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The effects of regulatory focus and mixed valence imagery and analytical attributes on product decisions

Abstract

Purpose – This paper investigates the effects of regulatory focus (promotion vs. prevention) and mixed valence attributes (positive imagery and negative analytical vs. negative imagery and positive analytical) on consumers' evaluation and purchase intention for a product.

Design/methodology/approach – A pre-test followed by a single between subject's experiment was conducted to test the major hypotheses in the study.

Findings – Results show that promotion (prevention) focus prefer the product when it is described in terms of positive imagery but negative analytical (positive analytical but negative imagery) attributes in terms of both evaluation and purchase intention.

Research limitations/implications – Future research may validate and extend the current findings with other product or service categories, and study the underlying processes that guide decision making.

Practical implications – Findings from this study will help managers devise a range of marketing strategies in the areas of advertising, segmentation and product positioning.

Originality/value – The current research is novel as it addresses lack of research that engages imagery and analytical attributes with different valences, and fills in a gap as to how regulatory focus will rely on imagery (analytical) attributes with different valences while making product decisions.

Keywords: Regulatory focus, imagery and analytical attributes, positive and negative valence, evaluation, purchase intention

Article Classification: Research paper

Introduction

In recent times the marketing literature has studied the role of imagery processing in consumer evaluation, including how people driven by different regulatory foci respond to imagery versus analytical product advertisements (Roy and Phau, 2014; Bolls and Muehling, 2007; Thomson and Hamilton, 2006; Petrova and Cialdini, 2005). Of particular interest is the study by Roy and Phau (2014) who argue that matching promotion (prevention) focus with imagery (analytical) product features can lead to enhanced persuasion. However, majority of the studies mentioned above, including the one by Roy and Phau (2014), emphasize the role of positively valenced imagery and analytical attributes in product decisions.

The regulatory focus literature prescribes two orthogonal motivational systems, i.e. the promotion and prevention focus. The former involves nurturance and advancement needs in life, while the latter focuses on safety and security needs (Higgins, 1997). A number of studies in the marketing literature has established that regulatory orientation of an individual systematically influences the preference for a specific attribute type in product decisions (Shao *et al.*, 2015; Roy and Phau, 2014; Motyka *et al.*, 2014). In support of this, findings show that a range of product attributes like hedonic versus utilitarian, imagery versus concrete, performance versus safety can moderate the effect of regulatory focus on product evaluation (Shao *et al.*, 2015; Roy and Phau, 2014; Chernev, 2004; Lee and Aaker, 2004).

The promotion focus has a natural tendency to engage risky bias while their counterpart prefers a risk averse strategy in goal pursuit (Higgins, 1997). However, recent findings show that both risky and conservative bias can serve promotion and prevention system, especially when a product decision implies a negative consequence or impede goal advancement (Scholer and Higgins, 2013; Scholer *et al.*, 2008). In other words, both promotion and prevention system is capable of shifting decision strategy when they expect an impending failure (Scholer and Higgins, 2013). While product decision making in the context

of positive imagery attributes is well understood, it is not evident how people with different regulatory motivation will react in response to imagery product attributes that combine both positive and negative valences.

Marketing literature has long recognized the role of positive versus negatively valenced imagery attributes in decision making (Keller and McGill, 1994), while current studies (e.g., Roy and Phau, 2014; Bolls and Muehling, 2007; Thomson and Hamilton, 2006) have predominantly focused on positively valenced imagery attributes only. As such, the primary objective of this research is to understand how promotion (prevention) focus will react to positive and negatively valenced imagery and analytical product attributes (mixed attributes) in decision making. Further, although extant scholars like Yi and Baumgartner (2008) posit that mixed attributes can invoke differential reactions amongst promotion and prevention people, no research has tested this proposition for imagery and analytical attributes. The current work also focuses on the moderating relationship between mixed attributes and product responses, as scholars like Bolls and Muehling (2007) recommend more research to understand the role of imagery attributes in consumer decision making.

The current study therefore combines findings from latest regulatory focus literature to predict how promotion (prevention) system responds to imagery (analytical) attributes by combining positive (negative) imagery with negative (positive) analytical attributes. In the following section both the literature on regulatory focus, imagery and analytical attributes are detailed, before the hypotheses are posited. It is followed by an experimental study that is conducted to test the hypotheses, followed by discussion of findings, limitations and way for future research.

Imagery and analytical processing and attributes

Imagery processing is a cognitive construct, a process by which sensory information is represented in the working memory (Petrova and Cialdini, 2008; MacInnis and Price, 1987). Imagery evocation might engage a single dimension like smell, or involve multiple experiences like sight, smell, taste and tactile sensations. Imagery processing can trigger affect, but evidence shows that imagery's effect on product preference remains even after controlling for emotion (Escalas, 2004; Mani and MacInnis, 2001). According to the current literature, imagery processing style can be evoked by inherent message cues like 'descriptive language' (Bolls and Muehling, 2007), instructing respondents explicitly to adopt imagery processing style (Petrova and Cialdini, 2005), or even based on the motivational state (regulatory focus) of the respondent (Roy and Phau, 2014).

In contrast, analytical processing is driven by data and focuses on verbal encoding and retrieval, rather than internal sensory responses (Thompson and Hamilton, 2006; MacInnis and Price, 1987). Under this process, a respondent can focus on careful information processing based on product attributes to assess the overall value of the target product (Sujan, 1985). Analytical processing can be triggered by highlighting rational product information (e.g., using a matrix to convey information) in the advertising message to support more semantic reason based processing (Thompson and Hamilton, 2006).

Imagery processing can be based on product attributes in the advertisement. For example, Keller and McGill (1994) first manipulated attribute imagibility (positive versus negative), to study its impact on product decisions. The majority of literature in the area however focuses on positive imagery attributes in decision making. For example, an important product attribute like sun roof in a car can be described as "*enjoy the warmth of morning sun through the sunroof*" to invoke imagery (Thompson and Hamilton, 2006). Similarly, respondents can be given explicit instructions to imagine themselves on a

European holiday using attributes like ‘beauty’ and ‘tradition’ to generate positive mental imagery (Petrova and Cialdini, 2005).

Although imagery and analytical processing styles have been discussed in the literature, there is also some mention in the literature that product attributes can also be of imagery or analytical nature (Roy and Phau, 2014; Bolls and Muehling, 2007; Thomson and Hamilton, 2006). This line of argument propagates the notion that imagery and analytical attributes can be inherent to a product or advertising message. These attributes can also trigger off a particular processing style like imagery or analytical, depending on factors like copy and style of adverts and consumer motivation (Roy and Phau, 2014; Bolls and Muehling, 2007; Thomson and Hamilton, 2006). The current research mainly focuses on imagery (analytical) product attributes in decision making.

More recently Roy and Phau (2014) manipulated a number of imagery and analytical product attributes to study advertising effectiveness amongst people with different regulatory motivations. Results show that promotion(prevention) focus are persuaded by imagery (analytical) attributes in product advertisement, and further adopt imagery (analytical) processing style in response to these different kinds of adverts (Roy and Phau, 2014). However, this study also deals with both imagery and analytical product attributes that are of positive valence.

In real life, marketing stimuli like product and brand advertisements can engage both positive and negative images to influence product evaluations (Chowdhury *et al.*, 2008). Similarly, people with different regulatory motivation can consider both negative and positive stimuli that can influence their judgments (Scholer and Higgins, 2013). It is therefore important to understand how imagery versus analytical attributes with positive and negative valence will influence product decisions, especially when they are pitched to consumers with different regulatory orientations. The case of mixed valence is interesting as most research

(e.g., Roy and Phau, 2014; Thompson and Hamilton, 2006) has focused on positive attributes. A product description using mixed valence imagery and analytical attributes is depicted in table 1.

<Insert table 1 about here>

Regulatory focus and attribute based product evaluation

Originally proposed by Higgins (1997), regulatory focus theory describes two dominant motivational systems within people. The first one is referred to as the promotion system, and ensures that human beings work towards their goals of advancement, accomplishment and aspirations in life (i.e., maintain a nurturance focus and concern with the presence or absence of a positive outcome). Similarly, the prevention system ensures that people work towards their goals of distinct survival needs such as protection, safety and responsibility (i.e., focus on security needs in lives and concern with the absence or presence of a negative outcome). Promotion focus is characterized by a risky bias and relies on approach oriented strategies to maximize gains (Pham and Avnet, 2009). Prevention focus on the other hand is characterized by a conservative bias and engages a vigilant strategy to prevent loss (Pham and Avnet, 2009). Regulatory focus is a motivational state, and both systems can co-exist independently of each other in every person. This motivational state can be also activated by priming a person's thoughts about ideals or oughts (Higgins, 1997).

The current literature argues that depending on the motivational state, consumers can engage different types of information, such as product attributes to form evaluations and judgments. For example, risk seeking behavior of promotion focused people gravitates them towards products with hedonic features (Kim and Sung, 2013; Chernev, 2004) or impulsive purchases (Sengupta and Zhou, 2007). Further, a promotion focus may cause these people to

overlook rational features in product decision, for example, while choosing a car these people might ignore a safety feature and prefer top speed (Sengupta and Zhou, 2007). Prevention focus on the other hand shows a safety bias, prefers products that are described in terms of utilitarian features (Chernev, 2004), and engage substantive information in decision making (Pham and Avnet, 2009).

Matching a specific type of product information with a regulatory system can lead to enhanced persuasion, and is normally described as fit (Motyka *et al.*, 2014; Zhao and Pechmann, 2007). Making a product evaluation as described above can lead to regulatory fit and therefore influence attitude. Roy and Phau (2014) explore a different type of fit in the context of imagery and analytical information processing in advertisements. According to them the promotion system entails a mindset that nurtures creativity, and may therefore be more suited to imagery processing, with preference for a product described in terms of imagery attributes. Similarly, the prevention mindset being rational and logical may respond favorably to a product described in terms of analytical features. Roy and Phau (2014) indeed find that matching imagery (analytical) attributes with promotion (prevention) system leads to enhanced persuasion. However, in their study both imagery and analytical attributes were of positive valence.

Combining imagery and analytical attributes with mixed valence can be of particular interest to consumer behavior researchers. The case of mixed attribute is interesting as it might entail risk for both promotion and prevention system. Recent findings support that when goal pursuits of advancement or safety is threatened, both promotion and prevention motivation is capable of risk averse and risky decisions (Zou *et al.*, 2014; Scholer and Higgins, 2013). The influence of these mixed attributes on people with different regulatory motivation, leads to nuanced hypotheses proposed in this study.

In the context of mixed valenced attributes, it is argued that promotion focus will be motivated by imagery attributes and overlook negative analytical attributes. Firstly, overall findings from marketing literature broadly support that promotion system's preference for certain attributes (e.g., hedonic) in product evaluation persists even when it is combined with other attributes (e.g., utilitarian) that their counterparts prefer (Roy and Ng, 2012; Chernev, 2004). Recent findings also show that the gain maximization focus of promotion focus leads them to prefer risky attributes in product (e.g., speed in car) or overlook safety aspects like braking mechanism (Sengupta and Zhou, 2007). Further, evidence shows that promotion focus is also more likely to tolerate negative behaviours, like unethical consumer practices (De Bock and Kenhove, 2010). When promotion focus is activated, people tend to weigh positive attributes more heavily, as they are consistent with their objectives of 'advancement' (Zhang and Mittal, 2007). For example, while deciding on a holiday spot, these people paid more attention to the quality of restaurant, beaches and theatres (thereby ignoring high pollution level), in comparison to prevention focus (Zhang and Mittal, 2007). Further, when a promotion goal (like ordering a new fiction book for enjoyment) is threatened, promotion focused subjects are prepared to safeguard against it, and even pay a higher price for prompt delivery, to ensure goal achievement (Chen *et al.*, 2005).

Finally, positive imagery attributes may also indicate a safe environment and encourage these people to engage in stimulation seeking activities to pursue their advancement goals; while negative analytical attributes may be perceived as less benign and hence not important for goal pursuit (Friedman *et al.*, 2007). Given that imagery attributes appeal to the promotion focus (Roy and Phau, 2014), and these people are inclined to ensure promotion goal achievements (Zhang and Mittal, 2007; Chen *et al.*, 2005), it can be posited that the promotion system will prefer these features in decision making, even when it is combined with negative analytical attributes.

The case for prevention focused people is also interesting. First of all, given their safety bias and rational style of information processing, these people will prefer analytical over imagery attributes (Roy and Phau, 2014). Broad findings also show that their preference for certain attributes (e.g., analytical) is sustained even when it is combined with attributes (e.g., hedonic) that their counterparts prefer (Roy and Ng, 2012; Chernev, 2004). Further, the prevention system is relatively more concerned about maintaining a safe state, and can even engage risky strategy to ensure safety, especially when such needs are compromised (Scholer and Higgins, 2013). In the event of a likely failure, these people also engage higher cognitive resources in decision making, to ensure prevention of loss (Baumeister *et al.*, 2001). In support of this, evidence shows that when prevention focus is activated, people tend to consider those attributes more heavily, or undertake decisions that help them to avoid an unsafe state (De Bock and Kenhove, 2010; Zhang and Mittal, 2007). For example, while choosing a vacation spot they paid more attention to the pollution level (and in the process ignoring quality of beaches, restaurants and theatres), when compared to promotion focus (Zhang and Mittal, 2007). Further, when a prevention goal is threatened leading to a perceived loss (like delay in receiving a new fiction book), these people are prepared to safeguard against it, i.e. pay a higher price for prompt delivery, similar to their counterparts to ensure goal achievement (Chen *et al.*, 2005).

In the case of mixed attributes, prevention focus is therefore likely to pay more attention to positive analytical attributes as these features (e.g., braking mechanism) cater to their goals of a safe state, and ensure safeguard against possible failures. Further, even if they perceive any threat from negative imagery attributes, engagement of higher cognitive resources and greater attention will favor processing of positive analytical information, since it is critical to their safety needs in life (Scholer and Higgins, 2013; Baumeister *et al.*, 2001).

As a result, the preference for a product should be higher when described in terms of positive analytical but negative imagery attributes. This leads to the following hypotheses:

H1: Promotion focus would prefer a product described with positive imagery attributes but negative analytical attributes compared to prevention focus in terms of both (a) product evaluation and (b) purchase intention.

H2: Prevention focus would prefer a product described with positive analytical attributes but negative imagery attributes compared to promotion focus in terms of both (a) product evaluation and (b) purchase intention.

Study

The objective of this study was to examine if promotion (prevention) focused individuals would react more positively towards a product described in terms of imagery versus analytical attributes with different valence. In other words, we would like to seek evidence for our Hypotheses 1 and 2 in the context of a product described in terms of mixed attributes.

Methodology

We used a 2 (Regulatory Focus: Promotion versus Prevention) x 2 (Mixed Attribute Type: Positive Imagery and Negative Analytical vs. Negative Imagery and Positive Analytical) between subject's design.

Participants

Sixty-nine undergraduate students (41 females, $M_{age} = 21$ years) from a large University participated in the experiment in lieu of course credit. All participants were randomly assigned to one of the four experimental conditions.

Regulatory focus manipulation pre-test

The manipulation for regulatory focus used in the study replicates Pham and Avnet (2004). A total of 21 undergraduate students who did not take part in the main experiment were engaged to pre-test the regulatory focus manipulation for promotion and prevention motivation. Participants in the promotion condition were primed about their ‘ideals’. In particular, they were asked to think about their past hopes, aspirations and dreams, and list two of them. They were then required to think about their current hopes, aspirations and dreams, and again list two of them. Similarly, in the prevention condition subjects were primed with their ‘oughts’. In this case, participants were asked to think about their past duties, obligations and responsibilities, and then list two of them. After this they were required to think about their current duties, obligations and responsibilities, and again list two of them. Following this, they answered the manipulation check questions.

Participants were presented with three different personal choice questions that were meant to capture conflict between ideals and oughts. The choices were presented as pairs of statements anchoring opposite ends of seven-point scales. For each pair of statements, participants were asked to indicate which direction they would lean towards. Responses were averaged into a single index ranging from 1 (emphasis on ideals) to 7 (emphasis on oughts). As expected, a one-way ANOVA showed that participants in the primed- oughts condition put relatively greater emphasis on oughts ($M= 5.1$) than did participants in the primed-ideals condition ($M= 2.94$; $(F(1, 19) = 74.16; p < 0.001)$). The pretest for regulatory focus manipulation thus appeared to be successful.

Stimuli advertisement

The product stimulus that was used for the study was an apartment described in two different ways. In order to create mixed attributes, the study replicates an approach by Keller and McGill (1994), i.e. the stimulus combines attributes that are imagery versus analytical, albeit

with different valence. As highlighted in table 1 under ‘mixed attributes’, the positive imagery condition used attributes like recently varnished hardwood, brightly lit hallways; and combined them with negative analytical attributes like below average security, old appliances. The opposite trade-off combined positive analytical attributes (like above average security, new appliances) with negative imagery attributes (dull and worn flooring, narrow and dark hallways). In the current study we refer to the former as Apartment A, while the latter is called Apartment B.

Procedure

Using a cover story, participants were asked to participate in two supposedly unrelated studies. In the first part, participants completed the priming task used to manipulate regulatory focus. In line with Pham and Avnet (2004), participants in the promotion- focus condition were asked to write about their hopes and aspirations while those in the prevention- focus condition were asked to write about their duties and responsibilities.

Next, in an ostensibly different task, participants were told that a study was conducted to gain insights into the way consumers make decisions in their daily lives. After examining the product descriptions of one of the two types of apartment, participants completed major dependent variables like evaluation of the product, purchase intention, mood and other demographic questions.

Measures

Attitude towards the product was measured on a four item seven-point scale- the apartment is desirable/ enjoyable / awful/ bad value for money ($\alpha = 0.870$). Purchase intention was measured on a single item seven-point scale – how likely individuals are to purchase the evaluated apartment anchored at not at all / very likely.

Further, in line with regulatory focus and imagery literature (Pham and Avnet, 2004; Mani and MacInnis, 2001), we used “mood” as a covariate for this study. The usage of mood

was justified as it was felt that different processing conditions (imagery versus analytical) might affect individuals' mood (Petrova and Cialdini, 2005; Mani and MacInnis, 2001). Mood was measured by the 4 item Mood Short Form (MSF) scale. Items included "Currently I am in a good mood", "As I answer these questions I feel cheerful", "For some reason I am not very comfortable right now" and "At this moment I feel edgy or irritable"; all anchored at "1= strongly disagree" and "5 = strongly agree", $\alpha = 0.78$.

Analyses and results

Confound check

A two-way ANOVA was conducted to see whether the independent variables in the study, or their interaction affected mood. Mood was therefore subjected to a two-way ANOVA with regulatory focus, apartment type and their interaction as independent variables. Results showed that mood was not affected by regulatory focus ($F(1, 65) = 3.29, p > 0.05$), apartment type ($F(1, 65) = 0.012, p > 0.05$), or by their interaction ($F(1, 65) = 0.938, p > 0.05$). Previous research has confirmed similar findings for mood, i.e. it did not vary across regulatory focus or advertisement type conditions (Pham and Avnet, 2004). Given this finding, mood was dropped from further statistical analysis.

Test of hypotheses

Both the dependent variables i.e. evaluation and purchase intention were subjected to a MANOVA with regulatory focus and apartment type as the independent variables. Results showed a significant multivariate interaction effect between the independent variables (Wilks' $\lambda = .804, F(2, 64) = 7.80, p < 0.01$). Separate ANOVA tests confirmed a significant interaction effect for evaluation ($F(1,65) = 10.15, p < 0.01$), as well as for purchase intention ($F(1,65) = 15.83, p < 0.001$). No other main effect was significant.

A follow up contrast analyses showed that promotion focused subjects when compared to their counterparts, had a higher evaluation ($M_{\text{prom}} = 3.75$ versus $M_{\text{prev}} = 3.13$, $t(65) = 2.03$, $p < 0.05$) and purchase intention ($M_{\text{prom}} = 3.56$ versus $M_{\text{prev}} = 2.63$, $t(65) = 2.67$, $p < 0.05$) for the apartment A. Prevention focused subjects on the other hand, had higher evaluation ($M_{\text{prev}} = 4.05$ versus $M_{\text{prom}} = 3.29$, $t(65) = -2.48$, $p < 0.05$) and purchase intention ($M_{\text{prev}} = 3.58$ versus $M_{\text{prom}} = 2.56$, $t(65) = -2.95$, $p < 0.01$) for the apartment B. Findings therefore fully support hypotheses 1 and 2. Cell means are shown in Table 2 The interaction effect for purchase intention is shown in Figure 1.

<Insert Table 2 here>

<Insert Figure 1 here >

Overall Discussion

Results from the current study support the hypotheses that promotion (prevention) focused individuals indeed prefer imagery (analytical) attributes in their decision making, even when they were pitched as mixed attributes with opposing valence. Promotion focused people seemed to focus on positive imagery attributes, while overlooking any negative analytical attributes. Similarly, prevention people were mainly influenced by positive analytical attributes, while overlooking negative imagery attributes. The interaction between regulatory focus and mixed attributes further influenced attitude and purchase decision for the showcased product.

The findings contribute to the theory of regulatory focus, and address call for research from scholars like Yi and Baumgartner (2008). The regulatory focus literature has shown that in order to ensure a desired end state, both promotion and prevention focus can shift between risky and risk averse strategy. However, the current work argues that perceptions of

impediment to goal pursuit is important. Both promotion (prevention) system are focused on achieving their end state of advancement or security, and in the process they adopt a strategy that ensure achievement of these goals. The current findings show that imagery features help to sustain a promotion focus and cater to advancement goals, while in the process negative analytical features may be ignored as they seem relatively secondary to goal pursuit. This extends earlier findings of Roy and Phau (2014), who show that promotion focus in comparison to their counterparts prefer imagery attributes in decision making. Similarly, prevention focus may not equally respond to all negative stimuli in the environment as extant research claims (Scholer *et al.*, 2008). As long as perceptions of safety and security are not compromised, the prevention system may ignore certain attributes, e.g. negative imagery, while focusing on attributes that help to prevent loss. The findings, therefore also extend claims regarding prevention system's preference for analytical attributes (Roy and Phau, 2014).

The current work addresses gaps in imagery literature as well. Although the concept of mixed attributes was demonstrated in the early work of Keller and McGill (1994), extant literature in recent times has predominantly focused on studying positively valenced imagery and analytical attributes only. The current work therefore addresses this gap by studying consumer responses to mixed attributes, albeit in the context of regulatory focus. Further, scholars like Bolls and Muehling (2007) have recommended more research to understand product responses in relation to imagery attributes. The current work addresses this call and extends current state of knowledge by highlighting the role of mixed imagery (analytical) attributes in product persuasion.

The findings have managerial implications as well. In real life products can possess both imagery and analytical attributes that have opposite valence. For example, a car might combine a feature like sunroof (capable of generating mental imagery) with less than desired

warranty system (analytical attribute). Similarly, a car might have a desirable warranty system, but feature a sunroof with minor leakage issues. Our findings regarding differential attitude towards mixed valenced attributes can inform positioning, segmentation and advertising strategy.

A product having a strong imagery feature (e.g., a sunroof) can form the basis for positioning, while a relatively weak analytical feature (e.g., less than desired warranty) can be downplayed, while promoting the product to people with a specific regulatory orientation. For example, for a first time car buyer who is expected to be more promotion focused (a significant advancement in life), a salesperson can highlight the imagery feature. Similarly, for the purchaser of a luxury car where such imagery processing is pursued (Keller and McGill, 1994), an imagery based positioning should be beneficial. On the other hand, for a buyer who is focused on a safe family car, and likely to be more prevention oriented, the marketer might benefit from highlighting the analytical feature.

Translated to the case of advertisement, this means that product ads can play on positive imagery (analytical) features while targeting promotion (prevention) people. Scholars argue that a regulatory state can be triggered by environmental cues like product advertisements (Labroo and Lee, 2006). For example, a shampoo ad showing silky hair can trigger promotion focus, while a vitamin ad focusing on disease prevention can trigger prevention focus (Labroo and Lee, 2006). Matching the triggered regulatory focus with another advertisement that sustains it, leads to fluent processing (Labroo and Lee, 2006). Based on this Roy and Phau (2014) suggest that an imagery (analytical) ad benefits from higher evaluation if it follows the shampoo (vitamin) ad that has already invoked promotion (prevention) focus in viewers. The current work extends this, and we suggest that for the imagery (analytical) ad that follows, a promotion (prevention) system may focus only on the

positive imagery (analytical) feature, and may completely overlook the negative analytical (imagery) feature, resulting in positive target brand evaluations.

Findings from this work can also be of particular interest to used car and house markets, where occurrence of such mixed attributes can be common (e.g., a house having bright hallways but old appliances). The current findings can also be relevant for housing market based in different suburbs, where houses may have different features. For example, a suburb can boast of great waterfront properties (imagery attribute) but homeowners need to purchase an expensive home insurance, that includes wind and flood cover (analytical attribute). The converse of this can also be true, i.e. a suburb without waterfront views but cheaper home insurance due to low risk. Real estate marketers may apply our findings by delving into the motivations of consumers buying such properties. If a consumer is buying a home with major objectives like enjoying the view or entertaining guests (a promotion motive of nurturance), he may ignore the associated risks and insurance costs. On the other hand, if the motive is to stay away from potential hazard like flood (a prevention focus to ensure safety), these people may prefer suburbs with ordinary views (e.g., of other houses).

Limitations and future research

The current study addresses a niche area, as to how people with different regulatory foci will respond to imagery (analytical) attributes with different valence. In the current study, the actual mechanism underlying the process has not been studied. For example, it is not clear whether promotion (prevention) system overweighs attributes that appeal to them while ignoring negative attributes that does not appeal. Future study may look at some of these mediating mechanisms. Future studies may also look at replicating and extending the current findings, with different product stimuli and consumer samples to enhance generalizability.

Conclusion

Regulatory focus can influence the choice of imagery and analytical attributes in product decisions (Roy and Phau, 2014). While extant research supports this, new findings from regulatory focus literature predict that consumers might be sensitive to mixed valence attributes, and can further change their product decision strategy, especially if these attributes imply goal impediment. Against this backdrop, the current work shows that as long as certain attributes like positive imagery (analytical) can service the promotion (prevention) goal of advancement (safety), the presence of negative analytical (imagery) attributes can be overlooked in product decision making.

References

- Baumeister, R. F., Bratslavsky, E., Finkenauer, C. and Vohs, K. D. (2001), "Bad is stronger than good", *Review of General Psychology*, Vol. 5 No. 4, pp. 323-70.
- Bolls, P. D. and Muehling, D. D. (2007), "The effects of dual-task processing on consumers' responses to high and low-imagery radio advertisements", *Journal of Advertising*, Vol. 36 No. 4, pp. 35-47.
- Chen, H., Ng, S. and Rao, A. R. (2005), "Cultural differences in consumer impatience", *Journal of Marketing Research*, Vol. 42 No. 3, pp. 291-301.
- Chernev, A. (2004), "Goal-attribute compatibility in consumer choice", *Journal of Consumer Psychology*, Vol. 14 No. 1, pp. 141-150.
- Chowdhury, M.M.I., Olsen, D. G. and Pracejus, J. W. (2008), "Affective responses to print images in advertising: affect integration in a simultaneous presentation context", *Journal of Advertising*, Vol. 37 No. 3, pp. 7-18.
- De Bock, T. and Van Kenhove, P. (2010), "Consumer ethics: the role of self-regulatory focus", *Journal of Business Ethics*, Vol. 97 No. 2, pp. 241-255.
- Escalas, J. E. (2004), "Imagine yourself in the product," *Journal of Advertising*, Vol. 33 No. 2, pp. 37-48.
- Friedman, R. S., Förster, J. and Denzler, M. (2007), "Interactive effects of mood and task framing on creative generation", *Creativity Research Journal*, Vol. 19 No. 2-3, pp. 141-62.
- Higgins, E. T., Idson, L. C., Freitas, A. L., Spiegel, S., & Molden, D. C. (2003). Transfer of value from fit. *Journal of personality and social psychology*, 84(6), 1140.
- Higgins, E. T. (1997), "Beyond pleasure and pain", *American Psychologist*, Vol. 52 No. 12, pp. 1280-1300.
- Keller, P.A. and McGill, A.L. (1994), "Differences in the relative influence of product attributes under alternative processing conditions: attribute importance versus attribute ease of imaginability", *Journal of Consumer Psychology*, Vol. 8 No. 1, pp. 29-49.
- Kim, D. H. and Sung, Y. (2013), "Gucci versus old navy: interplay of brand personality and regulatory focus in advertising persuasion", *Psychology & Marketing*, Vol. 30 No. 12, pp. 1076-1087.
- Labroo, A. A. and Lee, A. Y. (2006), "Between two brands: a goal fluency account of brand evaluation", *Journal of Marketing Research*, Vol. 43 No. 3, pp. 374-385.
- Lee, A. Y. and Aaker, J. L. (2004), "Bringing the frame into focus: the influence of regulatory fit on processing fluency and persuasion", *Journal of Personality and Social Psychology*, Vol. 86 No. 2, pp. 205-218.
- MacInnis, D. J. and Price, L. L. (1987), "The role of imagery in information processing: review and extensions", *Journal of Consumer Research*, Vol. 13 No. 4, pp. 473-91.

- Mani, G. and MacInnis, D. J. (2001), *Imagery Instructions, Imagery Processes and Visual Persuasion*, in Advertising and Consumer Psychology, R. Batra and O. Scott, eds., Lexington, MA.
- Motyka, S., Grewal, D., Puccinelli, N. M., Roggeveen, A. L., Avnet, T., Daryanto, A., de Ruyter, K. and Wetzels, M. (2014), "Regulatory fit: a meta-analytic synthesis", *Journal of Consumer Psychology*, Vol. 24 No. 3, pp. 394-410.
- Petrova, P. K. and Cialdini, R. B. (2008), "Evoking the Imagination as a Strategy of Influence," in Haugtvedt, C. P., Herr, P. M. and Kardes, F. R. (Ed.), *Handbook of Consumer Psychology*, Mahwah, NJ, pp. 505–23.
- Petrova, P. K. and Cialdini, R. B. (2005), "Fluency of consumption imagery and the backfire effects of imagery appeals", *Journal of Consumer Research*, Vol. 32 No. 3, pp. 442–52.
- Pham, M. T. and Avnet, T. (2009), "Contingent reliance on the affect heuristic as a function of regulatory focus", *Organizational Behavior and Human Decision Processes*, Vol. 108 No. 2, pp. 267–278.
- Pham, M. T. and Avnet, T. (2004), "Ideals and oughts and the weighting of affect versus substance in persuasion", *Journal of Consumer Research*, Vol. 30 No. 4, pp. 503–518.
- Roy, R. and Phau, I. (2014), "Examining regulatory focus in the information processing of imagery and analytical advertisements", *Journal of Advertising*, Vol. 43 No. 4, pp. 371-381.
- Roy, R. and Ng, S. (2012), "Regulatory focus and preference reversal between hedonic and utilitarian consumption", *Journal of Consumer Behaviour*, Vol. 11 No. 1, pp.81-88.
- Scholer, A. A. and Higgins, E. T. (2013), "Dodging monsters and dancing with dreams: success and failure at different levels of approach and avoidance", *Emotion Review*, Vol. 5 No. 3, pp. 254-58.
- Scholer, A. A., Stroessner, S. J. and Higgins, E. T. (2008), "Responding to negativity: how a risky tactic can serve a vigilant strategy", *Journal of Experimental Social Psychology*, Vol. 44 No. 3, pp. 767-74.
- Sengupta, J. and Zhou, R. (2007), "Understanding impulsive eaters' choice behaviors: the motivational influences of regulatory focus", *Journal of Marketing Research*, Vol. 44 No. 2, pp. 297–308.
- Shao, W., Grace, D. and Ross, M. (2015), "Self-regulatory focus and advertising effectiveness", *Marketing Intelligence & Planning*, Vol. 33 No. 4, pp. 612-632.
- Sujan, M. (1985), "Consumer knowledge: effects of evaluation strategies mediating consumer judgments", *Journal of Consumer Research*, Vol. 12 No. 1, pp. 31–45.
- Thompson, D. V. and Hamilton, R. W. (2006), "The effects of information processing mode on consumers' responses to comparative advertising", *Journal of Consumer Research*, Vol. 32 No. 4, pp. 530 – 40.

- Yi, S. and Baumgartner, H. (2008), "Motivational compatibility and the role of anticipated feelings in positively valenced persuasive message framing," *Psychology & Marketing*, Vol. 25 No. 11, pp. 1007–1026.
- Zhang, Y. and Mittal, V. (2007), "The attractiveness of enriched and impoverished options: Culture, self-construal, and regulatory focus," *Personality and Social Psychology Bulletin*, Vol. 33 No. 4, pp. 588-596.
- Zhao, G. and Pechmann, C. (2007), "The impact of regulatory focus on adolescents' response to antismoking advertising campaigns", *Journal of Marketing Research*, Vol. 44 No. 4, pp. 671-687.
- Zou, Xi, Scholer, A. A. and Higgins, E. T. (2014), "In pursuit of progress: promotion motivation and risk preference in the domain of gains", *Journal of Personality and Social Psychology*, Vol. 106 No. 2, pp. 183-201.

Table 1: Mixed valence for imagery and analytical product attributes

Valence/ Attribute types	Positive	Negative	Mixed
Imagery	<p>Hallways: The apartment has hallways that are wide and brightly lit.</p> <p>Flooring: The hardwood flooring has been recently sanded and varnished with a shining finish.</p>	<p>Hallways: The apartment has hallways that are narrow and dark.</p> <p>Flooring: The hardwood flooring is in moderately good condition with some areas being worn and dull.</p>	<p>Hallways: The apartment has hallways that are wide and brightly lit.</p> <p>Flooring: The hardwood flooring has been recently sanded and varnished with a shining finish.</p> <p>Security level: The overall security level is below average.</p> <p>Condition of Appliances: The condition of the appliances is approximately 6 to 20 years old.</p>
Analytical	<p>Security level: The overall security level is above average.</p> <p>Condition of Appliances: The appliances in the apartment are new</p>	<p>Security level: The overall security level is below average.</p> <p>Condition of Appliances: The condition of the appliances is approximately 6 to 20 years' old</p>	<p>Hallways: The apartment has hallways that are narrow and dark.</p> <p>Flooring: The hardwood flooring is in moderately good condition with some areas being worn and dull.</p> <p>Security level: The overall security level is above average.</p> <p>Condition of Appliances: The appliances in the apartment are new</p>

	Attitude		Purchase intention	
	Apartment A	Apartment B	Apartment A	Apartment B
Promotion	3.75 (1.1) n = 18	3.29 (.93) n = 16	3.56 (1.42) n = 18	2.56 (.63) n = 16
Prevention	3.13 (.76) n = 16	4.05 (.74) n = 19	2.63 (.96) n = 16	3.58 (.84) n = 19

Table 2: Attitude and intention as a function of regulatory focus and mixed attributes

Note: Figures in parentheses denote standard deviation

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Figure 1: Purchase intention as a function of regulatory focus and mixed attributes

