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# The psychology of appraisal: Specific emotions and decision-making

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## Abstract

A growing stream of research has examined emotions and decision-making based on the appraisal tendencies associated with emotions. This paper outlines two general approaches that can lead to further our understanding of the variety of ways emotions affect decision-making and information processing. Specifically, future research can examine the nature of emotional appraisals or investigate the nature of decision contexts and underlying psychological processes influenced by emotions. To understand the nature of emotional appraisals, scholars could examine the interaction of two appraisal dimensions or identify novel appraisal tendencies. To understand the decision-making contexts and psychological processes influenced by emotions, scholars could examine how emotions interact with contextual influences to shape judgments through a variety of processes such as providing information, priming goals, or activating mindsets. These approaches to the study of emotions and decision-making will contribute to more nuanced theory development around emotions, nurture new empirical work, and encourage interest in exploring a broader set of emotions.

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*Keywords:* Emotions; Appraisal tendencies; Consumer judgment; Decision-making

## Introduction

A growing body of research has begun documenting how specific emotions, even when they are incidental to the decision at hand, can systematically affect individuals' perceptions,

judgments, and behavior (Agrawal, Han, & Duhachek, 2013; Agrawal, Menon, & Aaker, 2007; De Hooze, Breugelmans, & Zeelenberg, 2008; Garg, Inman, & Mittal, 2005; Han, Lerner, & Keltner, 2007; Keltner & Lerner, 2010; Lerner & Keltner, 2000, 2001; Lewis, 2000; Maheswaran & Chen, 2006; Tiedens & Linton, 2001). The range of the effects of emotions on decision-making is wide and diverse. Some can be predicted by valence, others by distinct appraisal dimensions associated with those emotions, such as the certainty or coping potential underlying the experience of the emotion itself. The theories of appraisal effects and their associated processes are numerous and have produced varying perspectives on the basic underlying characteristics of emotions.

Research on specific emotions has documented a range of interesting effects and psychological processes revealing that

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emotions conceptualized as similar in many appraisal theories and phenomenological experiences can have unique effects on decisions. This suggests that studying how emotions affect decision-making can help us understand decision-making as well as identify important differences among closely related emotions. By reviewing theory development in emotion-related decision-making and information processing, this paper articulates some novel directions for theory building that may illuminate new research opportunities and perspectives beyond extant findings. This review uses the prevailing theories of emotional appraisal (e.g., Smith & Ellsworth, 1985) and the appraisal-tendency framework (Han et al., 2007; Lerner & Keltner, 2000, 2001) as a starting point for the inquiry of emotions, and explores additional frameworks to suggest how some limitations of appraisal theories can be overcome and how new predictions can be made from adopting a nuanced view of emotional appraisals. Our goal is to provide stimulus for new research in the area of emotion effects in consumer behavior.

In what follows, we first review theories of emotional appraisal (e.g., Smith & Ellsworth, 1985) and the appraisal-tendency framework (e.g., Lerner & Keltner, 2000, 2001). Next, we propose a framework that identifies potential research directions regarding how emotions affect decision-making and information processing. Specifically, we propose that future research could enrich the current emotion literature by approaching it from two angles: a) by understanding the nature of emotional appraisals and how such appraisals affect decision-making (e.g., examining the interaction of emotional appraisals and identifying novel appraisal dimensions) and b) by understanding the nature of decision contexts impacted by emotions and the underlying psychological processes (see Fig. 1).

### Emotions shape decision-making and information processing through appraisals

Emotions are complex multi-dimensional judgments that reflect a great deal of information about one's relationship to social and physical surroundings as well as one's own internal thoughts regarding these relationships (Lambie & Marcel,

2002; Smith & Ellsworth, 1985). Each specific emotion can be further deconstructed as a function of several information-rich associations underlying the global emotional experience termed 'emotional appraisals'. Some scholars have relied on theories of emotional appraisals to identify the key associations that define a certain emotion and guide one's thinking under the influence of that emotion. In one such theory of emotional appraisal, Smith and Ellsworth (1985) showed how fifteen different emotions could be varied and defined by six core dimensions. This research suggested that each of these specific emotions is associated with a core set of appraisals including pleasantness (i.e., valence of the emotion-eliciting event), certainty (i.e., the extent of certainty about the event), perceived controllability (i.e., the extent to which individuals feel that the event is in their own or others' or the situation's control), attentional activity (i.e., the extent to which individuals are motivated to devote their attention to the emotion-eliciting event), anticipated effort (i.e., the extent to which individuals feel that they need to exert themselves in the emotion-eliciting situation), and agency (i.e., the extent to which individuals feel that the event was brought about by others or themselves).

Each emotion can be uniquely defined by its distinct profile with respect to each of the six appraisal dimensions. An emotion may share some common appraisals with another emotion but is unique because it differs on other appraisal dimensions. For example, pride and happiness are similar because both emotions are experienced when individuals appraise an event as high in pleasantness, high in certainty, and high in perceived situational controllability. However, these emotions differ in appraisals of perceived responsibility because pride is experienced due to a sense of personal achievement whereas happiness is not associated with personal achievement.

Similarly, surprise is experienced when an event is deemed high in pleasantness, but is distinct from pride - which is also deemed high in pleasantness - because surprise is experienced when individuals attribute the surprising event to others whereas pride is experienced when individuals attribute the event to the self. Disgust is similar to shame or guilt because these three emotions are negative in valence but disgust is experienced when individuals feel that others are responsible

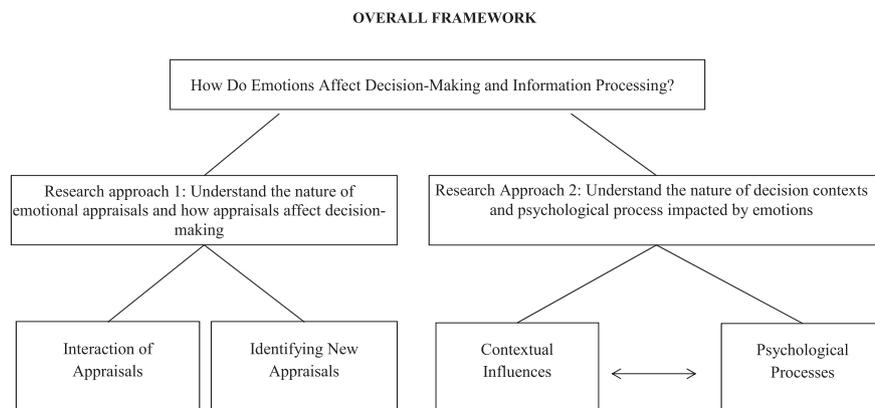


Fig. 1. Overall framework.

for an unpleasant event, whereas shame and guilt are provoked by self-agency appraisals. Unlike feelings of disgust, shame, and guilt, individuals experience feelings of sadness when they believe that the unpleasant events are brought by an uncontrollable situation (i.e., out of their and others' direct control). These examples illustrate how emotions take distinct identities based on their similarities and differences along appraisal dimensions.

Similar to Smith and Ellsworth (1985), another model of emotional appraisals is the circumplex model (Russell, 1980). The circumplex model suggests that emotions are differentiated along the dimensions of valence and arousal. For example, in this model, anxiety is a combination of negative valence and high arousal and elation is a combination of positive valence and high arousal. There are several other models of emotional appraisal, such as action readiness (Frijda, Kuipers, & ter Schure, 1989), the goal-relevance and goal-congruency framework (Lazarus, 1991), the motivational, situational, probability, legitimacy, and agency framework (Roseman, 1984), novelty, pleasantness, goal relevance, and compatibility with standards (Scherer, 1984), causality attribution (Weiner, 1985), agency and accountability (Smith & Lazarus, 1993), and self-discrepancy theory (Higgins, 1987).

The appraisal-tendency framework has helped emotion scholars bridge the gap from the various emotional appraisal theories to specific predictions about the influence of these emotions on incidental judgments (Lerner & Keltner, 2000). According to the appraisal-tendency framework, unique appraisals associated with each emotion activate a cognitive predisposition, called an *appraisal tendency*, which leads individuals to appraise the subsequent event in a way that is consistent with its core appraisals that characterize the emotion (i.e., Han et al., 2007; Lerner & Keltner, 2000, 2001). Thus depending on the unique constellation of underlying appraisals that comprise each emotion, subsequent behavior and judgment in turn differ. For example, Keltner, Ellsworth, and Edwards (1993) found that sadness and anger have different influences on causal judgment. Anger and sadness could be differentiated by perceived agency. When individuals perceive that someone else is to blame for the negative outcome, the likely emotional response is anger, whereas when individuals perceive the situation to have arisen due to events beyond anyone's control, the resulting emotional response is sadness. Based on these differentiated agency appraisals, Keltner et al. (1993) showed that angry individuals perceive a situation as more likely to happen when it is caused by humans whereas sad individuals perceive a situation as more likely to happen when it is caused by situational non-human factors.

Such an appraisal-driven approach allows us to systematically examine the effects of emotions on decision-making. However, the reliance on a given theory or theories of emotional appraisal may not allow us to fully capture the depth and complexity of emotions. For example, most research in the area of emotions and decision-making looks at one appraisal dimension. Similarly, little research has built an interface between theories of information processing (e.g., dual process models of persuasion; Chen & Chaiken, 1999) and emotions. Most research in this area remains focused on a subset of emotions, a few appraisals and a

few types of decisions. We hope to encourage research that explores a broader set of emotions and studies a broader range of decisions. In the following section, we propose a framework for future research, which will illuminate research directions that extend the boundaries of specific emotional appraisal theories and their application to decision-making.

### **A framework for understanding how emotions affect decision-making**

Our framework outlines two broad approaches to examine emotions: 1) enquiry of the *nature of emotional appraisals* and how these appraisals influence decision-making, and 2) enquiring into the *nature of the decision contexts and the underlying psychological processes* through which emotions affect decisions (see Fig. 1). Within each of these approaches, we identify under-researched but important directions for research, discuss insights from past research within those directions, and propose future lines of enquiry that advance knowledge in those directions. In doing so, we integrate theories of motivation, information processing, and decision-making with insights on emotions. Regarding understanding the nature of the emotional appraisals and how the appraisals affect decision making, we recommend that future research extend the scope of the current appraisal tendency framework by considering interactions of appraisals and identifying novel appraisals, thus helping emotion researchers achieve a more complete understanding of the nature of emotional appraisal effects. With regard to understanding the nature of the decision contexts and the psychological processes, we propose that future research could examine the contextual influences as well as the psychological processes through which emotional appraisals impact decisions.

#### *Understanding the nature of emotional appraisals and their impact on decisions*

We outline two directions of future research that build on previous models and could offer more nuanced theorizing that fully captures the richness of the nature of emotions. One direction is to study interactions of appraisals and the other is to identify new sets of appraisals. See Table 1 for a summary of these directions and representative papers.

#### *Interaction of appraisals: leveraging the predictive power of appraisals*

Most research based on appraisal frameworks focuses on a single appraisal dimension (e.g. uncertainty). Most studies take two emotions at the opposite ends of an appraisal dimension (e.g., anxiety and anger, which vary in uncertainty appraisal) and examine how those emotions lead to differences in judgments and behavior in a given context (e.g., gambling). However, most emotions are best characterized by a combination of appraisals and that is what differentiates them from other emotions. Because of this 'combination of appraisals' characteristic, it is important to study the interactions among emotional appraisals. Yet, there are few studies that develop 'interaction' driven theorizing to explain the effects of emotions.

Table 1  
Research papers that take the approach of examining the nature of emotional appraisals.

| Interaction of appraisals          |   |                        |                   |                             |
|------------------------------------|---|------------------------|-------------------|-----------------------------|
| Interacting dimensions             | Mechanism   | Discrete emotion pairs |                   | Reference                   |
| Valence × agency                   | Differential effects of self-other agency depending on valence      | Anger, gratitude       | Shame, pride      | Agrawal et al. (2013)       |
| Valence × motivational orientation | Motivation matching mood repair effects of approach (vs. avoidance) | Anger, happiness       | Anxiety, calmness | Labroo and Rucker (2010)    |
| Certainty × avoidance              | Persuasion from combining emotions differing on certainty           | Fear                   | Disgust           | Morales et al. (2012)       |
| Identifying novel appraisals       |   |                        |                   |                             |
| Appraisal dimension                | Definition  | Representative emotion |                   | Reference                   |
|                                    |   | High                   | Low               |                             |
| Global vs. local                   | Specificity of the causal appraisal                                 | Shame                  | Guilt             | Han et al. (2014)           |
| Self vs. other similarity          | Perceived similarity between self and others                        | Compassion             | Pride             | Oveis et al. (2010)         |
| Other deservingness                | Extent of seeing others as deserving an outcome                     | Benign envy            | Malicious envy    | Van de Ven et al. (2011)    |
| Framing of others                  | Whether others are seen as observers vs. sufferers                  | Guilt                  | Shame             | Agrawal and Duhachek (2010) |

*Interaction between valence and agency appraisals.* One approach to studying interactions of two appraisals has been to show different effects of valence across a set of emotions varying along another dimension as well. For example, Agrawal et al. (2013) examined the effect of two discrete negative emotions of anger and shame that diverge on agency appraisals (other-agency in the case of anger vs. self-agency in the case of shame) on information processing. They showed that angry individuals, driven by their negative other-agency appraisal, were less likely to change their initial preference after receiving preference inconsistent information whereas shameful individuals, because of their negative self-agency appraisal, were highly likely to update their initial preference. The authors also identified the moderating role of valence by examining two positive emotions (e.g., pride and gratitude) that differed on agency appraisals. In a separate study, they found that individuals feeling pride, driven by their positive self-agency, did not update their initial preference; whereas gratitude, due to its positive other-agency appraisal, led individuals to change their initial preference. The effect of self/other agency appraisal was reversed by valence of the emotion suggesting a conceptual interaction of emotional appraisal effects.

*Interaction between valence and motivational orientation appraisals.* A few researchers have recently investigated the interactive effects of two appraisal dimensions associated with discrete emotions on consumer behavior and judgments. For example, Agrawal et al. (2007) showed that for happiness, calmness, sadness and agitation, the valence dimension and self/other dimension (see self-discrepancy theory and regulatory focus theory, Higgins, 1987, 1997) both interactively influence the effectiveness of health messages. Specifically, they showed that when the primed emotion was positive, the fit between the focal referent in the message (self or family) and the discrete emotion enhanced the processing of aversive health information; whereas when individuals were primed with a negative emotion, the fit hindered the processing of health information.

Appraisal dimensions based on motivations could interact with other dimensions to result in motivation-matching mechanisms. For example, Labroo and Rucker (2010) proposed that an interaction of two dimensions of emotional appraisals predicted consumers' attitudes: motivational orientation (along the dimensions of approach vs. avoidance) and valence. This framework shows that when participants were focused on their negative affective experience, providing positive emotions that matched their motivational orientation resulted in greater affective regulation benefits than merely providing any positively valenced emotions. In particular, they found that when individuals experienced a negative emotion associated with an approach orientation (e.g., anger), they showed more favorable attitudes toward a brand when the brand was presented in an ad that activated positive emotions associated with the same approach orientation (e.g., happiness).

*Interaction between certainty appraisals and avoidance appraisals.* Moreover, interactions of emotions with differing appraisals can co-activate a tendency when one emotion alone would have shown a different tendency. Morales, Wu, and Fitzsimons (2012) showed that fear can elicit an immediate action tendency when combined with disgust. Fear is associated with uncertainty and motivates consumers to escape from the threat. Fear has been known to be associated with both avoidance behaviors when the threat is imminent and freezing behaviors when the threat is not imminent (Smith & Ellsworth, 1985). That is, consumers show freezing behaviors initially and then take an avoidance reaction only when the fear eliciting object is unavoidably near. In contrast, disgust is associated with high appraisals of certainty and a strong impulse to avoid and distance oneself immediately from the object. Morales et al. (2012) showed that when disgust was incorporated within the fear appeal, it enhanced persuasion and message compliance when fear alone did not because disgust led individuals to take an immediate action. In sum, these findings indicate that investigating interactions of different appraisals might be a useful way to think about

divergent findings or ways to reconcile conflicting findings in the emotion literature.

#### *Malleable appraisals: identifying novel appraisals*

Our perspective highlights that an additional fruitful area for future emotions research is to examine the possibility of additional appraisals that may be more localized in their applicability, operating within a subset of emotions in a subset of contexts. This view would indicate that far from being a constant set of appraisals that define all emotions in all contexts, the set of appraisals activated in driving emotional responses in a given context are highly malleable and contingent on the situation.

This is particularly notable in the case of self-conscious emotions. For example, Smith and Ellsworth (1985) view guilt and shame as having a similar appraisal profile and thus treat them as conceptually indistinguishable in their model of emotional appraisals. In fact, recent research on guilt and shame has shown several important differences between those two emotions (Blum, 2008; Dearing, Stuewig, & Tangney, 2005; Lewis, 2000; Tangney & Dearing, 2002; Tracy & Robins, 2004) suggesting additional underlying appraisal dimensions not specified in the original theorizing. Smith and Ellsworth's original conceptualization accentuated the self-blame appraisal common to guilt and shame. Recent research suggests that guilt and shame can have distinct effects on judgments and decision-making driven by the nature of the differences in how the self-blame is perceived, the differential information it provides, the mindset it primes, and the coping style it activates (Agrawal & Duhachek, 2010; Dearing et al., 2005; Duhachek, Agrawal, & Han, 2012; Han, Duhachek, & Agrawal, 2014). Next, we discuss some recent research pointing to additional appraisals that are not specified in extant appraisal theories.

*Global versus local appraisals.* Research has identified two forms of pride that differ from each other on the specificity of the behaviors relevant to the appraisal. Smith and Ellsworth (1985) defined pride as a positive feeling arising from achievements that could be attributed to the self. However, recent research on pride suggests that pride can be further defined along a global versus local appraisal dimension, which distinguishes two distinct forms of pride, hubristic pride and authentic pride (Tracy & Robins, 2004, 2007). These findings characterize authentic pride as occurring when individuals focus on specific aspects of the self that drive their subsequent pride experience (e.g., *I feel proud of what I did*). In contrast, hubristic pride is felt when individuals appraise the emotion as stemming from a global self-appraisal consistent with pride (e.g., *I feel proud of who I am*), rather than tied to a specific behavior.

Existing emotional appraisal theories do not predict the existence of these two types of pride. However, research that examines specific nuanced differences between self-conscious emotions theorizes differences surrounding self-related constructs (e.g., self-perception) and pride itself, and may allow us to see this novel appraisal dimension that may not be illuminated by existing appraisal theories. Prior research related to authentic pride and hubristic pride suggests that the degree to which the appraisal implicates a specific aspect of the self or the global self could be

another appraisal dimension to be considered along with the six cognitive dimensions that were identified by Smith and Ellsworth (1985). Williams and DeSteno (2008) focused on authentic pride and showed how pride could affect perseverance. Authentic pride arises from appraisal of specific achievement and it provides an incentive to pursue success despite short-term losses. Participants in a laboratory study were induced to feel authentic pride through feedback on their primary task. After the manipulation, participants performed an effortful and tedious mental rotation task, and the time they spent on the task was taken as a measure of perseverance. The result showed that compared to control groups, participants who felt proud of their achievement on the primary task spent more time on the effortful task.

Similarly, Han et al. (2014) differentiated guilt and shame based on local and global appraisals. Previous research suggested that guilt is experienced when individuals attribute negative outcomes to their specific behavior whereas shame is experienced when individuals attribute negative outcomes to their global self (Tangney & Dearing, 2002). Han et al. (2014) showed that these differences in the local or global appraisals associated with guilt and shame, respectively, led individuals to appraise subsequent events in line with the corresponding appraisals (i.e., activating either local appraisal tendencies in the case of guilt or global appraisal tendencies in the case of shame), thus affecting subsequent judgments and decision-making.

Understanding the potential impact of these novel appraisals helps to advance theoretical understanding of emotions, as well as their linkages to other important psychological constructs. For example, Huang, Dong, and Mukhopadhyay (2014) showed that pride can have a differential effect on uniqueness seeking, based on whether the pride is hubristic or authentic. Hubristic pride, which is associated with a global self-appraisal, attributes an achievement to the self and confers a feeling of uniqueness. Huang et al. (2014) showed that such feelings of uniqueness lead consumers to choose a product that affirms and signals their uniqueness. On the other hand, a local appraisal of authentic pride does not make consumers see themselves as distinctive.

*Self versus other similarity.* The self-other dimension of appraisals is particularly rich and can further accommodate specific emotional constructs for a precise understanding of how self versus other appraisals function. Here, we provide another example of a construct on which researchers have situated the self-other dimension: self-other similarity.

Self-other similarity has been defined as the extent of perceived similarity or identified congruity between one's self and another. Oveis, Horberg, and Keltner (2010) showed that two positively valenced emotions, pride and compassion, differ in their influence on care-taking behavior. Pride and compassion elicit opposite appraisals of self-other similarity, especially in the case of weak or vulnerable others. In laboratory experiments, participants primed with compassion (vs. pride) rated themselves as more similar to general others and to completely unfamiliar faces. This difference in appraisals of self-other similarity across the two emotions led to the contrasting social outcomes of compassion (e.g., to motivate care-taking behavior) and pride (e.g., to motivate

self-enhancement) and would not be captured by several theories of emotional appraisals.

*Appraisals related to perceptions of others.* Previous research has examined how individuals' perception of their own deservingness (Cavanaugh, 2014) or other's deservingness of outcomes (Feather, 2008) influences their judgments. This appraisal dimension of perceived deservingness may be associated with emotions that involve comparing the self to others (e.g., envy). Recent research on envy suggests that there are two distinct types of envy; malicious envy and benign envy. Malicious envy arises when a person appraises another's achievement to be undeserved, whereas benign envy arises when a person appraises another's achievement to be deserved (Van de Ven, Zeelenberg, & Pieters, 2011). This distinct appraisal of perceived deservingness leads to different motivations, such that malicious envy motivates harmful behavior toward others and benign envy motivates individuals toward improving the self (Van de Ven, Zeelenberg, & Pieters, 2009). Based on the differences between malicious envy and benign envy, Crusius and Lange (2014) showed that malicious envy increased consumers' focus on the envied person versus the envied object, and benign envy made consumers more focused on means that were conducive to the self-improvement. The driving force in this case was an appraisal such as 'deservingness' that is not part of existing appraisal theories and may be unique to the nature of envy.

*Temporal focus appraisals.* Winterich and Haws (2011) differentiated positive emotions based on temporal focus, defined as "the extent to which an emotion results in future- versus past- or present-oriented action tendencies" (Winterich & Haws, 2011, p. 508) and they examined the effect of discrete emotions on self-regulation. They proposed that hopefulness (relative to happiness and pride) is a future-oriented emotion. The future orientation of such emotions as hopefulness results in greater self-control by activating a higher level of construal, which has been shown to enhance self-control (Agrawal & Wan, 2009; Wan & Agrawal, 2011).

*Other suffering versus observing appraisals.* Based on research distinguishing guilt and shame based on individuals' concerns vis-à-vis others (Lindsay-Hartz, De Rivera, & Mascolo, 1995; Tangney, 1995), Agrawal and Duhachek (2010) examined the effect of guilt and shame on individuals' responses toward anti-drinking ad messages. In particular, guilt is experienced when individuals are concerned about how their actions bring negative outcomes to others whereas shame is experienced when individuals are concerned about how others evaluate them (Lindsay-Hartz et al., 1995; Tangney, 1995). Building on these differences, Agrawal and Duhachek (2010) found that anti-drinking messages that highlighted others as sufferers of the negative outcomes of one's drinking evoked guilt, while anti-drinking messages that delineated others as observers of the negative outcomes of one's drinking produced shame.

*Social connection appraisals.* Cavanaugh, Bettman, and Luce (2015) examined how discrete positive emotions (love,

hope, and pride) influence prosocial behavior. The authors suggested that love, defined as "feelings of warmth and affection toward platonic others (i.e., family and friends) in close, non-sexual relationships," increased donations to distant others whereas hope and pride did not increase donations. This effect was found because love, relative to hope and pride, widened the boundary of caring and enhanced the level of social connection to distant others (i.e., feelings of closeness and enhanced relationship with others). Consistent with the theorizing, participants feeling the specific emotion of love were more likely to donate money to distant others (e.g., an international relief fund) than those feeling hope or pride.

In summary, such nuanced views of appraisals could enrich the literature on emotions by identifying new appraisals that affect judgment and decision-making. This review has identified several examples and profiled emerging research that investigates how these novel dimensions can extend our understanding of emotions and related consumer behavior phenomena.

#### *Understanding the nature of decision contexts and the psychological processes*

To understand the conflicting and diversified findings about influences of emotions on decision-making, another key approach is to explore the nature of decision-making contexts impacted by emotions and the underlying psychological processes by which emotions affect decisions. In this section, we suggest two substantial directions for research taking this approach: contextual influences and psychological processes. Contextual influences and psychological processes can independently explain the effect of emotional appraisal on decision-making, but can also influence one another to elicit different decisions.

#### *Contextual influences and the impact of emotions*

An emotion can have multiple appraisal tendencies, and different emotions can share an appraisal tendency. This implies that there is no 'fixed effect' of the same emotion and the effect could vary based on which appraisal tendency is activated, salient or relevant to the decision context. An overarching framework should include how motivational and situational factors interact with certain cognitive appraisals of an emotion. For example, an appraisal can lead to different motivations depending on the contexts. Fear is known to lead consumers to show avoidance and status quo behaviors, but it can lead to a higher need for affiliation when a situation allows consumers to have someone or a brand nearby (Dunn & Hoegg, 2014). Such incongruent findings could be reconciled by accounting for the type of decision context and motivation that may guide which appraisal of an emotion will shape its effect on the decision at hand. Below, we review some findings from the extant literature that highlight the influence of decision-making context on emotional appraisals and show how the decision context could explain differences within an emotion or similarities across emotions, or even interact with the felt emotion.

*Contexts can capture differences in appraisals within an emotion.* Accounting for contextual factors can help identify areas of potentially divergent findings or explain existing

conflicting findings. For example, previous research on pride has demonstrated inconsistent findings: pride results in positive behavior (Herrald & Tomaka, 2002) but it also leads to maladaptive behavior such as aggression (Bushman & Baumeister, 1998). Specifically, Herrald and Tomaka (2002) found that participants who felt pride showed better task performance. Participants in the pride condition received positive feedback on their performance from a confederate. Participants' responses in subsequent tasks were then videotaped and the quality of their task performance (such as evaluations of poise, eye contact, confidence, and the quality of response) were coded by independent coders. Participants in the pride condition performed better than those in the anger or shame conditions. In contrast, Bushman and Baumeister (1998) found that participants who held inflated and grandiose self-views, which are associated with pride, showed more aggression (e.g., the level and duration of noise participants set for the other participant in the experiment) in response to negative evaluations about them. In the above examples, the different behavioral outcomes of felt pride could likely be explained by the difference in the contexts that give rise to pride. In one, pride arose due to positive performance feedback; while in the other, pride arose due to grandiose self-evaluations.

Another example of contexts leading to different outcomes can be found in the prior research on shame. Shame is known to elicit a withdrawal tendency that directs individuals to disappear and move away from others (Frijda et al., 1989). In fact, previous research has shown that individuals have a tendency to hide after recalling shameful experiences (Tangney, Miller, Flicker, & Barlow, 1996; Wicker, Payne, & Morgan, 1983). Duhachek et al. (2012) also found that shame led individuals to cope with negative emotions by avoiding shame-enhancing contexts or information. However, De Hooge et al. (2008) found that shame motivated prosocial behaviors to provide assistance to others, a seeming reversal of the shame withdrawal tendency. These inconsistent findings could perhaps be reconciled and understood based on different appraisal tendencies associated with shame. Besides the withdrawal tendency, shame is also associated with a desire to undo the shameful situation (Frijda et al., 1989). Thus, individuals experiencing shame may either approach or withdraw. Future research should investigate the circumstances when shame will lead to the approach versus avoidance tendency.

This approach of delving into the contextual influences on multiple facets of the same emotion has led to important findings in emotion research. For example, Lerner, Small, and Loewenstein (2004) studied disgust through one of its core appraisal tendencies: withdrawal in order to change the current situation. Another appraisal tendency associated with disgust relates to a belief in impurity and contamination within one's environment. Thus, feeling disgusted can make individuals have stronger moral judgments about a violation or a stronger impulse to uphold purity (Horberg, Oveis, Keltner, & Cohen, 2009). Horberg et al. (2009) found evidence in favor of a disgust–purity association through several experiments. Both disgust and sadness are negative emotions, but sadness is not associated with purity and contamination appraisals. Thus, the researchers showed that participants in the disgust rather than the sad condition were more likely to moralize violations

related to purity. Participants were given four purity-violation items (e.g. keeping an untidy living space) and four purity-virtue items (e.g. being a vegetarian). Participants were asked to rate their moral perception of each behavior (e.g. how bad they perceived the behavior for purity-violation items; how good they perceived the behavior for purity-virtue items). Participants in the disgust condition showed stronger moral judgments than those in the sadness condition. Interestingly, this effect was not seen in other moral concern domains (e.g., kicking a dog that is blocking a doorway) that are not associated with disgust appraisals (i.e., appraisal of impurity and contamination of environment).

Another example of the influence of decision-making contexts can be found in research on anger (Keltner et al., 1993; Lerner & Keltner, 2000). Judgments and estimates of future events when feeling angry could be examined from different perspectives based on which appraisal of anger is applicable. As mentioned earlier, anger (vs. sadness) can change the perception of future events because angry individuals blame others (vs. the situation) for the negative event (Keltner et al., 1993). Angry individuals show lower trust in co-workers because of the perception of other-responsibility (Dunn & Schweitzer, 2005) and they associate out-group members with having negative (vs. positive or neutral) attributes (DeSteno, Dasgupta, Bartlett, & Caidric, 2004). In addition, anger is associated with other cognitive appraisal dimensions, such as high certainty and low situational control, that could influence risk perception of future events because previous research shows that certainty and control appraisals are the factors that determine risk perception (Slovic, 1987). Lerner and Keltner (2000) showed that due to the high certainty and high control appraisal tendencies of anger, anger elicited optimistic risk assessments as compared to fear, which was associated with high uncertainty and low control appraisal tendencies. Overall, anger's influence on decision-making varies as a function of the domain of decision-making or the context in which the decision occurs. Thus, examining different contexts that elicit various appraisals associated with an emotion may allow us to better understand the multiple, and sometimes conflicting, effects that the same emotion can have on decision-making.

*Contexts can capture differences and similarities in appraisals across emotions.* Examinations of contextual influences help us understand not only the conflicting outcomes of the same emotion, but also differences and similarities across emotions. Lerner et al. (2004) present a nice illustration of how emotions may be similar as well as different in appraisal tendencies in the context of the endowment effect. Sadness arises from loss and activates an appraisal tendency to change the current circumstance. For individuals feeling sad, getting rid of what they currently possess and acquiring something new implies a desire to change the circumstances. Based on this appraisal tendency of sadness, Lerner et al. (2004) showed that individuals who were feeling sad reduced the selling price and increased the buying price of an object, reversing the endowment effect. Moreover, they showed that disgust, which is also associated with a tendency to get rid of objects, influences the endowment effect as well. Since disgust arises from being too close to unwanted objects, disgust evokes a

tendency to expel the objects, and leads to reducing the selling price. However, unlike sadness, disgust is associated with avoidance of taking something new. Thus feeling disgusted makes individuals reduce the buying price as well.

These findings imply that the two negative emotions of sadness and disgust, that are closely related and evoke a tendency to change the current situation, can have differential effects on a subset of behaviors in a given context based on different appraisal tendencies underlying each emotion. Some decisions are influenced by similar appraisals across sadness and disgust; other decisions are governed by differing appraisals across the same two emotions. [Zemack-Rugar, Bettman, and Fitzsimons \(2007\)](#) showed that different appraisals of two emotions can elicit distinctive outcomes even when consumers are not consciously aware of the emotion affecting the behavior. They showed that guilt and sadness, which are similar in the unpleasantness, effort and certainty dimensions, can have different outcomes on indulgence such that guilt leads to greater self-control than sadness when the emotions are subliminally primed; because consumers seek gratifications when feeling sad but seek punishments when feeling guilty. Examining situations where two emotions have similar effects and situations where those same two emotions have divergent effects presents a productive opportunity for future research.

*Contextual factors can interact with emotions.* Features of the decision-making context could also interact with incidental emotions to lead to interesting effects. A potential area of inquiry is how the presence (or consideration) of other individuals in a decision-making context might influence or interact with an incidental emotion to lead to different behavioral outcomes. In a series of experiments, [Fisher and Dubé \(2005\)](#) presented same-gender and mixed-gender pairs of participants with advertisements that invoked a positively valenced emotion with high agency (e.g., enthusiastic, excited) or low agency (e.g., calm, relaxed). Viewing pleasure and attitudes toward advertisements were significantly lower when males watched a low-agency ad in the presence of another male (vs. in the presence of a female). This effect was seen only in public ratings of the ad and not in private. These findings indicate a social desirability effect on the favorability of context-congruent emotions (e.g., high agency is a desirable social stereotype for males). Future research could explore similar context-congruency effects of emotional appraisals and how they might influence behavioral outcomes.

Contextual factors could also influence the extent of thinking, which in turn, could influence how emotions influence primary cognition. In a recent review, [Petty and Briñol \(2015\)](#) posit that the appraisal dimension of valence plays a key role under conditions of low elaboration. Through valence, incidental emotions provide ‘simple cues’ about attitude objects and thus influence attitudes under low thinking conditions. In contrast, under conditions that lead to elaborate thinking, emotions provide arguments through other cognitive appraisals and complex mechanisms. As an example of the interaction between extent of elaboration and emotional valence, [Lau-Gesk and Meyers-Levy \(2009\)](#) found that when participants’ processing motivation was low, they evaluated an ad more favorably when they were shown positive (vs.

negative) emotional ad appeals. In contrast, when participants were highly motivated to process, they evaluated an ad more favorably when the resources required to process the emotional appeal matched their higher motivation to process the information.

Considering the small sample of effects discussed here, we propose that examining the impact of contextual factors on emotional influence, and the interactive effect of contextual factors and emotions on judgments, are substantial avenues for future research.

#### *Psychological processes by which appraisals impact decisions*

We will next discuss how emotions might affect decisions by providing information, motivation, and mindsets. The goal of this discussion is to offer a starting point to think about how appraisal tendencies associated with emotions may affect decision-making and information processing via different processes. We further suggest how these distinct paths may lead to different outcomes as predicted from other processes. By studying these issues, we could enhance our understanding of the nature of psychological processes by which emotions influence decisions. [Table 2](#) provides a representative summary of such mechanisms. Note that the processes and mechanisms presented in [Table 2](#) are for purposes of illustration only and reflect our interpretations of the findings reported in the cited papers.

*Emotions guide information processing.* Scholars have adapted a specific emotions equivalent of “affect as information” model ([Schwarz & Clore, 1988](#)) to predict that emotional appraisals may provide information that serves as an input in incidental tasks. These effects can be best understood by comparing the outcomes of evaluating the same object under the influence of different emotions. For example, [Raghunathan, Pham, and Corfman \(2006\)](#) found that anxiety, which is associated with uncertainty and low control, led consumers to prefer safer and control-enhancing options as compared to sadness. They showed that consumers used anxiety and sadness as information to evaluate the options, and that this effect was attenuated when the source of anxiety and sadness was made salient indicating a source misattribution mechanism. Similarly, [Kim, Park, and Schwarz \(2010\)](#) showed that distinct emotions can be used as information to evaluate a product. They found that when consumers felt excited (vs. peaceful), they preferred adventurous (vs. serene) product appeals, showing an emotion-congruency effect because when the emotional appraisal matched the product appeal, consumers expected the product to deliver what it promised.

Although not as direct as emotions being used as information, appraisals associated with emotions may indirectly influence information processing, by shifting individuals’ attention to specific information. [Maheswaran and Chen \(2006\)](#) found differential effects of anger and sadness on evaluating a product based on its country-of-origin information. As discussed previously, anger and sadness vary on the dimension of agency or control, and the different appraisal tendencies associated with anger and sadness determine the type of information individuals feeling those emotions attribute to subsequent decision-making contexts. [Maheswaran and Chen \(2006\)](#) found that angry consumers gave

more weight to human factors whereas sad consumers gave more weight to situational factors, thus making angry (vs. sad) consumers evaluate a product more favorably when its country-of-origin information was favorable than when it was unfavorable.

Another appraisal that has been shown to serve as information is that of certainty. Raghunathan and Pham (1999) examined the effect of anxiety and sadness on decision-making. They found that anxious consumers showed a greater preference for low risk/low reward options because of the low certainty appraisal tendencies associated with anxiety; whereas sad consumers showed a greater preference for high risk/high reward options because of the high certainty appraisal tendencies associated with sadness.

Prior research has shown another mechanism by which appraisal tendencies provide information related to confidence appraisals. Inbar and Gilovich (2011) showed that individuals made to feel anger or disgust (vs. fear or sadness) were more likely to change an initial anchor value that they had self-generated, because they felt greater confidence in their judgment about adjusting the anchor they had set. Anger and disgust, which are emotions associated with certainty appraisals, also led to more confidence and thoroughness in the thought process of changing the initial values. Agrawal et al. (2013) showed that angry (vs. shameful) consumers were less likely to accept information which contradicted their prior preference because angry (vs. shameful) individuals felt greater confidence in their own judgments as compared to others' judgments. Agrawal et al. (2013) also found that pride (vs. gratitude) resulted in less acceptance of information which contradicted their preexisting preference because they felt more confident regarding their own (vs. others') views. These findings show that appraisals associated with emotions can affect judgments in various ways related to confidence in judgments.

*Emotions activate goals.* Emotions may also influence judgments by activating goals or intentions. For example, emotions can affect judgments and decision-making by activating distinct coping strategies (Duhachek, 2005; Herral & Tomaka, 2002), priming different goals (Winterich & Haws, 2011), or promoting different modes of information processing (Agrawal & Duhachek, 2010; De Mello, MacInnis, & Stewart, 2007; Tiedens & Linton, 2001).

*Emotions influence coping strategies.* One way that appraisals can exert important influences on consumer judgment stems from a need to cope with the unpleasant or stress-inducing properties of an emotion. In fact, several of the studies reviewed thus far begin with the premise that individuals are directed by a need to regulate the emotion resulting from the appraisal in order to feel better. Herral and Tomaka (2002) found that participants who felt angry or ashamed reported a need to cope with these negative emotions by seeking social support or engaging in defensive processing to a greater extent than those who felt pride. Duhachek (2005) examined interactions between specific emotions and efficacy appraisals as drivers of distinct coping responses. Threat was shown to be associated with support seeking coping strategies when combined with high efficacy appraisals. In contrast, when threat was experienced along with low efficacy appraisals, avoidance-based coping strategies were adopted. Thus, there appear to be fairly systematic linkages between emotions, appraisals and the coping processes they activate.

In a more specific link to coping strategies based on appraisals, distinct cognitive appraisal tendencies elicited by different emotions can also influence how individuals process subsequent marketing information via activation of particular coping strategies.

Table 2  
Psychological processes through which emotions may influence behavior.

| Discrete emotion(s)   | Potential mechanism                           | Interpretation of the psychological process  | Reference <sup>a</sup>      |
|---|---|--|-----------------------------|
| <i>1. Guide information processing — emotional appraisals provide information</i>                       |   |  |                             |
| Anxiety   | Provides risk information                     | Uncertainty appraisal led to preference for low risk/low reward options                                  | Raghunathan and Pham (1999) |
| Excitement  | Leads to preference of congruent information  | Emotion congruency effects led to preference for adventurous appeals due to                              | Kim et al. (2010)           |
| Anger   | Highlights agency information                 | Higher agency appraisal increased weightage on human (vs. situational) factors in information evaluation | Maheswaran and Chen (2006)  |
| <i>2. Activate goals — emotional appraisals activate motivations</i>                                    |   |  |                             |
| Shame, Anger  | Influences coping strategies                  | Participants felt a need to cope by seeking social support   | Herral and Tomaka (2002)    |
| Pride   | Primes self-regulation goals                  | Increased goal-consistent choices in presence of self-awareness  | Wilcox et al. (2011)        |
| Hope  | Primes self-regulation goals                  | Future focus and positive appraisal activated self-regulatory goals                                      | Winterich and Haws (2011)   |
| Fear, Hope  | Influences motives for information processing | Uncertainty appraisals lead to accuracy-driven elaborate information processing                          | Tiedens and Linton (2001)   |
| Hope  | Influences motives for information processing | Information processing biased by a defensive goal when hope is threatened                                | De Mello et al. (2007)      |
| <i>3. Activate mindsets — emotional appraisals activate cognitive procedures or mental associations</i> |   |  |                             |
| Envy  | Leads to high attention mindset               | Better recall of information as a result of increased attention to others                                | Hill et al. (2011)          |

<sup>a</sup> Note: In some of the papers cited here, we offer our interpretation of the psychological processes that could potentially drive the effects found in these papers to illustrate how future research on emotions could bridge the gap between models of information processing and motivation.

Duhachek et al. (2012) suggest that guilt-laden individuals are more likely to activate problem-focused coping strategies, which refer to efforts to manage the source of stress directly (Lazarus & Folkman, 1984), because guilt is associated with high self-efficacy appraisals (i.e., *I can fix the problem*; Tangney, Stuewig, & Mashek, 2007). In contrast, shame-laden individuals are more likely to use emotion-focused coping strategies, which refer to efforts to regulate emotional responses toward the stress (e.g., stop thinking about it, let negative emotions out; Lazarus & Folkman, 1984), because shame is associated with low self-efficacy appraisals (i.e., *I cannot fix the problem*; Tangney et al., 2007). The research showed that such differences in coping strategies led guilt-laden versus shame-laden consumers to be more persuaded by different types of message frames. Guilt-laden consumers were more persuaded by gain rather than loss framed messages whereas the reverse was true of shame-laden consumers. By studying the specific nature of coping strategies associated with each emotion, we can better identify how emotions affect judgments and decision-making.

*Emotions prime self-regulation goals.* Another research approach is to view the interplay of different motivations through the lens of self-regulation. Self-conscious emotions affect self-regulation by way of activating different goals in different situations. Wilcox, Kramer, and Sen (2011) found that incidental pride (an emotion associated with positive self agency appraisals) had dual effects on self-regulation; it led to indulgent choices when pride promoted a sense of achievement and to virtuous choices when pride promoted self-awareness. This research highlights the need to take a nuanced view of the motivational influences of incidental emotions, as many emotions have multiple motivations associated with their appraisals.

The influence of emotions on goals or self-regulation is not limited to self-conscious emotions. Other appraisals can work through a different set of goals to impact self-regulation. For example, an appraisal dimension that is relevant to self-regulation is the temporal focus of the incidental emotion because temporal focus is central to the trade-offs between long-term goals and short-term indulgences. Winterich and Haws (2011) found that future-focused positive emotions such as hopefulness (vs. pride, which is past focused) aided in making healthier food choices. In contrast, fear, a future-focused but negative emotion, did not influence self-regulation. This research indicates that a combination of appraisals (temporal focus and valence) influences self-regulation through differential goal activation.

*Emotions influence motives for information processing.* Past research on dual process models of persuasion (e.g., Heuristic Systemic Model, Chen & Chaiken, 1999; Agrawal & Maheswaran, 2005) suggests three types of motives that can bias information processing: an accuracy motive, defense motive, and impression motive. In the following section, we review research that highlights situations where emotions can affect decision-making by priming one of these three motives. Tiedens and Linton (2001) found that emotions associated with certainty appraisals (e.g. disgust, fear, happy, hopeful) can affect the need for accuracy and the depth of information processing. They found that emotions associated with uncertainty appraisals led individuals to elaborate more on subsequent information

in order to fulfill a need to be more certain of the accuracy of their opinions, whereas emotions that were associated with certainty appraisals motivated individuals to employ more heuristic processing because they were confident of the validity of their judgments.

A defensive motivation elicited by emotions can also affect whether consumers accept or reject information. Agrawal and Duhachek (2010) showed that when individuals were already feeling incidental shame (or guilt), a shame (vs. guilt) appeal had a backfire effect on message compliance due to the activation of a defensive mechanism to avoid experiencing further shame or guilt. That is, when consumers were feeling shame or guilt, a message that was framed to induce the same negative emotion amplified the negative state further, thus motivating individuals to discount the message to avoid exacerbating the negative emotional state. De Mello et al. (2007) suggest that a defensive motive can also affect information processing when the emotion is positive in valence, but under threat. They showed that when feelings of hope were threatened, consumers engaged in biased processing of information in order to restore their confidence and loss of control.

Although several emotions are associated with impression motives (e.g., pride, embarrassment, shame, arrogance, anxiety), scant research has examined such emotions in the domain of information processing. Research exploring impression motivation elicited by emotions such as embarrassment may be a good example of future research on specific emotions and information processing.

*Emotions activate mindsets.* Finally, emotions may affect decisions by activating cognitive procedures or a set of mental associations that then automatically apply to subsequent tasks conducted under the emotion's influence. An example of this process can be found in studies where distinct emotions activated different cognitive mindsets. Han et al. (2014) showed that guilt elicited a low construal level mindset whereas shame elicited a high construal level mindset because of the different cognitive appraisal tendencies associated with these two emotions. As noted earlier, Han et al. (2014) proposed that the distinct cognitive appraisals elicited by two emotions activated local (in case of guilt) versus global (in case of shame) appraisal tendencies, which activated either low versus high construal level mindsets. It was not that the local versus global inference served as information about a subsequent decision or goal fulfillment but it served as a mindset that influenced subsequent decisions by systematically shifting construal level, decision-making processes, and weighting of attributes. Such mindset activation due to emotions may influence multiple subsequent decisions, and may not be diminished by source salience, but is likely to dissipate over time.

Hill, DelPriore, and Vaughan (2011) showed that envy can shift cognitive resources to processing information about meaningful others. Because envy is associated with heightened awareness of another person's possession that one lacks (Smith & Kim, 2007), envy can lead to a mindset of high attention about others. Participants in the envy condition recalled interview information better compared to those in the neutral condition, suggesting that envy directed greater attention toward other individuals.

Thus, emotions may influence judgments by providing information, motivations (i.e., coping strategies, self-regulation goals, or information processing goals), or mindsets. Hence, understanding which appraisal is likely to trigger which process would allow researchers to predict the effects of different emotions more precisely.

## Summary and discussion

This paper has identified several directions that can extend extant research on emotions and consumer decision-making. The first direction is to examine the interactions among two or more appraisal dimensions that can help us better predict the consequences of complex decision-making. The second direction is to identify novel appraisals that may be unique to certain subsets of emotions and may not be part of popular and more encompassing models of emotional appraisals. The third direction is to explore the nature of the decision-making contexts and investigate how emotional appraisals might interact with the decision-making contexts to shape judgments. A final direction is to investigate multiple psychological processes, such as information processing, goals, coping strategies, and mindsets, through which emotions might impact decisions.

In general, our review suggests that emotion research could benefit from deeper connections with the extensive literature on motivations and cognition in psychology and decision-making. A broader view of appraisals could focus on theoretical frameworks outside the purview of emotions research to identify new appraisals as well as decision-contexts that help us better understand the psychology of emotions. For example, regulatory focus theory (Higgins, 1997) is primarily about motivations but links four specific emotions to two motivational states; happiness and dejection are posited to be promotion focused emotions where as calmness and agitation are posited to be prevention focused emotions. Exploring the links between regulatory focus and emotions can inform how consumers in those four different emotional states react to self versus family frames (Agrawal et al., 2007). Similarly, construal level theory (CLT; Trope & Liberman, 2003), while not a theory of emotions, may help us better understand certain appraisals (e.g., global/local appraisals; Han et al., 2014).

Beyond the directions discussed in this paper, there are other interesting avenues that future research could pursue. Emotions are frequently blamed for consumers being impulsive and making suboptimal decisions. However, as discussed earlier, emotions can also lead to more optimal decisions and behaviors. A question then arises: Can consumers regulate their emotional states to maximize their desired outcomes? Are some emotions more adaptive and others more maladaptive? Or depending on the decision context, would an emotion be either adaptive or maladaptive? Such questions about the use of emotions to aid better decision-making and desirable behaviors constitute a valuable avenue for future research. Similarly, whether and when integral and incidental emotions have similar or distinct effects on decision-making is an important question for future research. Another relevant direction may be to examine how emotions transform over time. For example, when might shame morph into

anger or to guilt? Is this morphing an act of repair or reappraisal? Is it conscious and controllable?

Emotions are complex, multi-dimensional, and dynamic constructs. They impact our decisions and behaviors across a wide variety of domains. We outlined a few directions that could help build a body of research that captures the richness and variety of the effects of emotions. We hope that our call for research will encourage further research on various emotions and develop more nuanced theories about how emotions affect decision-making.

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