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Hannah H. CHANG

Singapore Management University, hannahchang@smu.edu.sg

Iris W. HUNG

Fudan University

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Mirror, Mirror on the Retail Wall: Self-focused Attention Promotes Reliance on Feelings in
Consumer Decisions

Hannah H. Chang
Associate Professor of Marketing
Lee Kong Chian School of Business
Singapore Management University
50 Stamford Road
Singapore 178899
Tel: (+65) 68280722
hannahchang@smu.edu.sg

Iris W. Hung
Professor of Marketing
Fudan School of Management
Fudan University
670 Guo Shun Road
Shanghai, China
Tel: (+86) 25011186
iris.hung@fudan.edu.cn

Hannah H. Chang (e-mail: hannahchang@smu.edu.sg) is Associate Professor of Marketing at the Lee Kong Chian School of Business, Singapore Management University, and Academic Fellow at the Institute on Asian Consumer Insight in Singapore. Iris W. Hung (e-mail: iris.hung@fudan.edu.cn) is Professor of Marketing at Fudan School of Management, Fudan University. The authors contributed equally to this research. The authors gratefully acknowledge the very constructive input of the editorial team on earlier versions of this research. The authors also thank the reviewers of Hung and Wyer (2011) and Robert S. Wyer for encouraging the authors to pursue the core idea of the present research. The research was supported by the Singapore Ministry of Education (MOE) Academic Research Fund (AcRF) Tier 1 grant, 13-C207-SMU-006, to the first author, and the Shanghai Institutions of Higher Learning grant, and the National Natural Science Foundation of China grant, 71772043, to the second author.

The authors propose that increased attention that consumers pay to themselves promotes relative reliance on affective feelings in making decisions. This hypothesis was tested in a variety of consumption domains and decision tasks, including real-life, consequential charitable donations. Consistent support from five experiments with more than 1,770 participants shows that (a) valuations of the decision outcome increase when consumers with high (low) self-focus adopt a feeling-based (reason-based) strategy. The hypothesized effect of self-focus on relative reliance on feelings in decision making is (b) moderated by self-construal. Further, greater attention to the self (c) increases evaluations of products that are affectively superior but (d) decreases evaluations of products that are affectively inferior, and (e) exerts little influence on evaluations of products that are less affective in nature (i.e., utilitarian products). Finally, self-focused attention (f) amplifies a decision bias typically attributed to feeling-based judgments, known as scope-insensitivity bias, in a hypothetical laboratory study and in a real-life, consequential charitable donation. Theoretical and marketing implications are discussed.

Keywords: affect, feeling, judgment, self, self-focus

Various cues in the decision environment can encourage consumers to direct their attention to the self. For example, retail environments often incorporate cues such as reflective surfaces (e.g., mirrors), self-referential messages, and communications with a personalized greeting (e.g., in small talk with salespeople). The act of signing one's name can prime self-identity (Kettle and Häubl 2011). Moreover, advertisements that encourage consumers to retrieve autobiographical memories—a special form of self-referencing—likely increase attention to the self and decrease attention to the environment (Sujan, Bettman, and Baumgartner 1993). Consumers in today's world have a pervasive tendency to pay attention to the self. Does the tendency to self-focus influence consumers' behavior? If so, how?

Extant research has established self-focused attention as an important determinant of attitude and behavior. For example, people who are self-focused tend to show more resistance to persuasion (Hormuth 1982; Scheier, Buss, and Buss 1978), behave in line with their central values (Verplanken and Holland 2002), and are motivated to reduce any discrepancy between their current and standard behavior (Carver and Scheier 1985). More recently, research in marketing has begun to look at how self-focused attention affects various aspects of consumption behavior, such as product evaluation (Hung and Wyer 2011), choice (Goukens, DeWitte, and Warlop 2009), satisfaction (Pham et al. 2010), and word-of-mouth communication (Barasch and Berger 2014). This stream of research has largely emphasized the effect of self-focused attention on social and cognitive styles of processing, such as mental representation or imagery (Hung and Wyer 2011), ease of preference formation (Goukens, DeWitte, and Warlop 2009), locus of outcome attribution (Pham et al. 2010), and content of communications (Barasch and Berger 2014). Less is known about its effect on consumers' decision-making process, particularly affective style of processing.

In this research, we investigate the impact of self-focused attention on consumers' relative reliance on affective feelings in making judgments and decisions. Consumer choices are often driven by affective considerations, whether prompted by product characteristics, the decision-maker's chronic tendencies, or a marketer's advertising campaign. For example, hedonic products, such as chocolates and spas, tend to be evaluated based on their affective criteria compared to utilitarian products, such as microwave ovens and physical therapies. Some consumers are chronically more likely to base their decisions on feelings than reasons (Hsee et al. 2015). Many advertisements encourage consumers to rely on their feelings, as seen in the slogan used in Coca-Cola's 2016 product campaign, "Taste the Feeling," and in Bernie Sanders' 2016 U.S. presidential campaign, "Feel the Bern." It is therefore important to understand when and how affective feelings are relied on in consumers' decision-making process. We hypothesize that self-focused attention increases consumers' relative reliance on affective feelings in decision making. We make this proposition based on the conceptual rationale that self-focus emphasizes personal information during decision making, and feelings tend to be perceived as particularly personal and idiosyncratic.

THEORETICAL BACKGROUND

Influence of Self-focused Attention on Decision Making

People differ in their tendency to direct attention toward or away from the self (Duval and Wicklund 1972). This tendency may be due to their chronic trait (i.e., self-consciousness; Fenigstein, Scheier, and Buss 1975) or can be triggered by the situation. Any stimulus that directs attention back to the self is assumed to be capable of activating self-focused attention

(Gibbons 1990), which has been defined as “an awareness of self-referent, internally generated information that stands in contrast to an awareness of externally generated information derived through sensory receptors” (Ingram 1990, p. 156) and involves public and private dimensions (Fenigstein, Scheier, and Buss 1975). A public dimension of self-focus emphasizes an awareness of the self as a social object and situates the self in a third-person perspective. When people attend to their public self (e.g., in the presence of a camcorder or an outside observer), they make choices that conform to social expectations (Ratner and Kahn 2002) and feel self-conscious emotions more intensely (Hung and Mukhopadhyay 2012). In contrast, a private dimension of self-focus emphasizes an awareness of the inner and individual aspects of the self from one’s personal perspective (Carver and Scheier 1981). When people attend to their private self (e.g., in the presence of a mirror or self-referential messages), they are more likely to seek out information to help them evaluate their own behavior (Scheier and Carver 1983). For example, they are more likely to self-regulate their attitude and behavior with respect to their behavioral standards, by maintaining consistency between the past and the present attitudes and behaviors. They also show higher resistance to persuasion (Hutton and Baumeister 1992). This is because self-focused individuals are aware of their behavioral standards and are motivated to reduce disparities between their attitudes and behaviors (Pryor et al. 1977). In the present research, we focus on contextually induced private self-focus and use the terms “self-focus” and “self-focused attention” interchangeably.

An emerging stream of research in marketing has started to examine the impact of self-focused attention on consumption behavior, such as product evaluation (Hung and Wyer 2011), choice (Goukens, Dewitte, and Warlop 2009), satisfaction (Pham et al. 2010), and word-of-mouth behavior (Barasch and Berger 2014). These studies demonstrate that self-focused

attention affects consumers' processing of social and cognitive information, with downstream consequences of these processing differences on consumer behavior. For example, self-focused consumers are more likely to imagine themselves using the product in its evaluation (Hung and Wyer 2011) and to rely on preexisting attitudes and beliefs in making choices (Goukens, Dewitte, and Warlop 2009). They tend to attribute service outcome to the self in determining their level of satisfaction with the service provider (Pham et al. 2010) and share more self-presenting content in communications (Barasch and Berger 2014) compared to consumers who are not self-focused. To the best of our knowledge, previous research has yet to examine the impact of self-focus on consumers' relative reliance on affective feelings in decision making. The present research examines whether and how differential amount of self-focus impact consumers' relative reliance on feelings in decision making. To do so, we first turn to a conceptual review of the impact of affective feelings in decision making.

Affective Feelings and Decision Making

Consumers often form judgments and make decisions on the basis of affective feelings that they experience at the time of judgment. They evaluate products more favorably, are more likely to purchase, and are willing to pay more when they experience pleasant feelings than when they experience unpleasant feelings. These feelings may be genuine affective reactions to the target (i.e., "integral affect"; Bodenhausen 1993), such as the pleasant feelings upon seeing a luscious chocolate cake, or the unpleasant feelings upon seeing a spider. Because consumers tend to assume that any feelings they have are reactions to whatever is in the focus of their attention (Clore et al. 2001; Higgins 1998), they are often unaware that these feelings may instead be incidental moods misattributed to the target (i.e., "incidental affect"; Schwarz and Clore 2007), such as upbeat mood on a sunny day or gloomy mood on a rainy day. Decision making based on

affective feelings has distinct properties compared to decision making based on cognitive reasoning. For example, compared to reason-based decisions, feeling-based decisions tend to be more automatic (Zajonc 1980), more consistent interpersonally (Pham et al. 2001) and intrapersonally (Lee, Amir, and Ariely 2009), and more insensitive to numerical quantities—a phenomenon known as scope-insensitivity (Hsee and Rottenstreich 2004).

Prior research identifies several factors that increase the relative reliance on feelings in making judgments and decisions (see Greifeneder, Bless, and Pham 2011 for a review). For example, feelings are more likely to enter judgments when people have experiential goals (e.g., choosing a novel to read during a vacation) than when they have instrumental goals (e.g., assessing the usefulness of tax-preparation manuals; Pham 1998). In addition, feelings are more likely to be used as an evaluative basis for hedonic products (e.g., jeans) than for utilitarian products (e.g., backpacks; Adaval 2001). This is because feelings are perceived to be more informative in evaluating the potential fulfillment of hedonic/experiential goals than that of utilitarian/ instrumental goals (Pham 1998). Hedonic products provide primarily experiential consumption, fun, and pleasure (Dhar and Wertenbroch 2000); therefore, they tend to be evaluated on the basis of the affect elicited by their physical attractiveness, taste, or other experiential features. Utilitarian products, on the other hand, are instrumental or functional (Dhar and Wertenbroch 2000); therefore, they tend to be evaluated on the basis of more objective, functional features, and feelings elicited by these features are minimal. Due to this relatively more feeling-based approach to hedonic products, evaluations are more likely to incorporate incidental mood states for hedonic products than for utilitarian products (Adaval 2001). These studies demonstrate that affective feelings can serve information functions: they are more likely

to enter judgments when they appear to be informative for the judgment at hand (Schwarz and Clore 2007).

Recent studies found that affective feelings are relied on more in decisions with increased psychological proximity, such as decisions whose outcome occurs in the near future as opposed to the distant future (Chang and Pham 2013; Pronin, Olivola, and Kennedy 2008). In addition, the way consumers define themselves in relation to others (i.e., self-construal) influences the relative reliance on feelings in decision making. Independent consumers, who define the self as being separated from others, rely more on affective feelings than cognitive reasoning compared to interdependent consumers, who define the self as being connected to others; this is because interdependents have a greater need to justify their decisions to others (Hong and Chang 2015). Building on these research efforts, the current research identifies the role of another construct—consumers' self-focused attention—in relative reliance on feelings in decision making.

The Impact of Self-focused Attention on Relative Reliance on Affect in Decision Making

We posit that self-focused attention would promote a greater reliance on affective feelings in making judgments and decisions. Specifically, self-focused attention should encourage consumers to rely on self-aspects considered more personal and idiosyncratic, which would consequently increase their tendency to rely on feelings in decision making. First, prior research found that people high in dispositional self-focused attention tend to consider personal aspects of the self more important (Cheek and Briggs 1982), behave consistently with their privately endorsed attitudes (Scheier, Buss, and Buss 1978), and regulate their behavior according to personal and egocentric goals (Carver and Scheier 1985). This is because dispositional self-focus, known as self-consciousness, is associated with processes involved in self-referent encoding (Hull and Levy 1979) and activation of self-knowledge (Hull et al.

1988). It has been further proposed that people high in self-consciousness “attend more to the unshared idiosyncrasies of their particular experiences” (Buss 1980, p. 122). These findings collectively support the notion that self-focused attention should be associated with the tendency to rely on more personal self-aspects in decision making.

Second, affective feelings tend to convey information that uniquely summarizes one’s personal assessment of the evaluative target. After all, feelings are internal information available only to the self who experiences the feelings and not to an outside observer (Damasio 1995, 1999; Izard, Kagan, and Zajonc 1984). Hence, compared to cognitive reasoning, affective feelings tend to be perceived as particularly subjective and idiosyncratic (Cacioppo and Gardner 1999). In line with this view, several theorists suggest a close connection between feelings and the self. According to Solomon (1993), feelings are “a basic judgment about our Selves and our place in our world” (p. 126). Judgments related to feelings and emotions are therefore “self-involved...the judgments and objects that constitute our emotions are those which are especially important to us, meaningful to us, concerning matters in which we have invested our Selves” (Solomon 1993, p. 127; see also de Sousa 1990). This view converges with Zajonc’s (1980) assertion that affective judgments tend to describe information about the self. Other theorists suggest that there may be a neurobiological basis for the close connection between feelings and the self. Damasio (1994, 1999) theorizes that feelings and emotions play an important role in decision making, particularly in decisions that relate directly to the self. This may be due to “the neural basis of feelings and of self [having] a shared neurobiological stem” (Damasio 2003, p. 253; see also Craig’s [2010] notion of “the sentient self”). Therefore, to the extent that self-focus increases the emphasis on personal aspects, and that feelings are considered to be personal

information, we hypothesize that consumers with high self-focus would rely more on their affective feelings in making decisions than would consumers with low self-focus.

Preliminary support for our hypothesis comes from studies showing a greater influence of incidental moods when consumers are likely to focus on themselves than when they are likely to focus on the external environment (e.g., evaluative objects or other people). For example, Gorn, Pham, and Sin (2001, experiment 2) found that incidental mood had a greater influence on evaluations when participants made self-referential evaluations (e.g., “I like the ad”) than when they made object-referent evaluations (e.g., “The ad is good”). Similarly, consumers are more likely to rely on their feelings in forming a decision when the decision is made for the self than when it is made for others (Forgas 1991; Hsee and Weber 1997; Loewenstein et al. 2001). Forgas (1991) found a significant effect of preexisting mood on participants’ choice of partner when they were choosing a team member for themselves but not when they were choosing a team member for someone else. Taken together, these results provide indirect support for our hypothesis that self-focused attention increases the relative reliance on feelings in making decisions.

Overview of the Experiments

We test the hypothesis that self-focused attention promotes a reliance on affective feelings in consumer judgments and decisions in five experiments with more than 1,770 participants. Experiment 1 examines our basic prediction. Extant research has shown that when consumers adopt a decision strategy that is consistent with their goal orientation, the value derived from the experience of “fit” between consumers’ goal orientation and decision strategy can be transferred to the valuation of the decision outcome (Higgins et al. 2003; Hong and Chang 2015, experiment 3). For example, Higgins et al. (2003) asked participants to choose between a

coffee mug and a pen using an eagerness or a vigilance strategy; the decision strategy would either fit or not fit with their motivational orientation. Although all participants chose the mug (the dominant option), they were willing to pay more for the mug when they had chosen it with a decision strategy that fit their underlying motivational orientation than with a strategy that did not fit. Therefore, if high (vs. low) self-focus is indeed associated with feeling-based decision strategy, we should observe increased valuations of the decision outcome when high (vs. low) self-focused consumers adopt a feeling-based decision strategy.

Experiment 2 investigates an important boundary condition of the effect of self-focused attention: the effect should depend on consumers' self-construal. One of the main conceptual rationales underlying our hypothesis is that self-focused attention should encourage the reliance on self-aspects considered more personal and idiosyncratic. However, consumers might differ in their definitions of the self (Markus and Kitayama 1991). An independent self-construal defines the self as being more differentiated from others; an interdependent self-construal defines the self as being more connected to others. It has been shown that directing consumers' focus to the self activates self-presentational goals for both chronic independent and interdependent self-construals, but their self-presentational goals differ (Lalwani and Shavitt 2009, study 3). If self-focus emphasizes consumers' self-construal (Markus and Kitayama 1991) and that an independent (interdependent) self-construal promotes feeling-based (reason-based) decision making (Hong and Chang 2015), then heightened self-focused attention should increase the reliance on feelings under independent self-construal but not under interdependent self-construal.

Experiment 3 explores another boundary condition of the hypothesized effect. As discussed in our conceptualization, feelings tend to be perceived as subjective and idiosyncratic (Cacioppo and Gardner 1999) and shares a close connection with the self (Damasio 2003;

Solomon 1993). Feelings should therefore be considered more informative for the judgment at hand when consumers are self-focused than when they are not. If our hypothesized effect is due to the greater perceived information value of feelings under heightened self-focus attention, the effect of self-focus should depend on the informativeness of feelings for the judgment at hand. Past studies found that feelings are perceived to be more informative in evaluating the potential fulfillment of hedonic/experiential goals than utilitarian/instrumental goals (Adaval 2001; Pham 1998). Building on this prior finding, we posit that self-focus would increase the reliance on feelings in judgments when feelings are more informative (e.g., when evaluating hedonic products) but not when they are less informative (e.g., when evaluating utilitarian products). Consistent with this theorizing, experiment 3 finds that self-focus (a) increases consumers' evaluations of a product described as superior in hedonic attributes, but (b) decreases consumers' evaluations of a product described as inferior in hedonic attributes. Self-focus (c) does not influence consumers' evaluations of a product described in functional attributes.

The final two experiments test the effect of self-focus on consumer valuations. Past research has shown that when making valuation judgments, consumers can be surprisingly insensitive to the quantity of the objects in question—a phenomenon known as scope-insensitivity. Scope-insensitivity is generally attributed to the operation of affect in judgment (see Chang and Pham 2018; Hsee and Rottenstreich 2004). We examine the effect of self-focus on consumers' relative reliance on feelings by observing scope-insensitivity in consumer valuations, in a hypothetical scenario (experiment 4) and in a real-life, consequential charitable donation (experiment 5).

EXPERIMENT 1: FIT BETWEEN SELF-FOCUS AND FEELING-BASED STRATEGY

Prior research has shown that self-focused attention facilitates the processing of self-relevant information, including beliefs, attitudes, affect, and other characteristics of the self (Gibbons 1990; Hull and Levy 1979; Scheier and Carver 1977). These prior studies examined the effect on affect or cognition independently; it is possible that self-focused attention increases not just a reliance on affective feelings but also a reliance on cognitive reasoning. If this is the case, then feelings might not be considered any more personally relevant than cognitions, contrary to our conceptualization. In this experiment, we examine two competing theoretical possibilities: (a) whether self-focused attention would increase the reliance on affective feelings in particular, or (b) whether self-focused attention would increase the reliance on affective feelings and on cognitive reasoning.

The main objective of experiment 1 is therefore to test the effect of self-focused attention on relative reliance on affective feelings versus cognitive reasoning in decision making. We directly varied the decision process that participants use in decision making. Participants whose self-focused attention was varied in a separate task were explicitly instructed to follow a specific strategy in making their decisions. Half the participants were instructed to rely on their feelings (feeling-based strategy); the remaining half were instructed to rely on cognitive reasoning (reason-based strategy). If self-focused attention promotes a greater reliance on feelings in particular, valuation of the chosen option would be higher for participants who are more self-focused when they adopt a feeling-based but not a reason-based decision strategy; this suggests an interaction effect between self-focus and decision strategy. However, if self-focused attention encourages reliance on any internal reactions—whether feelings or cognitions—in decision making, valuation of the chosen option should be higher for participants who are more self-

focused irrespective of feeling-based or reason-based decision strategy, suggesting a main effect of self-focused attention on participants' valuation of the chosen option.

Method

Participants and design. A total of 173 undergraduate students (average age = 21.18; women = 52.6%) from a university in Singapore participated in the study in exchange for course credit. They were randomly assigned to one of the four conditions of a 2 (self-focused attention: high vs. low) \times 2 (decision strategy: feeling-based vs. reason-based) between-subjects design.

Procedure. Self-focused attention was manipulated using a well-established operationalization (Fenigstein and Levine 1984; Pyszczynski, Holt, and Greenberg 1987). Under the pretense that the study aimed to examine university students' writing styles, participants were asked to spend at least 10 minutes writing a short story, using as many words as possible from a list of 20 specific words. In the high-self-focus condition, participants were asked to write a story about themselves (making oneself the protagonist), and 5 of the 20 words given were designed to induce self-focus (e.g., "I," "myself"). In contrast, in the low-self-focus condition, participants were asked to write a story about a well-known public figure (making that person the protagonist), and 5 of the 20 provided words were designed to induce external focus (e.g., "she," "herself"). The remaining 15 words were identical across the two conditions (e.g., "ocean," "afternoon"). (Separate posttests established the effectiveness of this self-focus manipulation with our participant population; see Web Appendix A.)

After the self-focused attention manipulation, participants were given a modified version of the apartment choice task from Hong and Chang (2015, experiment 3). They were asked to imagine that they were going to rent a one-bedroom apartment and were shown descriptions of two apartments in the same price range. Before they saw the apartment options, participants were

asked to use a specific decision strategy in making a choice between the two apartment options. Half the participants were instructed to rely on their feelings; they were told to make their decisions based on “how [they] feel about each of the options” and to “focus on [their] emotions and feelings toward each option.” In contrast, the other half were instructed to rely on their reasoning; they were told to make their decisions “based on [their] reasoning” and to “focus on the logical reasoning of the pros and cons of each option” (Hong and Chang 2015; Pham et al. 2001). All participants were then shown the two apartment options. The apartments were described with six attributes, three of which were designed to operationalize affective dimensions (i.e., view from the apartment, amount of sunlight, and look of the interior décor [as shown in a picture]), while three attributes were designed to operationalize functional dimensions (i.e., apartment size, access to public transportation, and amount of closet space). Apartment B dominated apartment A irrespective of the decision strategy used. Specifically, apartment B was superior to apartment A on four attributes (view from the apartment, look of the interior décor [as shown in a picture], apartment size, and access to public transportation) and identical to apartment A on the remaining two attributes (amounts of sunlight and closet space). The modified design helped us keep participants’ choices constant, ensuring that participants’ valuations of the chosen apartment were comparable. Participants were asked to choose between the apartments. As the main dependent measure, they then indicated the maximum monthly rent (in Singapore dollars) they would be willing to pay (WTP) for the chosen apartment.

Manipulation checks for decision strategy were collected. After participants provided their WTP, they were asked to indicate how they made their apartment decision on four items from 1 (strongly disagree) to 7 (strongly agree). Two items assessed the extent to which participants relied on their feelings in making their decision (e.g., “I made my decision based on

my gut feelings about the options”); the other two items assessed the extent to which participants relied on their cognitive reasoning (e.g., “I made my decision based on the logical reasoning of how good the options are”).

Results

Following previous research (e.g., Higgins et al. 2003), three participants who did not choose the dominant option were excluded from all analyses, leaving 170 observations. Subsequent analyses were based on a 2 (self-focused attention: high vs. low) \times 2 (decision strategy: feeling-based vs. reason-based) between-subjects ANOVA model.

Preliminary analyses. Two indices were created to assess the effectiveness of the decision-strategy manipulation: (a) a feeling-based decision-strategy index by averaging the two items that measured participants’ reliance on feelings in decision making ($r = .68$), and (b) a reason-based decision-strategy index by averaging the two items that measured participants’ reliance on cognitive reasoning in decision making ($r = .69$). Results showed a significant main effect of decision strategy on (a) the feeling-based decision-strategy index such that participants indicated greater reliance on feelings in the feeling-based conditions than in the reason-based conditions ($M_{\text{feeling}} = 5.37$ vs. $M_{\text{reason}} = 4.59$; $F(1, 166) = 14.38$, $p < .001$), and (b) the reason-based decision-strategy index such that participants indicated greater reliance on cognitive reasoning in the reason-based conditions than in the feeling-based conditions ($M_{\text{feeling}} = 5.56$ vs. $M_{\text{reason}} = 6.00$; $F(1, 166) = 8.23$, $p < .01$). Other effects in the models were nonsignificant ($ps > .28$). Overall, these results suggest that our decision-strategy manipulation was successful.

None of the participants guessed the hypothesis correctly. The manipulations did not inadvertently influence participants’ moods across conditions (all $ps > .19$). There was a marginally significant main effect of decision strategy on participants’ self-reported task

involvement ($F(1, 166) = 3.03, p = .08$). Participants in the reason-based conditions reported higher levels of involvement than did participants in the feeling-based conditions ($M_{\text{feeling}} = 5.56$ vs. $M_{\text{reason}} = 6.00$). Other effects in the model remained nonsignificant (both $F_s < 1$).

WTP for apartment rental. Based on the “value-from-fit” effect (Higgins 2000), in this experiment we observe participants’ WTP for the apartment’s rent to infer whether increased self-focused attention would fit with a feeling-based versus reason-based decision strategy. If participants with high versus low self-focus adopt a compatible decision strategy, their valuation for the target option should increase as a result of fit. A 2×2 ANOVA model on participants’ WTP showed that main effects of self-focused attention and decision strategy were nonsignificant ($F_s < 1$). (To correct for skewness, all analyses were conducted with log-transformed WTP; the means provided are in raw numbers for ease of interpretation.) Instead, results revealed a significant interaction between self-focused attention and decision strategy ($F(1, 166) = 7.90, p < .01, \eta_p^2 = .029$). As shown in Figure 1, when participants were instructed to rely on feelings, participants in the high-self-focus conditions were willing to pay more rent than those in the low-self-focus conditions ($M_{\text{high self-focus}} = \text{S\$}1,465.21$ vs. $M_{\text{low self-focus}} = \text{S\$}1,176.34; F(1, 166) = 4.38, p < .04$). Interestingly, when participants were instructed to rely on reasons, participants in the low-self-focus conditions were willing to pay more rent than those in the high-self-focus conditions ($M_{\text{high self-focus}} = \text{S\$}1,157.41$ vs. $M_{\text{low self-focus}} = \text{S\$}1,376.74; F(1, 166) = 3.54, p = .06$). This finding suggests that a reason-based decision strategy was actually more compatible with lower self-focus, though it was not specifically predicted. From a different angle, these results demonstrate that participants in the high-self-focus conditions were willing to pay more rent when they were instructed to rely on their feelings than when they were instructed to rely on their reasons in making their apartment decisions ($M_{\text{feeling}} = \text{S\$}1,465.21$ vs. $M_{\text{reason}} =$

$S\$1,157.41$; $F(1, 166) = 4.71, p < .04$). This finding is consistent with the notion that reliance on feelings in decision making is more compatible with heightened self-focused attention.

[Insert Figure 1 about here]

Discussion

Experiment 1 directly examined the impact of self-focus on affective feelings versus cognitive reasoning. Specifically, we found that a feeling-based decision strategy was more compatible with increased self-focus; we also found that a reason-based decision strategy was more compatible with decreased self-focus, although the latter was not specifically hypothesized. These results are consistent with the interpretation that self-focused attention increases the relative reliance on affective feelings as compared to cognitive reasoning in making decisions.

EXPERIMENT 2: SELF-FOCUS, SELF-CONSTRUAL, AND RELIANCE ON FEELINGS

The main objective of experiment 2 is to test an important boundary condition for the effect of self-focused attention on the relative reliance on affective feelings in decision making. We examine how different definitions of the self—*independent* versus *interdependent* self-construal—may moderate the hypothesized effect. *Independent* self-construal defines the self as being more differentiated from others, whereas *interdependent* self-construal defines the self as being more connected to others. Recent research has shown that independent consumers tend to rely on feelings, whereas interdependent consumers tend to rely on reasoning (Hong and Chang 2015). Therefore, we expected that self-construal would moderate the effect of self-focused attention on relative reliance on feelings in decision making.

In this experiment, we varied participants' self-focused attention and self-construal orthogonally and asked participants to choose between two options: one that is superior on affective dimensions and one that is superior on cognitive dimensions. This testing strategy has been used in previous studies to indicate consumers' relative reliance on integral affect in decision making (e.g., Chang and Pham 2013; Shiv and Fedorikhin 1999). To the extent that self-focus should accentuate one's definition of the self (Markus and Kitayama 1991), we predicted that with independent self-construal, participants would exhibit a greater relative preference for the affectively superior option under high self-focus than under low self-focus. In contrast, with interdependent self-construal, there should be little difference in participants' relative preference between high and low self-focus. This is because interdependents' self-definition encourages the need for decision justification, thereby promoting a relative reliance on cognitive reasoning over affective feelings (Hong and Chang 2015) even under high self-focus.

Method

Participants and design. A total of 177 undergraduate students (average age = 21.21; women = 59%) from a university in Singapore participated in the study in exchange for course credit. They were randomly assigned to one of the four conditions of a 2 (self-focused attention: high vs. low) \times 2 (self-construal: independent vs. interdependent) between-subjects design.

Pretest for the decision-task stimuli. The main objective of this pretest was to verify that participants' relative preference between an affectively superior option and a cognitively superior option can be seen as indicative of consumers' differential reliance on feelings versus cognitive reasoning in decision making. Although this testing strategy has been used in previous research (e.g., Chang and Pham 2013; Shiv and Fedorikhin 1999), we wanted to establish the validity of the stimuli with our participant pool. An independent group of 59 undergraduate

students from the same participant pool were randomly assigned to one of two decision-strategy conditions. Half the participants were asked to use a feeling-based decision strategy, while the remaining half were asked to use a reason-based decision strategy. The decision-strategy instructions were the same as used in experiment 1.

The decision task was adopted from Chang and Pham (2013, experiment 1), with modification to suit our participant population. All participants were shown two apartments described along the same six attributes as in experiment 1. However, in the current experiment, apartment A was designed to be superior on the cognitive dimensions, whereas apartment B was designed to be superior on the affective dimensions. As the main dependent measure, participants were asked to indicate their relative preference between the two apartments from 1 (strongly prefer apartment A) to 7 (strongly prefer apartment B).

Results of the pretest showed that participants in the feeling-based condition were more likely to prefer the affectively superior option ($M = 4.73$) compared to participants in the reason-based condition ($M = 3.59$; $F(1, 57) = 5.05, p < .03$). These results suggest that participants' relative preference between an affectively superior and a cognitively superior option can be seen as indicative of a differential reliance on feeling-based versus reason-based decision strategy.

Procedure. Participants were seated in individual cubicles upon entry to the behavioral laboratory. Self-focused attention was varied unobtrusively through the presence or absence of a mirror, which is a well-established manipulation of private self-focus (Duval and Wicklund 1973). In the high-self-focus condition, a 8.7in.-by-5.9in. mirror was placed on each desk with the following notice: "For another study scheduled later today. Please do not touch the mirror." In the low-self-focus conditions, the mirror setup was not present. All participants were told that they would take part in a series of unrelated studies. In the "first" study," they were asked to read

a story about an ancient warrior who needed to decide whom to put in command of his army. This task is a well-established manipulation of self-construal (e.g., Gardner, Pennington, and Bessenoff 1999; Hong and Chang 2015; Trafimow, Triandis, and Goto 1991). In the independent condition, the warrior considered the benefits for himself and chose the person who was best for the job. In the interdependent condition, the warrior considered the benefits for his family and chose a member of his family for the job. Following previous research, as manipulation checks participants were asked to indicate the extent to which the warrior was thinking about himself and about his family on two separate 7-point scales (1 = not at all; 7 = a lot).

In the “second” study, all participants were asked to imagine that they were going to rent a one-bedroom apartment and were shown descriptions of two apartments in the same price range. The apartment stimuli were identical to those used in the pretest. Apartment A was the cognitively superior option, whereas apartment B was the affectively superior option. Participants indicated their relative preference between the two apartments from 1 (strongly prefer apartment A) to 7 (strongly prefer apartment B), which served as the main dependent measure. Next, they reported how much attention they paid to their feelings on two items (e.g., “I paid much attention to my feelings”; $r = .58$) from 1 (strongly disagree) to 7 (strongly agree). Demand check was collected. As confounding checks, participants’ mood was measured on five 7-point items (e.g., “bad/good,” “unpleasant/pleasant”; $\alpha = .89$). Finally, participants reported basic demographic information such as gender and age.

Results

None of the participants guessed the purpose of the study. Data from two participants who spent an implausibly short time on the decision task were excluded, leaving 175 observations as data for subsequent analyses. All analyses were based on a 2 (self-focused

attention: high vs. low) \times 2 (self-construal: independent vs. interdependent) between-subjects ANOVA model.

Preliminary analyses. To assess the effectiveness of the self-construal manipulation, an index was created by taking the difference between the extent to which the warrior was thinking about himself and about his family. A higher score indicates that participants rated the warrior as thinking more about himself than about his family. A 2×2 ANOVA on the index yielded a significant main effect of self-construal ($F(1, 171) = 75.09, p < .0001$), in which participants in the independent condition indicated that the warrior was thinking more about himself than about his family compared to those in the interdependent condition ($M_{\text{independent}} = 2.38$ vs. $M_{\text{interdependent}} = -.05$). Other effects were nonsignificant ($F_s < 1$). These results suggest that the self-construal manipulation was successful. Additional checks showed that the manipulations did not inadvertently influence participants' moods (all $F_s < 1$) nor the amount of attention that participants paid to their feelings (all $p_s > .14$) across conditions.

Apartment preference. A 2×2 ANOVA model revealed a significant main effect of self-focus on participants' apartment preference. Higher self-focus increased participants' relative preference for the affectively superior apartment ($M_{\text{high self-focus}} = 4.58$ vs. $M_{\text{low self-focus}} = 3.98$; $F(1, 171) = 4.16, p < .05, \eta_p^2 = .024$). The interaction between self-focus and self-construal was significant ($F(1, 171) = 7.61, p < .01, \eta_p^2 = .043$; see Figure 2). As predicted, participants primed with an independent self-construal were more likely to prefer the affectively superior apartment in the high-self-focus conditions than in the low-self-focus conditions ($M_{\text{high self-focus}} = 5.00$ vs. $M_{\text{low self-focus}} = 3.58$; $F(1, 171) = 11.49, p < .001$). In contrast, participants primed with an interdependent self-construal had comparable apartment preferences between high and low self-focus conditions ($M_{\text{high self-focus}} = 4.19$ vs. $M_{\text{low self-focus}} = 4.40$; $F < 1$). Seen from a different angle,

the results replicated Hong and Chang (2015): participants were more likely to prefer the affectively superior apartment when they were focused on the independent self than when they were focused on the interdependent self ($M_{\text{independent}} = 5.00$ vs. $M_{\text{interdependent}} = 4.19$; $F(1, 171) = 3.98, p < .05$).

[Insert Figure 2 about here]

Discussion

Experiment 2 documented a boundary condition of the hypothesized effect. We found that self-construal moderated the effect of self-focus on the relative reliance on feelings in decision making. Self-focus increased the relative preference for the affectively superior option when participants were primed with an independent self-construal as compared to when they were primed with an interdependent self-construal. Specifically, independent participants were more likely to prefer the affectively superior option when they had high self-focus than when they had low self-focus. In contrast, interdependent participants' relative preference was comparable between high and low self-focus. We also found that participants with high self-focus were more likely to prefer the affectively superior option when they had independent self-construal than when they had interdependent self-construal, replicating Hong and Chang (2015). Our findings seem to suggest that a high self-focus is necessary for self-construal to exert influence on people's reliance on feelings versus reasoning in decision making. This is consistent with previous studies showing that (a) the amount of attention to the self was high for both independents and interdependents (Lee, Aaker, and Gardner 2000; study 2), and (b) directing people's focus to the self activates different self-presentational goals for chronic independents and interdependents (Lalwani and Shavitt 2009; study 3).

*EXPERIMENT 3: RELIANCE ON FEELINGS ACROSS HEDONIC VERSUS UTILITARIAN
CRITERIA*

This experiment was designed with two main objectives. First, we tested another boundary condition for the hypothesized effect. Second, we aimed to examine whether the effect is contingent on the perceived information value of feelings in making judgments. To the extent that affect tends to be perceived as particularly subjective and idiosyncratic (Cacioppo and Gardner 1999) and shares a close connection with the self (Solomon 1993), self-focus might increase the perceived informativeness of feelings for the judgment at hand.

Existing research suggests that feelings are perceived to be more informative in evaluating the potential fulfillment of hedonic/experiential goals than utilitarian/instrumental goals (Adaval 2001; Pham 1998). If our hypothesized effect is due to the greater perceived information value of feelings under self-focus, then the effect of self-focus should depend on the informativeness of feelings for the judgment at hand: self-focus should increase reliance on feelings in judgments when feelings are more informative (e.g., when evaluating hedonic products) but not when they are less informative (e.g., when evaluating utilitarian products).

Participants whose self-focused attention was varied were asked to evaluate several products with brief descriptions. The descriptions included different combinations of attribute quality (hedonic vs. utilitarian) and attribute superiority (superior vs. inferior) to determine whether the hypothesized effect is contingent on the perceived information value of feelings in making judgments. We predicted that when feelings are perceived to be informative (i.e., when using hedonic criteria), participants with high self-focus would be more likely to use their feelings toward the products in their evaluations than would participants with low self-focus.

Therefore, participants with high self-focus should be more responsive to attribute superiority. On the other hand, when feelings are perceived to be less informative (i.e., when using utilitarian criteria), self-focused attention would be less likely to influence participants' judgments.

Method

Participants and design. Two hundred and sixty-five undergraduate students from a large university participated in this study in exchange for US\$7. Participants were randomly assigned to one of the eight conditions of a 2 (self-focused attention: high vs. low) \times 2 (attribute quality: hedonic vs. utilitarian) \times 2 (attribute superiority: superior vs. inferior) \times 4 (combinations) mixed factorial design with self-focused attention and combinations as between-subjects factors, and attribute quality and attribute superiority as within-subject factors.

Procedure. Participants were seated in separate cubicles upon entry to the behavioral laboratory. As in experiment 2, self-focused attention was varied through the presence or absence of a mirror on the cubicle desk. Under the pretense that the study is about how people process information they encounter in daily life, participants were asked to evaluate five products separately (four of which are target products; within-subject, presented in counterbalanced order). The fifth product (a filler product) was a 3D television, which always came after the four target products and was identical in its description across all conditions.

To control for idiosyncratic differences across product categories, we held product categories constant (e.g., apartment) but described each one using either hedonic features (e.g., view from apartment) or functional features (e.g., distance to school). Specifically, descriptions of each target product included different combinations of attribute quality (hedonic vs. utilitarian) and attribute superiority (superior vs. inferior) as follows (adapted from Dhar and Wertenbroch 2000, with slight modifications for our participant population):

- An apartment: utilitarian attribute, distance to school (10 minutes vs. 45 minutes); hedonic attribute, view from the apartment (breathtaking view of the ocean vs. view of a parking lot).
- A roommate at the dormitory: utilitarian attribute, reliability (very reliable vs. not very reliable); hedonic attribute, fun to be with (a lot of fun vs. somewhat arrogant).
- A cafeteria on campus: utilitarian attribute, walking distance to the cafeteria (5 minutes vs. 15 minutes); hedonic attribute, dessert menu (cookies, pastry, and fresh fruit for dessert vs. no dessert).
- A shampoo: utilitarian attribute, cleansing efficacy (very effective cleansing agent vs. moderately effective cleansing agent); hedonic attribute, softness of hair (hair feels soft and silky vs. hair feels dry after shampooing).

A separate pretest ($N = 20$) established the effectiveness of the manipulation of attribute quality across the target products (see Web Appendix B). In the main study, two types of product characteristics (attribute superiority and attribute quality) were paired for each product replicate in one of four random combinations. (Further tests indicated that the combination did not moderate the results.) As main dependent measures, participants were asked to evaluate each target product using four items from 1 (negative, unfavorable, bad, dislike) to 7 (positive, favorable, good, like; $\alpha > .72$). As a manipulation check of self-focused attention, participants carried out a sentence-construction task used in previous research to measure self-consciousness (Briley and Wyer 2002). Under the guise that researchers were interested in studying English sentence construction, participants were given twenty-five scrambled sentences with a set of five words each (e.g., “take taxi I a they”) and were asked to construct the first sentence that comes to mind out of each set of words. An index was constructed from the total number of sentences in

which participants used a self-related (first-person) pronoun. (See Web Appendix A for additional posttests establishing the effectiveness of this self-focused attention manipulation.) As confounding checks, participants were asked to report how they were feeling on nine items (e.g., happy, disappointed), ranging from 1 (not at all) to 7 (extremely). They stated their task involvement on a 7-point scale (1 = not at all careful; 7 = very careful) and their general approach-avoidance tendency on two 7-point items (e.g., “I avoid undesirable things/I approach desirable things”; $r = .74$). Demand check was collected before participants were debriefed.

Results

Analyses were conducted using a 2 (self-focused attention: high vs. low) \times 2 (attribute quality: hedonic vs. utilitarian) \times 2 (attribute superiority: superior vs. inferior) \times 4 (combinations) mixed ANOVA model, unless stated otherwise.

Preliminary analyses. A 2 (self-focused attention) \times 4 (combinations) ANOVA of the self-focused attention index showed a significant main effect of self-focus manipulation. Participants constructed a higher number of sentences with self-related pronouns in the high than in the low self-focused attention conditions ($M_{\text{high self-focus}} = 18.55$ vs. $M_{\text{low self-focus}} = 16.39$, $F(1, 260) = 15.18$, $p < .001$), suggesting that the manipulation was successful. Self-focused attention and combinations did not impact evaluations of the filler product nor did any of the control measures, including participants’ moods ($ps > .19$), task involvement ($ps > .49$), and general approach-avoidance tendencies ($ps > .17$). None of the participants correctly guessed the hypothesis.

Product evaluations. Analysis of product evaluations revealed significant main effects of attribute superiority ($F(1, 257) = 988.74$, $p < .001$, $\eta_p^2 = .79$). Superior attributes were rated more favorably than inferior attributes, not surprisingly (an apartment: $M_{\text{superior}} = 5.82$ vs. $M_{\text{inferior}} =$

3.33, $F(1, 257) = 264.79, p < .001$; a roommate: $M_{\text{superior}} = 5.71$ vs. $M_{\text{inferior}} = 2.96, F(1, 257) = 323.08, p < .001$; a campus café: $M_{\text{superior}} = 5.34$ vs. $M_{\text{inferior}} = 3.93, F(1, 257) = 84.06, p < .001$; a shampoo: $M_{\text{superior}} = 5.50$ vs. $M_{\text{inferior}} = 3.60, F(1, 257) = 150.67, p < .001$). Combinations did not moderate the interaction effects of self-focused attention, attribute superiority, and attribute quality ($F < 1$). More importantly, a significant three-way interaction emerged ($F(1, 257) = 28.72, p < .001, \eta_p^2 = .10$). When products were described in hedonic attributes, self-focused attention affected participants' evaluations. Participants in the high-self-focus conditions evaluated (a) hedonic products with superior attributes more favorably (an apartment: $M_{\text{high self-focus}} = 6.26$ vs. $M_{\text{low self-focus}} = 5.64, F(1, 257) = 4.13, p < .05$; a roommate: $M_{\text{high self-focus}} = 6.14$ vs. $M_{\text{low self-focus}} = 5.26, F(1, 257) = 8.30, p < .01$; a campus café: $M_{\text{high self-focus}} = 5.87$ vs. $M_{\text{low self-focus}} = 5.08, F(1, 257) = 6.55, p < .01$; a shampoo: $M_{\text{high self-focus}} = 5.79$ vs. $M_{\text{low self-focus}} = 5.09, F(1, 257) = 5.17, p < .02$; all $\eta_p^2 > .02$), and (b) hedonic products with inferior attributes less favorably (an apartment: $M_{\text{high self-focus}} = 2.88$ vs. $M_{\text{low self-focus}} = 3.70, F(1, 257) = 6.94, p < .01$; a roommate: $M_{\text{high self-focus}} = 2.53$ vs. $M_{\text{low self-focus}} = 3.23, F(1, 257) = 5.12, p < .02$; a campus café: $M_{\text{high self-focus}} = 3.34$ vs. $M_{\text{low self-focus}} = 3.99, F(1, 257) = 4.47, p < .04$; a shampoo: $M_{\text{high self-focus}} = 3.03$ vs. $M_{\text{low self-focus}} = 3.63, F(1, 257) = 3.78, p < .05$; all $\eta_p^2 > .01$). However, when products were described in functional attributes, self-focused attention did not affect participants' evaluations (all $F_s < 1$).

Discussion

The results suggest that self-focused attention increases reliance on affective feelings toward targets in product evaluations. In addition, they show that this effect is contingent on the information value of feelings, consistent with prior research indicating that feelings are more likely to be relied on in judgments when feelings are more relevant (Adaval 2001; Pham 1998). When feelings are perceived to be informative for the judgment, self-focused attention increases

reliance on affective reactions to the products: participants with high self-focus evaluated hedonically superior products more positively and hedonically inferior products more negatively than did participants with low self-focus. In contrast, when feelings are perceived to be less informative, self-focused attention does not affect product evaluations.

EXPERIMENT 4: DOWNSTREAM CONSEQUENCES IN CONSUMER VALUATIONS

In experiment 4, we examined the hypothesized effect through a different aspect of the greater reliance on affect. A characteristic of affect-based decision is that people are often more insensitive to quantitative scope when they use their feelings as a basis for valuating objects (Chang and Pham 2018; Hsee and Rottenstreich 2004). This tendency is known as the scope-insensitivity bias. In a study by Hsee and Rottenstreich (2004), participants were asked to indicate how much money they were willing to donate to save either one panda or four pandas. When pandas were represented in an affect-poor manner, participants were willing to donate more to save four pandas than one panda. When pandas were depicted in an affect-rich manner, participants were willing to donate a similar amount for saving either one panda or four pandas.

Our experiment 4 tested a greater reliance on affect under heightened self-focus in valuation decisions by observing scope-insensitivity. Participants whose self-focused attention was varied were asked to indicate their WTP for a one-day tour offered by a travel agency. The number of sites offered in the tour was varied. If self-focused attention increases the reliance on affect in valuations, then WTP for the tour package should be more scope-insensitive when participants are more self-focused.

Method

Procedure. A total of 153 undergraduate students participated in this study in exchange for course credit. They were randomly assigned to one of four conditions of a 2 (self-focused attention: high vs. low) \times 2 (scope: one vs. four) between-subjects design. Self-focused attention was manipulated by the presence or absence of a mirror as in experiments 2 and 3. Under the pretense that the study was intended to understand how people process information encountered in daily life, participants were asked to imagine that they were going on a vacation to Furano, a city in Hokkaido, Japan. They were told that they had already paid for flight tickets and hotel accommodations and were considering a one-day tour package offered by a local travel agency. Participants were each given a brochure about the package describing the sites visited in this one-day tour. To manipulate scope, the number of local sites included in the one-day tour was varied across the brochures showing four sites or one of these sites. All brochures included a picture and a short description for each site (see Web Appendix C). A separate pretest (N = 22) confirmed that the tour sites were comparable in their hedonic qualities and attractiveness (see Web Appendix B). As the main dependent measure, participants stated their WTP (in Singapore dollars) for the one-day package on a 9-point scale from S\$0 to S\$160 (in S\$20 increments).

To provide additional process-level evidence, participants were asked to write down all thoughts, feelings, and reactions they had as they were deciding on their WTP for the tour package. As a manipulation check, participants reported the number of tour stops mentioned in the scenario. As control measures, participants reported their task involvement, frequency of travel, whether they have travelled to the city in the scenario, and whether they have heard of and were interested in the city mentioned. Finally, demand check was collected.

Results

Preliminary analyses. None of the participants correctly guessed the hypothesis. The manipulation of scope was successful: participants reported a greater number of tour sites in the package in the four-sites condition than in the one-site condition ($M_4 = 3.86$ vs. $M_1 = 1.08$; $F(1, 149) = 906.46, p < .001$). Self-focused attention and scope did not impact any of the control measures, including self-reported task involvement ($ps > .12$). In addition, the total number of thoughts generated did not differ across self-focused attention conditions ($ps > .14$), further suggesting that elaboration and involvement were comparable.

WTP. A 2 (self-focused attention: high vs. low) \times 2 (scope: one vs. four) between-subjects ANOVA on participants' WTP for the one-day tour package revealed significant main effects of self-focused attention ($M_{\text{high self-focus}} = \text{S\$}101.04$; $M_{\text{low self-focus}} = \text{S\$}73.88$; $F(1, 149) = 10.81, p < .001, \eta_p^2 = .05$) and scope ($M_4 = \text{S\$}110.64$; $M_1 = \text{S\$}71.06$; $F(1, 149) = 51.34, p < .001, \eta_p^2 = .17$). Central to our investigation, results showed a significant two-way interaction between self-focused attention and scope ($F(1, 149) = 28.53, p < .001, \eta_p^2 = .07$). Participants in the low-self-focus conditions were willing to pay more for a one-day travel package that included four sites ($M_4 = \text{S\$}113.14$) than a travel package that included one site ($M_1 = \text{S\$}47.85$; $F(1, 149) = 48.89, p < .001, \eta_p^2 = .23$), exhibiting scope-sensitivity. In contrast, participants in the high-self-focus conditions were willing to pay comparable amounts regardless of whether one or four tour sites were included in the package ($M_1 = \text{S\$}94.98$ vs. $M_4 = \text{S\$}108.63$; $F = 2.30, p > .13$), showing scope-insensitivity.

Thoughts listing. Two independent coders ($\kappa_s > .60$) who were blind to the experimental hypothesis coded the thoughts, feelings, and reactions that participants listed as either (a) more related to affective criteria (e.g., “my feelings are great when I think about the green café in the forest,” “it will be a very fresh, peaceful way to enjoy a cup of coffee in the middle of a forest”)

or (b) more related to objective criteria (e.g., “whether admission fees are included,” “prices of the other country’s travel package”). Results revealed a significant main effect of self-focused attention on the proportion of affective thoughts. Participants in the high-self-focus condition generated a higher proportion of thoughts describing their feelings toward the tour package compared to those in the low-self-focus condition ($M_{\text{high self-focus}} = .68$ vs. $M_{\text{low self-focus}} = .45$; $F(1, 149) = 11.18, p < .001, \eta_p^2 = .07$). These results thus provide further evidence that the greater scope-insensitivity observed in the high-self-focus condition was a result of the greater influence of affective inputs in this condition.

Mediation. To test whether the effects were driven by a differential weighting of affective inputs under different self-focused attention, a mediation analysis using bootstrapping procedures was conducted (Preacher and Hayes 2004, 2008; Zhao, Lynch, and Chen 2010). First, as mentioned earlier, self-focused attention influenced the proportion of affective thoughts significantly ($B = .26, SE = .08, t = 3.21, p < .01$) and participants’ WTP significantly ($B = 29.98, SE = 6.27, t = 4.78, p < .001$). Second, the indirect effect of self-focused attention on participants’ WTP with the proportion of affective thoughts as the mediator was significant ($Z = 2.41, p < .02$; a 95% CI: [1.7450 and 9.6399]), while the direct effect of self-focused attention on WTP was reduced ($B = 24.73, SE = 6.24, t = 3.96, p < .01$). The results suggest that the impact of self-focused attention on WTP was partially mediated by the proportion of affective thoughts.

Discussion

The present findings show that participants’ WTP was more scope-insensitive under heightened self-focus. It is also partially mediated by the proportion of affective thoughts generated, consistent with past research that affect-based valuations are more scope-insensitive (e.g., Hsee and Rottenstreich 2004). The findings revealed that high self-focused attention

increased the proportion of affective thoughts, whereas low self-focused attention increased the proportion of objective thoughts.

EXPERIMENT 5: REAL-LIFE CHARITABLE DONATIONS

The objective of the final study is to examine whether self-focused attention leads to a greater reliance on affect in the context of real-life, consequential charitable donations.

Participants whose self-focused attention was varied were given a charity appeal describing one or four beneficiaries, and asked to make a monetary donation. Descriptions of the beneficiaries were based on actual charity projects occurring at the time of this study. We predicted that participants who are self-focused should be more insensitive to the number of beneficiaries, thus donating comparable amounts; in contrast, participants who are not self-focused should be more scope-sensitive, donating more money to a greater number of beneficiaries.

Method

Participants and design. A total of 479 undergraduate students in a large university in China participated in this study in exchange for monetary compensation, across two batches of data collection in the field ($N_{\text{batch 1}} = 239$, $N_{\text{batch 2}} = 240$). They were randomly assigned to one of four conditions of a 2 (self-focused attention: high vs. low) \times 2 (scope: one vs. four) between-subjects design.

Pretest of manipulation of self-focused attention. The pretest had two objectives: (a) to establish the effectiveness of the self-focused manipulation, and (b) to examine whether there are unintended correlates of this manipulation. An independent group of 159 participants from the same population as in the main study was recruited. They were given appeals for real charity

projects organized by Wei Gongyi, an online charity website based in China. The appeals described needy children suffering from acute illnesses, who are seeking support to fund their surgeries. The appeals included pictures of children and brief descriptions of their situations; these information were extracted from projects posted on the Wei Gongyi microblog page at Sina Weibo at the time of this study (see Web Appendix C). To vary self-focused attention, a large bold message that was self-referential (i.e., “I donate”) or not (i.e., “Donate”) was included on the top of the appeal.

Next, participants completed the same sentence-construction task intended to probe their level of self-focused attention (Briley and Wyer 2002). They then indicated the extent to which they thought about the self as being independent from others, and the extent to which they thought of the self as being connected to other people when processing the appeal, from 1 (not at all) to 7 (very much). These two measures served as a check on participants’ situational self-construal. To rule out other unintended correlates of the manipulation, participants reported the extent to which they thought the appeal was “pushy” (“I feel that the appeal was pushy by compelling me to make a donation”), their suspicion on the appeal’s intent (“I feel that the appeal has a manipulative intent”), and their task involvement in processing the appeal on a 7-point scale (1 = not at all, 7 = very much so). Finally, they completed the dispositional self-construal scale (Singelis 1994).

Pretest results showed that participants’ self-focused attention was higher when they processed the self-referential appeal than when they did not ($M_{\text{self-referent}} = 20.77$ vs. $M_{\text{non self-referent}} = 19.30$, $F(1, 155) = 4.87$, $p < .03$). The use of self-referential messages and the number of beneficiaries had no effects on (a) participants’ situational and dispositional self-construal, nor did it determine the extent to which (b) participants felt the appeal was pushy ($M = 4.10$); (c)

they were suspicious of the motive of the appeal ($M = 3.71$); and (d) they were involved when processing the appeal ($M = 3.97$; $ps > .10$). Overall, the pretest established the effectiveness of the manipulation of self-focused attention using these self-referential messages, without inadvertently introducing these alternative accounts.

Procedure. The experiment was administered in two data collection batches; they were essentially identical, except that some additional manipulation, demand, and confounding checks were collected in the second batch. All participants were told that the study aimed to understand how people process information encountered in daily life. Participants received the charity appeals (as in the pretest), which varied their self-focused attention. Scope was varied across the appeals by showing one child or four children as beneficiaries. As in the pretest, after participants read the appeal, they were told that they could make an anonymous donation to the needy child (or children) described in the appeal. If they chose to do so, they placed money (in renminbi) in a sealed envelope. All participants were assured that the researchers would collect and submit the full donation amount to the charity on their behalf. In addition, for the second batch of data collection, manipulation checks of self-focused attention, demand check, and task involvement were collected. To check for the effectiveness of the scope manipulation, all participants were asked to report the number of beneficiaries mentioned in the charity appeal. At the end, they provided background information (frequency of charitable donations, gender, age).

Results and Discussion

Preliminary analyses. None of the participants correctly guessed the purpose of the study. The manipulation of scope was successful. Participants in the four-beneficiary conditions reported a greater number of beneficiaries ($M = 3.03$) than did those in the one-beneficiary conditions ($M = 2.34$; $F(1, 475) = 33.16$, $p < .001$). The manipulation of self-focused attention

was also successful. Participants constructed a higher number of sentences with self-related pronouns when they processed the self-referential message than when they did not ($M_{\text{high self-focus}} = 14.60$ vs. $M_{\text{low self-focus}} = 13.73$; $F(1, 236) = 4.96, p < .03$). Self-focus and scope did not influence the control measures, such as feelings of sadness or task involvement ($ps > .15$).

Monetary donation. A 2×2 between-subjects ANOVA on participants' monetary donations revealed main effects of self-focus ($M_{\text{high self-focus}} = ¥4.84$; $M_{\text{low self-focus}} = ¥3.31$; $F(1, 475) = 19.55, p < .0001, \eta_p^2 = .040$) and scope ($M_4 = ¥4.69$; $M_1 = ¥3.46$; $F(1, 475) = 5.32, p < .03, \eta_p^2 = .011$). (These analyses were conducted with log-transformed donation amounts to correct for positive skewness. The means provided are in raw numbers for ease of interpretation.) As predicted, a significant self-focused attention \times scope interaction emerged ($F(1, 475) = 5.08, p < .03, \eta_p^2 = .011$). Participants in the low-self-focus conditions donated more to help four beneficiaries than one beneficiary ($M_4 = ¥4.49$ vs. $M_1 = ¥2.11$; $F(1, 475) = 10.37, p < .002$), showing significant sensitivity to scope. In contrast, participants in the high-self-focus conditions donated comparable amounts across scope ($M_4 = ¥4.88$ vs. $M_1 = ¥4.80$; $F < 1$), demonstrating scope-insensitivity. Interestingly, results in experiments 4 and 5 both show that heightened self-focus leads to higher valuation, regardless of scope. We speculate that this is because, under high self-focus, participants' valuation is driven by their feelings toward the evaluative object—a vacation in Hokkaido (experiment 4) and charitable donation (experiment 5). Should the evaluative object be less affectively appealing, a heightened self-focus might instead lower people's monetary valuation, as experiment 3's results would suggest.

GENERAL DISCUSSION

Consumers' self-focused attention can be influenced by numerous cues in the decision environment. However, less is known about the effects of self-focus on consumers' relative reliance on feelings in decision making. Five studies provide converging evidence for the hypothesis that self-focused attention promotes a greater reliance on feelings in consumer judgment and decision making. We tested this hypothesis using multiple operationalizations of self-focused attention (presence of mirror, writing a story using first-person pronouns, self-referential promotional message) across a broad range of consumption behaviors, including affective valuation (experiments 1, 4, and 5) in hypothetical and real situations, affect-based choices (experiment 2), and product evaluations based on affective (hedonic) considerations (experiment 3). The wide range of operationalizations of self-focused attention, affective inputs in the decision contexts, and decision outcomes shows the potential generalizability of the effect.

Theoretical Implications and Directions for Future Research

Our research contributes in several ways to extant literature on self-focused attention. First, prior research suggests that dispositional self-focused attention increases awareness of the inner aspects of the self (Carver and Scheier 1977). Others have examined the impact of self-focused attention on processing of social and cognitive information in consumer decision making (e.g., Hung and Wyer 2011; Pham et al. 2010). To the best of our knowledge, the present research is among the first to examine whether and how self-focused attention may influence a relative reliance on affective feelings in making judgments and decisions. Second, prior research on self-focused attention tend to examine its influence on either affect or cognitions independently. Past research suggests that when people's attention is directed to themselves, they become more cognizant of their self-dimensions (Gibbons 1990; Scheier and Carver 1977). It is therefore theoretically possible that self-focused attention would increase the reliance on any

internal information—not just affective feelings per se but also cognitive thoughts, personal attitudes, behavioral standards, and beliefs—made salient at the time of making evaluations and decisions. Our research directly tests and shows that self-focused attention increases the weight that people attach to their affective feelings more than to their cognitive reasoning in decision making (experiment 1). The results are notable in that our decision tasks did not explicitly make the affective or cognitive component more salient than the other.

Our research adds to extant literature on affect-based decision making. Specifically, the present research identifies a novel antecedent—self-focused attention—that influences consumers' reliance on feelings in decision making. In addition, the current research offers a process-level explanation as to why some of the previously identified factors, such as self-construal, would lead to a reliance on feelings in decision making. For example, Hong and Chang (2015) speculated that the differential degree of self-focus underlying independent and interdependent self-construal might explain their hypothesized effect, and explicitly acknowledged that they “did not directly test this underlying process explanation...An important avenue for future research is to directly test the informational account underlying the link between self-focus and affect-based decision making” (p. 1407). The findings from our experiment 2 specify that a differential degree of focus on the independent self can lead to varied relative reliance on feelings in decision making. We find that a high self-focus is necessary for self-construal to exert an effect on people's reliance on feelings versus reasoning in decision making. Our findings converge with prior research (e.g., Lalwani and Shavitt 2009; Lee, Aaker, and Gardner 2000; Markus and Kitayama 1991) regarding the idea that independent and interdependent self-construals both involve attention directed to the self, and these self-definitions differ.

We tested and ruled out several alternative accounts to our findings. First, one might suspect that self-focused attention increases people's attention to feelings directly, which in turn enhances consumers' reliance on feelings in judgment. Earlier findings suggest that individuals are more likely to be influenced by their mood when they are chronically attentive to their feelings than when they are not (Gasper and Clore 2000). We did not find self-focused attention differentially affecting the amount of attention paid to participants' feelings in our study (experiment 2). Rather, it affected the perceived information value of feelings in decision making (experiment 3). Second, one might wonder how self-focused attention relates to self-construal. On conceptual and empirical levels, self-focused attention and self-construal are distinct constructs with different conceptual definitions and comparisons of the directionality of people's attention. Whereas research in self-focused attention compares attention directed to the self versus the environment, research in self-construal compares two instances of attention directed to the self in which definitions of the self differ (Lalwani and Shavitt 2009; Lee, Aaker, and Gardner 2000; Markus and Kitayama 1991). Our results in experiment 2, where we varied participants' self-focused attention and self-construal orthogonally to examine their effects independently, converge with these prior research. To further ascertain that our results cannot be explained by the self-construal account, we collected additional data (N = 139) to assess whether manipulations of self-focused attention would inadvertently vary participants' self-construal. Our results show that participants in the high versus low self-focus conditions did not differ in their self-construal (see posttests in Web Appendix A and experiment 5).

Third, one may wonder whether self-focused attention would influence psychological proximity, which has been shown to influence people's reliance on feelings (Chang and Pham 2013). Self-focused attention and psychological proximity/distance involve different

assumptions about the directionality of people's attention. Psychological distance refers to "a subjective experience that something is close or far away from the self, here, and now" (Trope and Liberman 2010, p. 440). It is "a metaphor to denote the separation of the person from the immediate, ongoing present" (Sigel 1982, p. 52). In a typical study of psychological distance, participants would be asked to compare objects that vary along a dimension of psychological distance, comparing between outcomes in the near future versus distant future, objects related to a close friend versus a distant friend, or targets in spatially near versus remote locations. In other words, participants' attention is directed outward, focusing on the evaluative target with varying distances from the self. Again, this is in contrast to our research, in which the comparison is between attention directed to the self versus the environment. Our additional posttest results (N = 132) show that participants with high versus low self-focused attention did not differ in their psychological proximity (see Web Appendix A). It would be interesting for future research to systematically investigate the relation between self-focus and psychological proximity.

In this research, we examined genuine affective responses elicited from the evaluative target (i.e., integral affect). An interesting avenue for future research would be to examine the effect of self-focused attention on the reliance on other types of affective reactions, such as incidental affect and specific emotions. Future research can also investigate whether the effect can be extended to other forms of subjective experiences, including non-affective feelings such as metacognitive experiences of ease of processing and bodily sensations. We speculate that self-focused attention might increase individuals' sensitivity to and reliance on these subjective, phenomenal experiences. These conjectures await future research.

Marketing Implications

Our research suggests that even subtle contextual cues—such as presence of reflective surfaces, self-referential messages, and personalized greeting of customers—can influence consumers’ judgments of products. For example, hedonic products, such as flowers, vacations, and sports cars, tend to be evaluated based on their affective dimensions compared to utilitarian products, such as cleaning supplies, microwaves, and minivans. Our research indicates that increasing consumers’ self-focus through subtle cues can increase the perceived attractiveness of hedonic products if these products are affectively superior, but can decrease the perceived attractiveness of hedonic products if these products are affectively inferior. In contrast, these cues should have less impact on judgments of functional products. Hence, marketers can encourage consumers to focus on themselves when highlighting superior hedonic features of products, via any tactic that increases consumers’ self-focus. An interesting example is Apple Computer’s branding strategy in naming its products with an “i” prefix, such as the iTunes, iPhone, and iMac. As Steve Jobs pointed out during his keynote introduction of the first iMac in 1998, one of the reasons behind Apple’s “i” prefix is that it stands for “individual” (Jobs 1998). Such a branding strategy might prompt consumers to focus their attention on the self.

Marketers often encourage consumers to use either thinking-based or feeling-based assessment in evaluating products. For example, in advertising for laptop computers, IBM encouraged consumers to rely on thinking-based assessment with the slogan: “ThinkPad. Where do you do your best thinking?” In contrast, NEC (another computer manufacturer) prompted consumers to rely on their feeling-based assessment with the slogan “See, hear, and feel the difference.” Our research recommends that (a) feeling-based messages would be more effective when consumers are prompted to focus their attention on themselves, as observed in our experiment 1 with a 24.6% increase in participants’ WTP, whereas (b) thinking-based messages

might be more effective when consumers are encouraged to focus their attention on others, as observed in our experiment 1 with a 19.0% increase in participants' WTP. Another implication suggested by our research relates to pricing of product bundles. When subtle contextual cues prompt consumers to pay more attention to themselves, their WTP for a product bundle may be less affected by the number of items contained in the bundle. Marketers may want to carefully consider their retail store environment (e.g., placement of mirrors and reflective surfaces), promotion design (e.g., self-referential messages), and interactions with consumers (e.g., personalized greetings). These cues can increase consumers' self-focus, promoting a greater relative reliance on affect in their decisions.

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FIGURE 1

WILLINGNESS TO PAY AS A FUNCTION OF SELF-FOCUSED ATTENTION AND DECISION

STRATEGY (EXPERIMENT 1)

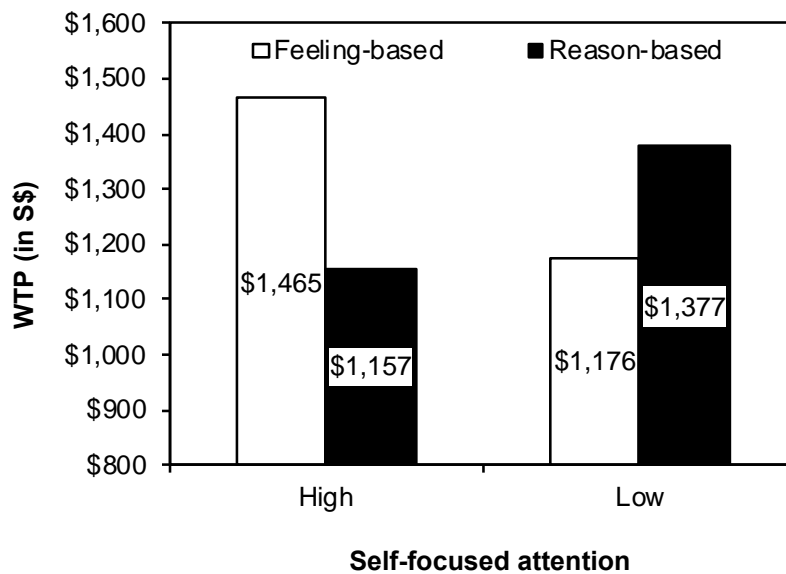
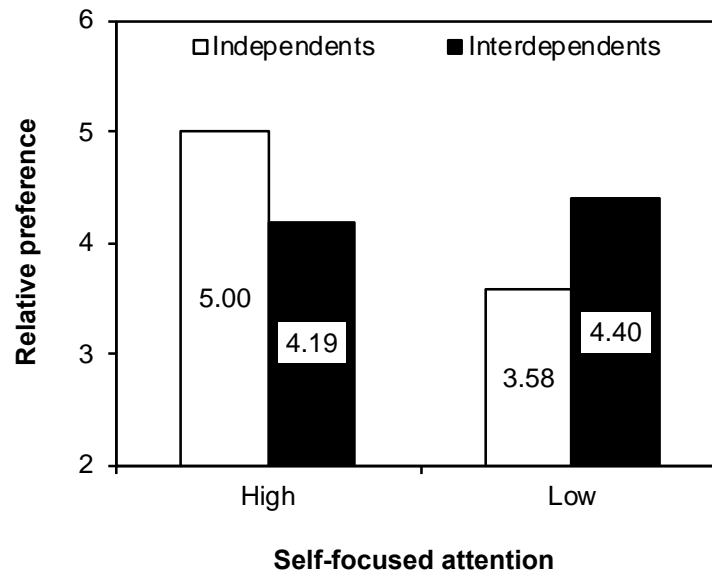


FIGURE 2

PREFERENCE FOR THE AFFECTIVELY SUPERIOR OPTION AS A FUNCTION OF SELF-FOCUSED ATTENTION AND SELF-CONSTRUAL (EXPERIMENT 2)



Mirror, Mirror on the Retail Wall: Self-focused Attention Promotes Reliance on Feelings in
Consumer Decisions

Hannah H. Chang and Iris W. Hung

Web Appendix A

*POSTTESTS FOR MANIPULATIONS OF SELF-FOCUSED ATTENTION ON SELF-
CONSTRUAL*

An alternative explanation is that manipulations of self-focused attention may have inadvertently affected participants' self-construal, thereby leading to the observed effects. On a theoretical level, self-focused attention and self-construal involve different comparisons and emphases on the self. (A theoretical discussion on the relation and difference between self-focused attention and self-construal is included in the General Discussion.) On an empirical level, two posttests were conducted to more confidently rule out the alternative explanation based on self-construal. In the first posttest ($N = 73$), participants' self-focused attention was operationalized by the presence or absence of a mirror as in experiments 2, 3, and 4. As a "main" task for this study, participants were presented with the same decision task as in experiment 2. After choosing between the two apartments, participants indicated the extent to which they were thinking about their family and their friends from 1 (not at all) to 7 (very much). These two measures served as the self-construal checks. Central to the purpose of this posttest, there was no difference in the extent to which participants between the two conditions thought about their family ($M_{high\ self-focus} = 3.33$, $M_{low\ self-focus} = 3.27$; $F < 1$) or their friends ($M_{high\ self-focus} = 3.28$, M_{low

self-focus = 2.95; $F < 1$). Together, the findings ruled out self-construal as an alternative explanation for the observed results.

In the second posttest ($N = 66$), self-focused attention was manipulated through a story-writing task as in experiments 1. After spending 10 minutes writing a short story using either first-person or third-person pronouns, participants then indicated the extent to which they were thinking about each of the following—“myself,” “someone else,” “a public figure,” “my family,” and “my friends”—from 1 (not at all) to 7 (very much). Results showed that the story-writing task was successful in inducing a high versus low self-focus, replicating previous research (e.g., Fenigstein and Levine 1984; Pyszczynski, Holt, and Greenberg 1987). Specifically, participants in the high-self-focus condition thought more about themselves ($M_{high\ self-focus} = 5.42$, $M_{low\ self-focus} = 1.85$; $F(1, 64) = 70.21$, $p < .0001$) and less about someone else ($M_{high\ self-focus} = 3.39$, $M_{low\ self-focus} = 6.21$; $F(1, 64) = 41.23$, $p < .0001$) or a public figure ($M_{high\ self-focus} = 1.67$, $M_{low\ self-focus} = 6.42$; $F(1, 64) = 190.62$, $p < .0001$) compared to those in the low-self-focus condition. Interestingly, participants in the self-focus condition also thought somewhat more about their family ($M_{high\ self-focus} = 2.27$, $M_{low\ self-focus} = 1.39$; $F(1, 64) = 6.07$, $p < .02$), although participants in both conditions did so to a limited extent. There was no difference in the extent to which participants thought about their friends between the conditions ($M_{high\ self-focus} = 1.73$, $M_{low\ self-focus} = 1.67$; $F < 1$). Together, these results help (1) validate the story-writing task in manipulating self-focused attention and (2) rule out self-construal as an alternative explanation for our results.

*POSTTESTS FOR MANIPULATIONS OF SELF-FOCUSED ATTENTION ON
PSYCHOLOGICAL PROXIMITY*

One might wonder whether varying self-focused attention inadvertently affected participants' psychological proximity to the evaluative target, thereby leading to the observed effects. Two posttests were conducted to empirically rule out the alternative explanation based on psychological proximity. These posttests were identical in study design and procedure to the posttests used to rule out self-construal; the only difference is that checks for psychological proximity replaced the ones for self-construal.

In the first posttest ($N = 97$), self-focused attention was manipulated through the presence of a mirror as in experiments 2, 3, and 4. As a "main" task for this study, participants were presented with the same decision task as in experiment 2. After choosing between the two apartments, participants reported the subjective distance the decision seemed to them on two 7-point items anchored at "very close/very far away" and "happening in the near future/happening in the distant future." These measures served as the checks for psychological proximity. There was no difference in the extent to which participants between the conditions in how close or distant the decision seemed ($M_{\text{high self-focus}} = 3.33$, $M_{\text{low self-focus}} = 3.27$; $F < 1$) or whether the decision seemed to happen in the near or distant future ($M_{\text{high self-focus}} = 3.28$, $M_{\text{low self-focus}} = 2.95$; $F < 1$). The findings ruled out psychological proximity as an alternative explanation for the observed results.

In the second posttest ($N = 35$), self-focused attention was manipulated through a story-writing task as in experiments 1. After their self-focused attention were varied, participants indicated the extent to which they were thinking about themselves or about others from 1 (not at all) to 7 (very much). As confounding checks for psychological proximity, participants reported the subjective distance the decision seemed to them using two 7-point items anchored at "very close/very far away" and "happening in the near future/happening in the distant future." Results

showed that the story-writing task was again successful in inducing a high versus low self-focus. Participants in the high-self-focus condition thought more about themselves ($M_{high\ self-focus} = 5.41$, $M_{low\ self-focus} = 2.94$; $F(1, 33) = 3.87$, $p < .0001$) and less about others ($M_{high\ self-focus} = 1.76$, $M_{low\ self-focus} = 4.61$; $F(1, 33) = 3.98$, $p < .0001$) compared to those in the low-self-focus condition. Importantly, there was no difference between the conditions in how close or distant the decision seemed ($M_{high\ self-focus} = 2.88$, $M_{low\ self-focus} = 3.17$; $t < 1$) or whether the decision seemed to happen in the near or distant future ($M_{high\ self-focus} = 3.00$, $M_{low\ self-focus} = 3.50$; $t < 1$). Together, these results (1) validate the story-writing task in manipulating self-focused attention and (2) rule out psychological proximity as an alternative explanation for the observed results.

Web Appendix B

PRETEST FOR STIMULI USED IN EXPERIMENT 3

A separate pretest ($N = 20$) tested the effectiveness of the manipulation of attribute quality across the target products. Participants were presented with descriptions of four target products as in experiment 3. Participants rated a pair of attributes (one hedonic and one utilitarian) for each product according to their hedonic and utilitarian qualities (1 = primarily utilitarian—useful, practical, functional, and something that helps achieve a goal; 9 = primarily hedonic—pleasant and fun, something that is enjoyable and appeals to the senses; scales adapted from Dhar and Wertenbroch [2000] and Strahilevitz and Myers [1998]) and their importance (1 = not at all important, 9 = very important). Results confirmed that within each pair of product attributes across the four target products, these attributes differed only in their hedonic and utilitarian qualities but not in importance. As expected, distance to school was rated as a primarily utilitarian attribute of an apartment ($M = 2.65$), whereas the view from an apartment was rated as primarily hedonic ($M = 7.55$, $t(1, 19) = -14.77$, $p < .001$). Similarly, a dormitory roommate's reliability was rated as primarily utilitarian ($M = 3.45$), whereas whether roommate is fun to be with was rated as primarily hedonic ($M = 7.05$; $t(1, 19) = -8.72$, $p < .001$). Distance to the campus cafeteria was primarily a utilitarian attribute ($M = 2.65$), whereas the presence of the dessert menu was primarily hedonic ($M = 7.30$; $t(1, 19) = -14.99$, $p < .001$). Cleansing efficacy of a shampoo was primarily utilitarian ($M = 3.10$), whereas the softness of one's hair was primarily hedonic ($M = 7.15$; $t(1, 19) = -8.10$, $p < .001$). Hedonic attributes and utilitarian attributes were rated as comparable in importance across attribute pairs of the four target

products ($F_s < 1$). In the main study, these two types of product characteristics (attribute superiority and attribute quality) were paired for each product replicate in one of four random combinations (further tests indicate the combination did not moderate the results).

PRETEST FOR STIMULI USED IN EXPERIMENT 4

To verify the design of the stimuli, an independent group of 22 participants from the same population were asked to evaluate each of the four destinations based on (a) the relative hedonic/utilitarian qualities on a 7-point scale (e.g., “experiential/functional”) and (b) attractiveness on a 7-point agree-disagree item (“This place is attractive”). Results of the pretest showed that the four tour destinations were intrinsically affective ($M = 2.43$) and fairly attractive ($M = 5.17$). More important, results confirmed that these destinations were comparable in their hedonic qualities ($t(21) < 1.67, ps > .11$) and attractiveness ($t(21) < 1.34, ps > .20$).

Web Appendix C

SAMPLE STIMULI IN EXPERIMENT 4: THE FOUR TRAVEL SPOTS

Tour
Site #1

A visit to the flower gardens of Shikisa-no-oka --where you can enjoy the panoramic view of flowers such as sunflower, poppy, senissa feida.



Tour
Site #2

A visit to Farm Tomita -- where you can pick strawberries and try the ice-cream made from their dairy farm. Charges for strawberries picking up and ice-creams included.



Tour
Site #3

A visit to Furano Winery Lavender Park -- The winery produces dozens of varieties of local wine with carefully developed mellow flavor and scent. Observation tour and tasting are provided.



Tour
Site #4

A visit to a very famous café amidst the forest in Furano --where you can enjoy a walk in the forest, the view of the green forest and coffee made by the traditional way of brewing. Charges for one tea set included.



SAMPLE STIMULI FROM EXPERIMENT 5: THE FOUR BENEFICIARIES



Zhao Hao Lin is 10 years old this year. He is from Tangshan. Being a generous, cheerful, and polite kid, Hao Lin enjoys learning, and playing basketball and table tennis with his friends. The peaceful life has been interrupted since Hao Lin was diagnosed with acute lymphoblastic leukemia and hospitalized. He used to keep a pigtail and it has fallen out due to chemotherapy. Hao Lin remains positive and strong. He believes that he would recover and go back to school very soon. Hao Lin's dream is to become a soldier when he grows up. The current situation is that two additional courses of treatment are required but Hao Lin's parents are unable to pay for the costly medical treatments on their own. (<http://gongyi.weibo.com/221083>)



Guo Yu Xuan is six years old this year. He is from Baoding, Hebei. Yu Xuan likes animated movies with armor warriors and bears as characters. He enjoys himself a lot by watching funny cartoons and by imitating actions and facial expressions of cartoon characters. His teachers, his classmates and his classmates' parents like him a lot. Yu Xuan's happy childhood has been interrupted since he was diagnosed with acute lymphoblastic leukemia. He is currently hospitalized in the Beijing Children's Hospital. Yu Xuan's parents are unable to pay for the costly medical treatment on their own. (<http://gongyi.weibo.com/221741>)



Wang Ruoxuan is three years old. She was first admitted to Shangqiu First People's Hospital and later Beijing Children's Hospital. She was initially diagnosed with neuroblastoma. Doctors recommend an immediate abdominal surgery. After the surgery, however, Ruoxuan was diagnosed with malignant neuroblastoma. Ruoxuan had four courses of chemotherapy and a second surgery. Unfortunately, the tumor could not be completely removed. Ruoxuan's kidney became smaller due to chemotherapy. Experts from the Beijing Children's Hospital suggest Ruoxuan to go to Singapore for an operation. However, the surgery cost is high and Ruoxuan's parents are unable to pay for it on their own. (<http://gongyi.weibo.com/221729>)

(cont.)



Xiao Jia Meng was diagnosed with acute myeloid leukemia and needed to undergo chemotherapy. Since having chemotherapy, Jia Meng has been unable to eat normal meals but had to be put on the drip. Jia Meng's parents are very worried about her situation. Jia Meng, however, remains very positive and keeps comforting her mom by saying that she is looking forward to going back to school after recovering from the disease. The medical treatment cost is high and Jia Meng's parents are unable to pay for it on their own. (<http://gongyi.weibo.com/221722>)

Note: The experimental stimuli and original appeals were in Chinese.