursue their goal in a way that fits with their regulatory concerns.

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Introducing a new brand (entrant or decoy brand) in the marketplace can affect the *relative* shares of the existing brands in one of three ways. First, the entrant brand may be irrelevant to the existing market dynamics to the extent that it steals the same fraction of market share from each of the existing brands, in which case the relative market shares of the existing brands remain the same as before (*independence of irrelevant alternatives*; McFadden, 1973). Second, the decoy may steal disproportionately more market share from the existing brands that are similar to the decoy, thereby reducing the market share of the similar brands relative to the dissimilar brands (*similarity hypothesis*; Tversky, 1972). Finally, and third, if the entrant is dominated by some of the existing brands, then the entrant can increase the share of the brands that dominate the entrant (henceforth called the dominant or target brands) relative to brands that do not dominate the entrant (*the attraction effect*; Huber, Payne, & Puto, 1982).

This third, or attraction effect, violates one of the fundamental axioms of rational choice, that is, adding a new brand in the product

space should not increase the market share of an existing brand (the *regularity axiom*; Luce, 1959). Therefore, and not surprisingly, since the pioneering demonstration by Huber et al. (1982), considerable research has focused on understanding the mechanisms underlying the attraction effect and the moderators thereof. The mechanisms include the psychophysical distortion of the range and frequency of the brand attributes (Huber et al., 1982) and the consumer's need to justify or simplify her choice (Hedgcock & Rao, 2009; Simonson, 1989). The moderators include the consumer's knowledge of, and familiarity with, the brands in the marketplace (Mishra, Umesh, & Donald, 1993; Sen, 1998), and the preference elicitation process (evaluating each brand separately versus expressing which brand is preferred; Park & Kim, 2005).

Recently, researchers have applied the theory of regulatory focus (Higgins, 1997), a motivational state concerned with a consumer's advancements and accomplishment needs (promotion focus) or with safety and security needs (prevention focus), to understand her sensitivity to the attraction effect (see Murali, Bockenholt, & Laroche, 2007). For example, Murali et al. (2007) show that promotion-oriented consumers are more susceptible to the attraction effect relative to their prevention-focused counterparts. One reason is that the decoy makes the target or dominant brand an attractive opportunity, thus fitting with the advancement-goal seeking tendencies of the promotion-focused consumers.

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Our paper builds on the research by Murali et al. (2007) by proposing that we can make *both* promotion and prevention-focused consumers equally susceptible to the attraction effect. For example, suppose that a predominantly promotion brand (i.e., a brand that possesses superior promotion features relative to the competition) and a predominantly prevention brand (i.e., a brand that possesses superior prevention features relative to the competition) compete with each other. We can create regulatory fit either on the promotion or the prevention dimension by adding an entrant that targets either the predominantly promotion or the predominantly prevention brand. The upshot is that both promotion and prevention-oriented consumers should demonstrate the attraction effect as long as the entrant brand targets (and makes more attractive) the focal brand that is more relevant to their regulatory concerns.

Before proceeding with the rest of the paper, we make two important provisos. First, we do not mean to challenge the findings of Murali et al. (2007) but, rather, we extend them. These authors investigate how decoys might contribute to the value of a decision by promoting the use of an eagerness strategy (i.e., dominance heuristic) that is compatible to the regulatory concerns of promotion-focused consumers (*value from fit*; Higgins, 2002). However, since the dominance heuristic also provides the consumers with a strong reason to justify their choice (Simonson, 1989), it is conceivable that both promotion and prevention-focused consumers might be susceptible to the attraction effect if the decoy enables them to defend their brand choice (*value from proper means*; Higgins, 2002). Our paper builds on this premise by configuring decoys to target (fit with), and make more attractive, either the predominantly promotion brand (typically sought by the promotion-focused consumer) or the predominantly prevention brand (typically sought by the prevention-focused consumer). We should note that Murali et al. (2007) did not distinguish between the types of target brand and they acknowledge that a prevention-focused consumer may be sensitive to the attraction effect if the dominant brand is superior on the prevention attribute (page 242). Our research, therefore, fills an important “gap” in Murali et al.’s (2007) study.

Second, Levav, Kivetz, and Cho (2008) have shown that decoys enable both promotion and prevention-focused consumers to resolve approach–approach conflicts induced by a choice between two desirable brands. These authors create fit (desirable) and misfit (undesirable) choice sets for their participants (e.g., a prevention-focused consumer selects either between two prevention brands or between two promotion brands) and show that decoys are better able to break the tie between two fit brands compared to two misfit brands. Their results are consistent with that of Murali et al. (2007) in that the difference in the magnitude of the attraction effect (or the tie-breaking ability of the decoy) between the fit and misfit conditions is greater among promotion-focused consumers compared to prevention-focused consumers. We should note that, whereas Levav et al. (2008) investigate a special case of decoy effects when the choice is between either two equally desirable brands or two equally undesirable brands, we investigate a more general case where consumers select between brands that are a mixture of desirable and undesirable features

(promotion and prevention features; Wang & Lee, 2006). We do so with the explicit purpose of addressing a “gap” in Murali et al.’s (2007) study, described above, and show that there is no difference between promotion and prevention-focused consumers in their susceptibility (or insusceptibility) to the attraction effect. Therefore, although our work and that by Levav et al. (2008) may have reached the same conclusion (i.e., consumers pay more attention to information when it fits with their regulatory orientation), the two papers address very different research questions.

## Theoretical framework

### *Regulatory fit and the attraction effect*

According to regulatory focus theory (Higgins, 1997), consumers self regulate to align their behavior with one of two desired goals, a prevention goal or a promotion goal. Promotion goals are associated with the need for growth, a focus on hopes and aspirations, and a desire to seek out positive outcomes. Prevention goals are associated with the need for security, a focus on duties and obligations, and a desire to avoid negative outcomes. Research suggests that a consumer will feel better and evaluate a brand or feature more positively if the positioning or framing of the brand or feature fits her regulatory focus. For example, Aaker and Lee (2001) show that promotion-focused consumers evaluate a juice positioned on promotion benefits (e.g., energy and taste) more positively whereas prevention-focused consumers do the same to a juice positioned on prevention benefits (e.g., cardiovascular disease prevention). Monga and Zhu (2005) show that (prevention-focused) buyers place a greater emphasis on loss-related price frames (i.e., they feel better about non-losses but worse about losses), whereas (promotion-focused) sellers place a greater emphasis on gain-related frames (i.e., they feel better about gains but worse about non-gains).

Recent research suggests that consumers may be able to derive value from a decision not just by the outcome but also if they can pursue their decision goals in a manner that fits with their regulatory orientation (Higgins, 2002). Consumers can achieve this regulatory fit (or the *just right* feeling; Aaker & Lee, 2006) in many ways. For example, since promotion-focused (prevention-focused) consumers are more likely to use affect-based (cognition-based) decision strategies, instructing promotion-focused (prevention-focused) consumers to rely upon their feelings (reasons) to evaluate a target brand should help them achieve regulatory fit (and lead to a higher willingness-to-pay for the brand; Avnet & Higgins, 2006). Similarly, since a promotion-orientation (prevention-orientation) is associated with abstract (concrete) information processing, encouraging promotion-focused (prevention-focused) consumers to engage in alternative-based (attribute-based) information processing should result in greater satisfaction with the decision (and a higher willingness to pay for the selected brand; Murali & Pons, 2009).

In a similar vein, we propose that we can use decoy brands in the product space to create regulatory fit by making the decoy selectively target the brand that fits the regulatory orientation of

the target consumers. For example, consider two toothpaste brands, A and B, where we have positioned Brand A on a promotion feature (whitening teeth), Brand B on a prevention feature (preventing cavities), and configured the entrant brand to target either Brand A or Brand B. The typical attraction effect scenarios compare how individuals choose between Brands A and B, first, in a two-brand scenario, and, then, in a three-brand scenario (after introducing an entrant or decoy brand). The general finding is that the market share of the dominant brand increases as we move from a two-brand scenario to the three-brand scenarios, relative to the competitor brand. One reason is that the dominance relationship between the target brand and the decoy provides consumers with a strong reason to justify the selection of the dominant brand over the competitor brand (Simonson, 1989).

	Two-brand scenario (no entrant brand)		Three-brand scenario (Brand A dominates the entrant)		Three-brand scenario (Brand B dominates the entrant)	
	Whitens teeth (1–100)	Prevents cavities (1–100)	Whitens teeth (1–100)	Prevents cavities (1–100)	Whitens teeth (1–100)	Prevents cavities (1–100)
Brand A	90	70	90	70	90	70
Brand B	70	90	70	90	70	90
Entrant brand			80	70	70	80

Notice however, that in our three-brand scenarios, the entrant targets the brand that is either superior on the promotion feature (Brand A) or on the prevention feature (Brand B) and therefore creates a fit with the regulatory orientation of either the promotion-focused consumers or the prevention-focused consumers. Since consumers naturally gravitate to the brand that is superior on the attribute most relevant to their regulatory orientation (Chernev, 2004) and adding the decoy makes the target brand look even better, we expect both promotion and prevention-oriented consumers to demonstrate the attraction effect. For example, in the first of our three-brand scenario, we expect Brand A's choice share (relative to Brand B) to increase as we move from the two-brand to this three-brand scenario among the promotion-focused consumers. Similarly, in the second of our three-brand scenario, we expect Brand B's choice share (relative to Brand A) to increase as we move from the two-brand to this three-brand scenario among the prevention-focused consumers.

## Experiment

### Stimuli development

We selected toothpaste, shampoo, portable phone, and grapefruit juice as our focal products. For each focal product, we identified five to seven different features to describe the product. For example, we identified teeth whitening, decay prevention, mint flavor, refreshing taste, plaque fighting and enamel strengthening as possible toothpaste features. For portable phones, we identified stylish design, screen resolution,

hassle free set up and use, ability to carry out long, clear conversation, and availability in bright colors as possible product features. For shampoo, we identified hair strengthening, detangling ability, floral fragrances, dirt and oil cleansing capability, ability to provide soft and shiny hair, and color enhancing capability as possible product features. Finally, for grapefruit juice, we identified taste and energizing property, texture, flavor, natural ingredients, and ability to prevent arterial blockage as possible product features.

In a pre-test, we asked twenty-five participants from the same subject pool as in the main study to classify the product features as promotion-focused, prevention-focused, or neutral. Following the procedure outlined in Wang and Lee (2006), we defined promotion-focused (prevention-focused) features as those designed to bring about benefits concerning positive (negative) outcomes, help people attain accomplishments and advancement (avoid potential costs and losses) when they use the product, and make people feel cheerful (relieved) when they are present and disappointed (tense) when they are absent. We defined neutral features as those features participants perceive as neither promotion-focused nor prevention-focused. We gave the example of a powerful engine in a car as a promotion feature since it might enable people to enjoy the excitement and adventure of driving a fast car. We used an antilock brake in car as an example of a prevention feature since it might reduce the probability of a collision and make people feel safe.

For our experimental stimuli, we selected the promotion (prevention) features as those that were rated as promotion-focused (prevention-focused) by at least 85% of the participants. The promotion and prevention features chosen for the different products were (1) for toothpaste: whitens teeth for better appearance, and prevents decay causing bacteria, (2) for shampoo: soft, smooth and shiny hair after wash, and washes away scalp dirt and oil in pores; (3) for portable phone: long and clear conversation when charged, and hassle free set up and use of controls; (4) for grapefruit juice: great taste and energizing property, and prevents arteries from blocking.

### Procedure

In the main experiment, we randomly assigned the participants into one of two regulatory focus conditions. Following the procedure outlined in Murali et al. (2007), we asked participants in the promotion-focused conditions to write a brief essay about their hopes and aspirations in the past (as they were growing up) as well as at present. Next, we asked them to write about a situation in the past when they had tried and succeeded in achieving something that was very important to them and identify how they had succeeded in accomplishing that goal. Similarly, we asked participants in the prevention-focused conditions to write a brief essay about their duties and obligations in the past (as they were growing up) as well as at present. Next, we asked them to write about a situation in the past when, by exercising care, they had avoided getting into serious trouble, and identify how they had succeeded in accomplishing that goal.

After participants had completed their essays, we directed them to a new task where they imagined that they were in the market for various products and they had to choose between competing alternatives. Within each product class, participants read about the price of the competing brands and how they performed on a promotion-oriented feature and a prevention-oriented feature (see Table 1). For example, in the case of toothpaste, participants read that a consumer testing agency had rated the brands, on a 1 to 100 scale (100 = best), on their effectiveness to whiten teeth and prevent the buildup of decay causing bacteria. We varied the choice task, between-subjects, at three levels by altering the number of brands and/or the decoy configuration in the product space. Thus, participants assigned to the control conditions decided between a predominantly promotion brand and a predominantly prevention brand. Others decided between three brands (the two control brands plus a decoy brand). For these participants, depending upon the experimental condition, either the predominantly promotion brand dominated the entrant or the predominantly prevention brand dominated the entrant. We used four focal products, varied within-subjects (grapefruit juice, portable telephone, shampoo and toothpaste).

### Measures

Following their essays, we asked participants how they felt about themselves (9-point scale anchored on happy/sad; Zhao & Pechmann, 2007), and what was more important to them in their life (9-point scale anchored on what they want to do/what they ought to do; Keller, 2006). Being happy and more focused on what participants want to do are signs of an active promotion focus, whereas being sad and more focused on what participants

ought to do are signs of an active prevention-orientation. After reading about the brands, participants indicated their brand of choice, the attractiveness of the brands (9-point Attractive/Unattractive scale), and the importance of the brand features (9-point Important/Unimportant scale).

### Participants

Two-hundred and twenty-two undergraduate students from a large Western Australian university (95 males) participated in the study and received course credits for their participation. We randomly assigned them to the six experimental cells obtained by crossing the regulatory focus (promotion and prevention) and choice-task (control, decoy targeting the predominantly promotion brand, and decoy targeting the predominantly prevention brand) conditions.

### Manipulation checks

As manipulation checks, we subjected self-reports of how happy (sad) the participants felt and what they thought was more important in their lives (focus on what they want to do versus what they ought to do) following their essays, to separate ANOVAs with regulatory focus as the predictor. Consistent with our manipulation, promotion-oriented participants reported feeling more happy (less sad) compared to their prevention-oriented participants ( $F(1,220)=24.88$ ,  $p<0.0001$ ;  $M$ 's of 5.27 and 4.51). Similarly, promotion-oriented participants reported being more focused on what they wanted to do (as opposed to what they ought to do) compared to their prevention-oriented participants ( $F(1,220)=20.86$ ,  $p<0.0001$ ;  $M$ 's of 5.44 and 4.41).

Table 1  
Stimuli.<sup>a</sup>

Product	Brand descriptor	Experimental conditions								
		Control			Decoy dominated by promotion brand			Decoy dominated by prevention brand		
Toothpaste		Whitens teeth for better appearance	Prevents decay causing bacteria	Price (\$)	Whitens teeth for better appearance	Prevents decay causing bacteria	Price (\$)	Whitens teeth for better appearance	Prevents decay causing bacteria	Price (\$)
	Promotion	90	70	2.99	90	70	2.99	90	70	2.99
	Prevention	70	90	2.99	70	90	2.99	70	90	2.99
	Decoy				80	70	2.99	70	80	2.99
Shampoo		Soft, smooth and shiny hair after wash	Washes away scalp dirt and oil in pores	Price (\$)	Soft, smooth and shiny hair after wash	Washes away scalp dirt and oil in pores	Price (\$)	Soft, smooth and shiny hair after wash	Washes away scalp dirt and oil in pores	Price (\$)
	Promotion	90	70	7.99	90	70	7.99	90	70	7.99
	Prevention	70	90	7.99	70	90	7.99	70	90	7.99
	Decoy				80	70	7.99	70	80	7.99
Portable telephone		Long and clear conversation when charged	Hassle free set up and use of controls	Price (\$)	Long and clear conversation when charged	Hassle free set up and use of controls	Price (\$)	Long and clear conversation when charged	Hassle free set up and use of controls	Price (\$)
	Promotion	90	70	34.99	90	70	34.99	90	70	34.99
	Prevention	70	90	34.99	70	90	34.99	70	90	34.99
	Decoy				80	70	34.99	70	80	34.99
Grapefruit juice		Great taste and energizing property	Prevents arteries from blocking	Price (\$)	Great taste and energizing property	Prevents arteries from blocking	Price (\$)	Great taste and energizing property	Prevents arteries from blocking	Price (\$)
	Promotion	90	70	5.99	90	70	5.99	90	70	5.99
	Prevention	70	90	5.99	70	90	5.99	70	90	5.99
	Decoy				80	70	5.99	70	80	5.99

<sup>a</sup> All attributes (other than price) measured on 1–100 scale, 100 = best.

### Analysis and results

We eliminated all participants selecting the decoy brand so that we could compare the change in the share of the target brand across all three choice-task conditions with a comparable metric (e.g., those choosing the predominantly promotion brand divided by the sum of those choosing the predominantly promotion brand and the predominantly prevention brand; Simonson & Tversky, 1992). Consequently, depending upon the product class, we eliminated approximately 3% to 9% of the observations within each product class.<sup>2</sup>

We expected that participants would demonstrate the attraction effect if the entrant targeted the brand that fitted their regulatory concern, but not if the entrant targeted the brand that did not fit with their regulatory orientation. Therefore, prior to running the analyses we made two coding changes to the data. First, we labeled choices as either a fit choice or a misfit choice: a fit (misfit) choice occurred when a promotion-focused participant selected the predominantly promotion brand (prevention brand), or a prevention-focused participant selected the predominantly prevention brand (promotion brand). Second, we compared these choices between the control condition, a decoy-fit condition, and a decoy-misfit condition. For participants with a promotion-orientation, the decoy-fit (misfit) condition comprised of the predominantly promotion brand (prevention brand) dominating the entrant; for participants with a prevention-orientation, the decoy-fit (misfit) condition comprised of the predominantly prevention brand (promotion brand) dominating the entrant.

### Choice frequencies

Tables 2A and 2B report the choice frequencies for the promotion and prevention-focused participants, separately across the fit (Table 2A) and misfit conditions (Table 2B). On the aggregate, we find that the promotion-focused participants demonstrate the attraction effect only when the entrant targets the predominantly promotion brand (their fit condition). The choice of the predominantly promotion brand increased from 49% in the two-brand conditions to 70% in the three-brand conditions ( $\chi^2_1=14.99$ ,  $p<0.0001$ ). In the misfit conditions, however, when the entrant targets the predominantly prevention brand, the share of the latter brand, in fact, declines slightly, from 51% in the two-brand conditions to 49% in the three-brand conditions ( $\chi^2_1=0.07$ ). We observe the same pattern among the prevention-focused participants. On the aggregate, these participants demonstrate the attraction effect only when the entrant targets the predominantly prevention brand (their fit condition). The choice of the latter brand increases from 49% in the two-brand conditions to 63% in the three-brand conditions ( $\chi^2_1=7.10$ ,  $p<0.01$ ). In the misfit conditions, however, when the

entrant targets the predominantly promotion brand, the share of the latter brand remains virtually unchanged between the two-brand conditions (51%) and the three-brand conditions (51%;  $\chi^2_1=0.00$ ).

A product-by-product inspection of Tables 2A and 2B shows that in the fit conditions, our participants demonstrate the attraction effect in four out of the eight conditions. The failure to obtain statistical significance for each focal condition is not uncommon. For example, Murali et al. (2007) found statistical significance in their investigation of the attraction effect among promotion-focused consumers in only one out of three investigated products (page 237, Table 2). As expected, the attraction effect did not approach statistical significance in any one of the eight misfit conditions.

### Logit model

For a more comprehensive analysis, we used a logit model with choice of the fit or misfit brand as the dependent variable. The main and interaction effects of choice task (control, decoy fit, and decoy misfit) and regulatory focus (promotion and prevention) served as the predictors, with gender (males and females) and product class (grapefruit juice, shampoo, portable phone, and toothpaste) serving as controls. Note that our dataset contains repeated choices since each participant selected between the predominantly promotion brand and the predominantly prevention brand four times (once for each product class). To assume that these choices are independent of each other would perhaps be too restrictive. Therefore, we estimate the logit model using the generalized estimating equations (GEE) method that takes into account the possible correlation between the individual choices and leads to an unbiased and efficient estimation of the logit model (Haubl & Trifts, 2000). Furthermore, we estimate the  $z$  values using the robust standard errors that take into account the possibility of correlated error terms for every individual because of omitted individual-specific variables in our model (Mizik & Jacobson, 2009).

Tables 3A and 3B show the results of the GEE estimations. Table 3A reports the aggregate model, whereas Table 3B reports the model separately for each product. Prevention focus is the default level for the regulatory focus dummy variable, the control (two-brand condition) is the default level for the two decoy (fit and misfit) dummies, female is the default level for the gender dummy, and grapefruit juice is the default for the three product dummies (in the aggregate model). Table 3A shows that, consistent with our predictions, the fit dummy is positive and significant ( $z=3.31$ ,  $p<0.001$ ), suggesting that the choice share of the fit brand increases significantly from the two-brand (default) to the three-brand fit conditions. However, and as expected, the coefficient for the misfit dummy is not significant ( $z<|1|$ ) suggesting that there is no change in the choice share of the misfit brand when we move from the two-brand (default) to the three-brand misfit condition. More importantly, the interactions of the fit and misfit dummies with regulatory focus are not significant ( $z<|1|$ ) suggesting that the pattern is invariant across the promotion and prevention-focused participants.

A product-by-product analysis (Table 3B) shows a significant coefficient of the fit dummy in two out of the four products

<sup>2</sup> We dropped 20/222, or 9% of the observations for grapefruit juice, 10/222, or 5% of the observations for portable telephone, 17/222, or 8% of the observations for shampoo, or 9/222, or 4% of the observations for toothpaste. A logit model with choice of the decoy as the dependent variable, and the main and interaction effects of entrant condition and regulatory focus as predictors and gender and product class as controls did not return any significant effects on decoy selection other than one product-dummy variable.

Table 2A  
Choice distributions—regulatory focus and context fit conditions.

	Promotion focus				Prevention focus			
	Grapefruit juice	Portable telephone	Shampoo	Toothpaste	Grapefruit juice	Portable telephone	Shampoo	Toothpaste
Two-brand condition								
(1) $P(\text{Fit/Misfit})^a$	64.71% (n=34)	38.24% (n=34)	44.12% (n=34)	47.06% (n=34)	36.36% (n=33)	36.36% (n=33)	69.70% (n=33)	45.45% (n=33)
Three-brand condition								
(2) $P(\text{Fit/Misfit, Decoy})^b$	67.50% (n=40)	77.50% (n=40)	62.50% (n=40)	47.50% (n=40)	51.35% (n=37)	62.16% (n=37)	67.57% (n=37)	72.97% (n=37)
(3) $P(\text{Misfit/Fit, Decoy})$	22.50% (n=40)	15.00% (n=40)	30.00% (n=40)	47.50% (n=40)	43.24% (n=37)	35.14% (n=37)	18.92% (n=37)	24.32% (n=37)
(4) $P(\text{Fit/Misfit})^c$	75.00% (n=36)	83.78% (n=37)	67.57% (n=37)	50.00% (n=38)	54.29% (n=35)	63.89% (n=36)	78.13% (n=32)	75.00% (n=36)
$\Delta$ , or change in share of fit brand from two-brand to three-brand condition, (=4–1)	10.29%	45.54%	23.45%	2.94%	17.93%	27.53%	8.43%	29.55%
$\chi^2_1$	0.88	15.60	3.96	0.06	2.20	5.22	0.60	6.31
p value	0.35	0.00	0.05	0.80	0.14	0.02	0.44	0.01

<sup>a</sup> Read as probability of the choice of the fit brand in the choice set containing the fit brand and the misfit brand.  
<sup>b</sup> Read as probability of the choice of the fit brand in the choice set containing the fit brand, the misfit brand, and the decoy brand.  
<sup>c</sup>  $\frac{P(\text{Fit/Misfit,Decoy})}{P(\text{Fit/Misfit,Decoy}) + P(\text{Misfit/Fit,Decoy})}$ .

(toothpaste and portable phone,  $p < 0.05$ ; the coefficient approaches statistical significance for grapefruit juice,  $p = 0.10$ ). Neither the misfit dummy nor the interactions of the fit and misfit dummies with regulatory focus approach statistical significance in any of the four models.

Analyzing the role of the decoy

In addition to choices, we also collected data on the attractiveness of the brands and the importance our participants attached to the promotion and prevention features. Since each participant rated the attractiveness (and importance) of the fit as well as the misfit brand (feature) and did so for each of the four products, we have eight (2 × 4) brand attractiveness measure-

ments and eight (2 × 4) feature-importance measurements for each participant. These measurements allow us to gain some insights as to how the decoy might have affected the participant’s choice of the fit or misfit brand. For example, if the decoy had more influence on choice in the fit conditions compared to the misfit or control conditions, we would expect a more pronounced difference in the attractiveness (or importance attached) between the fit and misfit brands (or features) in the fit conditions compared to either the misfit or control conditions.

We adopted a similar coding scheme (fit/misfit) as we had done with the choice data. For example, we coded a promotion (prevention) oriented participant’s attractiveness rating of the brand superior on the promotion (prevention) feature as the fit

Table 2B  
Choice distributions—regulatory focus and context misfit conditions.

	Promotion focus				Prevention focus			
	Grapefruit juice	Portable telephone	Shampoo	Toothpaste	Grapefruit juice	Portable telephone	Shampoo	Toothpaste
Two-brand condition								
(1) $P(\text{Misfit/Fit})^a$	35.29% (n=34)	61.76% (n=34)	55.88% (n=34)	52.94% (n=34)	63.64% (n=33)	63.64% (n=33)	30.30% (n=33)	54.55% (n=33)
Three-brand condition								
(2) $P(\text{Misfit/Fit, Decoy})^b$	28.21% (n=39)	38.46% (n=39)	71.79% (n=39)	38.46% (n=39)	46.15% (n=39)	48.72% (n=39)	33.33% (n=39)	48.72% (n=39)
(3) $P(\text{Fit/Misfit, Decoy})$	53.85% (n=39)	51.28% (n=39)	23.08% (n=39)	51.28% (n=39)	35.90% (n=39)	46.15% (n=39)	48.72% (n=39)	46.15% (n=39)
(4) $P(\text{Misfit/Fit})^c$	34.38% (n=32)	42.86% (n=35)	75.68% (n=37)	42.86% (n=35)	56.25% (n=32)	51.35% (n=37)	40.63% (n=32)	51.35% (n=37)
$\Delta$ , or change in share of misfit brand from two-brand to three-brand condition	-0.91%	-18.90%	19.80%	-10.08%	-7.39%	-12.29%	10.33%	-3.20%
$\chi^2_1$	0.01	2.47	3.10	0.70	0.34	1.07	0.76	0.07
p value	0.94	0.12	0.08	0.40	0.54	0.30	0.38	0.79

<sup>a</sup> Read as probability of the choice of the misfit brand in the choice set containing the fit brand and the misfit brand.  
<sup>b</sup> Read as probability of the choice of the misfit brand in the choice set containing the fit brand, the misfit brand, and the decoy brand.  
<sup>c</sup>  $\frac{P(\text{Misfit/Fit,Decoy})}{P(\text{Fit/Misfit,Decoy}) + P(\text{Misfit/Fit,Decoy})}$ .

Table 3A  
Aggregate logit model.

Variable	Coefficient	Semi-robust standard error	<i>z</i>	<i>p</i> >  <i>z</i>	95% confidence interval	
Focus_dummy	0.01	0.26	0.38	0.71	−0.42	0.61
Fit_dummy	0.87	0.26	3.31	0.00	0.36	1.39
Misfit_dummy	0.13	0.23	0.54	0.59	−0.33	0.59
Focus × Fit	−0.05	0.36	−0.14	0.89	−0.76	0.66
Focus × Misfit	−0.08	0.36	−0.22	0.83	−0.78	0.63
Gender	−0.14	0.14	−0.98	0.33	−0.43	0.14
Toothpaste_dummy	−0.12	0.21	−0.60	0.55	−0.53	0.28
Shampoo_dummy	−0.00	0.21	−0.02	0.99	−0.43	0.42
Phone_dummy	−0.07	0.19	−0.37	0.71	−0.45	0.31
Constant	−0.02	0.22	−0.09	0.93	−0.46	0.42

brand's attractiveness; similarly, we coded a promotion (prevention) oriented participant's importance rating of the promotion (prevention) feature as the fit feature's importance. In our first analysis, we treated the two attractiveness ratings across the four products as the  $2 \times 4$  within-subjects factors in a repeated-measures ANOVA with choice task (control, decoy fit, and decoy misfit) and regulatory focus (promotion and prevention) as the between-subjects predictors, and gender (male and female) as a control variable. If, as we expect, the decoy has disproportionately more influence on choice in the fit conditions, as opposed to the misfit or control condition, we should obtain an interaction between the attractiveness ratings (within-subjects measure) and choice task (between-subjects measure). As expected, the attractiveness by choice-task interaction was significant ( $F(2,212)=13.28$ ,  $p<0.0001$ ). Follow-up analysis showed that the decoy increased the approach orientation towards the fit brand by deepening the divide between the attractiveness of the fit and the misfit brand, but only in the decoy-fit condition. In this condition, the participants rated the fit brand to be more attractive than the misfit brand ( $F(1,74)=24.91$ ;  $M$ 's of 7.16 and 6.29,  $p<0.0001$ ). They found the two brands to be equally attractive in the control

condition ( $F(1,63)<1$ ;  $M$ 's of 6.71 and 6.81) and the decoy-misfit condition ( $F(1,73)<1$ ;  $M$ 's of 6.84 and 6.96). We should note that the attractiveness ratings did not interact with regulatory focus ( $F(1,212)<1$ ); nor did the three way-interaction between attractiveness, choice task, and regulatory focus approach statistical significance ( $F(2,212)<1$ ).

For our second analysis, we conducted the same repeated-measures ANOVA except that we now had the two feature-importance ratings across the four products as the  $2 \times 4$  within-subjects factors. The results mimicked those of the brand attractiveness ratings. We obtained a significant interaction between the repeated-measures factor (feature importance), and the between-subjects (choice task) factor ( $F(2,212)=7.65$ ,  $p<0.001$ ). Follow-up analysis showed that the decoy deepened the gap between the importance attached to the fit and misfit feature, but only in the decoy-fit condition. In this condition, the participants rated the fit feature to be more important than the misfit feature ( $F(1,74)=11.03$ ;  $M$ 's of 7.37 and 6.80,  $p<0.001$ ). The difference was not significant in either the control condition ( $F(1,63)=1.39$ ;  $M$ 's of 6.81 and 7.00, *ns*) or the decoy-misfit condition ( $F(1,73)<1$ ;  $M$ 's of 7.27 and 7.26). We should note that the feature-importance ratings did not interact with

Table 3B  
Product class logit models.

Variable	Toothpaste ( <i>n</i> =213)			Shampoo ( <i>n</i> =205)			Portable phone ( <i>n</i> =212)			Grapefruit juice ( <i>n</i> =202)		
	Coefficient	<i>z</i>	<i>p</i> >  <i>z</i>	Coefficient	<i>z</i>	<i>p</i> >  <i>z</i>	Coefficient	<i>z</i>	<i>p</i> >  <i>z</i>	Coefficient	<i>z</i>	<i>p</i> >  <i>z</i>
Focus_dummy	0.01	0.01	0.99	−1.00	−1.94	0.05	0.10	0.19	0.85	1.32	2.52	0.01
Fit_dummy	1.27	2.43	0.02	0.47	0.81	0.42	1.14	2.26	0.02	0.79	1.62	0.10
Misfit_dummy	0.13	0.27	0.79	−0.45	−0.85	0.40	0.51	1.03	0.30	0.30	0.51	0.55
Focus × Fit	−1.09	−1.52	0.13	0.43	0.56	0.58	0.96	1.25	0.21	−0.43	−0.59	0.56
Focus × Misfit	0.31	0.45	0.65	−0.50	−0.67	0.50	0.25	0.35	0.73	−0.32	−0.44	0.66
Gender	0.23	0.78	0.44	−0.29	−0.95	0.34	−0.08	−0.26	0.79	−0.53	−1.72	0.09
Constant	−0.27	−0.72	0.47	0.94	2.31	0.02	−0.53	−0.141	0.16	−0.38	−1.00	0.32

regulatory focus ( $F(1,212)=2.45$ ,  $p=0.12$ ); nor did the three way-interaction between feature importance, choice task, and regulatory focus approach statistical significance ( $F(2,212)<1$ ).

### Summary and future research directions

Our study extends the research on the interplay between regulatory focus and the attraction effect by showing that *both* promotion and prevention-focused consumers demonstrate a *selective* attraction effect. The selective process occurs when the entrant or the third brand added to the choice set targets the brand that fits with the consumer's regulatory focus. Thus, promotion-focused consumers demonstrate the attraction effect if the predominantly promotion brand dominates the entrant; similarly, prevention-focused consumers demonstrate the attraction effect if the predominantly prevention brand dominates the entrant. Neither the promotion-focused nor the prevention-focused consumers demonstrate the attraction effect in those cases where the misfit brand dominates the decoy.

The results are important for three reasons. First, they fill a "gap" in Murali et al.'s (2007) study to show that, under the right conditions, both promotion and prevention-focused consumers demonstrate the attraction effect. Second, by doing so, they apply the concept of regulatory focus compatibility or regulatory fit (Avnet & Higgins, 2006) to the domain of the attraction effect and show that decoys (and the associated dominance relationship) enable consumers to sustain their regulatory orientation. Third, these results add to research which suggests that decoy effects are stronger if there exists a natural predisposition to select a particular type of brand (e.g., attraction effects are stronger for predominantly higher-quality brands among upscale consumers who prefer premium quality over cheaper price; Heath & Chatterjee, 1995).

Moving forward, we suggest three directions for future research. First, in our scenarios, the target brand completely dominates the decoy such that the fit created is quite strong. Similar in spirit to the research in brand extensions where researchers study how the strength of the fit between the parent and the extended brand contribute to brand evaluations (Fedorikhin, Park, & Thomson, 2008), future research can investigate if moderate or low fits facilitated with relatively inferior (nearly dominated) decoys weaken or even nullify these results.

Second, the current research on regulatory fit suggests that the so-called "just right" feeling (Aaker & Lee, 2006) that occurs in the fit conditions tend to be more polarized, i.e., positive reactions become more positive and negative reactions become more negative (Cesario, Grant, & Higgins, 2004). The attractiveness and the feature-importance ratings that we collected show some directional evidence of such polarization. For example, comparing the control to the decoy-fit conditions shows that adding the decoy increased the attractiveness (and feature importance) of the fit brand (feature) and reduced the attractiveness (and feature importance) of the misfit brand. An interesting avenue for future research would be to investigate how these "right" or positive feelings could turn into "wrong" or negative feelings when the entrant targets the misfit brand. For example, in Table 2B, we see directional evidence of a negative

attraction effect (repulsion) when the decoy targets the misfit brand; in six out of the eight cases, the choice share of the target misfit brand goes down. How consumers respond to counter this "feeling wrong" experience (Lee, 2009) in the context of the attraction effect is an important avenue for future research. For example, a starting point could be to test if misfit effects are strong enough to reverse the attraction effect (e.g., by drawing attention to a negative, the decoy can shift share away from the target and to the competitor; Higgins and Scholer, 2009).

A third avenue for future research is to look at switching measures (i.e., within-subjects tests of the attraction effect) when the same participant chooses twice, once in the two-brand condition, and again in the three-brand condition. In our study, in the control condition, the choice shares of the fit brand ranged from 36% to 70% among the promotion and prevention-focused consumers. (As a basis for comparison, the control condition shares in Murali et al.'s (2007) study ranged from 45% to 84%). Nevertheless, this indicates that some promotion (prevention) focused consumers may have preferred their fit brand weakly or preferred the misfit brand in the two-brand conditions. Only within-subjects tests can shed light on how a decoy influences consumers to either switch to the fit brand, or develop a stronger commitment to the fit brand.

This issue is important since one can interpret the choice distribution of the fit/misfit brands in our control conditions as evidence of a weak manipulation of regulatory focus, with the decoy, then, strengthening the effects of the manipulation in the desired direction in the fit condition. However, further checks on our manipulation show that the intensity of the regulatory focus was unchanged across the two conditions. How happy/sad participants felt and/or how focused they were on what they wanted to do versus what they thought they ought to do, were unchanged between the control and the decoy-fit conditions. However, only multiple manipulation checks at different points of the choice task and more sensitive within-subjects investigation can tell us if the decoy strengthens a consumer's regulatory focus (e.g., make promotion-focused consumers feel more happy about themselves) as the choice moves from the control to the decoy-fit condition.

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