

Chapter 24

THE FUNCTIONS OF AFFECT IN THE CONSTRUCTION OF PREFERENCES

(2006. In S. Lichtenstein & P. Slovic (Eds.), The construction of preference. New York: Cambridge University Press.)

ELLEN PETERS

Decision Research

1201 Oak Street, Suite 200

Eugene, OR 97401

empeters@uoregon.edu

(541) 485-2400

A major theme that emerges from judgment and decision making research is that we frequently do not know our own “true” value for an object or situation (e.g., how much we value a consumer good or better air quality). In such cases we appear to construct our values and preferences “on the spot” when asked to form a particular judgment or to make a specific decision (Payne, Bettman, & Schkade, 1999; Slovic, 1995). The present chapter focuses on the role of affect and the affect heuristic in the construction of preferences and extends earlier work on the affect heuristic by explicating four proposed functions of affect in the construction process.

Recent research has developed and tested theories of judgment and decision making that incorporate affect as a key component in a process of constructing values and preferences. Within these theories, integral affect (positive and negative feelings about a stimulus) and incidental affect (positive and negative feelings such as mood states that are independent of a stimulus but can be misattributed to it) are used to predict and explain a wide variety of judgments and decisions ranging from choices among jellybeans to life satisfaction and valuation of human lives (Slovic, Finucane, Peters, & MacGregor, 2002; Kahneman, Schkade, & Sunstein, 1998; Schwarz & Clore, 1983).

The Functions of Affect in Constructing Judgments and Decisions

Mild incidental affect and integral affect are ubiquitous in everyday life. Imagine finding a quarter lying on the sidewalk (a mild positive mood state is induced) or considering whether you will have a bowl of oatmeal or a chocolate croissant for breakfast (mild positive and negative integral affective feelings are experienced). These feelings can impact the processing of information and, thus, what is judged or decided. Research in this area has begun to delineate some of the various ways that affect alters how we process information.

Most recent research in affect has considered its informational value. That is, at the moment of judgment or choice, decision makers consult their feelings about a target or option and ask “how do I feel about this?” (Schwarz & Clore, 2003). These feelings then act as information to guide the judgment or decision process. In the present chapter, I argue that affect has four separable roles. First, it can act as *information* as suggested above. Second, it can act as a *spotlight* focusing us on different information — numerical cues, for example — depending on the extent of our affect. Third, affect can *motivate* us to take action or do extra work. Finally, affect, when present, acts as a *common currency* allowing us to compare apples to oranges more effectively than when it is absent.

1. *Affect As Information*

One of the most comprehensive theoretical accounts of the role of affect and emotion in decision making was presented by the neurologist, Antonio Damasio (1994). In seeking to determine “what in the brain allows humans to behave rationally,” Damasio argued that a lifetime of learning leads decision options and attributes to become “marked” by positive and negative feelings linked directly or indirectly to somatic or bodily states. When a negative somatic marker is linked to an outcome, it acts as information by sounding an alarm that warns us away from that choice. When a positive marker is associated with the outcome, it becomes a beacon of incentive drawing us towards that option. Affect developed through experience thus provides information about what to choose and what to avoid. Damasio claims that we make

better quality and more efficient decisions by consulting and being guided by these feelings. Without these feelings, information in a decision lacks meaning and the resulting choice suffers.

Peters, Slovic, and Hibbard (2004) were interested in the processes by which decision makers bring meaning to dry, cold facts. We attempted to influence the interpretation and comprehension of information about health-plan attributes by providing information in a form that can be used easily to evaluate the overall goodness or badness of a health plan. We suggested that more evaluable information is more affective and that decision makers will use this affect as information when interpreting and drawing meaning from numbers relevant to a judgment or choice. For example, in one of the studies older-adult participants were presented with identical attribute information (quality of care and member satisfaction) about two health plans. The information was presented in bar chart format with the actual score displayed to the right of the bar chart (see Figure 24.1). The information for half of the subjects in each group was supplemented by the addition of affective categories (i.e., the category lines plus affective labels that placed the health plans into categories of poor, fair, good, or excellent). The attribute information was designed such that Plan A was good on both attributes while Plan B was good on quality of care but fair on member satisfaction. The specific scores for quality of care and member satisfaction were counterbalanced across subjects such that, for half of the subjects, the average quality of care scores were higher; for the other half, average member satisfaction scores were higher. We predicted and found that affective categories influenced the choices. Specifically, older adults preferred health plan A more often when the categories were present (plan A was always in the good affective category when the categories were present).

In a second study, we found that choices of older adults with high deliberative ability (high speed of processing) were impacted less by the presence versus absence of affective categories than were choices of older adults with low deliberative ability. The results suggest that adults with high deliberative efficiency are better able to compare information and derive evaluative meaning from the data. This finding is consistent with research by Salthouse (1992) demonstrating that faster processing is associated with greater working memory capacity. However, for adults with low deliberative efficiency, affective categories appear to provide more information and influence the evaluative meaning. A third study provided direct evidence of the affective basis of this manipulation by demonstrating that decision makers accessed their feelings about the health plan highlighted by affective categories (e.g., Plan A in Figure 24.1) faster than their thoughts in the presence but not the absence of the evaluability manipulation.

Affect also appears to act as information in the construction of prices. Peters, Slovic, and Gregory (2003) demonstrated that buying and selling prices for real-play and hypothetical lottery tickets were constructed through a process guided in part by affect. For example, in their Study 2, buyers made offers for a lottery ticket with a real 5% chance to win a real \$100; buyers with more positive feelings about having a ticket offered twice as much for it. Sellers of a lottery ticket in the same study required twice as much in payment for their ticket if they had more negative feelings about not having a ticket. In four studies, buyers and sellers appeared to anchor on salient numerical values and then to adjust from those anchors based on these affective considerations. Affect, in other words, appeared to be information used to determine the extent of adjustment from an initial anchor. Peters, Slovic, Hibbard, and Tusler (2004) also linked affect to the adjustment process in a very different context. Specifically, they found that decision makers asked to estimate the number of fatalities in the U.S. each year from various causes of death anchored on a provided number (the actual number of deaths from a different disease) and then appeared to adjust based on the extent of their worry about the disease under consideration.

These findings are important in that they are the first to link affect as a possible mechanism underlying the adjustment process.

The interested reader can find additional examples of the role of affect as information in some of the excellent work on discrete emotions and mood (Connolly & Zeelenberg, 2002; Lerner & Keltner, 2000; Mellers, Schwartz, Ho, & Ritov, 1996; Schwarz & Clore, 2003). Affect has also been shown to act as information to influence perceptions of risk (Constans & Mathews, 1993; Johnson & Tversky, 1983; Loewenstein, Weber, Hsee, & Welch, 2001; Peters & Slovic, 1996; Rottenstreich & Hsee, 2001; Wright & Bower, 1992). Decision makers appear to consult their affective feelings and use them as information in judgment and decision processes. Affect as information thus acts as a substitute for the assessment of other specified target attributes in judgment (Kahneman, 2003c). Without affect, information appears to have less meaning and to be weighed less in judgment and choice processes.

2. Affect As a Spotlight

Considerably less work has been done on the other three proposed functions of affect in the construction of preferences. Peters et al. (2003) proposed that affect plays a role as a lens or spotlight in a two-stage process. First, the quality of affective feelings (e.g., weak versus strong or positive versus negative) focuses the decision maker on different information. Then, that information (rather than the feelings themselves) is used to guide the judgment or decision. While the impact of incidental feelings has been shown to function as a spotlight in memory and judgment (e.g., mood-congruent biases on memory; Bower, 1981), little research has examined how feelings about a target might alter what information becomes salient.

Peters et al. (2003) proposed that affect may influence the numerical anchors used by buyers and sellers in the construction of monetary valuations. In their Study 2, for example, buyers who reported low positive affect towards having a lottery ticket appeared to anchor on a price of zero more than buyers who reported greater positive affect towards the lottery ticket; buyers high in positive affect seemed to anchor more often on the expected value. Sellers, on the other hand, who reported low as compared to high negative affect towards giving up their ticket appeared more likely to anchor on the expected value response and less likely to anchor on the winning amount of the lottery. The level of affect towards an object seems to make different numerical cues more salient.

Depending upon how strongly we feel about an object, we may focus on different information. Alhakami and Slovic (1994) demonstrated that the negative correlation between perceived risk and perceived benefit is mediated by affect. In other words, decision makers with positive affect towards a technology tend to perceive it as high in benefit and low in risk; the reverse happens if decision makers have a negative affect about it. Although this effect has been interpreted in terms of the role of affect as information (Slovic et al., 2002), it may be related to affect's role as a spotlight. The affect-as-spotlight hypothesis predicts that decision makers who have positive feelings about a technology will spend more time looking at its benefits and will remember them better while they spend less time looking at its risks and will remember them less well. It predicts the reverse for technologies that they do not like (e.g., less time spent considering and poorer memory for its benefits).

3. Affect As a Motivator of Behavior

In a third role for affect, it appears to function as a motivator of behavior. Classical theories of emotion include, as the core of an emotion, a readiness to act and the prompting of plans (Frijda, 1986). Lerner, Small, and Loewenstein (2004), for example, studied the impact of

experimentally-induced emotion states of sadness and disgust on prices set by buyers and sellers in a real-play market. In particular, they linked prices with the action tendencies resulting from these incidental emotion states (i.e., disgust and “an implicit action tendency to expel current objects and avoid taking in anything new,” p. 5). Although affect is a much milder experience compared to a full-blown emotion state, recent research has demonstrated that we tend to automatically classify stimuli around us as good or bad and that this tendency is linked to behavioral tendencies. Stimuli classified as good elicit a tendency to approach while those classified as bad elicit avoidance tendencies (Chen & Bargh, 1999). Incidental mood states also motivate behavior as people tend to act to maintain or attain positive mood states (Isen, 2000).

Affect appears to be linked not only to automatic tendencies to act but also with the extent of deliberative effort decision makers are willing to put forth. Participants in Peters et al.’s (2003) real-play Study 2 compared to their hypothetical-play Study 1 had stronger feelings about their lottery tickets and showed more evidence of having calculated an expected value (40% of Study 2 first-time buyers gave the expected value as their response compared to 10% in Study 1). In addition, half of Study 1 participants gave the same buying price as their earlier selling price compared to only 3% of participants in the real Study 2. Thus, real play seemed to motivate buyers and sellers to work harder, and the motivating effect of real play was mediated by affect.

4. *Affect As Common Currency*

Affect is simpler in some ways than thoughts (see Figure 24.2). Affect comes in two “flavors,” positive and negative; thoughts include more, and more complex, cost-benefit and other tradeoffs (Trafimow & Sheeran, in press). Several theorists have suggested that, as a result, affect plays a role as a common currency, allowing decision makers to compare apples to oranges (Cabanac, 1992). Montague and Berns (2002) link this notion to “neural responses in the orbitofrontal-striatal circuit which may support the conversion of disparate types of future rewards into a kind of internal currency, that is, a common scale used to compare the valuation of future behavioral acts or stimuli” (p. 265). By translating more complex thoughts into simpler affective evaluations, decision makers can compare and integrate good and bad feelings rather than attempting to make sense out of a multitude of conflicting logical reasons.

In the health-plan choice studies of Peters, Slovic, and Hibbard (2004), affective categories were hypothesized to act as overt markers of affective meaning in choices. If this is the case, then these overt markers should help participants to consider relevant information (that is not considered as much when affective categories are not present) such that they can apply that information to a complex judgment. Thus, affective categories should influence not just the choice of a health plan, as shown in previous studies, but it should help decision makers to take into account more information and be more sensitive to variation in information.

We conducted an initial test of this hypothesis. Participants were asked to judge a series of eight health plans one at a time on a 7-point attractiveness scale ranging from 1 = *extremely unattractive* to 7 = *extremely attractive*. For each health plan, they received information about cost and two quality attributes presented with numerical scores (e.g., plan A scored 72 out of 100 points when members of the health plan rated the “ease of getting referrals to see a specialist”). The eight health plans represented a 2 x 2 x 2 design of low and high scores on each of the three attributes; eight versions were constructed using a Latin square design. Participants who received the quality information with affective categories (poor, fair, good, excellent) took into account more information in their judgments and showed significantly greater sensitivity to differences in

quality among the plans. Thus, providing information in a more affective format appeared to help these judges better integrate important quality information into their judgments.

How Do You Know It's Affect?

The study of affect and emotion is relatively new to the science of judgment and decision making. Decision makers appear to consult the feelings they experience as they consider a target or option. The experienced feelings can be relevant or irrelevant to the judgment or decision at hand but influence the construction of preferences either way.

A question that frequently arises, however, is how do you know it's affective feeling as opposed to more cognitive thought? After all, a decision maker may have good and bad thoughts as well as good and bad feelings about an object. In the present section, I consider how a researcher might measure affect, examine affect in relation to its functions, and differentiate it from more cognitive thoughts. No one method can "prove" the affective basis of a judgment or decision. However, by using multiple methods to measure and manipulate affect, we can provide converging evidence that is more consistent with an affective as opposed to a cognitive story.

Self-Report Measures

Peters and Slovic (2004) examined various measures of affect based on different conceptualizations. Affect can be: 1) a holistic reaction to an object that is derived from spontaneous images of the objects, 2) bipolar or unipolar in structure, and finally, 3) based on discrete emotional evaluations (e.g., angry, happy) or more general valenced evaluations (e.g., good, bad). They recommended that further research with affective self-reports include the holistic, unipolar, discrete emotion (HUE) evaluative measures developed in their paper in combination with a holistic bipolar valenced evaluation measure. Bradley and Lang (1994) developed the Self Assessment Manikin (SAM) as a nonverbal pictorial technique to directly measure the pleasure, arousal, and dominance associated with a person's affective reactions to stimuli. They thought that the body-based characters would be less problematic than scales such as the HUE that require more verbalization and thus may draw more on cognitive thoughts. Each of these measures relies on self-reported feelings about an object or the decision maker's internal state; these feelings can then be examined in relation to a judgment or decision thought to be constructed at least in part through affect. For example, a modified version of the HUE scale was used successfully by Peters et al. (2003) to examine the relation between affect and prices. In that study, they asked how participants felt about having or not having a lottery ticket. Researchers who are interested in the experienced feelings evoked by a stimulus could ask instead "how does it make you feel?" Asking the question in this way focuses more directly on the experienced affect hypothesized to be important to the affect heuristic rather than on the affective component of attitude ("how do you feel about it?").

Individual Differences

Other research has focused on individual differences in affect (both self-reported and physiological) and posited that if an hypothesized relation exists between the individual-difference measure and choices, then affect is at least one of the mechanisms underlying that choice process. For example, greater self-reported reactivity to negative events predicted faster learning of the likelihood of losing in a task (Zinbarg & Mohlman, 1998). Peters and Slovic (2000) demonstrated that college students high in negative reactivity learned to choose fewer

high-loss options while those high in positive reactivity learned to choose more high-gain options. In an unpublished study, Peters and Mauro found that individual differences in physiological reactions (heart rate) in anticipation of a choice were associated with choices among decks of cards that differed in the amount of gains, losses, and expected values. Bechara, Damasio, Damasio, and Anderson (1994) had similar physiological findings with non-brain-damaged adults; in their study, the presence of anticipatory skin conductance responses was associated with good choices in their Iowa Gambling Task. Patients with bilateral damage to the ventromedial prefrontal cortex showed abnormal emotional reactions, did not develop these anticipatory responses, and made bad choices overall in this task and in life.

Accessibility

Kahneman (2003c) argued that the accessibility of information was a determinant of what information most influenced a judgment or choice. For example, if a stereotype was particularly accessible and salient (e.g., Linda the feminist bank teller), then the representativeness heuristic would be evoked and similarity with the stereotype would guide subsequent judgments. Affect may also guide judgments and choices more when it is more accessible. Verplanken, Hofstee, and Janssen (1998) found that participants could make affective evaluations of brand names and countries faster than cognitive evaluations, suggesting that the affect-based evaluations were more “accessible” and therefore were more likely to be the basis of those attitudes. Peters, Slovic, and Hibbard (2004) modified this technique to examine the possible affective basis of health plan choices made more evaluable through affective categories. We hypothesized that participants would respond faster with affective evaluations than cognitive evaluations of choice options in the presence versus the absence of evaluability. A finding that affective feelings are more quickly accessible than cognitive thoughts in the presence of affective categories would be consistent with affect underlying evaluability’s effect on choice.

Without affective categories, participants accessed feelings about the options more slowly than thoughts (mean RTs = 1545 and 1460 msec, respectively). However, as hypothesized, they accessed feelings about the options faster than thoughts when affective categories were present (mean RTs = 1266 and 1382 msec, respectively; $F(1,76) = 4.9, p < .05$, for the interaction of the categories manipulation with feelings versus thoughts). The interaction of thoughts versus feelings with the affective-categories manipulation remained significant ($F(1,70) = 4.2, p < .05$) after controlling for the valence of the response and the order (asking thoughts first or feelings first). These results provided the first direct test of the role of affect in evaluability. Not only were the affect items accessed more quickly but they predicted choices among the health plans significantly better than the thought items.

Experimental Manipulations

Each of the previous methods employed to examine the how-do-you-know-it’s-affect question has focused on measuring affect. Affect can also be experimentally manipulated. In one study, incidental affect (i.e., positive and negative moods) was induced and misattributed as integral affect towards a lottery ticket (Peters, Västfjäll, & Starmer, 2004). Compared to those in a negative mood, positive-mood buyers were willing to pay more for a ticket and positive-mood sellers required a greater minimum payment in exchange for their ticket; these findings were mediated by self-reported affect towards the ticket. Mood also influenced perceptions of the likelihood of winning the lottery such that positive-mood sellers perceived their chances of winning the lottery as higher than negative-mood sellers. Lerner and her colleagues have also

manipulated discrete-emotion states such as anger and fear and demonstrated important relations with judgments (e.g., Lerner, Gonzalez, Small, & Fischhoff, 2003).

Is Affect Rational?

Emotion's influence on decision making can be one of overwhelming power and control (he was overcome with fear; she was filled with grief; both are incapable as decision makers). Damasio, on the other hand, argues that affect increases the accuracy and efficiency of the decision process, and its absence (e.g., in the brain-damaged patients) degrades decision performance. Affect is rational in the sense that some level of affect is necessary for information to have meaning so that decisions can be made. However, affect's role is nuanced. It sometimes may help and other times hurt decision processes. Which occurs will depend on how affect influences the information processing that takes place in the construction of preferences and how that particular influence matches whatever processing will produce the best decision in that situation. In other words, the presence of affect does not guarantee good or bad decisions, only different information processing.

Acknowledgments

Many thanks to Daniel Västfjäll, Sarah Lichtenstein, Robin Gregory, Paul Slovic, and David Trafimow for comments on a previous draft of this chapter as well as many enjoyable discussions on the topic of affect and decision making. Preparation of this chapter was supported in part by the National Science Foundation under Grant Nos. SES-0111941, SES-0339204, and SES-0241313. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of the National Science Foundation.

References

- Alhakami, A. S., & Slovic, P. (1994). A psychological study of the inverse relationship between perceived risk and perceived benefit. *Risk Analysis, 14*(6), 1085-1096. [TCP33]
- Bechara, A., Damasio, A. R., Damasio, H., & Anderson, S. W. (1994). Insensitivity to future consequences following damage to human prefrontal cortex. *Cognition, 50*, 7-15. [TCP33]
- Bower, G. (1981). Mood and memory. *American Psychologist, 36*(2), 129-148. [TCP33]
- Bradley, M. M., & Lang, P. J. (1994). Measuring emotion: The Self-Assessment Manikin and the semantic differential. *Journal of Behavior Therapy & Experimental Psychiatry, 25*(1), p.49-59. [TCP33]
- Cabanac, M. (1992). Pleasure: The common currency. *Journal of Theoretical Biology, 155*, 173-200. [TCP33]
- Chen, M., & Bargh, J. A. (1999). Consequences of automatic evaluation: Immediate behavioral predispositions to approach or avoid the stimulus. *Personality & Social Psychology Bulletin, 25*(2), 215-224. [TCP33]
- Connolly, T., & Zeelenberg, M. (2002). Regret in decision making. *Current directions in Psychological Science, 11*(6), 212-215. [TCP33]
- Constans, J. I., & Mathews, A. M. (1993). Mood and the subjective risk of future events. *Cognition & Emotion, 7*(6), 545-560. [TCP33]
- Damasio, A. R. (1994). *Descartes' error: Emotion, reason, and the human brain*. New York: Avon. [TCP33]
- Frijda, N. H. (1986). *The emotions: Studies in emotion and social interaction*. New York: Cambridge University Press. [TCP33]
- Isen, A. M. (2000). Some perspectives on positive affect and self-regulation. *Psychological Inquiry, 11*(3), 184-187. [TCP33]
- Johnson, E. J., & Tversky, A. (1983). Affect, generalization, and the perception of risk. *Journal of Personality and Social Psychology, 45*, 20-31. [TCP33]
- Kahneman, D. (2003). A perspective on judgment and choice: Mapping bounded rationality. *American Psychologist, 58*(9), 697-720. [TCP33]
- Kahneman, D., Schkade, D., & Sunstein, C. R. (1998). Shared outrage and erratic awards: The psychology of punitive damages. *Journal of Risk and Uncertainty, 16*, 49-86. [TCP22, TCP33, TCP25]
- Lerner, J. S., Gonzalez, R. M., Small, D. A., & Fischhoff, B. (2003). Effects of fear and anger on perceived risks of terrorism: A national field experiment. *Psychological Science, 14*(2), 144-150. [TCP33]
- Lerner, J. S., & Keltner, D. (2000). Beyond valence: Toward a model of emotion-specific influences on judgment and choice. *Cognition & Emotion, 14*(4), 473-493. [TCP33]

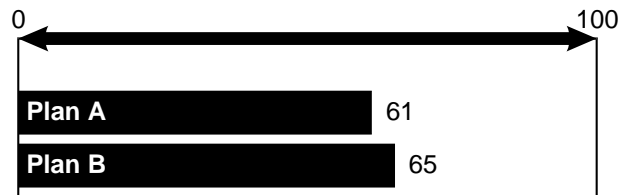
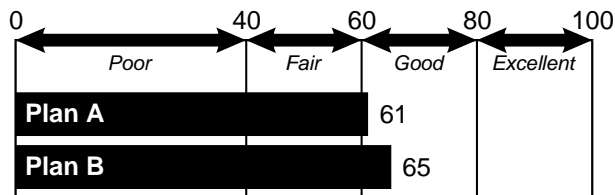
- Lerner, J. S., Small, D. A., & Loewenstein, G. (2004). Heart strings and purse strings: Carryover effects of emotions on economic decisions. *Psychological Science, 15*(5), 337-341. [TCP33]
- Loewenstein, G. F., Weber, E. U., Hsee, C. K., & Welch, E. S. (2001). Risk as feelings. *Psychological Bulletin, 127*(2), 267-286. [TCP22, TCP33]
- Mellers, B. A., Schwartz, A., Ho, K., & Ritov, I. (1996). *Elation and disappointment: Emotional responses to risky options*. Columbus, OH: Ohio State University Department of Psychology. [TCP33]
- Montague, R. P., & Berns, G. S. (2002). Neural economics and the biological substrates of valuation. *Neuron, 36*, 265-284. [TCP33]
- Payne, J. W., Bettman, J. R., & Schkade, D. A. (1999). Measuring constructed preferences: Towards a building code. *Journal of Risk and Uncertainty, 19*(1), 243-270. [TCP33, TCP25]
- Peters, E. & Slovic, P. (in review). *Affective asynchrony and development of the HUE affect scale*.
- Peters, E., & Slovic, P. (1996). The role of affect and worldviews as orienting dispositions in the perception and acceptance of nuclear power. *Journal of Applied Social Psychology, 26*, 1427-1453. [TCP33]
- Peters, E., & Slovic, P. (2000). The springs of action: Affective and analytical information processing in choice. *Personality and Social Psychology Bulletin, 26*, 1465-1475. [TCP33]
- Peters, E., Slovic, P., & Gregory, R. (2003). The role of affect in the WTA/WTP disparity. *Journal of Behavioral Decision Making, 16*, 309-330. [TCP33]
- Peters, E., Slovic, P., & Hibbard, J. (in review). *Evaluability manipulations influence the construction of choices among health plans*. [TCP33]
- Peters, E., Slovic, P., Hibbard, J., & Tusler, M. (in review). *Why worry?: Perceived risk of medical errors and willingness to act to reduce errors*.
- Peters, E., Västfjäll, D., & Starmer, C. (in review). *Feeling your way to the right price*. [TCP33]
- Rottenstreich, Y., & Hsee, C. K. (2001). Money, kisses, and electric shocks: On the affective psychology of risk. *Psychological Science, 12*(3), 185-190. [TCP22, TCP33]
- Salthouse, T. A. (1992). Why do adult age differences increase with task complexity? *Developmental Psychology, 28*, 905-918. [TCP33]
- Schwarz, N., & Clore, G. L. (2003). Mood as information: 20 years later. *Psychological Inquiry, 14*, 294-301. [TCP33]
- Slovic, P. (1995). The construction of preference. *American Psychologist, 50*, 364-371. [TCP15, TCP16, TCP17, TCP33, TCP25]
- Slovic, P., Finucane, M. L., Peters, E., & MacGregor, D. G. (2002). The affect heuristic. In T. Gilovich & D. Griffin & D. Kahneman (Eds.), *Heuristics and biases: The psychology of intuitive judgment* (pp. 397-420). New York: Cambridge University Press. [TCP22, TCP33]

- Trafimow, D., & Sheeran, P. (in press). A theory about the translation of cognition into affect and behavior. In G. R. Maio & G. Haddock (Eds.), *New directions in attitudes for the 21st century*. [TCP33]
- Verplanken, B., Hofstee, G., & Janssen, H. J. W. (1998). Accessibility of affective versus cognitive components of attitudes. *European Journal of Social Psychology*, 28(1), 23-36. [TCP33]
- Wright, W., & Bower, G. H. (1992). Mood effects on subjective probability assessment. *Organizational Behavior & Human Decision Processes*, 52(2), 276-291. [TCP33]
- Zinbarg, R. E., & Mohlman, J. (1998). Individual differences in the acquisition of affectively-valenced associations. *Journal of Personality and Social Psychology*, 74, 1024-1040. [TCP33]

Condition 1:
Affective categories

Condition 2:
No affective categories

Quality of
care received:



Member satisfaction
with HMO:

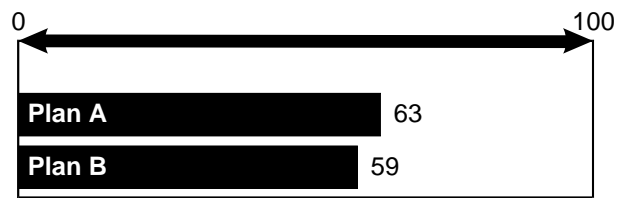
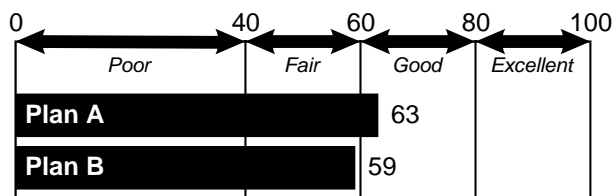
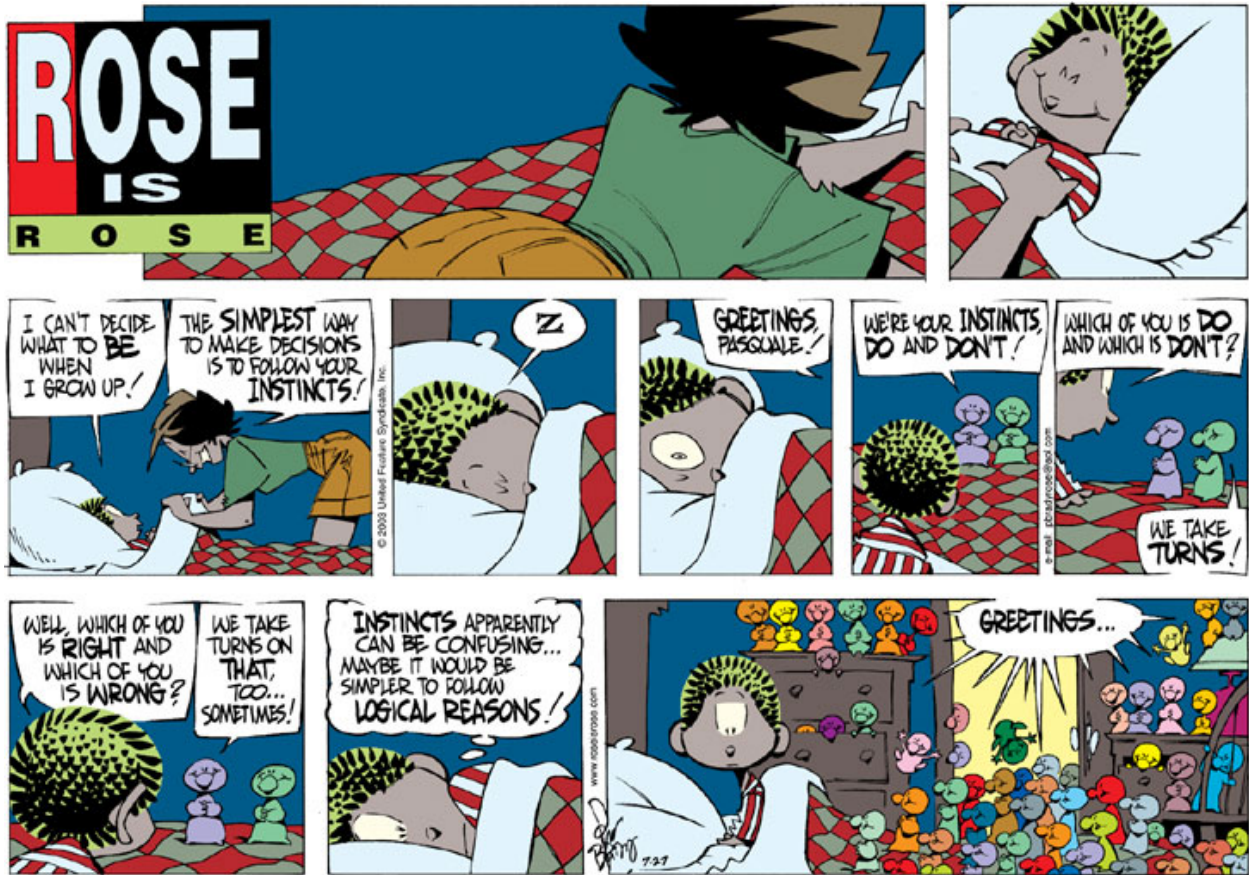


Figure 24.1. Example of affective categories in health-plan choice.



© 2003 by UFS, Inc.

Figure 24.2. Affect is simpler than thoughts.