An Integrated Model of Trade-Off Difficulty and Consumer Choice

In this chapter we develop a model of the antecedents and consequences of trade-off difficulty. This model integrates work on emotion, coping, and decision making to provide a new framework for understanding the impact of emotional trade-off difficulty on the decision maker. We begin by defining emotion, considering its relationship to decision making, describing Lazarus's (1991, 1999) model of stress and emotion, and then considering the implications of Lazarus's model of emotion and coping for decision making. Finally, we present our model of trade-off difficulty and its antecedents and consequences.[3]

EMOTION AND COPING

Definition of Emotion

There are many definitions of emotion, and there is much debate as to emotion's "true" nature (e.g., Lazarus 1984, 1991; Zajonc 1984; see Cacioppo and Gardner [1999] for a recent review). However, most psychologists agree with the general notion that emotions are communications to oneself and others that signal events relevant to one's important needs or goals (Frijda 1986, 1988; Hsee and Abelson 1991; Lazarus 1991; Oatley and Jenkins 1992; Ortony, Clore, and Collins 1988). There is also consensus that negative emotions are caused by outcomes or situations that

---

3. Lazarus (1999) has recently updated his approach, but the basic framework of appraisal and coping remains essentially the same. Lazarus (1999) argues for the use of the term "appraising" to describe the process and the use of the term "appraisal" to describe the outcome of the process of appraising; however, we continue to use the term "appraisal" to describe both the process and the outcome. We will generally cite Lazarus (1991) throughout the monograph because his earlier book provides more detail on the appraisal and coping processes.

either threaten or actually block the attainment of important goals, while positive emotions involve progress toward important goals or goal attainment. For instance, Lazarus (1991) argues that all affective states, including emotions and moods, are reactions to the status of goals in everyday adaptational encounters and that negative emotions result when goals have been, or are threatened to be, blocked. Likewise, Carver and Scheier (1990) assert that affective states are "readouts" relevant to the rate of goal attainment and that negative emotions are a result of slower than expected progress toward goals.

Many emotion researchers argue that, in addition to reflecting progress toward or away from goals, emotions can rearrange the priorities of currently activated goals in one's hierarchy (Mandler 1990; Simon 1967) or that they can lead to alterations in one's state of action readiness (Frijda 1986, 1988). For instance, Simon (1967) states that emotion interrupts the process of satisfying currently activated goals and substitutes new goals, a necessary adaptive mechanism in a complex environment in which, for instance, an oncoming truck may suddenly threaten one's survival goals. Similarly, researchers have proposed that the physiological changes associated with emotion can recruit adaptive behavior (Clark and Watson 1994; Levenson 1994). In addition to directly altering action tendencies, emotions may change our motivations to act (Clore 1994), either by directly short-circuiting ongoing cognitive processes (Clark and Watson 1994; Levenson 1994) or by providing information allowing for consideration of new actions (Clore 1994). In a broad sense, then, emotions function as interrupts, allowing for the appropriate adjustment of behavior (Bettman 1979; Mandler 1990; Simon 1967). One broad way to characterize these interrupts is to note that emotions reliably elicit coping behavior (e.g., Lazarus 1991).

Emotion and Decision Making

In this monograph, we focus on a subset of emotional experience particularly relevant for understanding decision making. First, we focus on negative, rather than positive, emotion. Although many decision situations (e.g., a major consumer purchase) are occasions for happiness, that happiness is likely to be a function of the overall situation (e.g., obtaining the funds or a spouse's approval for a purchase) rather than the decision per se. In contrast, it seems that a decision itself most often generates perceptions of threat. That is, by putting the decision maker into a situation of conflict (even conflict between solely desired alternatives), the decision task itself poses goal threats. These decision-task-related emotions can be distinguished from some other sources of emotion important to

consumer research. For instance, consumer researchers are often concerned with emotions generated by the consumption (rather than the decision-making) experience (e.g., Havlena and Holbrook 1986; Hirschman and Holbrook 1982; Holbrook and Hirschman 1982; Mano and Oliver 1993; Richins 1997; Westbrook and Oliver 1991). Other consumer researchers address emotion elicited in reaction to advertising (Aaker, Stayman, and Hagerty 1986; Burke and Edell 1989; Edell and Burke 1987; Goldberg and Gorn 1987; MacInnis and Park 1991; Murry, Lastovicka, and Singh 1992; Pavelchak, Antil, and Munch 1988). Certainly, decision-related emotion may be related to the consumption experience (e.g., when a decision is complicated by anticipation of consumption emotion) or by advertising (e.g., when an emotion-laden ad appeal "plants" a worry in a decision maker's mind). However, decision-task-related emotion is clearly separate from these other types of emotion, as it is centered on aspects of the decision itself, most notably the conflict inherent in having to give up the advantages of one alternative in order to gain the advantages of another.

Thus, the particular source of negative emotion of interest here is *task-related* emotion, distinct from consumption emotion and also distinct from ambient emotion (e.g., negative moods). The distinction between task-related and ambient emotion is often cited in work investigating the influence of stress on decision processing (Yates 1990). Task-related emotion directly arises from whatever is currently engaging one's attention; in the case of decision making, task-related emotion is essentially equivalent to emotional decision difficulty as discussed in chapter 1. Ambient emotion arises from background conditions that are independent of or irrelevant to the actual decision task. For example, sources of ambient emotion might include uncomfortable levels of heat or cold, loud background noise, fatigue, and negative mood. While the task versus ambient distinction is typically made with regard to stress, this distinction applies equally well to any sort of affect or emotion.

We expect task-related emotion to be generated during active decision processing. Thus, the task-related emotion we study is conceptually distinct from emotions such as regret or disappointment that are experienced after a decision is resolved. Of course, as we discuss below, we believe that postchoice emotional reactions may be anticipated by the decision maker and therefore may play a role in the emotion generated during the decision task. Our focus on emotions that are active during the decision process is consistent with Loewenstein et al.'s (2001) recent call for adding consideration of anticipatory emotions (which are active during choice) to the behavioral-decision-research focus on anticipated emotions (most notably postdecisional regret). We agree with Loewenstein et al. (2001) that these anticipatory emotional reactions may differ from cognitive as-

sessments made at the time of choice and may therefore have a unique effect on decision processing and outcomes (see also Ness and Klaas [1994] for distinctions between cognitive and emotional reactions to risk assessment).

The above distinction between task-related and ambient decision emotion is analogous to the distinction often made between emotion and mood. As compared to moods, emotions are typically thought to have a shorter duration, involve more cognitively accessible antecedents (Ekman 1994), result in more explicit goal direction (Frijda 1986, 1988; Lazarus 1991), and generate more impetus for action. Goal relevance is sometimes specified as the one factor that distinguishes emotions from more diffuse states such as moods (Oatley and Jenkins 1992), and even authors who link mood with goal relevance specify that the relevant goals are less salient in the case of moods than in the case of emotions (e.g., Carver and Scheier 1990; Lazarus 1991). Overall, therefore, their goal relevance and their specific, identifiable cause and focus typically distinguish emotions from other affective states such as moods or evaluations. Because we seek to study negative affect that is generated by a decision task during decision processing, we focus on negative emotion rather than negative mood.

Another relevant distinction made with respect to emotions is that between more controlled versus more automatic affective elicitation and response (Lazarus 1982; LeDoux 1994; Zajonc 1980). Automatic reactions are involuntary, inflexible, and can be aborted but not inhibited. Controlled responses are more flexible and voluntary and are expected to reflect cognitive events. Recent research indicates that there are multiple emotion-activating systems and that there is variance in the degree to which these systems appear to be under conscious control or subject to conscious introspection. There is evidence that affect involves both voluntary/controlled and involuntary/automatic processes and in fact that these processes may implicate separable neural systems (e.g., LeDoux 1995) in which conscious processes may interact with and sometimes exert control over automatically generated affect (e.g., Spielman, Pratto, and Bargh 1988). In fact, proposed emotion-activation systems include a system of cognitive appraisal and attribution, a motivational system, a sensorimotor system, and a neural system (Izard 1993). In summary, while Lazarus's theory and many other theories focus on cognitive processes of appraisal in emotion generation, there has been much recent progress documenting automatic effects of emotion. There is now substantial evidence that emotion can be generated with only the most superficial cognitive mediation (e.g., Damasio 1994; LeDoux 1995; see Lowenstein et al. [2000] for a discussion of the implications of this view for risk perception). We do not enter the debate regarding whether cognition or affect is pri-

mary, as there is ample evidence that affect can be generated under substantially varying levels of conscious mediation. Note, however, that our approach to affect focuses on more controlled affective processes, including conscious appraisal of one's current situation and coping prospects. We take this approach to emotional decision difficulty because we believe that decision behavior is largely a matter of cognitive appraisal. That is, while an individual is engaged in active decision making, she is typically not experiencing the relevant costs and rewards so much as she is anticipating or forecasting her experience of them. In short, we believe that controlled emotional responses are more relevant to conscious, learned tasks such as decision making in complicated, multiattribute environments (e.g., purchase decisions, as opposed to the spilt-second "decision" to blink when an object is flying toward one's face). Note that even though emotion researchers may argue about the minimal cognitive prerequisites for emotion, it is well accepted that emotion and cognition interact. It is this interaction that we address in this monograph.

Lazarus's Theory of Emotion

We have found Lazarus's (e.g., 1991) cognitive-motivational-relational theory useful in examining the emotional aspects of decision making; therefore, we provide a brief overview of this theory. Note, however, that Lazarus's model applies to emotion generally and is not specific to decision making. In addition, although we focus on Lazarus's model, many of the major points made below are consistent with several other theories of emotion.

Cognitive Appraisals and Emotion. Lazarus argues that emotion results from two sets of cognitive appraisals, termed primary and secondary appraisals. Primary appraisal addresses goal relevance, goal congruence/incongruence, and goal content (type of ego involvement). Goal relevance refers to what is at stake in or relevant to a particular person-environment situation or encounter. An appraisal of goal relevance means that a relevant goal is engaged in an encounter; the intensity of the resultant emotion is a function of the importance of that goal. Goal congruence distinguishes between encounters that are appraised as involving either harms or threats of future harms versus those that are appraised as involving benefits. This appraisal determines whether negative emotions (harms) or positive emotions (benefits) are generated by an encounter. Goal content is a classification of the type of ego involvement or, equivalently, is a classification of the specific goal that is at stake. This appraisal distinguishes among related emotions; for instance, Lazarus (1991) argues that guilt results from threats to the goal of attaining moral values, while

shame results from threats to the goal of living up to an ego ideal. In summary, primary appraisal addresses the stakes one has in the outcome of an encounter; it is termed "primary" because without a stake in an encounter there is no potential for emotion.

Secondary appraisal addresses one's options and prospects for coping and includes three related appraisals: blame or credit combined with self or other direction, coping potential, and future expectations. First, blame or credit assesses the presence or absence of responsibility for the relevant harm, threat, or benefit identified during primary appraisal, including assessment of the degree of control enjoyed by the responsible party. Thus, this appraisal combines accountability and control. Self or other direction simply involves the direction of the relevant blame or credit and therefore distinguishes between such emotions as anger and guilt. Second, coping potential involves whether and how an individual can influence the situation (i.e., the person-environment relationship) for the better. Third, future expectations involve the individual's assessment of the likelihood of change, for example, expected improvement or deterioration in the situation.

The cognitive appraisals specified in Lazarus's theory are similar to dimensions of appraisal proposed in other work, although Lazarus's theory appears to lay out considerations of goal relevance in more detail than many similar theories. For instance, Smith and Ellsworth (1985) examine patterns of subjects' reported cognitive appraisals of emotional experiences and find that these ratings involve six orthogonal dimensions: pleasantness, anticipated effort, certainty, attentional activity, and responsibility. The pleasantness dimension seems relevant to primary appraisal (appraisals of goal congruence, specifically), while the rest seem relevant to secondary appraisal.

Coping Behaviors. Lazarus's model of emotion focuses on the relationship between emotions and coping behaviors, particularly for negative emotions. He specifies that coping efforts both follow from emotion and shape subsequent emotion. Folkman and Lazarus (1988) classify coping behavior into two major forms, problem-focused and emotion-focused coping. Problem-focused coping involves actions designed to improve one's situation by planfully altering the environment and/or oneself. Emotion-focused coping, in contrast, alters only the contents of attention, either by attentional deployment such as through avoidance or by changing the meaning of the situation such as through denial or distancing. Survey research collecting both retrospective and diary accounts of coping behavior indicates that both problem- and emotion-focused coping are typically brought to bear on stressful situations or problems (Folkman and Lazarus 1988; Tennen et al. 2000; Terry 1994).

Both problem- and emotion-focused coping methods work via the pri-

mary and secondary appraisal processes outlined above. Changes in one's objective situation brought about by problem-focused coping are expected to change appraisal of that situation, while changes in one's appraisal of the (unchanged) objective situation are the direct result of emotion-focused coping. Further, Lazarus's argument that secondary appraisal is a fundamental part of emotion generation essentially assumes that individuals anticipate their likely coping strategies as they appraise situations for emotional content. Thus, Lazarus argues that appraisal-based emotion and coping enter into a dynamic relationship with bidirectional causality.

Applying Lazarus's Theory to Decision Making

In general, affect appears to be a central, necessary component of decision making. For instance, in his study of patients with hampered abilities to associate feelings with anticipated actions, Damasio (1994) concludes that deficits in emotional experience cause sociopathy that destroys rational decision-making abilities (see also Damasio [1998] for a more general discussion of emotion's function in the brain). Decision behavior essentially involves predicting future states of enjoyment such that actions can be taken to maximize potential utilities. Thus, the experience of affect may be necessary for effective decision making.

Conversely, decision situations are clearly capable of generating affect. In Lazarus's model of emotion, decisions that either threaten or actually involve the nonattainment of one's goals are expected to be inherently, negatively emotional. Relevant outcomes are generally received after a decision is made and are often uncertain, so decision-related emotions seem primarily anticipatory in nature. Thus, an emotionally difficult decision is simply one in which some potential decision consequences threaten a decision maker's goals. As threatened goals increase in number or importance (e.g., level in one's goal hierarchy), the decision should be more emotionally difficult. For example, a decision involving a life-threatening medical treatment seems inherently more emotionally difficult than is a decision involving what to order for lunch, because the goals that are relevant and salient should be much more significant in the former case (e.g., goals regarding survival vs. goals regarding enjoying a meal).

One source of negative emotion in decision making involves the potential material or social consequences of the chosen course of action. These consequences may be experienced relative to imagined (or known) consequences of forgone alternatives; this comparison of received to forgone options is a major focus of the literature on regret (Zeelenberg 1999). In addition to the direct consequences of a decision (e.g., I will drive the car I purchased), Janis and Mann (1977) note a second major source of

decision threat, namely, potential damage to one's self-esteem and reputation as a decision maker (e.g., I look foolish for buying a "lemon"). Thus, in addition to or even in the absence of significant material consequences, the fact that one's decision process could be unfavorably evaluated by oneself or by others may elicit negative emotion. The possibility that decisions may arouse negative emotion by threatening one's self-esteem or perceived reputation has been gaining increasing attention (e.g., Josephs et al. 1992; Larrick 1993; Lopes 1987; Schneider and Lopes 1986). Consideration of a decision maker's self-esteem and reputation also illustrates that the emotion associated with a given decision outcome (i.e., a given material or social consequence) can be increased as the decision maker anticipates responsibility or blame (from himself or others) for this outcome. Many authors have noted that negative outcomes caused by an individual's actions (e.g., by her decisions) are associated with more intense negative emotions than are identical outcomes that were not so clearly caused by the individual (Kahneman and Miller 1986; Ritov and Baron 1992). Weiner (1985) proposes that affective reactions to outcomes are generally enhanced when these outcomes are assessed as having internal rather than external causes. Decision threat related to responsibility or blame may be a particularly important aspect of the laboratory studies of emotion that comprise the bulk of the experimental work we report in this monograph. In particular, ethical and financial constraints limit the degree to which decision makers can be exposed to substantial material threats during laboratory experimentation; however, the laboratory context can certainly result in threats to the decision maker's reputation and/ or self-esteem.

One important aspect of Lazarus's model that we have not yet developed involves the specific affective components and motivational results of differing forms of negative emotion. Instead, we have focused on decision situations associated with more versus less task-related emotion. Lazarus explicitly rejects a dimensionalization of emotion (e.g., treating emotions as arrayed along orthogonal dimensions of arousal and pleasantness) and instead defines specific emotions with core relational themes (e.g., anger—being slighted or demeaned; anxiety—facing existential threats). Although he recognizes some utility in considering the degree of similarity across various emotions (e.g., distinguishing between emotions resulting from harms or threats and those resulting from benefits), Lazarus's theory explicitly incorporates the richness of the experience of distinct emotions. For instance, his theory recognizes that both subjective experience and motivational impulses are likely to have a different form for individuals feeling anger as opposed to fear.

We believe that the negative emotion associated with decision trade-

offs most often involves anxiety over foregone advantages of nonchosen alternatives and/or associated potential damage to one's self-esteem and reputation. Thus, we assume that anxiety is relevant when we discuss negative emotion in this monograph and refer to the decision conditions eliciting anxiety using the general term "threat." Lazarus (1991) explicitly defines anxiety as resulting from appraisals of threats (goal incongruence) to goals whose content is relevant to one's constructed sense of identity. These basic threats are thought to be relatively diffuse; that is, anxiety is often associated with threats whose exact nature and time frame are difficult to assess. Thus, the focal threat in anxiety is not so much a specific event (e.g., failing a test) but the uncertainty associated with a potential loss of meaning (e.g., damage to self-esteem based on one's assumed intelligence). Because the threats associated with anxiety are relatively diffuse, Lazarus assumes that anxiety is felt in the absence of appraisals of blame. Also, because of the diffuse nature of the relevant threats, there is no obvious source of action to alleviate them, although there is an urge to make the source of anxiety both more concrete and more external to the individual.

We argue that decision makers often deal with several diffuse threats during decision processing. For instance, when choosing a car, an individual may be threatened by the vague possibilities of feeling foolish some time in the future and even being harmed in an accident again at some, typically unspecified, future time. These threats seem unlikely to be extremely concrete, in contrast to the harm resulting from being publicly told that an automobile choice was foolish (potentially generating anger at the individual who makes this statement) or the direct concrete threat of an auto accident as it is unfolding (potentially generating fear). Thus, during many decision situations, there is likely no specific appraisal of blame (as negative outcomes have not yet been realized), and the decision maker is likely to try to both concretize various threats (e.g., gathering information about the possibility of an accident) and externalize them (e.g., constructing a justification for her choice).

Given the richness of decision behavior, there are of course opportunities for emotions other than anxiety to arise. Aspects of a decision may become concrete, leading to appraisals of blame that transform anxiety into anger, guilt, or shame. For instance, a specific restriction (e.g., a budget constraint) imposed by another party (a bank or one's spouse) may elicit other-directed blame for one's array of choices, eliciting anger. Realization that one's options have been unalterably narrowed (e.g., if decision delay makes valued alternatives unavailable) may elicit the appraisals of irrevocable loss that Lazarus associates with sadness. Envy or jealousy may result from comparing one's decision outcomes to those of others. On the positive side, happiness or pride might follow from positive expectations

or realizations associated with decision outcomes or one's self-esteem as a decision maker.

We believe that there is an opportunity to extend our research on trade-off difficulty by differentiating between specific types of negative emotions. Some recent research provides progress along these dimensions. Raghunathan and Pham (1999) demonstrate that sad subjects tend to prefer higher-risk options, while anxious subjects prefer lower risk options. In a different task domain, Lerner and Keltner (2000) show that specific emotions (e.g., anger vs. fear) influence perceptions of events in ways that are consistent with the underlying dimensions of cognitive appraisal distinguishing these emotions. For example, the specific emotion of fear is associated with both an appraisal of uncontrollability and a more pessimistic outlook concerning one's future. Similarly, DeSteno et al. (2000) find that sadness and anger increase the perceived likelihood of sad or angering events. Finally, Bodenhausen, Sheppard, and Kramer (1994) find that anger versus sadness have distinguishable effects on social information processing, with anger leading to relatively more heuristic processing. Thus, recent research develops predictions regarding effects of specific emotions both by considering the underlying content of these emotions (and the relation of that content to cognitive tasks) and by considering more general effects of specific emotion on information-processing style. While all of this research addresses ambient, rather than task-generated, sources of negative emotion, we believe it points toward promising areas for future work regarding the effects of specific decision-generated emotions.

We have now provided the major components needed to present our integrated model of the antecedents and consequences of trade-off difficulty. In the next section we consider an overview of the model, followed by a more detailed view.[4]

4. Although we use the emotion literature as our primary theoretical framework, note that some of the same insights were also generated in the early perceived risk literature in consumer behavior (e.g., Bauer 1960; Bettman 1973; Ross 1975). This research stream described anxiety-arousing decisions as high in "perceived risk." Several different models of perceived risk were developed, with consensus that perceived risk was a joint function of the decision maker's uncertainty regarding which alternative is best and the level of potential consequences associated with the decision. Given that the decision maker was uncertain regarding which alternative was best, more consequential decisions of course involved more numerous or important goals and thus should be associated with higher degrees of task-related emotion. Thus, the decision-consequences component of perceived risk maps into Lazarus's more general notion of primary appraisal. Further, uncertainty regarding which alternative is best seems similar to doubts about one's ability to cope with the relevant decision, and thus this second dimension of perceived risk maps onto Lazarus's secondary appraisal. As we discuss briefly in chapter 6, we believe our framework based on Lazarus's theory may provide a useful opportunity to revisit perceived risk research.

A MODEL OF TRADE-OFF DIFFICULTY

Overview Model: Figure 2.1

We present an overview of our model of trade-off difficulty in Figure 2.1; this overview defines the constructs and the major relationships we consider in this monograph. Considering the figure from left to right, the initial construct is the process of perceiving the choice situation, that is, the problem to be solved by the decision, the relevant attributes, and the available alternatives. As the characteristics of the choice situation are perceived, the situation is appraised for emotional content, just as any other person-environment relationship is appraised. These two (perception and appraisal) steps involving the antecedents of trade-off difficulty are shown in red in the figure.

We believe that a major output of the appraisal process in a choice situation is an assessment of trade-off difficulty, that is, an assessment of the degree to which the trade-offs required by a choice constitute a threat to the decision maker's important goals. An assessment of trade-off difficulty is equivalent to an assessment of the negative emotional potential or subjective threat associated with the trade-offs implied by a choice. This threat can lead to "in-process" emotion experienced during choice, and it can also lead to coping behavior. Note that we do not represent in-process negative emotion explicitly in our model of trade-off difficulty, as our theoretical focus is the influence of emotional trade-off difficulty on decision patterns and outcomes; however, as discussed in chapter 3, we have on occasion measured such emotion in order to verify the presence of emotional trade-off difficulty.

We expect that the decision maker will develop coping strategies in order to mitigate any assessed threats associated with trade-off difficulty. Thus, the primary consequence of trade-off difficulty is expected to be coping, which in turn will influence the decision. Consequences of trade-off difficulty are indicated in gray in the figure.

Coping strategies are expected to involve both problem-focused and emotion-focused coping, consistent with findings in the emotion literature that both forms of coping are typically brought to bear on stressful situations. Further, we expect the decision maker to be adaptive and to exploit aspects of her environment when constructing coping strategies. This is consistent with the more general notion that decision makers decide how to decide based in part on an assessment of the degree to which various decision strategies are warranted by or appropriate to a particular decision environment (e.g., Payne, Bettman, and Johnson 1993). As a simple example, a decision maker who has an expert readily
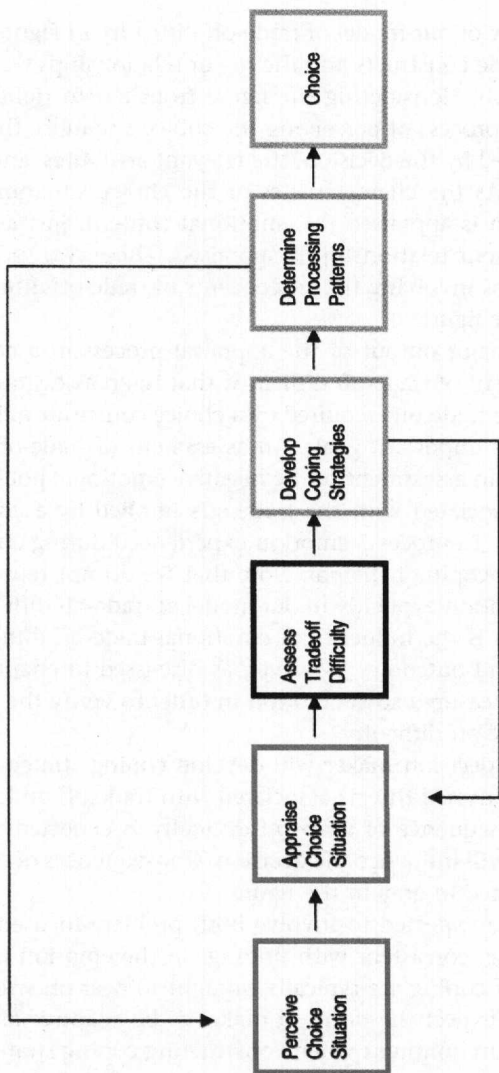
Figure 2.1. A model of trade-off difficulty: overview. Antecedents of trade-off difficulty (discussed in chap. 3) are shown in red, while consequences (discussed in chap. 4) are shown in gray.

Perceive Choice Situation → **Appraise Choice Situation** → **Assess Tradeoff Difficulty** → **Develop Coping Strategies** → **Determine Processing Patterns** → **Choice**

available to her is more likely to develop a coping strategy relying on expert advice.

The coping strategies that are identified or constructed based on an assessment of the threats and coping opportunities facing the decision maker will influence decision-processing patterns; we believe that a major challenge for a theory of decision making under negative emotion is reconciling the effects of problem-focused versus emotion-focused coping on such processing patterns. At a very general level, problem-focused coping motivations seem likely to encourage careful, analytical decision processing, while emotion-focused coping motivations seem likely to encourage simplified, heuristic decision processing. We will consider this issue at length in chapter 4. Finally, we expect a decision maker's processing pattern to influence his or her final choice, consistent with much research on decision making (Payne, Bettman, and Johnson 1993).

We propose several major relationships in the model, characterized by the arrows in Figure 2.1. Before we discuss these relationships, however, recall that we (and Lazarus) believe that the process of responding to and coping with stressful situations (i.e., choices that are high in trade-off difficulty) is dynamic, rather than linear. For example, Lazarus argues that individuals continually and automatically cycle between appraisal and development of coping strategies as they respond to a stressor. Thus, the model as we specify it is almost certainly incomplete, with many more uni- and bidirectional arrows possible. We have simplified the model to capture what we argue are the major aspects of coping with trade-off difficulty in decision making and the key relationships among these aspects.

Although the process of feeling emotion and coping during decision processing is not solely linear, we believe that the constructs in Figure 2.1 do follow a conceptually ordered relationship. That is, in general, a decision maker will progress from perception to appraisal to assessment of trade-off difficulty to coping to decision processing to choice. Of course, it would be difficult to separate each of these stages phenomenologically. For instance, perception and appraisal often seem subjectively simultaneous. However, these two phases are conceptually distinct in that (1) it is necessary to perceive and understand something (i.e., that a car is rated "unsafe") before one can appraise it and (2) all perception (i.e., noticing that a description of a decision problem is in black ink) does not necessarily have implications for emotional appraisal. Also, a decision maker may cycle among the components of decision behavior several times during a decision process. For instance, a decision maker may respond to a perceived threat by implementing a coping strategy of seeking expert advice, the expert may call attention to a previously unconsidered aspect of

the decision problem, and this new aspect may restart the appraisal (or reappraisal) process.

In addition to the major left-to-right flow of the model, we have two important feedback, or right-to-left, loops identified in the model. First, in order for trade-off difficulty to be recognized, the decision maker must appraise her choice situation. Such an appraisal is often not possible without some form of decision processing, even if only scanning the relevant choice information in a manner consistent with left-to-right reading order. Thus, continuous feedback from decision processing is fed into appraisal, and some decision processing must logically precede appraisals related to trade-off difficulty. We chose not to use decision processing as the starting point for our model; instead of focusing on decision processing in general, in our work on trade-off difficulty we have focused on how aspects of a decision specifically related to trade-off difficulty alter decision-processing strategies. Also, as noted above, the decision maker's understanding of her choice situation (i.e., what she perceives) is likely to be continually updated during decision processing. For instance, if the individual notices a dominating alternative in the process of making what could have been a potentially difficult decision, that decision is likely to be reappraised as lower in threat. Thus, one important feedback loop is from processing patterns to perception of the choice situation.

Second, note that appraisals of choice situations are influenced in part by anticipations of later coping strategies. That is, part of one's appraisal process involves a prediction regarding later coping strategies. As these coping strategies are developed and implemented, appraisals (and therefore assessments of trade-off difficulty) should be updated as well. This feedback loop is consistent with Lazarus's general argument that emotions and coping enter into a dynamic relationship and with his specification of secondary appraisal of coping options as a major component of emotion elicitation. Thus, a second feedback loop is from the development of coping strategies to the appraisal of the choice situation, consistent with Lazarus's notion that secondary appraisal of coping options is part of the generation of emotional experience.

The model in Figure 2.1 is highly simplified, with boxes summarizing multiple aspects of decision behavior. Note that the major antecedents of trade-off difficulty assessment are properties and appraisals of the choice situation; the major consequences are coping strategy selection, processing, and choice. A more detailed model is presented in Figure 2.2; note that Figure 2.2 is based on Figure 2.1 but with many components broken down into subcomponents.
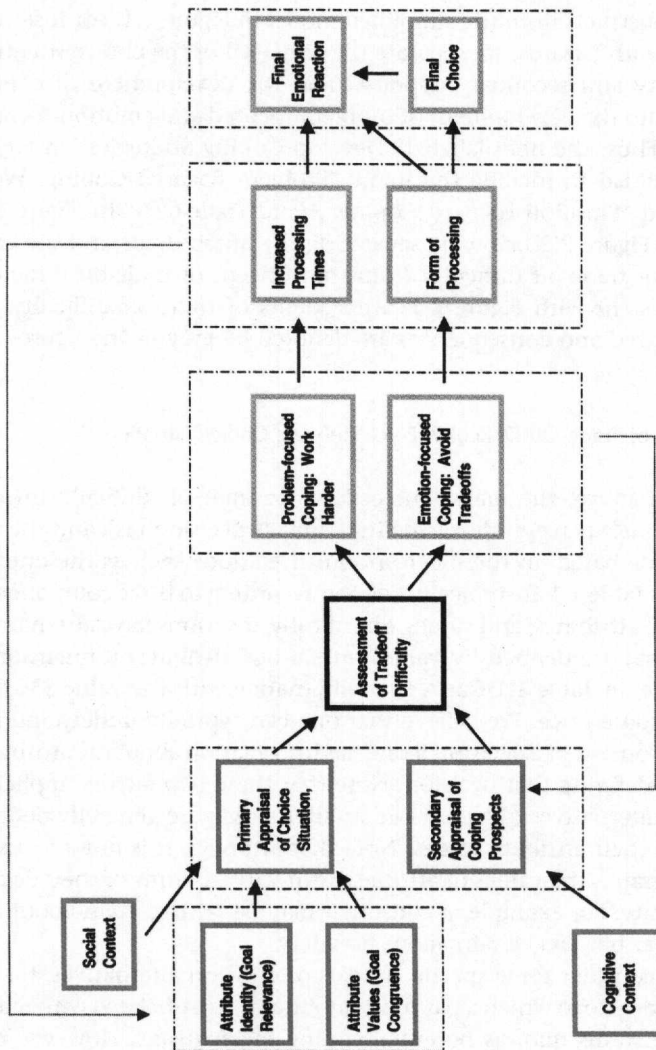
Figure 2.2. A model of trade-off difficulty: a more detailed view. Antecedents of trade-off difficulty (discussed in chap. 3) are shown in red, while consequences (discussed in chap. 4) are shown in gray.

A More Detailed Model: Overview of Figure 2.2

A more detailed model of trade-off difficulty is presented in Figure 2.2. This more detailed model will form the basis for the rest of the monograph. Note that the dashed-line boxes surround constructs that are expanded forms of constructs from the simplified model in Figure 2.1. For instance, consistent with Lazarus, we separate the appraisal of the choice situation into primary and secondary appraisal and the development of coping strategies into the development of problem-focused and emotion-focused strategies. Thus, the item labeled "Develop Coping Strategies" in Figure 2.1 is expanded to include the items "Problem Focused Coping: Work Harder" and "Emotion-Focused Coping: Avoid Trade-Offs" in Figure 2.2. We discuss Figure 2.2 below by separating the antecedents and the consequences of trade-off difficulty from the concept of trade-off difficulty itself; consistent with Figure 2.1, antecedents of trade-off difficulty are denoted by red and consequences are denoted by gray in the figure.

Antecedents of Trade-Off Difficulty: Perceiving the Choice Situation

As we note above, the major antecedents of trade-off difficulty in our model are one's perceptions of the individual's decision task and the appraisals made based on these perceptions. Decisions such as the one introduced in Table 1.1 are typically defined according to three components: alternatives, attributes, and values. Specifically, decisions have alternatives (options) that are defined by values on various attributes (dimensions). For example, in Table 1.1 Car A is an alternative with the value $30,000 on the attribute price. We believe that one can typically understand the emotional content of a decision if one has information about the attributes and values defining that decision. Note that these two factors implicitly define the alternatives of a decision, as alternatives are generally defined in terms of their attribute values. Note that although it is not a focus in this monograph, the values of attributes can vary in terms of their degree of uncertainty. For example, a consumer may be fairly certain about the price of a car but less certain about its safety.

We will consider some specific aspects of decision alternatives, for instance, the degree to which a particular alternative is associated with maintaining the status quo, as potential coping mechanisms. However, our model focuses on two major features of the choice situation that are relevant to appraisals of trade-off difficulty: attribute identities and attribute values. That is, we argue that attribute identities and values are the aspects of the perceived decision situation with the most major implications for appraisals related to emotional trade-off difficulty.

Attribute Identities. Decision attributes certainly differ from one another; for instance, deciding between two cars varying in terms of the attribute color is very different from deciding between two cars varying in terms of safety. The measures of attribute importance that are often used in marketing research are essentially intended to capture this aspect of a decision. However, we do not believe that importance is the only dimension along which individuals respond to decision attributes. We believe that emotionality or potential for threat is a second, separable dimension influencing response to attribute identities.

Attribute Values. The second major aspect of the choice situation that we will consider is attribute values. We will consider two major aspects of attribute values: the degree to which attribute values conflict with one another (i.e., the degree to which an alternative that has a favorable value on one attribute is perceived to have unfavorable values on other attributes) and the valence of attribute values (i.e., the degree to which alternatives are generally perceived as good vs. bad). Two factors complicate the definition and understanding of attribute value effects. First, attribute values may be considered in absolute ($30,000 for a car) or relative (expensive) terms. Second, the range of attribute values may influence perceptions or expressions of attribute importance. For instance, an individual choosing between two cars may perceive that price is a very important attribute in her decision if there is a wide range on price (e.g., $20,000 vs. $40,000) but not if there is a smaller range (e.g., $20,000 vs. $23,000); this sensitivity of importance to range has been associated with a "local" notion of importance weights (Goldstein 1990).

Antecedents of Trade-Off Difficulty: Appraising the Choice Situation

Following Lazarus, we classify cognitive appraisal into primary and secondary components. Figure 2.2 specifies that attribute identities and values determine the primary appraisal of the choice situation and that a secondary appraisal process is undertaken, consistent with Lazarus's model of emotion elicitation. Although we focus on attribute identities and values as determining one's perception, and therefore one's appraisal, of a decision situation, we also believe that the context within which a decision is perceived is important for appraisal. Thus, we also briefly discuss how the cognitive and social context of the decision affect appraisal.

Primary Appraisal of the Choice Situation. Because the specific decision attributes determine the goals that are implicated in a choice, we believe that attribute identities have a major impact on the goal-relevance dimension of primary appraisal. Further, we believe that primary appraisals involving attribute identities are responsive to more than simply attribute-

importance levels. Clearly, more important attributes are generally associated with more highly valued goals and therefore are potentially associated with increased threat. We will argue, however, that one must go beyond simple notions of attribute importance if one is to gain a full understanding of how attribute characteristics influence primary appraisals related to trade-off difficulty. In chapter 3, we discuss in more detail the properties of attributes such as whether an attribute is considered sacred (e.g., life or justice) or profane (e.g., money) and how those properties affect trade-off difficulty through primary appraisal processes.

The attribute values associated with an alternative determine the specific consequences of that alternative and therefore determine the degree to which the alternative satisfies (or does not satisfy) the relevant goals. Thus, attribute values should determine assessments of goal congruence, or assessments of the degree to which goals are likely to be blocked or furthered by a decision situation, and are therefore also (along with attribute identities) expected to be a major component of primary appraisal. Both conflict among attribute values (the degree one attribute has to be sacrificed for another to be maximized) and the valence of attribute values (whether alternatives are seen as generally "good" or "bad") seem relevant to the appraisal of goal congruence.

Although we separate out attribute identities and values in Figure 2.2, we believe that these decision aspects combine to determine primary appraisal. Above, we noted that there is an apparent effect of aspects of attribute value (specifically, attribute range) on aspects of attribute identity (specifically, the assessed importance of a given attribute). More generally, we will argue that appraisals related to trade-off difficulty are influenced by interactions of attribute identities and values. For example, primary appraisals should be sensitive to where (i.e., on what attributes) conflict is located for a particular decision. If the possibility of losses in safety is a particularly threatening aspect of a choice situation and price is relatively nonthreatening, then conflict between safety and other highly valued attributes should be more distressing than conflict between price and these other attributes. We discuss the effects of attribute identity, attribute value, and their interactions in more detail in chapter 3.

The Social Context of a Decision. Before moving on to our discussion of secondary appraisal, it is useful to discuss the larger context within which a decision is made. We have split the decision context into social and cognitive factors in Figure 2.2 (these factors were not considered in Fig. 2.1, for simplicity). We believe that these context factors may both have implications for primary and for secondary appraisal. However, and as is reflected in the model, we also believe that social context more often has an impact on primary appraisal, while cognitive context more often has an impact on secondary appraisal.

The social context of a choice (e.g., whether that choice is to be made public or whether the outcomes of the choice will influence family members) should influence the goals that are appraised as relevant to a decision situation. For instance, in addition to wanting to satisfy the goal of "protecting personal safety" by buying a car with airbags, an individual may also want to satisfy the goal of "appearing responsible and mature to others" by purchasing a car with such safety features. We will briefly discuss the cognitive context of a decision below, after we introduce the concept of secondary appraisal.

Secondary Appraisal of Coping Prospects. Secondary appraisal involves one's options and prospects for coping. Thus, secondary appraisal largely involves anticipation of later coping behavior, as mentioned in the context of Figure 2.1 and as illustrated in the feedback loop from coping strategies to secondary appraisal shown in both Figures 2.1 and 2.2. Our primary interest in emotional trade-off difficulty is the ultimate effect of trade-off difficulty on decision-processing patterns and choices, and we believe that these effects are mediated by coping motivations or strategies. Thus, we will focus on coping prospects and strategies when we discuss the consequences of trade-off difficulty below. Our hypotheses and findings regarding these coping consequences comprise the bulk of chapter 4. Our main goal in including the secondary appraisal component in this model is to point out that future coping behaviors are likely to be anticipated by the decision maker, and such anticipations may lead the decision maker to moderate his or her assessment of the overall level of trade-off difficulty. For instance, a decision maker provided with a coping strategy that she perceives is likely to be effective will probably assess a decision task as lower in emotional trade-off difficulty (and may generally experience less negative emotion during the decision process) than will a decision maker who is not provided with such a strategy. This is consistent with Lazarus's more general notion that the relationship between emotion and coping is a dynamic one. We also note that the decision maker's coping options are likely to be constrained by the cognitive context of a choice; we briefly discuss this possibility next.

The Cognitive Context of a Decision. We believe that the cognitive context of a choice has its major impact on secondary (vs. primary) appraisal. That is, cognitive demands and other aspects of a choice situation may either constrain the decision maker's options for coping or alter the likely prospects that her coping strategies are successful. For instance, if information format makes it difficult to understand a decision situation, the decision maker may feel less able to cope with that situation by implementing a normatively accurate problem-focused decision strategy. Similarly, if a response mode constrains subjects to specify an explicit trade-off between particular attributes, then that subject will be unable to use an emotion-

focused strategy to cope with her task by avoiding the relevant trade-off. Of course, the cognitive context of a decision may also influence primary appraisal by affecting what aspects of the decision environment are salient to the decision maker. Although we briefly discuss this possibility in chapter 3, it has not yet been a major focus of our work. More generally, it is likely that the cognitive context of a decision will have a direct impact on decision-processing patterns, consistent with research demonstrating that individuals adapt to their decision environments; we do not discuss this effect directly in our current work (see Payne, Bettman, and Johnson [1993] or Bettman, Luce, and Payne [1998] for extensive reviews of such research).

Assessment of Trade-Off Difficulty

The output of one's primary and secondary appraisal process is proposed to be a relatively general assessment of the level of threat posed by the relevant decision—that is, an assessment of emotional trade-off difficulty. This assessment of trade-off difficulty should have implications for decision behavior, just as other threats alter behavior by generating coping efforts. In general, when trade-off difficulty generates an appraisal of threat, decision makers are expected to engage in problem-focused and emotion-focused coping. Each form of coping may affect the form of decision processing and/or choice outcomes. Coping goals will also act through decision processing to influence final choice outcomes. We consider two outcomes of a decision: (1) the choice itself and (2) the decision maker's final or retrospective emotional reaction to her choice. Our major proposals regarding each coping form are reviewed below. Next we consider consequences of trade-off difficulty for coping strategies, processing patterns, and choice.

Consequences of Trade-Off Difficulty: Developing Coping Strategies

As mentioned earlier, Lazarus classifies coping strategies into problem-focused and emotion-focused forms. Recall that problem-focused coping seeks to address the underlying person-environment situation leading to emotion, while emotion-focused coping addresses only what is in the individual's mind (without altering objective circumstances). Emotion-focused coping is further broken down into avoidance and changing the meaning of a situation. In our work to date, we have focused on avoidance as the primary emotion-focused coping strategy used across decision en-

vironments. In addition, we have focused on the interaction of problem- and emotion-focused coping strategies; that is, we have focused on the manner in which decision makers reconcile the potentially conflicting implications of problem-focused versus emotion-focused coping motivations. We address these interactions in chapter 4; at this point we treat problem-focused and emotion-focused coping motivations separately in our model for clarity.

Problem-Focused Coping Strategies. We believe that the major form of problem-focused coping relevant to choice behavior is the motivation to work harder, in order to convince oneself and others that one is doing a "good job" of solving the choice problem with which one is confronted. Because effort feedback (rather than feedback regarding the normative accuracy of a particular choice) is both readily available to the decision maker and (often) directly observable by others, we expect that the major form of problem-focused coping elicited in response to emotional trade-off difficulty will be the motivation to engage in increased decision effort. Of course, situation-specific problem-focused coping, such as consulting an expert for advice, is also possible. We focus on the motivation to increase effort in part because we believe that this motivation is likely to be relatively pervasive across differing sorts of decision environments.

Emotion-Focused Coping Strategies. We assert that the major form of emotion-focused coping relevant to choice is a desire to avoid particularly distressing explicit trade-offs (Hogarth 1987). That is, if trade-off difficulty is a function of the degree to which the decision maker perceives that valued goals must be given up, then he or she should try to either avoid these sacrifices altogether or at least make them implicit (rather than explicit). This motivation to engage in emotion-focused coping should alter the form of decision processing; that is, it should alter which information is considered and in what order. For instance, a decision maker threatened by the possibility of giving up quality of medical care in choosing employee benefits may avoid this sacrifice by choosing a plan solely by maximizing perceived quality of care. Thus, only information relevant to quality of care might be considered. Alternatively, that decision maker may partially shield herself from the problematic trade-off between medical care and money by first considering only plans she can afford (screening on money) and then only considering quality of care for the "affordable" or "possible" plans. This latter strategy makes the trade-off between medical care and money implicit in that the decision maker never confronts the (perhaps higher) level of care she could have obtained by spending more money. Thus, we expect the motivation to avoid explicitly making emotion-laden trade-offs to be the major form of emotion-focused coping elicited in response to emotional trade-off difficulty. As discussed in the context of problem-focused coping above, we believe that more

situation-specific emotion-focused coping behaviors are also possible, but we will focus on this general emotion-focused coping motivation.

Consequences of Trade-Off Difficulty: Determinants of Processing Patterns

Increased Processing Times. We argue that the primary problem-focused coping motivation in a choice situation will be the desire to work harder; this motivation should primarily result in increased decision effort. The most likely outcome of this increased decision effort seems likely to be increased decision-processing times. Thus, we often measure decision-processing times in order to assess the impact of problem-focused coping on decision behavior.

Form of Processing. The expected impact of emotion-focused coping on choice is conceptually simple; specifically, we expect emotion-focused coping motivations to manifest themselves in a desire to avoid explicit decision trade-offs. However, measuring the presence or absence of explicit trade-offs is not nearly as straightforward as measuring decision-processing times. At this point, we simply note that the presence or absence of explicit decision trade-offs is likely to influence the order in which decision information is accessed and considered (i.e., the pattern of decision processing). Thus, we expect emotion-focused coping considerations to have a measurable impact on the form of decision processing, and we more explicitly consider this impact in chapter 4.

Consequences of Trade-Off Difficulty: Choice and Emotion

The focal outcome of a decision process is typically the decision itself. Thus, the most important implications of the processes of coping with emotional trade-off difficulty are implications for final choice outcomes. We believe that assessments of trade-off difficulty and the coping strategies generated as a result of such assessments are likely to influence final choices. These final choices are also likely to generate emotional reactions such as satisfaction, disappointment, or regret.

Final Choice. Increased processing time seems unlikely to have a large, direct impact on choice outcomes; instead, it often seems be undertaken to mitigate emotional reactions to choice. However, the form of decision processing is expected to have a major impact on both the final choice that is made and the final emotional reaction to that choice. We address two specific choice effects in our model and research: choice of avoidant options and particular directional choices. First, some options are inherently avoidant (e.g., do nothing and simply retain the status quo), and

decision makers may satisfy goals regarding avoidance of trade-offs by choosing these options. Second, in the absence of an acceptable avoidant option, trade-off avoidance goals may exert a particular directional influence on choice (e.g., a decision maker may choose the option that is best on the most emotion-laden attribute) in order to cope with her emotion.

Final Emotional Reactions. Finally, the choice itself should alter the decision maker's final emotional reaction in that a subjectively "better" choice (i.e., one that is more justifiable, one that maximizes crucial attributes) should generate a more positive overall emotional reaction. The final emotional reaction should be a function of the level of threat appraised as relevant to the decision situation, as mitigated by any successful coping behavior. Thus, note that the decision maker's final emotional reaction is proposed to be a function of both the choice (e.g., whether the decision maker thinks the choice situation has been satisfactorily resolved) and the decision-processing pattern by which she arrived at this choice. That is, aspects of decision processing (i.e., working hard, making or avoiding direct trade-offs) might have implications for emotional reactions that are separate from their influence on choice outcomes. For example, a decision maker who completes an explicit trade-off between safety and money may feel guilty about that trade-off, regardless of the final choice made and/or the consequences obtained as a result of that choice. Note that this final emotional reaction is likely anticipated during one's assessment of trade-off difficulty. This is consistent with the well-accepted notion in the regret literature that anticipated postdecisional regret influences decision outcomes (e.g., Bell 1982; Zeelenberg 1999). Thus, although we do not explicitly include a feedback loop from final emotional reactions to appraisal processes in our model, it is straightforward to expand notions of secondary appraisal to include anticipations of both coping strategies (as illustrated in the bottom feedback loop in the mode) and coping outcomes (e.g., the expected result of coping strategies).

SUMMARY

In this chapter we provide the basic components of our approach to integrating emotional considerations into the study of decision making. We briefly discuss the nature of emotion and make the important distinction between emotion generated by the decision task itself and ambient emotion (e.g., mood). Then we outline Lazarus's (1991) view of emotion and coping in more detail, arguing that the processes of appraisal and coping are particularly important in understanding how emotions arise and in-

fluence decision making. Trade-off difficulty, which we define as the negative emotional potential or subjective threat associated with the trade-offs implied by a choice, is the heart of our approach to integrating emotion and decision making. Therefore, we provide a framework for understanding the antecedents and consequences of trade-off difficulty. Major antecedents of trade-off difficulty include attribute identities and values, which are perceived within the larger social context of a choice and which are expected to influence primary appraisal processes. These primary appraisal processes are moderated by secondary appraisals involving anticipations of coping behavior that are likely to be constrained by the cognitive context of a choice. Major consequences of trade-off difficulty are motivations to engage in problem-focused and emotion-focused coping, which are expected to influence the amount and pattern of decision processing, the final choice made, and the final emotional reaction. Exhibit 2.1 summarizes the major points presented in this chapter.

The structure of the remainder of the monograph is as follows. First, chapters 3 and 4 explore the antecedents and consequences of trade-off difficulty, respectively. These chapters consider conceptual and empirical work on trade-off difficulty's determinants and effects, and this work will provide reviews of and suggest links to related literatures. In chapter 5, we discuss the implications of our model of emotional trade-off difficulty for theoretical accounts of decision behavior and for marketing and related research techniques. Finally, in chapter 6 we provide a brief summary of our view of emotional trade-off difficulty, consider limitations of the research done to date, and outline directions for future research. Thus, in the next chapter we begin a more detailed exploration of our framework by providing a conceptual analysis of the major antecedents of trade-off difficulty and reporting empirical work supporting these analyses. In chapter 4 we continue our examination of the framework by considering the major consequences of trade-off difficulty.

EXHIBIT 2.1 Summary of Major Points from Chapter 2

An emotionally difficult decision is one in which some potential decision consequences threaten a decision maker's important goals.

The distinction between emotion generated by the decision task itself and ambient emotion is important for understanding emotion's role in decision making.

Individuals perceive and appraise choice situations. Emotion results from a primary appraisal (what is at stake in a situation, whether the situation involves harms/threats vs. benefits, and the specific goal at stake) and a secondary appraisal (blame or credit and whether it is attributable to self or other, potential for coping, and future expectations).

Coping includes both problem-focused coping, which involves actions to improve one's situation by planfully altering the environment or oneself, and emotion-focused coping, which only alters what is in one's mind by changing attentional focus or the meaning of the situation.

Major determinants of primary appraisal in a decision situation are attribute identities, attribute values, and the social context of that decision. A major determinant of secondary appraisal in a decision situation is the cognitive context of that choice.

A major output of the appraisal process in a decision situation is an assessment of trade-off difficulty (the negative emotional potential or subjective threat associated with the trade-offs implied by a choice).

Trade-off difficulty leads to experiencing negative emotion during choice and to coping behavior.

Strategies utilized to cope with emotional trade-off difficulty will influence the amount (problem-focused coping) and pattern (emotion-focused coping) of decision processing.

A decision maker's coping and processing pattern will influence the final choice and the final emotional reaction.