

# On emotion specificity in decision making: Why feeling is for doing

Marcel Zeelenberg<sup>\*1</sup>, Rob M. A. Nelissen<sup>1</sup>, Seger M. Breugelmans<sup>2</sup>, & Rik Pieters<sup>3</sup>

<sup>1</sup> Department of Social Psychology and TIBER, Tilburg University

<sup>2</sup> Department of Developmental, Clinical and Cross-cultural Psychology, Tilburg University

<sup>3</sup> Department of Marketing and TIBER, Tilburg University

## Abstract

We present a motivational account of the impact of emotion on decision making, termed the feeling-is-for-doing approach. We first describe the psychology of emotion and argue for a need to be specific when studying emotion's impact on decision making. Next we describe what our approach entails and how it relates emotion, via motivation to behavior. Then we offer two illustrations of our own research that provide support for two important elements in our reasoning. We end with specifying four criteria that we consider to be important when studying how feeling guides our everyday doing.

Keywords: emotion, decision making, motivation, action.

## 1 Introduction

Most theories of rational decision making are descriptively implausible, especially if taken as process models. The idea that we take the time and invest the effort to produce a list of advantages and disadvantages, or costs and benefits for all alternatives in each single decision and decide on the basis of a rational calculation of those, is not only at odds with introspection, but would also not constitute an advantageous strategy. We simply do not have the time and ability to do so. Quite some time ago, Simon (1955, 1956) proposed that we are only rational within the limits of our cognitive capacities. Later on it was shown that the usage of simplifying rules of thumb or heuristics can even outperform more extensive processing when time is limited (which is the case for most decisions; Payne, Bettman, & Johnson, 1993). Here, we argue, emotions come in handy.

Emotions have evolved in evolution because of their adaptive functions in genotypic and phenotypic survival (Hasselton & Ketelaar, 2006; Ketelaar, 2004). They may help us to overcome the cognitive limitations within ourselves and constraints placed upon us within the decision environment. We think that emotions serve this function because emotions prioritize certain goals and thereby mobilize energy and give direction to behavior (Bagozzi, Baumgartner, Pieters & Zeelenberg, 2000; Frijda, 1986, 2006; Pfister & Böhm, this issue; Pieters & Van Raaij,

1988). Bounded rationality may be helped by the existence of emotion, because emotions restrict the size of the consideration set and focus the decision maker on certain, relevant aspects of the options (Hanoch, 2001). Emotions assign value to objects, aid the learning of how to obtain those objects, and provide the motivation for doing so (Gifford, 2002). In this article we build on these ideas and describe the role that emotions play in our everyday choices and decisions.

The importance of emotion for decision making is also apparent in the fact that decision making itself is often an emotional process. If we do engage in detailed weighing of the different courses of action and trading off their attributes this often appears to be a source of negative emotion (Beattie & Barlas, 2001; Luce *et al.*, 2001). We tend to undertake elaborate decision processes only for important decisions, but precisely in these cases emotional trade-off difficulty will occur (not so much for trivial decisions). Emotions are also present after we have decided. After having made a choice and before the outcomes are known we are often in state between hope and fear. Sometimes we are eager to learn the outcomes of our decision, expecting the best. Other times we avoid this information as we fear the worst (Shani & Zeelenberg, 2007; Shani, Tykocinski & Zeelenberg, 2008). When the outcomes materialize, they may again be a source of emotion, such as elation, happiness, surprise, regret and disappointment (Mellers, 2000; Zeelenberg *et al.*, 1998). These emotions influence how we evaluate our decision outcomes, and thus our well-being. When others are involved in our decisions, or in their consequences, emotions such as empathy, love, anger, shame and guilt may

<sup>\*</sup>Correspondence: Marcel Zeelenberg, Department of Social Psychology & TIBER (Tilburg Institute for Behavioral Economics Research), Tilburg University, PO Box 90153, 5000-LE Tilburg, The Netherlands, Email: Marcel@uvt.nl.

be evoked and play a role during the process. All in all, there is a plethora of emotions that are related to many different aspects of the decision making process. We think there is a good reason for emotions to be so pervasive in all phases of decision making: they help us in making the right decision.

Early decision theorists recognized the importance of emotion and discussed it in detail (e.g., Bentham, 1789; Jevons, 1871; Smith, 1759). Nevertheless, emotions did not make it into decision research because they were seen as intrinsically unstable and unpredictable, partly because they could not be measured objectively. Today, most problems with unpredictability and immeasurability of emotions have been solved. Emotions can be reliably measured in various verbal (e.g., via rating scales) and non-verbal ways (e.g., via FACS or facial EMG's; Larsen & Fredrickson, 1999; Parrott, & Hertel, 1999). Moreover, the impact of emotion on behavior is actually simpler and more systematic than previously thought. Emotions behave lawfully (Frijda, 1988, 2006), and their consequences are clear, stable and quite predictable. This has opened up opportunities for an integrative account of the different emotional influences on decision making. We present such an account in this article.

A core premise in our approach, which we have termed the feeling-is-for-doing approach, is that we conceptualize emotions as motivational processes (Zeelenberg *et al.*, 2007; Zeelenberg & Pieters, 2006). Of course, this is by itself not new, but in current decision research it is often forgotten. We propose that emotions commit decision makers to certain courses of action by providing control precedence (Frijda, 1986), which means that the experience of an emotion brings forward an associated goal that may overrule other goals. For example, when one is fearful, running away from the fear-evoking stimulus (e.g., a big, hairy eight-legged friend) has priority. Because different emotions are associated with different goals (e.g., Nelissen, Dijker, & De Vries, 2007b), it follows that different emotions have their idiosyncratic impact on decision making. For example, anger will motivate us to move against the source of our anger, whereas fear motivates us to move away. Further in this article, we explain this approach in more detail, and we review some of our own studies that have tested its predictions. First, however, we illuminate the nature of emotion and its distinctness from affect.

## 2 Affect and emotion: Why we need to be specific

Affect is a generic term that refers to many experiential concepts including moods, emotions, attitudes, evalua-

tions and preferences. The defining feature is the valence dimension. Valence is a term borrowed from physics and chemistry (Solomon & Stone, 2002). It refers to the extent that an experience is positive or negative, good or bad, or pleasant or unpleasant. Thus, any experiential concept that is positive or negative can be considered affective. The valence dimension is fundamental to many psychological experiences (Osgood *et al.*, 1975; Russell, 1980). Thus, emotions are affective phenomena.

It is obvious that decision scientists have a strong interest in affect, since the valence aspect of affect is so easily related to utility. Positive affect creates utility (or satisfaction, well-being, value) and negative affect creates disutility (Inman, Dyer, & Jia, 1997; Mellers, Schwartz, & Ritov, 1999). Freud (1920/1952, p. 365, emphasis in the original) even argued that: "our entire psychical activity is bent upon *procuring pleasure and avoiding pain*". Thus affect refers to positivity and negativity, goodness and badness, pleasantness and unpleasantness, favorability and unfavorability, or pleasure and pain.

Affective responses towards the choice options can function as a choice heuristic. For example, decision makers may choose on the basis of affect referral (Wright, 1975), which implies that they do not consider detailed information, but simply retrieve a previously formed evaluation and choose on the basis of that. The recently proposed affect heuristic is similar (Slovic, Finucane, Peters, & MacGregor, 2002). In these instances, rather broad and unspecified affective reactions associated with the choice alternatives drive our decision making. It shows that decision makers sometimes follow their gut feeling when deciding. These demonstrations of affective influences on decision making are important, and the theoretical insights further our insights into how preferences turn into behavior.

Notwithstanding the importance of affect, it is crucial to realize that affect is not a synonym for emotion. Emotions are affective because they can be placed on a positive-negative continuum, but not all affect is emotion. Equating affect with emotion hinders our insight into the role of emotion in decision making, as will become apparent later on in this article. Thus, research on affect does not tell the whole story with respect to the influence of emotions. The philosophers Solomon and Stone (2002, p. 431) recently reviewed the emotion literature and concluded that:

The analysis of emotions in terms of "valence," while it recognizes something essential about emotions . . . is an idea that we should abandon and leave behind. It serves no purpose but confusion and perpetrates the worst old stereotypes about emotion, that these are simple phenomena unworthy of serious research and analysis.

The idea is that if we really want to understand emotion and emotion's impact we have to go beyond mere valence. We should study what emotions are and use this as input for our understanding of the role of emotion in decision making. Let us start with what emotions are.

In the history of psychology, emotions have been described in terms of a wide variety of variables, such as bodily feedback (Breugelmans *et al.*, 2005; James, 1894), cognitive interpretations of arousal (Schachter & Singer, 1962; Valins, 1966), facial expressions (Ekman, 1992), and cultural symbols (Averill, 1974). As a consequence, there is no straightforward consensus on what emotions are. The exact definition is a matter of dispute among psychologists, philosophers and other researchers (Kleinginna & Kleinginna, 1981), mainly because of the wide array of possible emotions that one can experience (guilt, shame, regret, disappointment, envy, gloating, anger, fear, joy, pride, to name only a few), and because there is no single defining characteristic that applies to all emotions. However, there is agreement on several aspects. Emotions are acute, they are relatively momentary experiences. This differentiates emotions from moods, that typically last longer, and from other more general affects. Emotions are about something or someone: you are angry with someone; you regret a choice, etc. Emotions typically arise when one evaluates an event or outcome as relevant for one's concerns or preferences. One does not become emotional over something trivial. Moreover, emotions are, at least partly, "cognitively impenetrable": One cannot simply choose to have or not have emotions, given certain events or outcomes that are relevant for one's concerns (Frijda, 1986, p. 468). That does not mean, however, that we are slaves to our emotions, and that we passively undergo them. We actually undertake many attempts to regulate our emotions, and much of the impact of emotion on decision makings stems from these attempts (Baumeister, Vohs, DeWall, & Zhang, 2007; Zeelenberg & Pieters, 2007).

The past decades have seen the development of componential emotion theories which posit that emotions can be characterized by changes in different psychological subsystems, such as cognitive appraisals, hedonic experiences, bodily sensations, motivational goals, and action tendencies (e.g., Frijda, 1986; Scherer, 1984; Lazarus 1991). These theories emphasize that for a full understanding of emotions, we should not look at changes in a single emotion component but rather at patterns of changes across several components. Studies using a componential approach have distinguished many emotions at a high level of phenomenological detail (e.g., Breugelmans & Poortinga, 2006; Frijda, Kuipers, & Ter Schure, 1989; Roseman, Wiest, & Swartz, 1994; Van Dijk & Zeelenberg, 2002).

One of the most studied components of emotion is the

appraisal pattern that gives rise to the emotion. Appraisal refers to the process of judging the significance of an event for personal well-being. Appraisal theory (for a review, see Scherer *et al.*, 2001), the dominant approach in emotion research, maintains that specific emotions are associated with specific patterns of cognitive appraisals of the emotion-eliciting situation. People may differ in the specific appraisals that are elicited by a particular event, but the same patterns of appraisals always give rise to the same emotions. An understanding of appraisals is important, since it may help us to understand why specific emotions arise and hence provide a solid theoretical basis for emotion manipulation. Research on appraisal processes, however, remains relatively mute when it comes to predicting behavior (Frijda & Zeelenberg, 2001).

The other components of emotion that we address here are more closely linked to behavior. Together these components comprise the experiential content of the emotion. Basic emotion research on experiential content (Davitz, 1969; Wallbott & Scherer, 1988; Scherer & Wallbott, 1994) investigates a wide range of characteristics to differentiate emotions. Roseman *et al.* (1994) proposed that emotions could be differentiated in terms of the following five experiential categories: feelings, thoughts, action tendencies, actions, and emotivational goals. Feelings are perceived physical or mental sensations. Thoughts are ideas, plans, conceptions, or opinions produced by mental activity. Action tendencies are impulses or inclinations to respond with a particular action. Actions include behavior that may or may not be purposive. Emotivational goals describe the goals that accompany discrete emotions (wanting to avoid danger in case of fear, or wanting to recover from loss in case of sadness). These emotivational goals are similar to what Frijda refers to as "changes in patters of action readiness" (Frijda, 1986, 2006). Action readiness refers to motivational states that may involve attentional focusing, arousal, muscular preparation or actual action, goal priority, or felt readiness. Action readiness is defined by having control precedence, which means that it may overrule other goals. Many emotions can be differentiated in terms of action readiness.

The experiential content of an emotion thus reflects how emotions are felt and what emotions mean to the person experiencing them; it is the real emotional experience. Specific appraisals elicit specific emotions, with specific experiential contents. In our feeling-is-for-doing approach (Zeelenberg & Pieters, 2006) we reserve a special role for the experiential content of emotions and for the motivational aspect that is part of it. We have proposed that this experiential content is the proximal cause of all that follows, including specific adaptive behavior. Knowing the experiential content of an emotion therefore implies knowledge of the motivations that arise dur-

ing this experience. For example, when we realize that the experience of anger in consumers goes with feelings like exploding, thoughts of unfairness and violence and tendencies to let go and behave aggressively, it simply follows that these consumers are motivated to retaliate (Bougie, Pieters, & Zeelenberg, 2003). This knowledge allows us to make specific behavioral predictions.

Taken together, when interested in how emotions influence behavioral decision making, a focus on specific emotions is needed. In addition, we have to understand how emotions are experienced by the decision maker, to be able to predict the behavior that will follow from this experience. A focus on only the valence of the emotion does not suffice. This is the core element of the approach to which we turn now.

### 3 Feeling-is-for-doing

We have first presented our approach in Zeelenberg and Pieters (2006), and refer the reader to that chapter for an elaborated exposition. There we also explain how our approach has its root in the philosophy of pragmatism, with William James (1907, 1909) as one of its originators. We were inspired by James' (1890/1990, p. 669) claim that "my thinking is first and last and always for the sake of my doing" (see also, Fiske, 1992). The core element of our approach is that the concept of emotion must prove its worth by virtue of its correlation with an external criterion, such as behavior. It fits well with Averill's (1982, p. 178) take on the emotion anger, who stated: "the desire to gain revenge on, or to get back at the instigator of anger can almost be taken as a definition of anger". We have summarized our approach in a number of broad propositions that are described in Table 1 and briefly explain it below.

Our point is that when considering the potential impact of emotion on behavioral decisions, we should take seriously the fact that people may experience a whole range of different emotions, each with its idiosyncratic experiential content and associated goals. We think that this variety of feeling states exists for the sake of behavioral guidance. The specific emotion felt in a situation indicates a particular problem and prioritizes behavior that deals with this problem. Because different problems require different solutions, different emotions produce different behaviors. Ignoring emotion-specificity would lead one to predict similar effects for, for example regret and disappointment, because both emotions have a negative valence. Research clearly shows, however, that these two decision-related emotions have distinct behavioral effects (Zeelenberg & Pieters, 1999, 2004). The feeling-is-for-doing approach predicts differential effects for different emotions, even when they are as highly re-

Table 1: Propositions Summarizing the Pragmatic "Feeling-is-for-Doing" Perspective (adopted from Zeelenberg & Pieters, 2006).

- 
1. The emotional system is the primary motivational system for goal-directed behavior
  2. Each specific emotion serves distinct motivational functions in goal striving
  3. These motivational functions cannot be reduced to the overall valence of the specific emotions
  4. The distinct motivational functions are rooted in the experiential qualities of the specific emotions
  5. Emotions can be either endogenous (an integral part) or exogenous (environmentally invoked) to the goal striving process, their effect on behavior being contingent on their perceived relevance to the current goal.
- 

lated as regret and disappointment, or guilt and shame (De Hooze, Zeelenberg, & Breugelmans, 2008). In addition, we expect that the same specific emotion in different situations may activate different behaviors, depending on the overarching goal that people strive to. Put differently, emotions do not automatically call for a specific action, but rather they reflect a concern of the decision maker that is potentially threatened (in the case of negative emotions) or served (in the case of positive emotions). The emotion then facilitates behavior that is in line with our concerns and that is aimed at closing the gap between the current situation and the goal strived for. Depending on the situation one is in, different behaviors can fulfill this role ("many roads lead to Rome"), but we believe which behavior will be implemented is based on their accessibility, acceptability and their instrumentality to the current overarching goal. Thus, because of the specific meaning that they convey to the decision maker, specific emotions may help us to better understand the goals and motivations of the decision makers and hence better predict the specific behaviors the decision makers engage in or refrain from.

We have not yet talked about the common situation that people experience mixed emotions (Larsen, McGraw, Ciocoppo, & Mellers, 2004). For example, winning an auction may give rise to feelings of pride and happiness, but at the same time one may worry about paying too much. Thus, decision makers can be ambivalent, experiencing for instance hope and fear at the same time. Such common situations of emotional ambivalence clearly demonstrate that the subtlety of the experiential content of emo-

tions cannot be reduced to an overall good-bad position. The question is what happens in these situations. Which emotions will influence behavior? It could be the case that the strongest emotion cancels out the action tendencies and motivations of any other emotion. It is also possible that the strongest emotion simply gets action priority (see Frijda, 1986), such that less intense emotions, when not faded yet, can influence behavior after the strongest emotion has been reacted upon (see also, De Hooze et al., 2008).

The feeling-is-for-doing approach puts emphasis on the forward looking, motivational function of emotions (see also, Nelissen & Zeelenberg, 2007; Zeelenberg, Nelissen & Pieters, 2007). It explains how emotions may be instrumental in achieving the goal one is striving for. In this respect our approach differs from informational approaches (e.g., Lerner & Keltner, 2000). Information-based accounts highlight the nature of inferences that people in a particular emotional state are likely to draw. Focusing on the cues that emotions give about past goal performance, information-based accounts zoom in on the feedback function of emotions. It is important to note that the information-based accounts take a backward looking stance with respect to goal progress. That is, emotions provide information about how one is currently doing. This affective feedback informs about the extent of goal progress (e.g., *I am still not safe!*), but does not provide the decision maker with clear guidelines for how to attain these goals (e.g., *I better climb up that tree!*). Goal-based perspectives are by definition future oriented as they emphasize the directives of emotional states for future goal pursuit. We therefore argue for the superior suitability of goal-based perspectives to account for the influence of specific emotions on behavioral decisions.

It is important to note that emotions and emotional influences can be either endogenous or exogenous (cf. Zeelenberg & Pieters, 2006). This distinction is consistent with the general role that factors can play in causal processes, and corresponds to a distinction between two experimental methods for studying emotion effects. We refer to emotions as endogenous when the experience is relevant to the decision at hand, and an integral part of the goal setting and goal striving process. For example, the anxiety experienced when deliberating a risky choice, or the regret experienced over an earlier investment when determining whether to invest further are endogenous. Likewise, the anger about goal frustration is endogenous, when it influences future behavior with respect to that goal. Our feeling-is-for-doing approach is developed specifically for understanding how these endogenous emotions that are relevant for the decisions at hand influence those decisions.

Exogenous emotions or emotional influences, on the other hand, are those that are not related to the current

decision, and external to the actual goal setting and goal striving process, although they may—exogenously— influence this. They constitute the spill-over effects of emotions or mood states resulting from a prior experience, such as watching a happy or a sad movie, on subsequent, unrelated decisions. Most previous research on the effects of emotion has been limited to studying such carryover effects of exogenous affects. That is, that research has studied the effects of emotions, feelings, or moods that should be irrelevant for the current decision. Revealing such influences that should logically not occur is time and again considered to be interesting because it shows the fallibility of humans and tells an exciting, counterintuitive story. This is part of the more general tendency in psychology to focus on biases and bloopers, rather than on the overwhelming cases in which decisions go well. As a consequence, we know much about the failing motivational system, but too little about how and when the system works in the service of goal pursuit.

Thus, an endogenous emotion is part of current goal pursuit, while an exogenous emotion comes from outside, and its effects may “steam through” current goal pursuit. The distinction between endogenous and exogenous emotions is significant as it may determine the extent to which findings on emotional influences are relevant to theoretical accounts of such effects. Moreover, we think that the study of the hitherto understudied influence of endogenous emotions is important because this influence is so clearly related to what emotions are and what they signal to the decision maker. Moreover, many effects of exogenous emotions that seem erratic at first sight can be understood if one is aware of the effects of endogenous emotions.

## 4 Two illustrations

Let us now describe two examples of research projects that illustrate the insights of the feeling-is-for-doing approach in studying the effects of emotions in interpersonal decision situations. The first project shows differential effects of guilt and fear in social dilemmas (Nelissen, Dijkster & De Vries, 2007a). The second project compared the effects of endogenous and exogenous shame (De Hooze, Breugelmans, & Zeelenberg, 2008; for another illustration on the basis of research on regret and disappointment, see Zeelenberg & Pieters, 2006).

The first illustration is currently the best example that we are aware of, that has indicated a goal-activation mechanism to be involved in the observed consequences of induced emotional states (Nelissen et al., 2007a). This study reported fear to reduce and guilt to increase cooperation in a prisoner-dilemma interaction (for related findings concerning the role of guilt in social dilemmas,

see Keterlaar & Au, 2003). These effects were qualified, however, by a significant interaction between the emotional state and an individual's social value orientation. Social value orientation refers to the fact that some people, called pro-socials, have a natural tendency to act pro-socially, whereas others, called pro-selves, have a natural tendency to act more selfishly (Messick & McClintock, 1968; Van Lange, Otten, De Bruin, & Joireman, 1997). Specifically, fear decreased cooperation for pro-socials, whereas guilt increased cooperation for pro-selves. Social value orientation can be understood in terms of individual variation in the chronic accessibility of situation-relevant goals for action. Specifically, when confronted with a social dilemma, pro-selves only have their self-interest in mind and attempt to make as much profit as possible, whereas pro-socials also take the other players' interest into account. Temporal goal-activation due to an induced emotional state only changes the behavior of individuals to whom this goal was not already chronically accessible. Fear induces a goal to avoid personal risk, which does not affect pro-selves because they are chronically motivated to avoid the risk of losing to the other party. On the other hand, guilt is associated with an implicit goal to make-up for transgressions, inducing a tendency to cooperate, which does not affect pro-socials because they already have the other player's interest in mind. These interactions suggest that both emotions and individual dispositions operate through the same underlying mechanism of goal-accessibility, yet obviously present only an indirect indication thereof.

The second illustration is the first to show that the same emotion can have different endogenous and exogenous influences on interpersonal decision situations (De Hooze et al., 2007). Shame is seen as one of the moral emotions that are linked to the interests of other people and that motivate pro-social behavior (Haidt, 2003). However, in contrast to guilt, another moral emotion, pro-social effects of shame had hitherto not been empirically demonstrated (see De Hooze et al., 2007). One reason for this is that the effects of shame, and indeed of most emotions, have only been studied exogenously. The central focus of experiences of shame is a threatened or damaged self leading to a motivation to cope with this threat (Tangney & Dearing, 2002). This often produces a tendency to hide or withdraw from the shame eliciting event. When shame is exogenous to a decision situation, the situation in which the self was threatened is already different from the decision situation at hand and the motivation to cope with this threat is already satisfied, at least partially by the fact that the participant is already separated from the shame eliciting event. Consequently, the common situational carry-over effects that are observed with other emotions will not be found with exogenous shame. However, when shame is endogenous to the decision sit-

uation at hand, it will still motivate pro-social behavior in the same way as guilt did in the Nelissen et al. (2007a) study, described earlier. Indeed, four studies using three different inductions of shame and two different measures of pro-social behavior showed exactly the predicted results. Exogenous shame did not influence pro-social behavior at all. However, endogenous shame increased the social behavior for pro-selves. This study clearly shows the necessity of studying endogenous effects of emotions if we are to truly understand their influence on decision making.

## 5 Looking forward

Our approach borrows many ideas from old and sometimes forgotten insights in the psychology of emotion, but nevertheless, the current attempt to integrate these insights is new, and our approach is still under construction. We believe that focusing on the motivational aspect of emotions is a fruitful way to come to a better understanding of the role of emotion in decision making and, at the same time, to come to a better understanding of what emotions are. In order to make progress in developing an adequate motivational account of emotions we believe that four criteria should be met (Zeelenberg et al., 2007). First, a systematic approach to assigning goals to emotions is needed. We suggest that hypotheses should be based on empirically grounded catalogues of emotion-related goals, as for instance provided by Roseman et al. (1994). Naturally, by adopting similar procedures, goals can be unambiguously ascribed to previously unstudied emotions (see, for examples, Bougie et al., 2003; Nelissen et al., 2007b; Zeelenberg & Pieters, 1999).

Secondly, we have to be aware that not all emotions are clearly associated with well-defined goals for action. For example, sadness has sometimes been defined in terms of an absence of any goal-directed tendencies and the action goals for *schadenfreude* are also not straight forward. Hence, our feeling-is-for-doing approach is not equally well applied to all emotions. In order to collect meaningful results, behavioral consequences of emotions that are unambiguously related to a particular goal need to be singled out. More generally, it may be useful to examine in more detail which emotions are typically goal-directed and which are less so, following the lead of Bagozzi, Baumgartner and Pieters (1998).

Thirdly, it is useful to focus on emotion-decision linkages that are common in decision-making practices. Highly uncommon or even weird illustrations of linkages between emotions and decision-making may be exciting, but less useful to a relevant theory of decision-making. Consider for example the finding that disgust appears to reduce risk preferences (Fessler et al., 2004). Offering

a speculative explanation for this effect, these authors have overlooked that feelings of disgust are quite uncommon in most situations where individuals make risky decisions. So, even if an effect of disgust on making less risky decisions is found, the consequences of these findings for the theories on disgust, decision-making or emotions are less transparent.

Indeed, more research is needed on the functional, positive, optimal influence of emotions in regular decision-making. Although it is by now commonplace to laud the functionality of emotions for decision-making, as a discipline we seem to be more attracted to the dark and grim side of emotions. As a consequence we know much more about emotional obstruction than about emotional assistance to optimality. Thus, most research has emphasized carry-over effects of (exogenous) emotions on judgment and decision-making. These effects derive a counterintuitive appeal from demonstrating erratic consequences and the fallibility of humans. Such findings, however, obscure awareness of the functional role emotions play in the decision making process. Emotions that are relevant for the choice at hand (e.g., regret over foregone opportunities, fear about potential outcomes, guilt over earlier misbehavior) clearly show what emotions are and what they are for. They aid the decision maker by providing quick intuitive cues on how to solve motivational conflicts and ambiguities. Moreover, effects of exogenous emotions that seem erratic at first can often be understood if one is aware of the effects of endogenous influences. We consider the potential to determine a-priori the kind of decisions to which a particular emotion is relevant to be one of the strengths of our perspective.

Finally, we think that it is time to move beyond the mere documentation of behavioral results of emotions to direct tests of the proposed mechanism underlying these effects. Although many studies demonstrate congruence between observed decisional effects and emotional goals, this does not conclusively attest for the idea that goal-activation as a result of emotional states causes these effects.

## 6 Summary and conclusions

In this article we have reviewed our motivational account of the effects of emotion on decision-making. We refer to this approach as the feeling-is-for-doing approach. This approach recognizes that the differential impact of specific emotions occurs via the strong association between emotion and motivation. Emotions arise when events or outcomes are relevant for one's concerns or preferences and they prioritize behavior that acts in service of these concerns. As such, emotions can be understood as programs for intuitive decision-making, imposing upon the

decision maker inclinations for action that, in a given situation, most adequately serve current strivings. Investigating these dynamics should further our understanding of both decision processes and the dynamics of emotional experiences. Put differently, when we realize that feeling is here for the sake of our doing, we also realize that progress in studying the intuitive decision maker cannot be made without scrutinizing emotion.

## References

- Averill, J. R. (1974). An analysis of psychophysiological symbolism and its influence on theories of emotion. *Journal for the Theory of Social Behaviour*, 4, 147–190.
- Averill, J. R. (1982). *Anger and aggression: An essay on emotion*. New York: Springer-Verlag.
- Bagozzi, R. P., Baumgartner, H., & Pieters, R. (1998). Goal-directed emotions. *Cognition and Emotion* 12, 1–26.
- Bagozzi, R. P., Baumgartner, H., Pieters, R., & Zeelenberg, M. (2000). The role of emotions in goal-directed behavior. In S. Ratneshwar, D. G. Mick & C. Huffman (Eds.), *The why of consumption: Contemporary perspectives on consumer motives, goals, and desires* (pp. 36–58). New York: Routledge.
- Baumeister, R. F., Vohs, K. D., DeWall, C. N., & Zhang, L. Q. (2007). How emotion shapes behavior: Feedback, anticipation, and reflection, rather than direct causation. *Personality and Social Psychology Review*, 11, 167–203.
- Beattie, J., & Barlas, S. (2001). Predicting perceived differences in tradeoff difficulty. In E. U. Weber, J. Baron & G. Loomes (Eds.), *Conflict and tradeoff in decision making* (pp. 25–64). Cambridge: Cambridge University Press.
- Bentham, J. (1789/1948). *An introduction to the principles of morals and legislation*. New York: Hafner.
- Bougie, R., Pieters, R., & Zeelenberg, M. (2003). Angry customers don't come back, they get back: The experience and behavioral implications of anger and dissatisfaction in services. *Journal of the Academy of Marketing Sciences*, 31, 377–391.
- Breugelmans, S. M., & Poortinga, Y. H. (2006). Emotion without a word. Shame and guilt with Rarámuri Indians and rural Javanese. *Journal of Personality and Social Psychology*, 91, 1111–1122.
- Breugelmans, S. M., Poortinga, Y. H., Ambadar, Z., Setiadi, B., Vaca, J. B. & Widiyanto, P. (2005). Body sensations associated with emotions in Rarámuri Indians, rural Javanese, and three student samples. *Emotion*, 5, 166–174.

- Davitz, J. R. (1969). *The language of emotion*. New York: Academic Press.
- De Hooge, I. E., Breugelmans, S. M., & Zeelenberg, M. (2008). *Not so ugly after all: Endogenous shame acts as a commitment device*. Manuscript under review.
- De Hooge, I. E., Zeelenberg, M., & Breugelmans, S. M. (2007). Moral sentiments and cooperation: Differential influences of shame and guilt. *Cognition and Emotion, 21*, 1025–1042.
- Ekman, P. (1992). Are there basic emotions? *Psychological Review, 99*, 550–553.
- Fessler, D. M. T., Pillsworth, E. G., & Flamson, T. J. (2004). Angry men and disgusted women: An evolutionary approach to the influence of emotions on risk taking. *Organizational Behavior and Human Decision Processes, 95*, 107–123.
- Fiske, S. T. (1992). Thinking is for doing: Portraits of social cognition from Daguerreotype to laserphoto. *Journal of Personality and Social Psychology, 63*, 877–889.
- Freud, S. (1920/1952). *A general introduction to psychoanalysis*. New York: Washington Square Press.
- Frijda, N. H. (1986). *The emotions*. Cambridge: Cambridge University Press.
- Frijda, N. H. (1988). The laws of emotion. *American Psychologist, 43*, 249–358.
- Frijda, N. H. (2006). *The laws of emotion*. Mahwah, NJ: Erlbaum.
- Frijda, N. H., & Zeelenberg, M. (2001). Appraisal: What is the dependent? In: K. R. Scherer, A. Schorr, & T. Johnstone (Eds.), *Appraisal processes in emotion: Theory, methods, research* (pp. 141–155). New York: Oxford University Press.
- Frijda, N. H., Kuipers, P., & Ter Schure, E. (1989). Relations among emotion, appraisal and emotional action readiness. *Journal of Personality and Social Psychology, 57*, 212–228.
- Gifford, A. (2002). Emotion and self-control. *Journal of Economic Behavior & Organization, 49*, 113–130.
- Haidt, J. (2003). The moral emotions. In R. J. Davidson, K. R. Scherer, & H. H. Goldsmith (Eds.), *Handbook of affective sciences* (pp. 852–870). Oxford: Oxford University Press.
- Hanoch, Y. (2001). “Neither an angel nor an ant”: Emotion as an aid to bounded rationality. *Journal of Economic Psychology, 23*, 1–25.
- Hasselton, M. G., & Ketelaar, T. (2006). Irrational emotions or emotional wisdom? The evolutionary psychology of emotions and behavior. In J. P. Forgas (Ed.), *Affect in social thinking and behavior* (pp. 21–39). New York: Psychology Press.
- Inman, J. J., Dyer, J. S., & Jia, J. (1997). A generalized utility model of disappointment and regret effects on post-choice valuation. *Marketing Science, 16*, 97–111.
- James, W. (1894). The physical basis of emotion. *Psychological Review, 1*, 516–529.
- James, W. (1890/1990). *The principles of psychology*. Chicago: Encyclopedia Britannica, Inc.
- James, W. (1907/1995). *Pragmatism*. New York: Dover Publications.
- James, W. (1909/2002). *The meaning of truth*. New York: Dover Publications.
- Jevons, W. S. (1871/1965). *The theory of political economy* (5th ed.). Augustus M. Kelley Publishers.
- Keltner, D., Ellsworth, P. C., & Edwards, K. (1993). Beyond simple pessimism: Effects of sadness and anger on social perception. *Journal of Personality and Social Psychology, 64*, 740–752.
- Ketelaar, T. (2004). Ancestral emotions, current decisions: Using evolutionary game theory to explore the role of emotions in decision-making. In C. Crawford & C. Salmon (Eds.), *Darwinism, public policy and private decisions* (pp. 145–168). Mahwah, NJ: Erlbaum.
- Ketelaar, T., & Au, W. T. (2003). The effects of feelings of guilt on the behavior of uncooperative individuals in repeated social bargaining games: An affect-as-information interpretation of the role of emotion in social interaction. *Cognition and Emotion, 17*, 429–453.
- Kleinginna, P. R., & Kleinginna, A. M. (1981). A categorized list of emotion definitions, with suggestions for a consensual definition. *Motivation and Emotion, 5*, 345–379.
- Larsen, J. T., McGraw, A. P., Cacioppo, J., & Mellers, B. A. (2004). The agony of victory and thrill of defeat: Mixed emotional reactions to disappointing wins and relieving losses. *Psychological Science, 15*, 325–330.
- Larsen, R. J., & Fredrickson, B. L. (1999). Measurement issues in emotion research. In: D. Kahneman, E. Diener & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 40–60). New York: Russell Sage Foundation.
- Lazarus, R.S. (1991). *Emotion and adaptation*. New York: McGraw Hill.
- Lerner, J. S., & Keltner, D. (2000). Beyond valence: Toward a model of emotion specific influences on judgment and choice. *Cognition and Emotion, 14*, 473–493.
- Luce, M. F., Payne, J. W., & Bettman, J. R. (2001). The impact of emotional tradeoff difficulty on decision behavior. In E. U. Weber, J. Baron & G. Loomes (Eds.), *Conflict and tradeoff in decision making* (pp. 86–109). Cambridge: Cambridge University Press.
- Mellers, B. A. (2000). Choice and the relative pleasure of consequences. *Psychological Bulletin, 126*, 910–924.
- Mellers, B. A., Schwartz, A., & Ritov, I. (1999). Emotion-based choice. *Journal of Experimental Psychology-General, 128*, 332–345.

- Messick, D. M., & McClintock, C. G. (1968). Motivational basis for choice in experimental games. *Journal of Experimental Social Psychology*, *4*, 1–25.
- Nelissen, R. M. A., Dijk, A. J., & De Vries, N. H. (2007a). How to turn a hawk into a dove and vice versa: Interactions between emotions and goals in a give-some dilemma game. *Journal of Experimental Social Psychology*, *43*, 280–286.
- Nelissen, R. M. A., Dijk, A. J., & De Vries, N. H. (2007b). Emotions and goals: Assessing relations between values and emotions. *Cognition and Emotion*, *21*, 902–911.
- Nelissen, R. M. A., & Zeelenberg, M. (2007). The motivational function of emotions: A “feeling is for doing” perspective. In L. V. Brown (Ed.), *Psychology of Motivation* (pp. 47–63). Hauppauge, NY: NOVA Science Publishers.
- Osgood, C. E., Succi, G. J., & Tannenbaum, P. H. (1975). *The measurement of meaning*. Urbana: University of Illinois Press.
- Parrott, W. G., & Hertel, P. (1999). Research methods in cognition and emotion. In T. Dalgleish & M. J. Power (Eds.), *Handbook of cognition and emotion* (pp. 61–81). New York: John Wiley & Sons Ltd.
- Payne, J. W., Bettman, J. R., & Johnson, E. J. (1993). *The adaptive decision maker*. Cambridge: Cambridge University Press.
- Pieters, R., & van Raaij, W. F. (1988). The role of affect in economic behavior. In W. F. van Raaij, G. M. van Veldhoven, & K-E Warneryd (Eds.), *Handbook of economic psychology* (pp. 108–142). Dordrecht, Netherlands: Kluwer.
- Roseman, I. J., Wiest, C., & Swartz, T. S. (1994). Phenomenology, behaviors, and goals differentiate discrete emotions. *Journal of Personality and Social Psychology*, *67*, 206–211.
- Russell, J. A. (1980). A circumplex model of affect. *Journal of Personality and Social Psychology*, *36*, 1161–1178.
- Schachter, S., & Singer, J. E. (1962). Cognitive, social, and physiological determinants of emotional state. *Psychological Review*, *69*, 379–399.
- Scherer, K. R. (1984). Emotion as a multicomponent process – a model and some cross-cultural data. In P. Shaver (Ed.), *Review of personality and social psychology: Vol. 5. Emotions, relationships, and health* (pp. 37–63). Beverly Hills: Sage.
- Scherer, K. R., Schorr, A., & Johnstone, T. (2001, Eds.). *Appraisal processes in emotion: Theory, methods, research*. New York: Oxford University Press.
- Scherer, K. R., & Wallbott, H. G. (1994). Evidence for universality and cultural variation of differential emotion response patterning. *Journal of Personality and Social Psychology*, *66*, 310–328.
- Shani, Y., Tykocinski, O., & Zeelenberg, M. (2008). When ignorance is not bliss: How feelings of discomfort promote the search for negative information. *Journal of Economic Psychology*, forthcoming.
- Shani, Y., & Zeelenberg, M. (2007). When and why do we want to know? Experienced regret promotes post-decisional information search. *Journal of Behavioral Decision Making*, *20*, 207–222.
- Simon, H. A. (1955). A behavioral model of rational choice. *Quarterly Journal of Economics*, *69*, 99–118.
- Simon, H. A. (1956). Rational choice, and the structure of the environment. *Psychological Review*, *63*, 129–138.
- Slovic, P., Finucane, M., Peters, E., & MacGregor, D. G. (2002). The affect heuristic. In T. Gilovich, T. Griffin & D. Kahneman (Eds.), *Heuristics and biases: The psychology of intuitive judgment* (pp. 397–420). New York: Cambridge University Press.
- Smith, A. (1759/1976). *The theory of moral sentiments*. Oxford: Clarendon Press.
- Solomon, R. C., & Stone, L. D. (2002). On “positive” and “negative” emotions. *Journal for the Theory of Social Behavior*, *32*, 417–443.
- Tangney, J. P., & Dearing, R. L. (2002). *Shame and Guilt*. New York: The Guilford Press.
- Valins, S. (1972). Cognitive effects of false heart-rate feedback. In R. S. Browne, H. E. Freeman, C. V. Hamilton, J. Kagan & A. Kimball Romney (Eds.), *The social scene: A contemporary view of the social sciences* (pp. 87–98). Cambridge, MA: Winthrop Publishers.
- Van Dijk, W. W., & Zeelenberg, M. (2002). What do we talk about when we talk about disappointment?: Distinguishing outcome-related disappointment from person-related disappointment. *Cognition and Emotion*, *16*, 787–807.
- Van Lange, P. A. M., Otten, W., De Bruin, E. N. M., & Joireman, J. A. (1997). Development of prosocial, individualistic, and competitive orientations: Theory and preliminary evidence. *Journal of Personality and Social Psychology*, *21*, 273–292.
- Wallbott, H. G., & Scherer, K. R. (1988). How universal and specific is emotional experience?: Evidence from 27 countries on five continents. In K. R. Scherer (Ed.), *Facets of emotion: Recent research* (pp. 31–56). Hillsdale, NJ: Erlbaum.
- Wright, P. L. (1975). Consumer choice strategies: Simplifying vs. Optimizing. *Journal of Marketing Research*, *11*, 60–67.
- Zeelenberg, M., Nelissen, R. M. A., & Pieters, R. (2007). Emotion, motivation and decision making: A feeling is for doing approach. In H. Plessner, C. Betsch & T. Betsch (Eds.), *Intuition in judgment and decision making* (pp. 173–189). Mahway, NJ: Erlbaum.

- Zeelenberg, M., & Pieters, R. (1999). Comparing service delivery to what might have been: Behavioral responses to disappointment and regret. *Journal of Service Research, 2*, 86–97.
- Zeelenberg, M., & Pieters, R. (2004). Beyond valence in customer dissatisfaction: A review and new findings on behavioral responses to regret and disappointment in failed services. *Journal of Business Research, 57*, 445–455.
- Zeelenberg, M., & Pieters, R. (2006). Feeling is for doing: A pragmatic approach to the study of emotions in economic behavior. In D. DeCremer, M. Zeelenberg & J. K. Murnighan (Eds.), *Social psychology and economics* (pp. 117–137). Mahwah, NJ: Erlbaum.
- Zeelenberg, M., & Pieters, R. (2007). A theory of regret regulation 1.0. *Journal of Consumer Psychology, 17*, 3–18.
- Zeelenberg, M., Van Dijk, W. W., Van der Pligt, J., Manstead, A. S. R., Van Empelen, P., & Reinderman, D. (1998). Emotional reactions to the outcomes of decisions: The role of counterfactual thought in the experience of regret and disappointment. *Organizational Behavior and Human Decision Processes, 75*, 117–141.