Choosing with Crying Smiles and Laughing Tears:
The Dual Effects of Mixed Emotions on Variety Seeking

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Working Paper
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Abstract

This research examines the dual effects of mixed emotions on variety seeking. Four experiments provide support that when people are motivated to reduce the conflicting feeling from mixed emotions, they will engage in less variety seeking behavior; on the other hand, when people rely on the informational value from mixed emotions, they will seek more variety. We tested this dual processes model of mixed emotions and variety seeking by manipulating whether or not people feel conflicted from mixed emotions (experiment 1), whether people focus on feeling or thinking (experiment 2), whether people have a chronic tendency to engage in affect regulation (experiments 3 and 4). We also showed that engaging in less variety seeking can indeed help people reduce the conflicting feeling from mixed emotions (experiment 4).
Susan is celebrating her promotion with her three best friends at her favorite restaurant. Susan is thrilled with her hard-earned achievement. However, the promotion comes with a new assignment which will take her to a different city. Susan did agree to the relocation, and she is happy with the recognition and the raise; but she knows she will miss her friends. They are having a lot of fun tonight. Yet every joke leaves a funny lingering feeling and Susan wonders when they might be able to have so much fun again. They are now ready for the last course, and the waitress is recommending the warm chocolate pudding or the dessert sampler with seven different miniature desserts. Which one is Susan going to have – the chocolate pudding or the sampler? Might Susan’s choice of dessert be influenced by the mixed emotions that she is experiencing?

How consumers feel at the time of decision making is shown to affect the way they process information, evaluate products and make consumption decisions (e.g., Adaval 2001; Barone, Miniard, and Romeo 2000; Gorn, Goldberg, and Basu 1993; Kahn and Isen 1993; Lee and Sternthal 1999; Pham 1998). And how they feel at any one time is often influenced by situational factors such as the weather (Schwarz and Clore 1983), background music (Gorn et al. 1993), an unexpected gift (Kahn and Isen 1993), or a movie they just saw (Adaval 2001; Andrade 2005; Cohen and Andrade 2004). While most research on incidental affect (i.e., feelings that arise from situational factors rather than the task at hand) focuses on the effects of positive or negative affective state on consumer judgment and choice (e.g., Gorn et al. 1993; Pham 1998; Raghunathan and Pham 1999; Raghunatham, Pham, and Corfman 2006), the effects of mixed emotions on consumer decision making remain largely unexplored (for exceptions, see...
Ramanathan and Williams 2007; Williams and Aaker 2002). The objective of this paper is thus to examine the role of mixed emotions in consumer decision making.

Having mixed emotions is to simultaneously experience emotions that are of opposite valences (Larsen, McGraw, and Cacioppo 2001; Williams and Aaker 2002). Prior research has demonstrated the experience of mixed emotions in the context of watching movies (Andrade and Cohen 2007; Hemenover and Schimmack 2007), engaging in inadvertent indulgence (Ramanathan and Williams 2007), making impulsive purchases (Rook 1987), moving to a foreign country (Thompson and Tambyah 1999), planning one’s wedding (Otnes, Lowrey, and Shrum 1997), or becoming a parent (Fischer and Gainer 1993). Most of this work focuses on documenting the experience of mixed emotions rather than on examining the role of mixed emotions in consumer decision making. In this research, we investigate the effects of incidental mixed emotions in the context of variety seeking, a behavior that has been shown to be influenced by consumers’ affective state (Kahn and Isen 1993). In particular, we examine how feeling happy and sad at the same time may prompt consumers to engage in more or less variety seeking behavior.

Following prior research (e.g., Dube 2004; Kim, Allenby, and Rossi 2002; Ratner and Kahn 2002), variety seeking is conceptualized as the amount of variety chosen when selecting multiple items from a choice set on a single occasion. We propose that mixed emotions can affect variety seeking in two different ways, depending on whether people engage in affect regulation of mixed emotions or use mixed emotions as information in their subsequent choices. We argue that when people attempt to regulate their negative affective experience of psychological conflict, mixed emotions lead consumers to seek less variety. On the other hand, when people rely on the informational value of mixed emotions, the experience of mixed
emotions would lead to more variety seeking. In the next sections, we will review the literature on mixed emotions and develop a theoretical model from which our predictions are derived. We then present the results of four experiments that tested these predictions.

THEORETICAL BACKGROUND

Mixed Emotions as Affect Regulation Motive

Research on affect and decision making has suggested that one way through which affect can influence behavior is to serve as motive for affect regulation. Affect regulation refers to people’s spontaneous attempt to maintain or alter a given affective state. The basic affect regulation motives are seeking pleasure and avoiding pain (Gross 1998); and these motives for affect regulation can be conscious or unconscious (Cohen, Pham, and Andrade forthcoming). People’s motives to regulate their affect will in turn influence their behaviors: whereas the motivation to alleviate negative mood will prompt people to engage in mood-repair activities (e.g., Zillman 1988), the motivation to maintain positive mood will prompt people to engage in mood-maintenance activities (e.g., Clark and Isen 1982).

The experience of mixed emotions is usually characterized by a conflicting psychological state that is unpleasant in nature (Cacioppo, Gardner, and Berntson 1999; Larsen, Hemenover, Norris, and Cacioppo 2003). As with other types of conflicting psychological states such as cognitive dissonance (Festinger 1957) or attitudinal ambivalence (Cacioppo and Berntson 1994; Kaplan 1972; Thompson, Zanna, and Griffin 1995), mixed emotions is thought to be an unharmonious and disconcerting experience (Cacioppo 1999). In particular, people who felt both happy and sad at the same time after reading an ad with mixed emotional appeal reported feeling uncomfortable and conflicted (Williams and Aaker 2002). Larsen and his colleagues
(2003) propose that the disharmonious psychological state from mixed emotions provides indeterminate behavioral guidance and tends to be unstable, and people experiencing mixed emotions would strive to reach a more enduring affective endpoint. That is, people who experience mixed emotions should be motivated to reduce the conflicting feeling and to feel more coherent and settled.

An interesting question is what would people do when they are motivated to alleviate their negative feelings? In particular, what would people experiencing mixed emotions do when they are motivated to reduce the conflicting feeling? Larsen (2000) posits that there is an affective specificity principle in affect regulation behaviors. That is, people engage in different affect-regulation behaviors depending on the specific emotional states they are experiencing. For example, a person attempting to mitigate his anger might engage in activities that would cool him off, such as listening to calming music; whereas someone who is motivated to get out of sadness is more likely to engage in activities that are uplifting, such as watching a cheerful movie, than listening to calming music. Based on this notion of affective specificity, we argue that the motive to reduce the conflicting feeling from mixed emotions will also prompt affect-regulation behaviors that are unique to mixed emotions. Specifically, our view is that people experience conflicting feeling from mixed emotions because they have multiple goals that are in conflict which each other, not all of which can be satisfied at the same time. One way for people to resolve this conflicting feeling and feel more coherent and more settled is for them to reprioritize the importance of the goals and focus on one of them. And this attempt to resolve the conflicting feeling through narrowing their focus will in turn prompt people to be in a general mindset of staying focused and committing to fewer things. The notion that people may manage their conflicting state by narrowing their focus has received some empirical support in the
literature. For example, people who initially held an ambivalent attitude toward a topic were subsequently found to engage in biased information processing, as indicated by the amount of one-sided thoughts, to reduce the feeling of conflictedness (Nordgren, Harreveld, and der Pligt 2006). Similarly, research in cognitive dissonance has shown that people who chose to write a counter-attitudinal essay experienced dissonance due to the discrepancy between their attitude and their behavior; and they subsequently changed their attitude on the topic to be consistent with their behavior in order to reduce the dissonance (Elliot and Devine 1994). Moreover, Nowlis, Kahn, and Dhar (2002) showed that when consumers were forced to express their attitude toward an option that they felt ambivalent about – an option with both extremely positive and negative attributes – they would reprioritize the importance of attributes and assign greater weight to the most important attribute when forming their evaluation to resolve their ambivalence toward the option. This observation is consistent with our conjecture that one way for people to alleviate the conflicting feeling from mixed emotions is to reprioritize the importance of the goals and focus on one (or fewer) of them. We further argue that this general mindset of staying focused arising from people’s motivation to reduce the conflicting feeling from mixed emotions will in turn influence their subsequent behavior. In particular, when people who experienced mixed emotions are subsequently faced with the decision of choosing multiple items from a choice set, this general mindset of staying focused and committing to few things would steer them toward sticking to fewer options and seeking less variety.

It should be noted that our proposition that people are spontaneously motivated to reduce the conflicting feeling from mixed emotions rather than directly alleviate the negative component of the mixed emotions rests on the assumption that the mixed emotional experience is a unique affective state. As Scherer (1998) puts it, the experience of mixed emotions is not a simple
blending of two or more basic emotions, but rather is “the result of a complex appraisal process that combines elements of several modal emotions” (p. 142). Therefore, when different emotions are experienced simultaneously, it may be difficult to dissociate them and to identify their respective natures (Rosenberg 1990). Consistent with this conceptualization is the finding that when people are presented with an advertising appeal that elicits both happiness and sadness, it is their feeling of conflictedness (rather than sadness) that drives the evaluation of the advertisement (Williams and Aaker 2002).

Mixed Emotions as Informational Input

Research also suggests that another way through which affect can influence behavior is to serve as informational input to people’s judgment and decision making (Schwarz and Clore 1983; 1996). According to the affect-as-information model, people often draw inferences from their affective states and use this information in their judgment and decision making (Schwarz and Clore 1996). For example, people generally interpret pleasant feelings as indicating liking or satisfaction, and unpleasant feelings as evidence of disliking or dissatisfaction. Thus, when people are asked about their life satisfaction, those in a positive mood due to good weather interpreted their pleasant feelings as evidence of happiness with their life and reported higher life satisfaction; and those in a negative mood due to bad weather inferred from their unpleasant feelings that they were not happy with their life and reported lower life satisfaction (Schwarz and Clore 1983). However, this mood congruent effect on judgment of their life satisfaction was eliminated when respondents were reminded that their feelings were caused by external factors, as hence should not be diagnostic of their life satisfaction.

Earlier research has focused on documenting the implications of feelings as information
for evaluative judgments; that is, people are likely to infer the evaluation of a target object based on the pleasantness of their feelings (e.g., Gorn et al. 1993; Pham 1998; Schwarz and Clore 1983). More recent theorizing has adopted a broader conceptualization of the affect-as-information approach (Schwarz and Clore 2003; 2007; Pham 2004; 2007). In particular, it is proposed that the information extracted from people’s affective states can exert its influence beyond evaluative judgments (Schwarz and Clore 2003; 2007). For example, people’s affective state can inform people about the environment and in turn influence their processing style. Whereas a negative mood may signal a problematic situation and thus foster a systematic processing style; a positive mood may signal a benign situation and prompt a heuristic processing style (Schwarz 2002). Furthermore, people’s affective states can provide specific information that goes beyond merely the valence dimension (Schwarz and Clore 2003). For example, Raghunathan and Pham (1999; 2006) argued that feelings of anxiety can be interpreted as a signal that the environment is uncertain and uncontrollable and that feelings of sadness can be interpreted as a signal that something important is missing. Thus, when presented with two options which include a low-reward/low-risk option and a high-reward/high-risk option, participants who were feeling anxious were more likely to choose the low-reward/low-risk option presumably because anxiety signals an uncertain and uncontrollable environment; whereas those who were feeling sad were more likely to choose the high-reward option even though the risk was also higher as they felt something important was missing.

We argue that mixed emotions as a distinct affective state also carry its specific informational properties. Carver and Scheier (2002) suggest that people experience mixed emotions when they have multiple goals that are in conflict. While progress made toward one goal generates positive feelings, the lack of progress toward the other goal leads to negative
emotions. If both goals are important for the individual, mixed emotions may ensue (Ellsworth and Scherer 2003; Weigert 1991). Thus, the experience of mixed emotions reflects the complex and conflict-laden conditions under which it occurs (Lazarus 2001). We hypothesize that when people experience mixed emotions, they are likely to interpret the situation as one in which they have multiple goals or needs that might be in conflict. We further posit that the information inferred from the mixed emotional experience (i.e., the recognition that multiple goals are present) may subsequently lead people to seek multiple options to fulfill their multiple goals (McAlister and Pessemier 1982). This is manifested as greater variety seeking behavior in the product choice context.

Take together, the literatures on affect regulation and affect-as-information support the view that incidental mixed emotions can have dual effects on people’s subsequent variety seeking behavior: when people are motivated to engage in affect regulation to reduce the conflicting feeling from mixed emotions, they will exhibit less variety seeking; on the other hand, when people use mixed emotions as informational input in their decision making, mixed emotions will steer them toward choosing more varieties. We tested these predictions in four experiments. Experiment 1 tested this dual process model of mixed emotions and variety seeking by manipulating whether or not people experience the conflicting feeling from mixed emotions. The rationale is that if people experience conflictedness from mixed emotions, they are more likely to engage in affect regulation, which would in turn lead to less variety seeking behavior. However, when people do not experience psychological conflict from mixed emotions, there is no need for affect regulation and they are more likely to rely on mixed emotions as informational input to their choice decisions which should lead to more variety seeking. Experiment 2 tested these predictions by prompting people to focus on feeling or on thinking. The rationale is that
when people focus on their feelings, they should be more aware of their affective state and thus more motivated to engage in affect regulation to reduce the conflicting feeling from mixed emotions. This leads to less variety seeking. On the other hand, when people focus on thinking, they should be more likely to draw inferences from their affective state and extract information from it, in which case mixed emotions is more likely to influence variety seeking by signaling the presence of multiple goals, leading to more variety seeking. We further tested the model in Experiment 3 by examining the effects of people’s chronic affect regulation tendency. For people who have a high chronic affect regulation tendency, they are more likely to engage in affect regulation, so the experience of mixed emotions should lead to less variety seeking. Conversely, for those with a low affect regulation tendency, mixed emotions is more likely to serve as information to guide choices, leading to more variety seeking. Finally, in experiment 4, we provide further support for our model by showing that people’s conflicting feeling from mixed emotions can indeed be significantly reduced when they engage in less variety seeking behavior.

EXPERIMENT 1

Overview and Design

The objective of experiment 1 was to test the dual effects of mixed emotions on variety seeking by manipulating whether or not people experience conflictedness from mixed emotions. The rationale is that if people feel conflicted as a result of having mixed emotions, they should be more motivated to regulate the conflictedness; this leads to a mindset of being focused, which would in turn steer people toward seeking less variety. In contrast, if people do not feel conflicted from mixed emotions, there is no need for them to regulate their affect. And mixed emotions should lead to more variety seeking by signaling the presence of multiple goals. To this
end, we systematically varied participants’ feeling of conflictedness from mixed emotions by manipulating their construal level.

According to construal level theory (Trope and Liberman 2003), the same object or event can be mentally construed either at a high or a low level. High-level construals are abstract mental representations and reflect a more general understanding of objects and events. In contrast, low-level construals are concrete mental representations and reflect the details or specifics of objects and events. For example, the same act of going on a vacation can be thought of as having a good time and enjoying life, which is a high-level construal; or it can be thought of as lying on the beach with a cool refreshing drink, which is a low-level construal. We reason that when people think at a more abstract level (i.e., high-level construal), they tend to pay less attention to details and specifics that differentiate between objects, and are more likely to see commonalities across disparate things. Thus, while objects that are in conflict with each other may still appear different, they are likely to be perceived as less discrepant from each other by those who construe information at a more abstract level because of the shared commonalities. This reasoning is consistent with the finding that high-level construals appear to blur social distinctions by fostering perceptions of group homogeneity (Levy, Freitas, and Salovey 2002). Since people usually feel conflicted from having mixed emotions because they have conflicting goals, thinking at an abstract and high-level should reduce the perceived discrepancy between different goals and leading to feeling less conflicted. We tested and received support for these predictions in a series of studies. In particular, participants who construed information at an abstract, high level were less likely to feel conflicted when experiencing mixed emotions (Hong and Lee 2007). Thus, in experiment 1 we manipulated participants’ construal level to vary the extent to which they experienced conflictedness from mixed emotions. A 2 (affective state:
mixed emotions vs. neutral) × 2 (construal level: high vs. low) between-subject design was used. We predicted that when people are primed with a low-level construal, the motivation to reduce the conflictedness from mixed emotions will lead them to engage in less variety-seeking in a subsequent choice task. In contrast, those primed with a high-level construal should be less likely to feel conflicted; hence mixed emotions is more likely to serve as informational input in their subsequent choice task, leading to more variety seeking.

Method

Eighty-six undergraduate students from Northwestern University participated in the study in exchange for course credit. They were randomly assigned to one of the four experimental conditions.

At the beginning of the study, participants were asked to complete a category/exemplar generation task, which was used to prime high versus low-level construal (Fujita, Trope, Liberman, and Levin-Sagi 2006). Specifically, participants were first given a list of twelve objects (e.g., novel). Those in the high-level construal condition were asked to generate a superordinate category label for the object (e.g., books), whereas those in the low-level construal condition were asked to generate a subordinate exemplar of the object (e.g., Lord of the Rings: Return of the King).

Then we asked participants to complete an event recall task to induce the desired affective states. Participants in the mixed emotions condition were asked to vividly recall an emotional event in their life when they felt both happy and sad at the same time. They were asked to describe the event as vividly and in as much detail as possible. In contrast, those in the neutral condition were simply asked to list activities from the past week. This procedure is commonly used to induce desired affective state (e.g., Adaval 2001; Fong 2006; Schwarz and
Clore 1983). After the event recall, participants were asked to indicate the extent to which they felt happiness (happy, delighted, joyful), sadness (sad, sorrowful, depressed), and mixed feelings on seven-point scales (1 = not all; 7 = a lot). These measures serve as manipulation check for the emotion induction. Participants also indicated their feeling of conflictedness (torn, conflicted) on two seven-point scales (1 = not all; 7 = a lot). The order of these items was randomized.

Following the emotion induction, participants were asked to complete an ostensibly unrelated consumer choice task, which was our main dependent measure of variety seeking. Participants were shown nine different colors of M&M’s on the computer screen. They were asked to choose any five M&M’s of any combination (e.g., five of the same color, two of one color and three of another color, etc.) by typing in a number next to the color of M&M’s they would like to choose. Variety seeking was measured as the number of different colors of M&M’s participants chose. This measure has been employed in previous research as an indicator of variety seeking (e.g., Ratner and Kahn 2002). After participants completed the choice task, they were thanked and debriefed.

Results and Discussion

**Manipulation check.** To examine whether the emotion induction was successful, we first composed a happiness index by averaging the three items measuring happiness (α = .87). A 2 (affective state: mixed emotions vs. neutral) × 2 (construal level: high vs. low) ANOVA on participants’ happiness index showed only a significant main effect of affective state such that those in the mixed emotions condition felt happier (M = 4.27) than those in the neutral condition (M = 3.66; F(1, 82) = 3.99, p < .05). Neither the main effect of construal level (F < 1) nor the interaction between affective state and construal level (F(1, 82) = 2.66, p > .10) was significant. A similar analysis on participants’ sadness index (α = .90) indicated a significant main effect of
affective state such that those in the mixed emotions condition felt more sadness \((M = 3.16)\) than those in the neutral condition \((M = 2.22; F(1, 82) = 10.79, p < .01)\). Again, neither the main effect of construal level nor the interaction between affective state and construal level was significant \((F_s < 1)\). A similar analysis on participants’ mixed feelings also yielded a significant main effect of affective state such that those in the mixed emotions condition reported having more mixed feelings \((M = 4.23)\) than those in the neutral condition \((M = 3.26; F(1, 82) = 5.95, p < .05)\). Neither the main effect of construal level nor the interaction between affective state and construal level was significant \((F_s < 1)\). These results suggested that our emotion induction was successful.

**Conflictedness.** We hypothesized that for participants primed with a high-level construal, mixed emotions should lead to less conflictedness compared to those primed with a low-level construal. To examine this, we conducted a 2 (affective state: mixed emotions vs. neutral) × 2 (construal level: high vs. low) ANOVA on participants’ feeling of conflictedness \((\alpha = .82)\). The main effect of affective state was significant such that those in the mixed emotions condition felt more conflicted \((M = 3.45)\) than those in the neutral condition \((M = 2.69; F(1, 82) = 6.17, p < .05)\). The main effect of construal level was not significant \((F(1, 82) = 2.16, p > .10)\). However, the hypothesized interaction between affective state and construal level was significant \((F(1, 82) = 8.02, p < .01; \text{figure 1})\). Planned contrasts showed that participants who were primed with a high-level construal felt less conflicted \((M = 2.80)\) than those primed with a low-level construal when experiencing mixed emotions \((M = 4.14; F(1, 82) = 9.25, p < .01)\). In fact, participants primed with a high-level construal in the mixed emotions condition reported virtually the same level of conflictedness as those in the neutral condition who did not experience mixed emotions \((M_{\text{neutral/low-level construal}} = 2.48; M_{\text{neutral/high-level construal}} = 2.90; F_s < 1)\).
Variety seeking. We hypothesized that participants primed with a low-level construal should be more likely to engage in affect regulation because they feel conflicted from mixed emotions, thus mixed emotions should lead them to choose less variety compared to the neutral condition; in contrast, for participants primed with a high-level construal, since they are not feeling conflicted, mixed emotions is more likely to serve as informational input to their choices, leading to more variety seeking than the neutral. We conducted a 2 (affective state: mixed emotions vs. neutral) × 2 (construal level: high vs. low) ANOVA on the number of colors of M&M’s participants chose. The results showed that neither the main effect of emotion ($F < 1$) nor that of construal level ($F(1, 82) = 1.99, p > .15$) was significant. However, consistent with our hypothesis, the interaction between affective state and construal level was significant ($F(1, 82) = 8.48, p < .01$; figure 2). Planned contrasts indicated that for participants primed with a low-level construal, mixed emotions led them to choose fewer varieties of M&M’s ($M = 2.71$) compared to those in the neutral condition ($M = 3.64; F(1, 82) = 3.93, p = .05$). In contrast, for those primed with a high-level construal, mixed emotions led to them to choose more varieties ($M = 4.14$) than those in the neutral condition ($M = 3.14; F(1, 82) = 4.56, p < .05$).

Mediation analysis. We hypothesized that mixed emotions led participants to choose less varieties in the low-level construal condition because they were motivated to reduce the conflictedness from mixed emotions. To test this hypothesis, we conducted a mediation analysis
to examine the role of conflictedness in the low-level construal condition following Baron and Kenny’s (1986) procedures: First, a regression analysis showed that participants’ affective state significantly predicted their subsequent variety seeking behavior ($\beta = -.30, p = .05$). A second regression analysis showed that affective state was a significant predictor of the amount of conflictedness participants experienced ($\beta = .46, p < .01$). A third regression showed that conflictedness negatively predicts participants’ variety seeking behavior ($\beta = -.40, p < .01$).

Finally, when affective state and the feeling of conflictedness were both included in the model to predict variety seeking, the effect of affective state was no longer significant ($\beta = -.14, p > .35$); while the effect of conflictedness remained significant ($\beta = -.34, p < .05$). A Sobel test ($z = -2.15, p < .05$) confirmed that the effect of mixed emotions on variety seeking in the low-level construal condition was mediated by their feeling of conflictedness.

These results provide some initial evidence for the dual effects of mixed emotions on variety seeking. We showed that participants primed with a low-level construal were more likely to feel conflicted, which should prompt them to engage in affect regulation; and this in turn led them to choose fewer varieties compared to the neutral condition. In contrast, those participants primed with a high-level construal felt less conflicted; hence the information from mixed emotions signaling multiple goals was more likely to influence their subsequent choices, leading to more variety seeking than the neutral condition. We further showed that the effect of mixed emotions on variety seeking in the low-level construal condition was mediated by their feeling of conflictedness, thus providing some support for the notion that affect regulation of the feeling of conflictedness from mixed emotions would lead to less variety seeking.

One might wonder if the current results were driven by the experience of the negative affective component in mixed emotions (i.e., sadness) rather than the conflicted feeling. In other
words, could the effects observed in experiment 1 be driven by any negative affect or are they unique to mixed emotions? To address this issue, we included a sadness condition to juxtapose against the mixed emotions condition.

**Experiment 2**

Overview and Design

Experiment 2 was designed to achieve two objectives: first, we wanted to test the robustness of the effects of mixed emotions on variety seeking by using a different affect induction method and by using a different operationalization of the mechanisms of affect regulation and affect-as-information. In particular, we manipulated participants’ mindset by focusing them either on feeling or on thinking. The rationale is that when people focus on their feelings, they should be more aware of their affective state, and thus should be more motivated to engage in affect regulation to reduce the conflicting feeling from mixed emotions, leading to less variety seeking. On the other hand, since the affect-as-information mechanism involves people drawing inference from their affective experience (Schwarz and Clore 1988; 1996), when people focus on thinking, they should be more likely to draw inferences from their affective state and extract information from it, so mixed emotions is more likely to influence variety seeking by signaling the presence of multiple goals, leading to more variety seeking.

Another important objective of experiment 2 was to show that the effects of mixed emotions on variety seeking we observed in experiments 1 are unique to mixed emotions, and are distinct from a pure negative affective state. To this end, we included a sadness condition in the study. We expected that sadness would lead to the opposite pattern of results as mixed emotions. In particular, people are likely to regulate their sadness through engaging in mood-lifting behavior (Andrade 2005; Zillman 1988). Because variety seeking provides positive stimulation
(Menon and Kahn 1995), we should expect that for people who focus on their feelings, the motivation to reduce sadness would prompt them to engage in more variety seeking. In contrast, sadness signals that the environment is problematic (Schwarz 2002) and people are less likely to engage in variety seeking when the environment is unsafe (Kahn and Isen 1993). Thus, sadness should lead to less variety seeking when people focus on thinking. Hence, we expected that mixed emotions would lead to less variety seeking when people focus on feeling than when they focus on thinking; conversely, sadness would lead to more variety seeking when people focus on feeling compared to when they focus on thinking. Thus, a 3 (affective state: mixed emotions vs. sad vs. neutral) × 2 (mindset: feeling vs. thinking) between-subject design was employed.

Method

One hundred and twenty-five undergraduate students from Northwestern University participated in the study in exchange for $10. They were randomly assigned to one of the six experimental conditions.

At the beginning of the study, participants were asked to watch a video clip that would be used in a future study. They were shown a video clip that elicits either mixed emotions, sadness, or a neutral affective state. The use of video clips as an emotion induction has been extensively used in prior research (e.g., Adaval 2001; Cohen and Andrade 2004; Lerner, Small, and Loewenstein 2004). In the mixed emotions condition, participants watched a clip from the movie Father of the Bride, which had been shown in previous research to elicit mixed emotions (Fong 2005). The clip showed a father at his daughter’s wedding ceremony with a voice-over monologue expressing his mixed emotions on this bitter-sweet day. In the sad condition, participants watched a clip from the movie Lorenzo’s Oil. The clip showed a little boy was
stricken by a terrible disease and was undergoing extremely painful treatment. In the neutral condition, participants watched a video clip of a series of colored lines that has been used to induce neutral affective state (Gross and Levenson 1995). After watching the video clip, participants indicated their affective state using the same measures as in experiment 1. Participants also indicated their feeling of conflictedness (torn, conflicted) on two seven-point scales (1 = not all; 7 = a lot).

Then participants were asked to perform a word fragment completion task, an unobtrusive mindset manipulation that has been used in prior research (e.g., Bargh et al. 1995). All participants were given eight word fragments to complete, with each word fragment missing one letter. Participants in the feeling condition completed five words related to affect (fe_ling, emo-ion, m_od, hea_t, f_lt) and three filler words (t_ble, sh lf, j_cket); and those in the thinking condition completed five words related to cognition (t_ink, rea_on, analy_e, cons_der, refle_t) and the same three filler words. We took care in the development of the fragments so that participants would be able to produce all of the correct solutions.

Following the mindset manipulation, participants were asked to complete an ostensibly unrelated consumer choice task. We employed a similar measure of variety seeking as in experiment 1. However, to test the robustness of the effects, a different product category was used. Participants were shown nine different brands of candy bars on the computer screen. They were asked to choose any five candy bars of any combination (e.g., five of the same brand, two of one brand and three of another brand, etc.) by typing in a number next to the candy bar they would like to choose. As in experiment 1, participants’ variety seeking behavior was measured by counting the number of different types of candy bars they chose. Finally, participants were thanked and debriefed.
Results and Discussion

**Manipulation check.** To examine whether the emotion induction was successful, we first composed a happiness index by averaging the three items measuring happiness ($\alpha = .94$) and a sadness index by averaging the three items measuring sadness ($\alpha = .91$). A 3 (affective state: mixed emotions vs. sad vs. neutral) × 2 (mindset: affective vs. cognitive) ANOVA on participants’ happiness index showed only a significant main effect of affective state ($F(1, 118) = 26.34, p < .001$). Neither the main effect of mindset nor the interaction between affective state and mindset was significant ($Fs < 1$). Follow-up contrasts showed that participants in the mixed emotions condition felt happier ($M = 4.55$) than those in the neutral condition ($M = 2.85; t(121) = 5.59, p < .001$) and those in the sad condition ($M = 2.46; t(121) = 6.84, p < .001$). Those in the neutral condition ($M = 2.85$) did not differ significantly from those in the sad condition in terms of happiness ($M = 2.46; t(121) = 1.29, p = .20$). A similar analysis on participants’ sadness index also showed a significant main effect of affective state ($F(1, 118) = 24.61, p < .001$). Neither the main effect of mindset ($F < 1$) nor the interaction between affective state and mindset ($F(1, 118) = 1.32, p > .25$) was significant. Follow-up contrasts indicated that participants in the sad condition ($M = 4.62$) reported feeling more sad than those in the mixed emotions condition ($M = 3.04; t(121) = 4.85, p < .001$), who in turn reported feeling more sad than those in the neutral condition ($M = 2.41; t(121) = 1.94, p < .06$).

A similar analysis on participants’ mixed feelings yielded a significant main effect of affective state ($F(1, 118) = 6.21, p < .01$). Neither the main effect of mindset ($F(1, 118) = 2.68, p > .10$) nor the interaction between affective state and mindset ($F < 1$) was significant. Follow-up contrasts indicated that participants in the mixed emotions condition had more mixed feelings ($M = 4.32$) than those in the neutral condition ($M = 3.19; t(121) = 2.85, p < .01$) and the sad
condition ($M = 3.05; t(121) = 3.19, p < .01$). And those in the neutral condition ($M = 3.19$) did not differ from those in the sad condition ($M = 3.05; t(121) = .36, p > .70$). These results suggested that our emotion induction was successful.

**Conflictedness.** We also examined participants’ feeling of conflictedness across the different experimental conditions. A 3 (affective state: mixed emotions vs. sad vs. neutral) × 2 (mindset: feeling vs. thinking) ANOVA on participants’ feeling of conflictedness ($\alpha = .73$) indicated only a significant main effect of affective state. Neither the main effect of mindset ($F(1, 118) = 1.07, p > .30$) nor the interaction between affective state and mindset was significant ($F < 1$). Follow-up contrasts indicated that participants in the mixed emotions condition felt more conflicted ($M = 3.29$) than those in the neutral condition ($M = 2.58; t(121) = 2.26, p < .05$) and the sad condition ($M = 2.54; t(121) = 2.40, p < .05$). And those in the neutral condition ($M = 3.19$) experienced similar level of conflictedness compared to those in the sad condition ($M = 3.05; t(121) = .15, p > .80$).

**Variety seeking.** We hypothesized that participants primed to focus on feeling would be more likely to engage in affect regulation of the conflictedness they are experiencing, and thus mixed emotions should lead them to seek less variety compared to the neutral condition; in contrast, for those who focused on thinking, they should be more likely to draw the inference from mixed emotions that multiple goals are present, leading to more variety seeking than the neutral condition. A 3 (affective state: mixed emotions vs. sad vs. neutral) × 2 (mindset: feeling vs. thinking) ANOVA on the number of different brands of candy bars participants chose was conducted. The results yielded no significant main effect of affective state or of mindset ($Fs < 1$). However, the predicted interaction between affective state and mindset was significant ($F(1, 118) = 13.43, p < .001$; figure 3). Planned contrasts showed that, consistent with our hypothesis, for
participants who focused on feeling, mixed emotions led to less variety seeking ($M = 2.83$) compared to the neutral condition ($M = 3.78$; $F(1, 118) = 7.60, p < .01$); whereas for those who focused on thinking, mixed emotions led them to choose more variety ($M = 4.50$) than those in the neutral condition ($M = 3.70$; $F(1, 118) = 4.38, p < .05$). Importantly, sadness exhibited a different pattern of results. Participants who focused on feeling exhibited more variety seeking ($M = 4.25$) compared to those who focused on thinking ($M = 3.25$; $F(1, 118) = 7.22, p < .01$). Moreover, for participants who focused on feeling, sadness led to more variety seeking ($M = 4.25$) than those in the neutral condition ($M = 3.78$; $F(1, 118) = 1.69, p < .20$); and for those who focused on thinking, sadness led to less variety seeking ($M = 3.25$) than the neutral ($M = 3.70$; $F(1, 118) = 1.46, p < .25$), although neither contrast reached statistical significance.

Using a different operationalization, experiment 2 tested the dual effects of mixed emotions on variety seeking by priming participants to either focus on feeling or focus on thinking. We showed that when participants focused on feeling, mixed emotions led to less variety seeking compared to the neutral; conversely, for those who focused on thinking, mixed emotions led to more variety seeking. Furthermore, we showed that sadness led to the opposite pattern of results, suggesting that the effects of mixed emotions on variety seeking that we observed are specific to mixed emotions, and are not driven by just any negative affective state.

So far, experiments 1 and 2 provide convergent evidence for our hypothesis that mixed emotions leads to less variety seeking when people engage in affect regulation of the conflictedness, but leads to more variety seeking when people incorporate the informational value from mixed emotions into their choices. Although we have provided some evidence for the
affect regulation account in experiment 1, direct evidence for the underlying mechanism of affect-as-information is still lacking. Thus, we addressed this issue by directly assessing participants’ cognition of having multiple goals after the emotion induction in experiment 3. And we relied on people’s chronic affect regulation tendency to operationalize the affect regulation versus affect-as-information route to provide convergent evidence of our hypothesis.

EXPERIMENT 3

Overview and Design

The objective of experiment 3 was threefold: first, we wanted to provide convergent evidence for the dual effects of mixed emotions on variety seeking by using a different operationalization of affect regulation versus affect-in-information. To this end, we measured people’s chronic inclination to regulate their affect. We predicted that people who are chronically inclined to regulate their affect should be more motivated to reduce the conflictedness from mixed emotions, which in turn would lead to less variety seeking. On the other hand, for people who have a low chronic inclination to engage in affect regulation, the informational value from mixed emotions is likely to influence their choices, leading to more variety seeking. Second, we have provided some evidence for the affect regulation mechanism underlying the effects of mixed emotions on variety seeking in experiment 1. In experiment 3, we wanted to also provide direct evidence for the affect-as-information mechanism. Participants would be asked to indicate the extent to which they have multiple goals immediately after the emotion induction to directly assess the informational property of mixed emotions. A third objective of experiment 3 was to demonstrate the external validity of the dual effects of mixed emotions on variety seeking by employing a task involving real choices.
Method

One hundred and seventeen undergraduate students from Northwestern University participated in the study in exchange for $10. They were randomly assigned to one of the experimental conditions.

Participants first completed a modified version of the Negative Mood Regulation Scale (NMR Scale; Catanzaro and Mearns 1990). The NMR scale measures people’s general beliefs about whether and what they can do to make themselves feel better. This scale has been used as a measure of people’s affect regulation inclination in prior research (e.g., Tice, Bratslavsky, and Baumeister 2001). For the purpose of the current study, the modified version of the NMR scale used in this experiment included twelve items that measure participants’ general beliefs about whether they can do something to make them feel better and excluded items that measure their beliefs about what they can do to feel better.

Following the affect regulation tendency measure, participants watched the same video clips as in the mixed emotions and neutral conditions of experiment 2. After watching the video clip, participants reported their affective state on the same measures as used in experiments 1 and 2. They also indicated their feeling of conflictedness (torn, conflicted) on two seven-point scales (1 = not all; 7 = a lot). To assess the informational property of mixed emotions, participants were asked to indicate the extent to which they agreed they have multiple goals on two nine-point scales (I have multiple needs I want to fulfill; I may want very different things at the same time; 1 = strongly disagree; 9 = strongly agree).

Then participants were told that the experimenter would like to offer some candy bars in addition to the payment as a token of appreciation. Participants were presented with nine plates of candy bars, with each plate filled with one kind of candy bar. They were told that they could
choose any five candy bars in any combination (e.g., five of the same kind, two of one kind and three of another kind, etc.). As in experiments 1 and 2, variety seeking was measured as the number of different types of candy bars participants chose. Finally, participants were thanked and debriefed.

Results and Discussion

Manipulation check. To examine whether the emotion induction was successful, we first composed a happiness index by averaging the three items measuring happiness ($\alpha = .90$) and a sadness index by averaging the three items measuring sadness ($\alpha = .80$). A one-way ANOVA on participants’ happiness index showed that participants in the mixed emotions condition felt happier ($M = 4.71$) than those in the neutral condition ($M = 3.62$; $F(1, 115) = 20.16, p < .001$). A similar analysis on participants’ sadness index also showed that those in the mixed emotions condition felt more sad ($M = 2.75$) than those in the neutral condition ($M = 2.37$; $F(1, 115) = 3.32, p = .07$). A one-way ANOVA on participants’ mixed feelings also showed that those in the mixed emotions condition had more mixed feelings ($M = 4.44$) than those in the neutral condition ($M = 3.65$; $F(1, 115) = 5.81, p < .05$). These results again suggested that our emotion induction was successful.

Conflictedness. We first computed participants’ chronic affect regulation tendency by averaging participants’ ratings on the modified NMR scale. A higher score indicates a higher tendency to engage in affect regulation. We then examined participants’ feeling of conflictedness across the different experimental conditions. We composed a conflictedness index by averaging the two conflictedness items ($\alpha = .89$) and conducted a regression analysis with affective state ($-1 = \text{neutral}; 1 = \text{mixed emotions}$), participants’ affect regulation tendency score (mean-centered), and the interaction term as predictors of conflictedness. The analysis only yielded a significant
main effect of affective state ($\beta = .31, p = .001$). The coefficient suggests that participants in the mixed emotions condition felt more conflicted than those in the neural condition. Neither the main effect of affect regulation tendency nor the interaction term was significant ($ps > .20$).

**Cognition of multiple goals.** To directly assess the informational property of mixed emotions, we averaged participants’ ratings on the two items that measure the extent to which participants agreed that they had multiple goals ($a = .80$) and ran a regression with affective state (-1 = neutral; 1 = mixed emotions), affect regulation tendency score (mean-centered), and the interaction term in the model to predict participants’ cognition of having multiple goals. The results showed a significant main effect of affective state ($\beta = .23, p < .05$), providing support for our hypothesis that mixed emotions signals the presence of multiple goals. Neither the main effect of affect regulation tendency nor the interaction term was significant ($ps > .10$).

**Variety seeking.** We hypothesized that for participants with a high affect regulation tendency, mixed emotions should lead them to choose less variety compared to those in the neutral condition. In contrast, for participants with a low affect regulation tendency, the information from mixed emotions is more likely to influence their choices, leading to more variety seeking. We ran a regression with affective state (-1 = neutral; 1 = mixed emotions), affect regulation tendency score (mean-centered), and the interaction term in the model to predict the number of different types of candy bars participants chose. The results showed that neither the main effect of affective state nor affect regulation tendency was significant ($ps > .15$). However, consistent with our hypothesis, the interaction between affective state and affect regulation tendency was significant ($\beta = -.22, p < .05$). Subsequent planned contrasts based on a median split on participants’ affect regulation tendency score showed that for participants with a high chronic affect regulation tendency, mixed emotions led them to choose fewer varieties of
candy bars ($M = 2.97$) compared to the neutral condition ($M = 3.57$; $F(1, 113) = 5.49, p < .05$); in contrast, for those low affect-regulators, mixed emotions led to them to choose more varieties ($M = 3.89$) than those in the neutral condition ($M = 3.33$; $F(1, 113) = 4.67, p < .05$; figure 4).

Mediation analyses. We hypothesized that two different mechanisms underlie the effects of mixed emotions on variety seeking for people with high versus low affect regulation tendency. For those high affect-regulators, we expected that the effect of mixed emotions on participants’ reduced variety seeking behavior was driven by their motivation to reduce the conflictedness from mixed emotions; in contrast, for low affect-regulators, the effect of mixed emotions on their increased variety seeking behavior was driven by the informational property of mixed emotions that multiple goals are present.

To provide direct evidence for these dual processes, we first examined the underlying mechanism in the high affect regulation tendency condition. We first conducted a mediation analysis to examine the role of conflictedness following Baron and Kenny’s (1986) procedures: First, a regression analysis showed that participants’ affective state (-1 = neutral; 1 = mixed emotions) significantly predicted their subsequent variety seeking behavior ($\beta = -.29, p < .05$). A second regression showed that affective state was a significant predictor of their feeling of conflictedness ($\beta = .33, p = .01$). A third regression showed that conflictedness negatively predicts the number of varieties participants chose ($\beta = -.39, p < .01$). Finally, when both participants’ affective state and conflictedness were included in the model to predict variety seeking, the effect of affective state was no longer significant ($\beta = -.18, p > .15$); while the effect of conflictedness remained significant ($\beta = -.33, p < .05$). A Sobel test ($z = -2.05, p < .05$)
confirmed that the effect of mixed emotions on the variety seeking was mediated by the feeling of conflictedness. We also examined the effect of participants’ cognition of having multiple goals on variety seeking. A regression analysis showed that participants’ endorsement of having multiple goals did not predict their subsequent variety seeking behavior ($B = -.21, p > .10$).

Taken together, these results suggest that for people with high affect regulation tendency, the effect of mixed emotions on reduced variety seeking behavior was indeed driven by their motivation to reduce conflictedness, and not by the informational property of mixed emotions.

Next, we examined the underlying mechanism in the low affect regulation tendency condition. A mediation analysis showed that the informational property of mixed emotions (i.e., the cognition of having multiple goals) mediates the effects of mixed emotions on variety seeking: First, a regression analysis showed that participants’ affective state (-1 = neutral; 1 = mixed emotions) significantly predicted their subsequent variety seeking behavior ($\beta = .29, p < .05$). A second regression showed that affective state was a significant predictor of the extent to which participants agreed they had multiple goals ($\beta = .34, p < .01$). A third regression showed that participants’ endorsement of having multiple goals significantly predicts the number of varieties they chose ($\beta = .38, p < .01$). Finally, when participants’ affective state and conflictedness were both included in the model to predict variety seeking, the effect of conflictedness remained significant ($\beta = .32, p < .05$); however, the effect of affective state was no longer significant ($\beta = .17, p > .15$; Sobel z = 2.05, $p < .05$). A separate regression analysis showed that the feeling of conflictedness did not predict variety seeking ($B = .12, p > .35$). Taken together, these results suggest that for participants with low affect regulation tendency, the effect of mixed emotions on increased variety seeking behavior was mediated by the information from
mixed emotions signaling the presence of multiple goals, and not driven by participants’
motivation to reduce their conflictedness.

Experiment 3 employed a different operationalization to demonstrate the dual effects of
mixed emotions on variety seeking. We showed that for those who are chronically more likely to
regulate their affect, experiencing mixed emotions led them to subsequently choose fewer
varieties compared to the neutral condition; conversely, for those who have a low chronic affect
regulation tendency, experiencing mixed emotions led them to subsequently engage in more
variety seeking than the neutral condition. Furthermore, we provided direct evidence for the
processes underlying the dual effects of mixed emotions on variety seeking. Consistent with the
findings in experiment 1, we showed that for participants who have a high affect regulation
tendency, the effect of mixed emotions on variety seeking was mediated by participants’ feeling
of conflictedness, providing evidence for the affect regulation account. We also showed that for
participants who have a low affect regulation tendency, the effect of mixed emotions on variety
seeking was mediated by participants’ cognition of having multiple goals, providing support for
the affect-as-information mechanism.

The results across the three studies provide convergent support for the dual effects of
mixed emotions on variety seeking. Using three different operationalizations of the two
processes of affect regulation and affect-as-information, we showed that mixed emotions leads to
more variety seeking when people relied on the informational value from mixed emotions. On
the other hand, when people are motivated to reduce the feeling of conflictedness, they would
engage in less variety seeking. One interesting question is whether engaging in less variety
seeking can indeed help people reduce the feeling of conflictedness. Is variety seeking simply an
erroneous and ineffective strategy when people try to regulate their affect? Or is this an adaptive way of regulating psychological conflict? We sought to find the answer in experiment 4.

EXPERIMENT 4

Overview and Design

The objectives of experiment 4 was to examine whether narrowing one’s choices and engaging in less variety seeking can indeed help people reduce the feeling of conflictedness from mixed emotions. To this end, we adopted a very similar design as in experiment 3; but we measured participants’ feeling of conflictedness after they made their choices rather than before the choices.

Method

Eighty-seven undergraduate students from Northwestern University participated in the study in exchange for $10. They were randomly assigned to one of the experimental conditions.

The procedures were similar to experiment 3 except for the following changes: First, instead of using the video clips as emotion induction, we employed the same event call task as used in experiment 1. Second, to avoid potential problems of repeated measure, we assessed participants’ feeling of conflictedness after they made their choices, rather than before their choices. A final change was that participants made their choices on the computer instead of making real choices.

Results and Discussion

Chronic affect regulation tendency. As in experiment 3, we first computed participants’ chronic affect regulation tendency by averaging participants’ ratings on the modified NMR scale. A higher score indicates a higher affect regulation tendency.
Manipulation check. To examine whether the emotion induction was successful, we first conducted a series of one-way ANOVA analyses. A one-way ANOVA on participants’ happiness index ($\alpha = .79$) showed that participants in the mixed emotions condition ($M = 3.55$) did not differ from those in the neutral condition in terms of happiness ($M = 3.85$; $F(1, 85) = 1.64, p > .20$). A similar analysis on participants’ sadness index ($\alpha = .90$) yielded a significant effect of affective state such that participants in the mixed emotions condition felt more sadness ($M = 3.12$) than those in the neutral condition ($M = 2.47$; $F(1, 85) = 6.11, p < .05$). A one-way ANOVA on participants’ mixed feelings showed that those in the mixed emotions condition felt more mixed feelings ($M = 4.96$) than those in the neutral condition ($M = 4.05$; $F(1, 85) = 6.33, p < .05$). These results gave us the confidence that our emotion induction was successful.

Variety seeking. Our prediction was that for participants with a high affect regulation tendency, mixed emotions should lead them to choose less variety compared to the neutral condition; in contrast, for participants with a low affect regulation tendency, mixed emotions should lead to more variety seeking than the neutral. To test this prediction, we ran a regression with affective state (-1 = neutral; 1 = mixed emotions), affect regulation tendency score (mean-centered), and the interaction term in the model to predict variety seeking. The analysis yielded no significant main effect of affective state or affect regulation tendency ($ps > .80$). However, the predicted interaction between affective state and affect regulation tendency was significant ($\beta = -.30, p < .01$). Planned contrasts based on a median split on participants’ affect regulation tendency score showed that for participants with a high chronic affect regulation tendency, mixed emotions led them to choose fewer varieties of candy bars ($M = 2.83$) compared to the neutral condition ($M = 3.50$; $F(1, 83) = 4.09, p < .05$); in contrast, for those low affect-regulators,
mixed emotions led to them to seek more variety ($M = 3.43$) than those in the neutral condition ($M = 2.86; F(1, 83) = 3.09, p = .08$; figure 5).

Conflictedness after choice. Next, we examined whether participants’ decisions regarding the candy bars influenced their feeling of conflictedness ($\alpha = .88$). A regression with affective state (-1 = neutral; 1 = mixed emotions), affect regulation tendency score (mean-centered), and the interaction term in the model was conducted to predict participants’ conflictedness after they made their choices. The analysis yielded no significant main effect of affective state or affect regulation tendency ($ps > .25$). Interestingly, the interaction between affective state and affect regulation tendency was significant ($\beta = -.24, p < .05$). Follow-up contrasts based on a median split on participants’ affect regulation tendency score showed that there was no difference between high ($M = 2.10$) versus low affect-regulators in the neutral condition ($M = 2.02; F < 1$). However, in the mixed emotions conditions, participants with a high affect regulation tendency reported feeling less conflicted ($M = 1.48$) after making the choices than those with a low affect regulation tendency ($M = 2.48; F(1, 83) = 9.45, p < .01$; figure 6). Recall that in experiment 3, people with high affect regulation tendency were equally conflicted relative to those with low affect regulation tendency before they made their choice. Thus, the reduction in their feeling of conflictedness for high affect-regulators after the choice task indicates that seeking less variety indeed helped them to reduce the conflictedness from mixed emotions.
Experiment 4 replicated the findings from experiment 3 that for those who have a high (low) affect regulation tendency, experiencing mixed emotions led them to subsequently engage in less (more) variety seeking compared to the neutral condition. More interestingly, we observed that in the mixed emotions condition, high affect-regulators felt less conflicted than low affect-regulators after making the choices. Given that our data from experiment 3 showing that these two groups did not differ in terms of conflictedness before making the choices, these results suggest that seeking less variety indeed helped those high affect-regulators reduce the feeling of conflictedness.

CONCLUSION

The current research contributes to the extant literature on multiple fronts. First, it advances the mixed emotions literature by examining the processes through which mixed emotions can influence consumer decision making, and in particular, variety seeking. In four experiments, we demonstrated that mixed emotions can influence variety seeking in two different ways: affect regulation and affect-as-information. Specifically, we hypothesized that the motivation to reduce the conflictedness from mixed emotions would prompt people to be in a mindset of being focused, which would in turn lead them to choose less variety; in contrast, when people rely on the informational value from mixed emotions, which signals the presence of multiple goals, mixed emotions leads them to seek more variety. This dual effect model of mixed emotions on variety seeking was tested using multiple operationalizations of the constructs, including varying whether or not people feel conflicted when having mixed emotions by manipulating their construal level (experiment 1), focusing people either on feeling or thinking (experiment 2), and measuring people’s chronic tendency to engage in affect regulation as the
proxy for their affect regulation behaviors (experiments 3 and 4). We also provided direct evidence for the affect regulation and affect-as-information mechanisms. Consistent with the affect regulation account, we showed in experiments 1 and 3 that the effect of mixed emotions on reduced variety seeking was mediated by people’s feeling of conflictedness. And our data from experiment 3 indicated that the effect of mixed emotions on intensified variety seeking behavior was mediated by participants’ heightened cognition of having multiple goals, providing support for the affect-as-information mechanism.

This research also contributes to the extant literature on affect regulation. Prior research has primarily focused on examining affect regulation of positive and negative affective state (Zillmann 1988; Clark and Isen 1982). It is suggested that people engage in mood-lifting behavior when they are in a negative mood and engage in mood-maintenance activities when they are in a positive mood. The current research extends the extant literature by examining the regulation of people’s mixed emotional experience. Larsen (2000) posits that people tend to engage in different affect-regulation behaviors depending on the specific emotional state they are experiencing. Consistent with this notion of affect regulation specificity, we showed that the regulation of mixed emotions involves more than engaging in mood-lifting or avoiding mood-threatening behaviors. Regulating the aversive feeling of conflictedness arising from mixed emotions requires more specific strategies, such as trying to resolve the conflict by reprioritizing and focusing on fewer things. And this specific affect regulation strategy can manifest its unique behavioral consequences. In particular, we found that the motivation to reduce the conflictedness from mixed emotions led to less variety seeking whereas the motivation to reduce sadness led to more variety seeking (experiment 2). Furthermore, we found that executing the strategy of being
focused, such as through seeking less variety, can indeed help people reduce the conflicting feeling from mixed emotions (experiment 4).

This research adds to the affect-as-information literature by identifying the specific informational property that mixed emotions carries. Early work on affect-as-information has primarily focused on the global information conveyed by one’s affective state, i.e., the valence information drawn from the affective state (e.g., Schwarz and Clore 1983; 1988; Pham 1998). However, recent theorizing posits a broader conceptualization of the affect-as-information approach and suggests that people’s affective states can provide more specific information that goes beyond merely the valence dimension (Schwarz and Clore 2003; 2007; Pham 2007). Consistent with this notion of specificity of affect-as-information, we identified the unique informational property of mixed emotions in this research. We showed that mixed emotions can signal the presence of multiple goals, and this informational property of mixed emotions – that the environment is complex, conflict-laden, and multifaceted (Fong 2005; Lazarus 2001) – may in turn influence their decision making. For example, Fong (2005) found that mixed emotions leads to more creativity by cueing people that there are unusual associations in the environment. Given that identifying unusual associations involves thinking of the different multiple aspects of things in order to think outside the box, this finding is consistent with our conjecture that mixed emotions may signal the multifaceted nature of things.

Moreover, our research adds to the growing literature on integrative theories of affect and decision making (e.g., Andrade 2005; Forgas 1995). We propose an integrative model of affect regulation and affect-as-information to examine mixed emotions and decision making. Although we tested the model with mixed emotions, the factors that determine which process is operating might also apply to pure affective state, as evidenced by our data from experiment 2
demonstrating the effects of affect regulation and affect-as-information of mixed emotions versus sadness on variety seeking. By measuring participants’ belief about whether they can do something to make themselves feel better (experiments 3 and 4), our results converge with Andrade’s (2005) theorizing that affect regulation route is more likely to operate when people expect their affective state to change (e.g., the presence of a mood-changing cue). Moreover, our results seem to suggest that affect regulation is more likely to occur when people focus on their feeling whereas affect-as-information is more likely to occur when people focus on their thinking (experiment 2).

This research also contributes to the variety seeking literature by showing how variety seeking may affect consumer well-being. Prior research suggests that people seek variety to overcome satiation (Inman 2001), to the extent that they may even sacrifice their real-time enjoyment during consumption (Ratner, Kahn, and Kahneman 1999). Our results show that engaging in less variety seeking may help consumers reduce their feeling of conflictedness from mixed emotions.

From a managerial perspective, consumers’ variety seeking behavior has been identified as an important determinant of brand switching (e.g., Feinberg, Kahn, and McAlister 1992; Kahn and Louie 1990) and can be useful for customer segmentation (Trivedi 1999). The current research is particularly relevant to those industries that are prone to have consumers who are more likely to have mixed emotions, such as the wedding industry. Our research offers insights on assortment offering strategy for these industries by suggesting possible ways to identify consumers’ variety seeking tendency. One way to determine whether consumers would tend to seek more versus less variety is by demographics such as age or cultural background. Our data from experiment 1 suggest that mixed emotions leads to more variety seeking when people do
not feel conflicted and leads to less variety seeking when they feel conflicted. This would suggest that Asians and the elderly consumers would tend to seek more variety (than American consumers) as these are the populations who are not likely to feel conflicted from mixed emotions (Williams and Aaker 2002). If true, then a large assortment might be more attractive to these consumers. And since Americans and younger consumers are more likely to feel conflicted from mixed emotions (Williams and Aaker 2002), they would tend to seek less variety. Thus, marketers might want to consider offering a relatively smaller assortment to these consumers to avoid decision difficulty and cut down the cost of carrying an unnecessarily large assortment.

This research also offers insight on the advertising strategy for marketers who target consumers following episodes that elicit mixed emotions. For example, if a marketer is airing an ad during the commercial breaks of a horror movie, which has been shown to elicit both positive and negative affect (Andrade and Cohen 2007), he might want to take this opportunity to foster viewers’ variety seeking tendency. Feinberg et al. (1992) showed that the market leader benefits from consumers seeking less variety whereas the share of the least-preferred brand increases when consumers seek more variety. Thus, depending on their own market position, marketers might want to encourage consumers to seek more variety by designing an ad that focuses the viewers on thinking, as illustrated by the recent Hyundai “think about it” campaign; or designing an ad that focuses the audience on feeling, as exemplified by the new Ford Edge commercial.
References


FIGURE 1

CONFLICTEDNESS AS A FUNCTION OF AFFECTIVE STATE AND CONSTUAL LEVEL (EXPERIMENT 1)
FIGURE 2
NUMBER OF COLORS OF M&M’S CHOSEN AS A FUNCTION OF AFFECTIVE STATE AND CONSTUAL LEVEL (EXPERIMENT 1)
FIGURE 3

NUMBER OF TYPES OF CANDY BARS AS A FUNCTION OF AFFECTIVE STATE AND MINDSET (EXPERIMENT 2)
FIGURE 4

NUMBER OF TYPES OF CANDY BARS CHOSEN AS A FUNCTION OF
AFFECTIVE STATE AND AFFECT REGULATION TENDENCY (EXPERIMENT 3)
FIGURE 5

NUMBER OF TYPES OF CANDY BARS CHOSEN AS A FUNCTION OF AFFECTIVE STATE AND AFFECT REGULATION TENDENCY (EXPERIMENT 4)
FIGURE 6

CONFLICTEDNESS AFTER CHOICE AS A FUNCTION OF AFFECTIVE STATE AND AFFECT REGULATION TENDENCY (EXPERIMENT 4)