

# The Psychology of Doing Nothing: Forms of Decision Avoidance Result From Reason and Emotion

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Several independent lines of research bear on the question of why individuals avoid decisions by postponing them, failing to act, or accepting the status quo. This review relates findings across several different disciplines and uncovers 4 decision avoidance effects that offer insight into this common but troubling behavior: choice deferral, status quo bias, omission bias, and inaction inertia. These findings are related by common antecedents and consequences in a rational–emotional model of the factors that predispose humans to do nothing. Prominent components of the model include cost–benefit calculations, anticipated regret, and selection difficulty. Other factors affecting decision avoidance through these key components, such as anticipatory negative emotions, decision strategies, counterfactual thinking, and preference uncertainty, are also discussed.

The experience of postponing and avoiding certain choices is universal, yet often appears to work against individuals' goals. Delays transform into lost opportunities, and adhering to the status quo is frequently unjustified given advantageous alternatives. Still, individuals persist in seeking default no-action, no-change options.

Decision avoidance deserves concentrated attention, yet it has not been studied in an integrated manner because it does not fit neatly into the current paradigms in clinical, cognitive, or social psychology. Yet, it is a common phenomenon with high personal and societal costs. Under conditions of high stress, this avoidance can become extreme. Take, for example, the "old sergeant syndrome" described by Janis and Mann (1977b). Infantry on the front lines of battle for long periods, witnessing the death of comrades and having no hope of transfer, have been known to ignore decisions required to protect themselves under fire or from routine safety hazards. For them, decision avoidance costs lives. In more common environments, the costs of decision avoidance are too widespread and often ineffable to attempt to calculate here. Almost everyone can cite examples of the high price of a failure to act, and there is evidence that humans are only becoming more indecisive, perhaps as a part of cultural evolution in the information age

(Dentsu Reports, 1999). Given the adverse outcomes they expose themselves to by delaying and failing to act, why do humans so frequently engage in decision avoidance?

Herein I consider a variety of choice behaviors as reflections of an individual's underlying decision avoidance, a pattern of behavior in which individuals seek to avoid the responsibility of making a decision by delaying or choosing options they perceive to be nondecisions. This review reveals that in all such cases there is a mixture of a few good, rational reasons for avoidance and a more complex and rationally questionable role played by emotions such as regret and fear. These issues form the basis of this article: (a) the delineation of boundary conditions under which persons hesitate, defer, or choose options that require no action on their part or no change to the status quo and (b) the explanation for that behavior.

I proceed first by defining more precisely what is meant by the concept of *decision avoidance* and how it relates to similar everyday and technical terms. I then describe some initial principles regarding this phenomenon and the methods used for arriving at the inferences put forth in this article. Decision avoidance is then explored through a model that postulates both rational and emotional sources of avoidance. I conclude with an agenda for future research, a recapitulation of the insights gleaned from this review, and implied recommendations for indecisive persons.

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## Conceptual Analysis: Forms of Decision Avoidance

It is important at the outset to explain just what is meant in this review by decision avoidance, as it includes several phenomena not explicitly related in the research literature, yet excludes several concepts that one might think of as synonymous with decision avoidance.

Decision avoidance manifests itself as a tendency to avoid making a choice by postponing it or by seeking an easy way out that involves no action or no change. This concept is derived from the earlier notion of a decision attitude: "the desire to make or avoid decisions, independent of any consequence that they achieve" (Beattie, Baron, Hershey, & Spranca, 1994, pp. 129–130). In this regard, decision makers could be either decision

seeking or decision averse, depending on the context (as conceived, it does not represent an individual difference).

Marked preferences for avoidant options have been discovered in diverse areas of the literature; humans generally prefer no change (status quo bias, Samuelson & Zeckhauser, 1988), no action (omission bias, Ritov & Baron, 1992; inaction inertia, Tykocinski, Pittman, & Tuttle, 1995), and delay (choice deferral, Dhar, 1996) more than an initial analysis would indicate these options warrant. It is with these four phenomena that I most closely identify decision avoidance.

Decision avoidance is not the same as procrastination, although there is relevant research on decisional procrastination, an individual difference in the tendency to defer decisions. For one, this article is primarily concerned not with individual differences but with general human tendencies and the conditions (environmental and cognitive) that bring them about. An analysis complementary to that presented here could focus on individual differences in decision avoidance and contributors to those differences (there is less research in this area, but it is a valuable line of inquiry). Secondly, procrastination involves having an intention at some level but then acting contrary to that intention by stalling (Sabini & Silver, 1982). Decision avoidance, on the other hand, could be consistent with a decision maker's intentions. The literature in the area known as decision avoidance does not strongly suggest otherwise at this juncture.

Patterns of responding to difficult situations that are similar in many respects to decision avoidance have been investigated within the conflict model of decision making under the terms *defensive avoidance* and *unconflicted adherence* (Janis & Mann, 1977a, 1977b). Unconflicted adherence occurs when there do not appear to be significant risks if one maintains his or her current course of action in a challenging situation. Instead of responding to a threat by considering their alternatives in a systematic manner and making a decision, individuals in this case tend to adhere to the status quo in an unreflective manner. Defensive avoidance occurs when there may be risks to maintaining the status quo but the prospects for discovering better alternatives appears grim. The defensive response takes several forms: evasive, in which reminders of the decision are ignored and distractions are sought; buck passing, in which responsibility for the decision is shifted to others; and bolstering, in which the decision maker seeks reasons, in a biased manner, to support an inferior course of action. Phenomena similar to these concepts are revealed in the discussion of modern research on decision avoidance (see *Decision Avoidance Phenomena* section). However, the concept of decision avoidance differs in that it applies beyond threatening conditions into more mundane decisions. It also occurs under conditions beyond those specified in the conflict model as the antecedents of defensive avoidance and unconflicted adherence.

The studies reviewed here focus on decision-averse behavior, and the understanding of them herein as expressions of a decision-avoidant attitude is consistent with Beattie et al.'s (1994) suggestion that omission bias may indicate a general decision aversion. I have included three additional phenomena and suggest that decision avoidance is the dominant attitude of human decision makers within certain boundary conditions, which I discuss in the context of the model.

The forms of decision avoidance currently lack definition and common explanation in the literature, and they are not part of an

integrated understanding of indecisive behavior. Unfortunately, decision avoidance is precisely the type of behavioral phenomenon of high social importance that is likely to be overlooked given the paradigms and division of labor among the subdisciplines of psychology. It is not attended to by clinical psychologists, for although it is pervasive, it infrequently rises to the level of a disorder, and if it does, it can be subsumed under some other diagnostic category, such as anxiety disorders. It also has escaped the attention of cognitive and social psychologists, as it is not the type of behavior that fits easily into their programs of research. Even the area of judgment and decision making had not addressed the issue until recently, as the theoretical underpinnings of that field tend to emphasize choice between several positive options and did not explicitly represent the additional option people often have—not to choose.

### *First Principles*

Two important principles need to be recognized in any investigation of decision avoidance. These are meant to be limiting and clarifying principles rather than assumptions that ground conclusions reached later.

The first important principle to recognize is *conservation of energy*. Psychologists and biologists generally have focused, not on the factors that keep an organism dormant, but rather on which factors motivate or energize organisms to move and expend energy. There is validity to this approach; generally when one observes an organism doing nothing, the explanation is simple and uninteresting: the organism is resting or conserving energy for action when an appropriate opportunity or need presents itself. Insofar as decision avoidance is concerned, it is thus important to recognize at the outset that apparently avoidant behavior involving inaction may occur simply because the decision maker does not recognize that an opportunity has presented itself or that there is a need to make a decision. One may simply be maintaining energy for a later time rather than deliberately avoiding a decision.

The second principle concerns the relevant antecedents of decision avoidance and is termed *multiple causation*. It is reasonable to consider that a complex and common behavior, such as decision avoidance, may have more than one cause. It also is likely that many observed antecedents of decision avoidance have their influence through mediating variables. Finally, I consider it likely that many of the antecedents of decision avoidance are sufficient, but not necessary, causes. Thus, I have sought to make the model of decision avoidance as simple as possible, but no simpler than that.

### *Method of Investigation*

The primary goal of this article is to establish the concept of decision avoidance as a class of behavior that is revealed in several literatures and to integrate what is known about the motivation for decision avoidance. Having clarified some conceptual foundations, I proceed by building a path model of decision avoidance. First, I identify existing and unintegrated potential decision-avoidance phenomena through literature review. Having identified the relevant phenomena discovered to date, I examine the literature for identification of the antecedents and consequences of these forms of decision avoidance. Special attention is paid to shared causes,

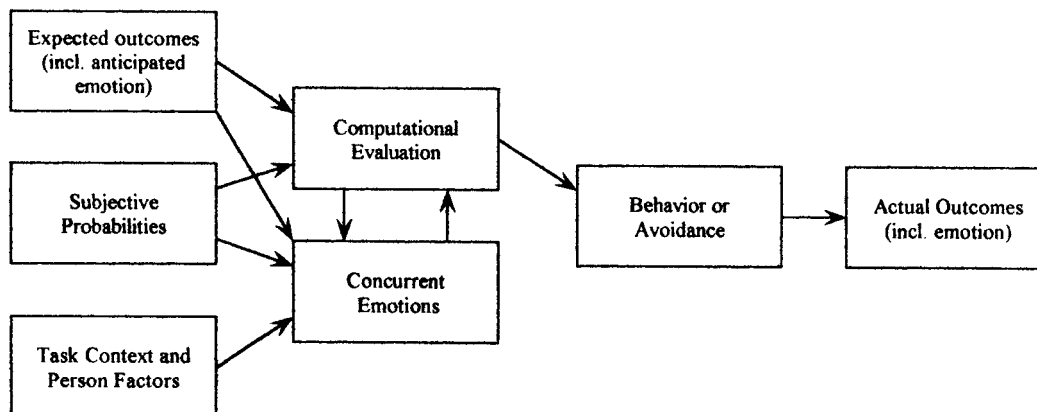


Figure 1. An alternative consequentialist model of emotional influence on decision making in which concurrently experienced emotion is not epiphenomenal (cf. Loewenstein et al., 2001). This constitutes a background assumption for the more detailed rational–emotional model of decision avoidance. Incl. = includes.

potential redundancy in terminology, potential influence of manipulated variables through other mediating factors, and the identification of potentially irrelevant antecedents considered in earlier literature. The last step covered in this article is the derivation of a path model of decision avoidance, its antecedents and consequences. Finally, an important step beyond the current purview is to conduct further research to test and/or correct this model and to identify any other potential forms of decision avoidance currently unknown to science. Some suggestions regarding directions for these investigations are made in the concluding remarks.

#### A Rational–Emotional Model of Decision Avoidance

For most of its history, judgment and decision-making theories in both psychology and economics have been characterized by the consequentialist mode of thought; expected utility theory is the prime example of a consequentialist theory. From this perspective, decision making is a computational process that operates solely on subjective probabilities and expected outcomes of different options. Feelings may be generated as by-products of this computational process but do not affect decisions in a substantial manner. Recently, theorists have begun to disavow the limitations of this model and propose nonconsequentialist theories in which emotions do influence choice (e.g., Loewenstein, Weber, Hsee, & Welch, 2001). In fact, some of the research embedded in this perspective is reviewed herein. It is worth noting, however, that the effects of anticipated emotions such as regret could be incorporated into a consequentialist model. It may be proposed that anticipated regret is just another attribute on which options vary and that this attribute is weighted and incorporated into evaluation just as any other attribute, without the need for postulating other processes.

There are several problems with this alternative. First, it requires the abandonment of basic axioms of most consequentialist models. The most prominent examples of this are the violations of transitivity that have been observed when anticipated regret is manipulated. Because regret is a highly context-sensitive attribute, it becomes difficult to order preferences reliably when it is taken into account; preferences depend highly on the options presented in a particular case (Loomes, Starmer, & Sugden, 1991, 1992; Redel-

meier & Shafir, 1995; see also Starmer & Sugden, 1996, 1998, for an alternative interpretation). Although a consequentialist model can incorporate emotion, it may not be able to do so and remain normative in the classical sense.<sup>1</sup>

Second, this alternative is insufficient to account for several findings in the area of decision avoidance. As Loewenstein et al. (2001) indicated, it is not just anticipated emotions but also anticipatory emotions that can have an effect on risky choice. Anticipatory emotions are experienced during the decision process and include states such as fear, anxiety, and dread. Phenomenologically, these mental states refer to potential future outcomes, as anticipated regret does, but the emotional experience itself occurs in the present rather than in a mentally simulated future. The nonconsequentialist model of emotions in decision making under risk postulates that emotions interact with computational processes and can also mediate choice directly. Although this model is reasonable, a slightly different framework is more suitable to the current understanding of decision avoidance, as per Figure 1. This consequentialist model is almost identical to the model advanced by nonconsequentialists, with two important differences. First, note that emotions have no direct effect on behavior. This is important because it identifies the model as consequentialist: Emotions have their role in choice either because one is attempting to reduce future negative emotion and is treating that goal as an attribute of the options or because one is experiencing unpleasant anticipatory emotions (e.g., fear, dread) and hopes to cope with those emotions by selecting a particular behavioral option. Both

<sup>1</sup> The other alternative for this sort of model is to recognize that alternatives are more than their labels. Emotions must be recognized as real properties of options as they are perceived by decision makers; the value of an option cannot be seen as fixed and context independent because context influences emotions, and fluctuating emotions must be allowed to be part of utility to retain transitivity (normative status) in a consequentialist model. Essentially, this view asserts that options with the same objective description are “different options” in different contexts because they strike the decision maker differently. In either case, something must be given up: context independent utility or transitivity.

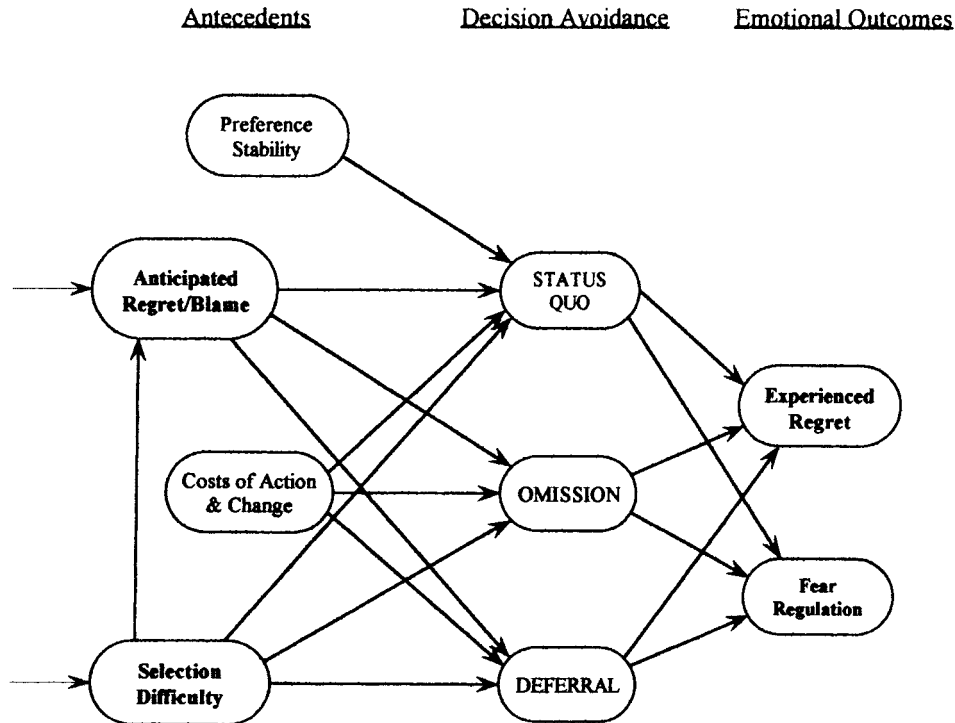


Figure 2. A rational–emotional model of decision avoidance, presented in the form of a path diagram. The primary subjects of the investigation, the forms of decision avoidance, are shown in capital letters. Bold text indicates emotional influences, which have thin arrows to indicate that other processes and situational factors in turn influence these emotions.

kinds of emotion, anticipated and anticipatory, could be factored into choice in a fully computational, goal-based manner. In this regard, another important difference between this model and more traditional models such as those underlying subjective expected utility (SEU) theory is that not acting or choosing is explicitly defined in the research as a behavioral option, often used by decision makers to reduce anticipatory emotion (e.g., Luce 1998; Luce, Bettman, & Payne, 1997).

A model of variables that influence decision avoidance is presented in Figure 2; this is the specific rational–emotional model of decision avoidance.<sup>2</sup> It is built on the consequentialist–emotion assumptions previously discussed: Rational inferences based on probability and outcome information are incorporated in a decision along with anticipated and anticipatory emotion. Those emotional influences have their impact because they bear on affective goals, which a decision maker has for managing present and future emotional states.

The rightmost column of Figure 2 represents specific emotional outcomes assumed in many theoretical analyses to result from decision avoidance, although these variables are rarely measured. The previous column represents the three forms of decision avoidance identified in this review (inaction inertia is not listed, as it overlaps with these forms). The column prior to that represents the variables postulated to have a direct impact on decision avoidance.

A proposed motivation for many acts of decision avoidance is to regulate one's emotional state. To this end, two emotional outcomes are identified in the model. Although it is true that for any

given decision any number of outcome dimensions may be affected by decision avoidance, these are the most general and relevant effects. It is interesting to note that the vast majority of studies support the conclusion that emotional goals influence decision avoidance but that postdecisional emotions are infrequently measured. This is probably due to the fact that most researchers study anticipated emotion (a cognitive evaluation manipulated by the researcher) or presently experienced anticipatory emotions and frequently conclude that, by manipulating those variables and altering patterns of decision avoidance, emotions can cause decision avoidance. It is reasonable to assume that people make choices that reduce negative emotions. Nonetheless, it is important for future research to explicitly measure the effect of decision avoidance on later emotional outcomes.

#### Decision Avoidance Phenomena

I begin my presentation of the rational–emotional model by discussing research on four decision avoidance phenomena identified in research literature. These phenomena, which have been independently discovered and discussed by researchers, are then revealed to be closely tied together by shared causes and effects.

<sup>2</sup> A distilled version of this path model is presented in the current article; a more detailed version reaching further back into earlier antecedents is available from Christopher J. Anderson.

*Status quo and omission biases.* Human decision makers have a tendency to prefer options that cause no change in the state of the world (the status quo) and/or require no action on their part (omissions; Ritov & Baron, 1990). The status quo bias is a decision maker's inflated preference for the current state of affairs. Two observations serve as criteria to establish the finding of a status quo bias: first, that a large majority of persons repeat initial choices in successive decision situations and, second, that this occurs in spite of changing preferences. Repeated choice of one option is unsurprising if that option continues to serve goals well.

Research provides abundant evidence for such a bias in both hypothetical decision tasks and everyday life. As an example of the former, a set of identical alternatives were distributed to college students, except that some students had an option (that could be any of the original options) labeled as the status quo (Samuelson & Zeckhauser, 1988). For the vast majority of questions and comparisons, the status quo option dominated both the control neutral options seen by a different group and the non-status quo options within their own group. Field studies provide evidence of this behavior in real-world decision making; for example, a greater than expected number of persons opt to keep the same allocation of retirement funds year after year even though they know there is no cost for changing, and persons just beginning a retirement fund invest in different ways that reflect the same preference changes, even within the same age group (Samuelson & Zeckhauser, 1988; see also Schweitzer, 1995). This research provides a challenge to SEU theory, although status quo choices can be quite "rational" when (a) preferences are unchanged, (b) there are costs for change, or (c) there is uncertainty regarding the consequences of non-status quo options. The aforementioned studies found evidence for a bias in the absence of such concerns.

Closely related to this is the omission bias, an inflated preference for options that do not require action (Spranca, Minsk, & Baron, 1991). Ritov and Baron (1992) argued that status quo bias is an extension of omission bias. In reviewing the literature, they found that in all cases, the status quo option had been confounded with the omission option. When questions were constructed so as to separate these two dimensions of the status quo (i.e., unchanging circumstances and inaction), individuals preferred the option that required no action, regardless of whether it represented the status quo or a change.

Some initial evidence (Ritov & Baron, 1992) favored the interpretation that these two biases are a unitary phenomenon and that observed status quo biases are dependent on one's partiality for choices that forgo action. However, Schweitzer (1994) produced evidence for independent status quo and omission biases, a position that Baron and Ritov (1994) supported. The biases were established as independent by responses to hypothetical questions that manipulated omission and status quo options independently. Instead of choosing an option, participants assigned preference ratings to all options. The degree of bias was established by comparing proportions of preference for a given option on whether it was labeled the *status quo*, *omission*, or *neutral* option (Schweitzer, 1994). When this procedure is followed, exaggerated preferences for options representing both status quo (without omission) and omission (without status quo) are observed. The biases are thus independent of each other, and they appear to be relatively equal in magnitude. Of course, in the majority of real-world cases, the two biases work in concert, and the fact that they occur

independently does not rule out the possibility that they share underlying causes. When preferences for omission and status quo are correlated within subjects, the correlation is positive and significant, indicating that the more one prefers the status quo, the greater the preference for omission, and vice versa. This suggests that the two independent effects may occur for the same reasons.

Why do individuals prefer inaction and the status quo when this may interfere with their goals? After all, if a non-status quo-omission option is preferable in a neutral context, the indication should be that one's goals would be better met by selecting that option, regardless of whether some nonpreferred option is the status quo or default position in another context.

First, I examine these situations from the vantage point of regret theory. Norm theory (Kahneman & Miller, 1986) can be considered an adjunct to regret theory for the current purposes. This theory states that emotional responses to the outcomes of decisions are amplified by "abnormal causes," and because actions are abnormal causes, it thus seems likely that deviations from the status quo are also, psychologically, abnormal causes. Emotional responses are amplified to omissions and deviations from the status quo because the alternatives to these options are easier to mentally simulate. Thus, norm theory is a regret theory: Counterfactual thinking about decisions is tied to an affective response presumed to influence choice. Norm theory predicts omission bias because individuals anticipate more potential regret as a result of commissions, and they incorporate regret avoidance into their valuation of the options.<sup>3</sup>

However, norm theory's explanation alone is inadequate. If potential affective responses are enhanced by actions, decision makers would also have to take into account the increased rejoicing they would experience from a good outcome to an action option. The enhanced rejoicing and regret should cancel out, leaving the omission and commission options equal in expected affective value. For this reason, it is necessary to supplement this regret theory of omission bias with the assumption of loss aversion described by prospect theory (Baron & Ritov, 1994). Loss aversion describes people's tendency to weight potential losses greater than potential gains of the same amount. If this assumption holds true, the utility of potential rejoicing experienced as a result of an action would be less than that for potential increased regret, leading to an increased preference for the omission option.

Riis and Schwarz (2000) advanced an alternative explanation for status quo selection similar to the trade-off avoidance hypothesis advanced for choice deferral below. As with deferral choices, status quo options may be seen as less threatening and could thus serve to reduce negative emotion that is experienced prior to making the choice (termed *anticipatory emotions*). They attempted to demonstrate the impact of this affective state on choice in a series of studies requiring participants to make consecutive deci-

<sup>3</sup> It might seem difficult to extend this explanation to omission bias in judgments of others' decisions. Two considerations come to mind: First, in the context of this article, I am concerned with people's decisions and what motivates them, not with their judgments of others, which could be based on different factors. Second, regret could be relevant to judgments of others' decisions if the person making the judgments assumes others are concerned with regret and feel regret in the same situations as he or she does and thus base judgments of some dimension partially on these assumptions.



sions. As predicted by the emotion hypothesis, individuals increased their selection of the status quo option when they had to make a second affective choice after making an initial difficult choice that produced negative emotion. On average, selection of the status quo option increased by 77% after an emotionally aversive initial decision. The direction of the effect was consistent, and it appears to be a robust finding.

Although these conflicting hypotheses might seem contradictory, they are congruent with the rational–emotional model. Selection difficulty, which is sometimes due to negative emotion, can cause selection of avoidant options, as can anticipated regret. Both are sufficient, but not necessary, causes of decision avoidance.

There is some evidence linking status quo choice to emotional outcomes. The clearest example comes from a study (Luce, 1998) that manipulated the difficulty of trade-offs to be made in a decision as well as whether an avoidant option (in some cases, the status quo) was available. Trade-offs on valued attributes increased negative emotion, whereas the presence of avoidant options tended to decrease overall negative emotion. The increased emotion provoked by value trade-offs was more pronounced if no avoidant options were present. When actually making a choice, an increased preference for the status quo and other avoidant options was present only if difficult trade-offs were also present. Participants who made those choices decreased their composite negative emotion.

A second source of evidence linking status quo choice to emotional outcomes comes from a study (Inman & Zeelenberg, 2002) that manipulated prior experience with choices with a repeat or switching of that choice by a hypothetical individual. When the individual chose to repeat the choice (i.e., selected the status quo), and when the prior outcome of that decision was positive or no information was available about its outcome, participants rated that person as feeling less regret about a bad outcome. This indicates that, by default, or when the status quo led to good outcomes, choosing the status quo was believed by these participants to lead to less regret. It is interesting, however, that status quo selection led to more regret when prior outcomes of the same status quo decision were undesirable. However, the general finding across Inman and Zeelenberg's (2002) studies demonstrates that, other things being equal, selecting the status quo can reduce postdecisional regret.

Omission, on the other hand, has been explicitly linked to differences in regret in a growing body of research (e.g., Kahneman & Miller, 1986; Zeelenberg, van den Bos, van Dijk, & Pieters, 2002). Decision makers tend to associate action with more regret than inaction; this has been referred to as the *action effect*, the *exaggeration effect*, and *emotional amplification* (e.g., Kahneman & Miller, 1986; Zeelenberg et al., 2002) in the research literature. There are some boundary conditions for this effect and it merits some review. However, individuals in these studies tend to make judgments about the regrets of hypothetical persons in a vignette; therefore, the results are most validly discussed under the heading of anticipated regret, and cautiously generalized to this component of the model.

*Choice deferral.* A situation in which an individual chooses not to choose for the time being is a choice deferral. This includes taking time to search for better alternatives, choosing not to purchase any of a variety of options, or avoiding responsibility for the decision altogether. The effects discussed in this category involve

decision avoidance characterized by postponing decision or refusing to select an option.

Degree of conflict plays a role in choice deferral; this is significant because conflict is a context-dependent variable that has no causal potency in SEU theory. One way researchers manipulate conflict is by varying the relative levels of attractiveness of two competing options. Higher degrees of conflict are associated with a greater willingness to prolong search and with a refusal of any option. This creates behavior that seems paradoxical from a simplistic interpretation of SEU theory. Consider the following result of Tversky and Shafir (1992): Decision makers did not prefer choice deferral when a single option was presented. However, when an additional option was made available, the share of the choice deferral increased markedly, although very few participants found the new option preferable to the original. This contradicts an important assumption of SEU theory: Each option has a value, and a decision maker chooses the option in a set with the highest value. This principle, termed *value maximization* by the authors, implies that what individuals choose in this situation should not be affected by adding an option that is considered inferior.

Likewise, Redelmeier and Shafir (1995) found that individuals often chose options they otherwise would have declined when additional options were made available. For example, participants who were doctors had to choose between treating two very different patients, A and B. In this situation, the patients' needs and the context were such that most doctors chose to treat Patient B. However, if Patient C, who was highly similar to B, was added to the list of options, but only one of the three can be treated, the doctors preferred to treat Patient A. In similar scenarios, individuals preferred a status quo, default, or distinctive option (as in the above example; Redelmeier & Shafir, 1995). The authors suggested that this pattern obtains because the additional options increase decisional conflict. Decision makers desire justifications for choices they make, and these become more scarce as the number of options increases. Conflict makes justification more difficult and, as a result, leads people to seek options that reduce their responsibility for the choice, such as deferral or the status quo.

Redelmeier and Shafir (1995) did not have a theoretical reason to predict deferral. Because the experience of conflict is excluded from explanation within SEU theory, the focus is on finding an effect incompatible with that theory to demonstrate that conflict does have an effect on actual human decision making. The hypothesis is that choice deferral occurs as a result of higher levels of conflict; it is unclear whether conflict operates on selection by making the justification of any particular option more difficult, thus making deferral options more attractive, or whether lack of justification increases choice conflict, which motivates escape or avoidance of responsibility provided by a deferral option.

An alternative theory has been advanced that focuses on the emotions experienced during the choice situation but shares with the conflict hypothesis and the preference uncertainty hypothesis (discussed next) a focus on broadening choice theories to include factors grounded in the psychological experience of decision making (Luce, Bettman, & Payne, 1997, 2001). This hypothesis is grounded in the finding that conflicts in a decision, such as those that put different values at odds, often lead to negative emotion (Luce, Bettman, & Payne, 1997, 2001). Luce (1998) claimed that the selection of avoidant options may serve to reduce decision-

related negative emotion in addition to serving efficiency and accuracy goals. This position is labeled a *trade-off avoidance hypothesis* because the primary source of the negative emotion to be reduced is the process of making compromises (trade-offs) between options on attributes that are highly valued (i.e., are weighted more heavily than others).

In work on trade-off avoidance, three types of decisions are considered avoidant: status quo choices, prolonging search for options, and choosing an alternative that dominates at least one other option in the choice set. Consistent with the theory, increases in trade-off difficulty led to increased negative emotion in Luce's (1998) Experiment 1. Furthermore, as trade-off difficulty increased, choice shares of the three avoidant options increased. In another study (Luce, 1998, Experiment 2), giving participants imagery instructions served to increase negative emotions experienced in a difficult choice situation and increased the percentage of participants choosing an avoidant option. Avoidant choices were generally preceded by more negative emotion and also were followed by less negative emotion than other choices. This demonstrates that emotion maintenance may be among the goals involved in choice and that the emotion being maintained may be task related. It is important to differentiate this influence from that of emotions anticipated as a result of choosing a given option (either in terms of its contribution to subjective utility or to anticipated regret and rejoicing) or that of ambient emotions, which precede the choice context and stem from outside of it (cf. Isen, 2001).

Dhar and colleagues (Dhar, 1996, 1997a, 1997b; Dhar & Nowlis, 1999; Dhar, Nowlis, & Sherman, 1999; Dhar & Simonson, 1999) have produced an abundance of research advocating a different position: that preference uncertainty produces the decisional conflict (selection difficulty) that precedes choice deferral. This hypothesis is based on the assumption that selection decisions have primacy over deferral decisions; before deciding whether to defer, an individual first attempts to find an acceptable or superior option to select that will finalize the decision. Their studies revealed that individuals given a choice between options with common good and unique bad features were more likely to defer choosing than those faced with a pair of options with common bad and unique good features (see, e.g., Dhar & Nowlis, 1999). Contrary to the conflict and trade-off avoidance hypotheses, this result is interpreted as being due to differences in the attractiveness of the options in the choice situation. Dhar and Nowlis (1999) claimed that the individuals process the choice in such a way that common features cancel out and that attention is focused on unique features. Thus, the valence of the unique features can drive the attractiveness of the set of options. When the choice set has low attractiveness, individuals are expected to defer choice because none of the options appears to satisfy their goals for the choice.

This interpretation led researchers to pursue a line of research based on the idea that choice deferral often occurs because of preference uncertainty, a state in which decision makers do not feel they can determine with accuracy which option best meets their goals. This also runs contrary to SEU theory because it focuses on the idea that values may not be stable or fully determined before entering the choice situation. The idea that elements of the choice situation itself can alter preferences violates the assumptions of SEU theory. Dhar (1997a) argued that preference uncertainty leads to more hesitation and that uncertainty can be increased by options with small differences in attractiveness. Supporting this notion,

Dhar (1997a, Experiments 1 and 2) found that individuals defer choice more often when there are small differences in attractiveness but that there were no effects of the number of trade-offs when attractiveness was held constant, contradicting conflict and trade-off difficulty explanations. In a study using verbal protocols, Dhar (1997a, Experiment 3) found that individuals produced a greater number of thoughts when there were small differences in attractiveness and that participants selecting deferral had more balanced evaluations of the options. This supports the idea that decision makers actively attempt to determine preferences in these situations and defer when their preferences are more uncertain. Further supporting this hypothesis are Dhar's (1997a) findings that asking participants to evaluate features of options led to more deferral (Experiment 4), participants allowed to choose multiple options from a set showed less choice deferral (Experiment 5), and allowing individuals to practice a compensatory decision strategy (learning how to manage trade-offs) decreased choice deferral (Experiment 6).

Dhar's (1997a) interpretation given to these findings is that evaluating features forces decision makers to consider their preferences more carefully and thus causes more uncertainty. Choosing multiple options allows participants to make a decision while maintaining preference uncertainty. Finally, using a compensatory decision strategy aids individuals in choosing by assigning a unidimensional value to the options, exposing their preferences. However, it is worth noting that many of Dhar's (1997a) findings are not necessarily incongruent with the trade-off avoidance hypothesis. Many of the manipulations could have their impact on choice through task-related emotion; it is impossible to rule out that possibility with the available data.

In a subsequent study, Dhar et al. (1999) found that the incidence of deferral depends on which features are emphasized in an initial comparison of the options. The comparison task is assumed to influence preference judgments, making a choice between options with unique bad (and common good) features seem worse after a dissimilarity judgment. Contrasting the alternatives in this case leads to increased focus on the negative features, decreasing the attractiveness of the choice set. Thus, deferral is increased by unique bad pairs compared with unique good pairs after individuals have made a dissimilarity judgment. A decision-tracking study in which Dhar et al. (1999, Experiment 2) were able to collect data on the features of options that participants viewed and on how long they viewed them supported this interpretation.

Dhar and Nowlis (1999) focused on the roles of decision processes and conflict in choice deferral rather than on their roles in preference uncertainty. Recall that earlier research (Redelmeier & Shafir, 1995; Tversky & Shafir, 1992) indicated that conflict might be important in producing deferral choices and that experiments (Dhar, 1997a) also had implied that the difference between compensatory and noncompensatory decision processes might be important. Dhar and Nowlis found that increased conflict is associated with increased incidence of choice deferral. They also discovered that choice deferral decreased under time pressure for pairs of options designated as high conflict. This is important because individuals tended to resort to noncompensatory decision strategies under time pressure, effectively making the selection decision easier. These researchers assumed that participants first made the selection decision and then chose whether to defer choice. Thus, they hypothesized that the difficulty of the selection

decision could affect the deferral decision; if selection was easy, they predicted, an individual would not defer. The effect of time pressure seems to have occurred through the route of decision strategies; individuals tended to pay more attention to unique features, use noncompensatory strategies, and experience decisions as easier and less conflicted in time-limited conditions.

Dhar and Nowlis (1999) also found that deferral is less likely in approach–approach conflicts (decisions between two attractive choices) than in avoidance–avoidance conflicts (choices between two unattractive options). This supports their earlier notion that the overall attractiveness of a choice set is important and implies that conflict is important because of its influence on preferences.

Three different explanations have been proposed for various findings involving choice deferral, each detailing processes and situational variables considered unimportant from the vantage point of SEU theory. Conflict theory states that individuals have more difficulty justifying decisions under conflict and thus choose deferral and status quo choices. Trade-off avoidance hypothesis claims that difficult choices stimulate negative emotions, which individuals seek to reduce by choosing avoidant options, including the status quo and deferral of decision. Finally, preference uncertainty hypothesis states that individuals do not always have clearly defined preferences and that small differences in attractiveness can increase this uncertainty. Preference uncertainty means that selection is difficult, and individuals tend to defer more often when selection is problematic. This difficulty may be compounded by the use of compensatory decision strategies. This theory has also been extended to incorporate an understanding of how conflict affects deferral; conflict seems to operate on deferral by increasing selection difficulty. However, it is not the conflict per se that produces deferral, as its effect disappears under time pressure.

These explanations are not mutually exclusive, and there is no particular advantage to be gained by treating them as if they were. In fact, there is considerable overlap between the positions. The conflict, trade-off avoidance, and preference uncertainty effects can be consolidated by incorporating a common mediating variable, selection difficulty, into the analysis, which I discuss in the *Antecedents of Decision Avoidance* section.

*Inaction inertia.* Although these phenomena have not been considered related in previous research, the last finding I look at also concerns a reluctance to take action. Inaction inertia refers specifically to the tendency of a person to omit action when he or she already has passed up a similar, more attractive opportunity to act (Butler & Highhouse, 2000; Tykocinski & Pittman, 1998, 2001; Tykocinski et al., 1995). This occurs especially when the subsequent opportunity is somehow less attractive, even if it still represents a gain from one reference point. In one demonstration (Tykocinski et al., 1995, Experiment 1), some participants missed a hypothetical opportunity to buy a ski pass for \$40, another group missed an \$80 price, and a third group had no initial opportunity. All participants then had the opportunity to buy a pass for \$90, which still represents a 10% savings compared with the usual price of \$100. Participants in the large difference condition rated themselves as least likely to purchase the ticket. This effect has also been demonstrated with nonfiscal costs and in an experimental rather than a hypothetical setting (Tykocinski et al., 1995).

Tykocinski et al. (1995) have interpreted this finding as due to a form of counterfactual thinking. Counterfactual thoughts are alternative representations of events (i.e., outcomes that could have

occurred but did not; Roese, 1997, 1999), such as “If I had chosen to quit smoking 5 years ago as I planned, perhaps I would not be diagnosed with lung cancer today.” This particular example is one of upward counterfactual thinking (imagining a better outcome), whereas downward counterfactuals concern worse outcomes than those experienced by the thinker. Upward counterfactuals are associated with regret, which figures prominently in the standard explanation of inaction inertia.

The anticipated regret explanation of inaction inertia assumes that, in general, persons do not consider the merits of current opportunities independently of past choices. Individuals in the high discrepancy condition recalled the prior, much better opportunity they had missed (Tykocinski et al., 1995). These people knew that if they took the current offer, it would be easy to construct an upward counterfactual for the situation and experience concomitant regret. Anticipating this, they bypassed the subsequent opportunity—regardless of its merits—to avoid regret. Alternatively, participants may experience regret over the initial decision and seek to decrease or avoid amplifying that level of regret (M. Zeelenberg, personal communication, September 21, 2001).

Although anticipated regret is a reasonable explanation, it is valuable to examine how it was established. Tykocinski and colleagues (1995) used a disconfirmation strategy, investigating four alternative hypotheses: perceptual–price contrast, cognitive dissonance, self-perception, and commitment.

The perceptual–price contrast explanation claims that inaction is due simply to the knowledge of a lower cost, which correspondingly devalues the current opportunity. Inconsistent with this hypothesis, Tykocinski et al. (1995, Experiment 3) demonstrated that inaction inertia is not evident when there is no initial action opportunity but a cost contrast is otherwise achieved. Several further studies also disconfirmed a price contrast explanation (see Tykocinski & Pittman, 2001).

Cognitive dissonance and self-perception theories offer explanations of inaction inertia that are similar. According to these theories, decision makers desire to maintain a certain image of themselves, and to do so, they must explain certain events and occasionally revise evaluations of aspects of the world. In the case of inaction inertia, it may be the case that people feel the need to explain to themselves why they failed to act on that initial opportunity. To do so, individuals might devalue the goal or offer in question and decide they must not like it, which leads them to likewise devalue the similar present opportunity to obtain the same goal or object. If this explanation is correct, one would expect that inaction inertia would be mitigated if the individual was not to blame for missing the initial opportunity. In that case, the inaction can be quite readily attributed to external sources, and there is no need to revise one’s assessment of the goal or object. However, manipulations of initial responsibility did not reduce or eliminate inaction inertia in Tykocinski et al.’s (1995) Experiment 4. This generalizes to a nonhypothetical context; participants who were forced to miss an early, winning bet were equally unresponsive to a later opportunity to bet on the same horse, compared with participants who also missed the bet, but because of their own choice (Tykocinski et al., 1995, Experiment 5). These results are also considered to be troublesome for an account based on behavioral commitment because personal responsibility is typically a prerequisite for obtaining commitment-based effects.



The positive case for an explanation of inaction inertia was established in a subsequent article by Tykocinski and Pittman (1998) that focused on avoidance of anticipated counterfactual regret. The researchers demonstrated that the future avoidability of the object or some aspect of the opportunity plays a role in inaction inertia (Experiments 1 and 2). For example, imagine that a consumer had an opportunity to buy a used car at a very low price and then postponed the purchase. Later, the buyer wants the car and returns to the seller, but the seller wants a somewhat higher amount this time (even though the price is still advantageous to the buyer). According to the anticipated regret explanation, inaction inertia would set in because the buyer knows that if the car is purchased, regret would be experienced, even though the current price is still a good deal. But suppose that if the consumer does not buy the car, it will be displayed prominently in a lot that the consumer drives by on the way to work. This person is going to have to see the car tomorrow and every day after regardless, so that by avoiding purchasing the car, the individual is not effectively avoiding reminders of it. According to the regret interpretation, inaction inertia would now be eliminated, because the regret cannot be avoided no matter what the individual does. Therefore, the buyer ought to examine the offer on the basis of its merits, independently of the earlier opportunity missed. Likewise, Tykocinski and Pittman (1998) found that unavoidability does significantly reduce the inaction inertia effect.

More convincing is the result of another study (Tykocinski & Pittman, 1998, Experiment 4), which showed that if the initial missed opportunity is somehow made to look less attractive than it previously did, regret over taking a related offer dissipates and inaction inertia is diminished. To support their interpretation, the authors provided a postexperimental survey of participants' reasons for their choices. Reports making mention of regret were most prevalent in the group that did not receive information degrading the initial opportunity (i.e., the group displaying the most inaction inertia).

Is there any information that further compels the anticipated regret hypothesis? Further studies by Tykocinski and Pittman (2001) pitted the contrast hypothesis against regret. Costs were held equivalent across conditions, and availability of a bonus and the timing of missing the bonus were varied. Regret should have been more likely when participants missed an opportunity more recently, because it is then easier to construct counterfactuals (while the price contrast is held constant). Inaction inertia was reduced when the opportunity was missed longer ago, consistent with the regret interpretation. Their Experiment 2 contrasts a situation in which an individual postpones acting on an opportunity and is faced with a less attractive offer because the original offer was sold out with a situation in which the original offer was a typographical error. Indeed, inaction inertia was reduced by this manipulation; the magnitude of the effect was much larger in the sold out group. Another investigation (Arkes, Kung, & Hutzler, 2002) found that when the earlier offer was in another country, participants did not show the inaction inertia effect in their decisions about whether to make a current purchase. Analyses of regret with a separate group of participants demonstrated that no regret was associated with the distant earlier offer, but regret was associated with offers that were made nearby.

There are potentially contradictory results pertaining to the regret hypothesis. Tykocinski and colleagues (1995, Experi-

ments 4 and 5; Tykocinski & Pittman, 2001, Experiment 1) also produced evidence discrepant with the anticipated regret explanation. In both of these studies, inaction inertia was obtained even when the individual was not responsible for missing the opportunity. Further research has found mixed results in the relationship among responsibility, regret, and inaction inertia (Anderson, 2002a; Zeelenberg, 2002).

There is some disagreement among theorists as to whether responsibility is a necessary component for regret; many argue that it is essential (e.g., Bell, 1985; Gilovich & Medvec, 1995a; Sugden, 1985). Others argue that responsibility is not an essential component of regret (Connolly, Ordonez, & Coughlan, 1997), although even among this group it is noted that the degree of regret often correlates closely with the degree of perceived responsibility (Simonson, 1992; this issue is more thoroughly discussed in the *Anticipated regret* section below). Thus, the regret hypothesis as applied to inaction inertia needs to explain why someone would still fail to act in a situation in which he or she is not responsible for missing the initial opportunity. In addition, some preliminary studies indicate that although regret is correlated with inaction, differences in ability to think counterfactually (and thus in ability to anticipate regret) do not appear to be related to inaction inertia (Anderson, 2001a, 2001b; current research is concerned with establishing validity of the measurements of individual differences and with clinical populations in which individual differences in counterfactual thinking are known to occur). Thus, some of the results appear to be somewhat inconsistent with the regret hypothesis's predictions. Regret may be a sufficient but not necessary cause of inaction inertia, as postulated by the rational-emotional model. These potentially anomalous findings pose less of a problem when inaction inertia is viewed in light of other forms of decision avoidance.

There are also alternative and complementary views emerging with regard to inaction inertia. One possibility is that lower priced items lead people to devalue those items so that later opportunities with higher prices do not seem as valuable, even though those higher prices may be objectively lower than normal (Arkes et al., 2002). Another possibility is that individuals are exercising self-control because the earlier price leads them to believe that they can obtain a better price if they can exert enough temperance to wait. Although both of these possibilities may seem similar to the contrast hypothesis disconfirmed above, neither of them should be affected by the manipulations that ruled out a contrast explanation. For example, making the earlier opportunity a typo leaves contrast intact but might also lead participants to revise valuations and relax the exertion of self-control, because there is no potential better opportunity to wait for. These possibilities could be viewed as independent explanations, or self-control motivation and diminished valuations might both be reinforced by regret. It would seem that the concepts are more complementary than contradictory; taken together, this explanation also suggests a possible functional role for regret in reinforcing (reasonable) diminished valuations and facilitating the exercise of self-control. Some preliminary research (Anderson, 2002a; Zeelenberg, 2002) is supportive of the notion that inaction inertia can occur in the absence of regret, as predicted by the rational-emotional model or complementary self-control explanation of inaction inertia but not by the pure anticipated regret explanation. Future research has many possibilities to explore.

### *Antecedents of Decision Avoidance*

*Preference stability.* Among the clear and rational influences on decision avoidance is preference stability, the degree to which people's values remain the same over time and thus their consecutive decisions. When preferences (measured independent of choice) change less, one expects an individual to select the status quo option more often. Choice-independent measures of preference can be made through multiattribute utility analyses or through a simpler method with the same goal, such as ranking options, providing a scale rating of each option, or assigning dollar values to options (a special case of scale rating).

*Costs.* Many instances of status quo selection may also be attributable to a different rational reason. Changing the status quo, in the real world, often entails transaction costs that can be avoided by maintaining the status quo. For example, to alter one's holdings in the stock market, one must usually pay an agent to first sell the stock currently owned and then pay another commission to buy an alternative stock. Individuals presumably trade off the potential gains to be made by diverging from the status quo with the costs of changing; when those costs are higher, status quo selection is more likely, *ceteris paribus*.

Analogous to change costs, but less frequently discussed, are action costs, which should influence the tendency to choose a route of inaction. As the costs required to take an action increase, selection of an omission option should increase, *ceteris paribus*. These costs are as pervasive, if not more so, than change costs associated with status quo selection. This is the case because, in addition to culturally or situationally imposed costs, there is also a cost component reflecting expenditure of energy that is not associated with a pure status quo change cost, which can require either omission or commission.

Analogous to costs for changing the status quo and for taking action, there are also costs for delay. Often, a decision maker faces declining outcomes as decisions are postponed and therefore must make a decision about when to decide by trading off the gains that could be produced by further thinking and consideration with the losses that could be incurred by deferring the choice. This is the last of the purely "rational" influences in the model.

*Anticipated regret.* Anticipated regret is hypothesized to influence decision avoidant behavior; Table 1 presents a summary of research suggesting such a link. The general hypothesis is that individuals seek to minimize regret resulting from decisions and that choice of an avoidant option is a domain-general vehicle for avoiding regret. In other words, a higher level of anticipated regret resulting from a choice over all of the available alternatives motivates a search for the option that minimizes regret; status quo choices, omission choices, and choice deferral are likely candidates for selection when anticipated regret is an attribute under consideration. Status quo selection presumably decreases regret because it provides an additional justification for a choice; when choices are seen as more reasonable or justified, one experiences less regret over them, even if the outcome is poor (Inman & Zeelenberg, 2002). Omission appears to function as a response to anticipated regret; for example, researchers have found that the bias toward omissions is exaggerated by worse outcomes (Baron & Ritov, 1994, Experiment 1). Other conditions that tend to produce increased anticipated regret also produce an increased preference for omission options (Kordes-de Vaal, 1996; Ritov & Baron,

1995). Alternatively, it might be argued that omission can increase regret, given the finding that individuals tend to regret bad outcomes more when they expend less instrumental effort toward an outcome (van Dijk, van der Pligt, & Zeelenberg, 1999). Effort and omission are not identical variables, but they should be highly correlated. Thus, these results do pose a challenge to the general theory. Further research is needed to disentangle these conflicting findings.

Sometimes individuals are less likely to defer a choice when regret is a factor, but these cases are the exception that proves the rule. What occurs in these situations is that decision makers anticipate more regret on the basis of deferring the option because the only information they are given in these studies concerns the immediately present option; therefore, they anticipate substantial costs for delaying (Simonson, 1992). When information is obtainable on outcomes available if they had made a decision either sooner or later, individuals tend to be more influenced by outcomes that are available later. The increased impact of later options indicates that to avoid regret, deferral is a preferable protective option. Decision makers appear to know this, and they set more stringent criteria for options when they expect to receive information on outcomes available after their choice, leading them to defer choosing longer (Cooke, Meyvis, & Schwartz, 2001).

*Complement: Anticipated blame.* There is an alternative source of decisional causation in these situations that rests on the same cognitive structures that anticipated regret does. There is no research evaluating decision avoidance from the perspective about to be outlined, but it has a clear logic and is worth consideration.

In the status quo and omission bias literature, it has been found (Ritov & Baron, 1995, 1999; Spranca et al., 1991) that individuals associate less wrongdoing with omissions, and presumably this might hold for nonomission status quo decisions as well, although this is unknown. For example, in one study (Spranca et al., 1991), students acting as hypothetical jurors awarded larger sums of money for damages to individuals who were harmed by a commission, compared with individuals who experienced something equally harmful as a result of an omission.

Most individuals in the various studies show evidence of holding an omission bias, and for some of them it is so pervasive as to outweigh more important concerns, such as saving lives (Baron & Ritov, 1990). Assume for a moment that individuals have, at some level, an awareness of their own omission bias and the fact that others share this bias, as might be the case if omission bias results from overgeneralization of a social norm (Baron, 1994; alternately, the social norm could be unconscious). If individuals know that other people attribute less responsibility and wrongdoing to omissions, they could be biased toward omissions, not out of any consideration for their own regret, but out of the will to avoid the blame of others for a bad outcome. This blame could result in further damaging outcomes for the decision maker. The question then becomes one of how important it is for the decision maker to avoid damaging outcomes resulting from blame. Because the blame resulting from omission bias is out of the decision maker's control, the question of the rationality of incorporating this emotion into choice is less compelling.

Anticipated blame should involve the same cognitive processes and obey the same rules as anticipated regret. Even if decision makers refuse to consider their own potential regret as an important variable, the blame resulting when others evaluate their deci-

Table 1  
*Research Reports Suggesting an Influence of Anticipated Regret on Decision Avoidance (DA) by DA Form*

Study	DA measure	Manipulation of avoidance regret	Major findings and/or interpretation
Omission			
Ritov & Baron (1990)	Risk tolerance, written reports		Participant-reported reasons for preferring omission primarily regarded responsibility and fault.
Spranca et al. (1991)	Morality, written reports	Relative outcome, intention, degree of risk	Harmful omissions were perceived as less immoral than equivalent commissions. Participants' justifications emphasize distinction of action versus omission, responsibility (diffusion of and a general decrement for omissions). It follows that what is perceived as more moral would be more justified and less regrettable.
Baron (1992)	Normative beliefs, emotions	Debiasing	Normative beliefs interact with anticipated emotion; omission bias (OB) reversed after logical debiasing argument that affected most participants' anticipated regret.
Baron & Ritov (1994)	Preference ratings, comparisons	Relative outcome, gain/loss	Preference for omission increased by worse outcomes, irrespective of gain/loss domain.
Ritov & Baron (1995)	Choice, satisfaction, written reports	Outcome feedback, outcome overlap, gain/loss	Biased preference for omissions dependent on bad outcomes and information about foregone outcomes, less likely under high overlap (less potential for regret based on comparisons). Verbal justifications were consistent with avoidance regret theory.
Kordes-de Vaal (1996)	Responsibility, morality	Causality, intention	Preference for omission stronger for intentional, causally potent choices.
Ritov & Baron (1999)	Decision threshold	Sel.: protected values	Holding protected values (i.e., being reluctant to trade off) was correlated with increased preference for omission. OB is a reliable individual difference. Trading off protected values is likely to lead to regret, so such individuals may be more prone to anticipated regret, thus the difference in OB.
Status quo			
Tsiros & Mittal (2000)	Regret ratings, counterfactuals	Outcome feedback, reversibility, switch/stay	Most participants had counterfactual thoughts in the switch-irreversible condition, also rated as lowest quality/safety decisions. Participants had more counterfactual thoughts when switching from the status quo. Participants avoided regret by choosing status quo when feedback on foregone outcomes was available. Switching associated with more regret regardless of feedback. Irreversible decisions also produced high regret regardless of outcome feedback; reversible decisions followed by unpleasant feedback produced a slight increase in regret.
Inman & Zeelenberg (2002)	Choice, written reports	Prior outcomes	Positive prior outcomes increased tendency to select status quo option, compared with negative prior outcomes. No prior information also led to more status quo selection. More reasons were given for switching than for repeating decisions, indicating participants need to justify potentially regrettable choices.
Status quo and omission option confounded			
Kahneman & Tversky (1982)	Preference/regret	Mutability	"People generally agree that the person who acted and experienced the same [bad] outcome [as one who omitted action] feels more regret. . . . Anticipation of regret is likely to favor inaction and routine behavior" (pp. 170-171).
Redelmeier & Shafir (1995)	Choice	Increased no. of options	Compared with similar decisions with fewer alternatives, participants chose the status quo-omit option more often and chose less preferable but easier to justify options more often (transitivity violation). Attributed to increased "conflict," this could be due to avoidance of regret.
Inaction inertia <sup>a</sup>			
Tykcinski et al. (1995)	Choice	Gain/loss, outcome discrepancy	Inaction inertia occurred in neutral and loss frames only; there was no effect in the gain frame. A number of manipulations predicted to affect inaction inertia by nonregret hypotheses did not produce results.

(table continues)

Table 1 (continued)

Study	DA measure	Manipulation of avoidance regret	Major findings and/or interpretation
Inaction inertia <sup>a</sup> (continued)			
Tykcinski & Pittman (1998)	Choice, written reports	Avoidability, outcome discrepancy, avoidance cost	Inaction inertia is only present when reminders of (regret-provoking) option are avoidable. It is also reduced when costs are introduced for avoiding the option. If participants receive information that the earlier outcome was not as attractive as thought, inaction inertia is eliminated. Mention of regret was more frequent in protocols of participants with large discrepancy between past and present options and for participants who did not receive information degrading prior option.
Butler & Highhouse (2000)	Choice, regret ratings	Outcome discrepancy, gain/loss	Regret ratings correlated with differences in action tendencies.
Anderson (2001a)	Choice, regret ratings	Outcome discrepancy, time pressure, Sel.: counterfactual inference ability	Speeded decisions produced more inaction inertia as well as higher regret ratings. No differences in inaction inertia based on individual differences in counterfactual thinking have been found to date.
Tykcinski & Pittman (2001)	Choice, written reports	Outcome discrepancy, mutability	Inaction inertia was only present for highly mutable foregone outcomes, for which outcome contrast was controlled. Reported thoughts of regret correlated closely with inaction behavior whereas other emotions did not. When regret was partialled out, the inaction inertia effect size was reduced, though still statistically significant.
Arkes et al. (2002)	Choice, regret ratings	Outcome discrepancy, distance	Individuals felt no regret and display no inaction inertia when a prior opportunity was highly distant compared with nearby offers.
Zeelenberg et al. (2002)	Regret judgments, ratings	Omission, commission; prior outcome's valence, prior outcome's informativeness	Participants attributed more regret to individual who took action (change) when prior outcomes were positive or not known. Inaction produced more regret only when prior outcomes were negative. The effect of omission was mediated by perceived responsibility. Prior outcome only influences responsibility, and thus regret, when it is informative about the wisdom of a prior choice.
Deferral			
Simonson (1992)	Timing of choice	Outcome feedback, forced regret evaluation	Participants chose not to defer only when they expected feedback about future opportunities and explicitly considered regret. Deferral can act to increase anticipated regret when future opportunities may be worse (delay costs).
Beattie et al. (1994)	Preference, regret	Outcome feedback	Participants were more regretful when bad outcomes ensued from a personal choice compared with a choice made by others. In situations in which regret is a factor, many prefer to have others make the decision.
Cooke et al. (2001)	Timing of choice; rated satisfaction, regret	Outcome feedback, control over decision	Regret ratings were affected more by outcomes that could have been obtained if participants deferred longer, than by those they actually deferred on. Upward comparisons have greater effect on satisfaction. Comparisons to earlier obtainable outcomes had an effect when purchase timing decision was uncontrollable. Postdecision outcome information's influence was not limited by control. Participants could anticipate these results and set higher thresholds for decision when they expected information on foregone postdecision outcomes, causing them to defer deciding longer.

Note. Sel. = selected variable.

<sup>a</sup> These studies could meet criteria for any of the three decision avoidance forms identified in the current article (omission, status quo, deferral).

sion and make the same cognitive processes may still be important to avoid. Although individuals may not weight regret in their choice, they can still make use of counterfactual thought structures to anticipate the regret they would feel and the blame that might thus come from others when they realize a better decision could have been made. Omission options clearly offer a source for diminishing perceptions of responsibility, causality, and wrongdoing, and thus the degree of blame assigned to a decision maker. Status quo choices might be able to offer this kind of protection as

well; therefore, these forms of decision avoidance might offer protection from backlash to the decision maker. Deferral is less clearly associated with decreased blame, but the heightened anxiety resulting from situations in which blame may be a factor could lead an individual to seek escape of the decision by postponing it, especially if no status quo or omission option is available. These alternative hypotheses are worth considering, but they must be seen as complementary sources of avoidance that could operate in isolation of and in addition to other sources of avoidance.



*Contributors to Anticipated Regret*

A number of factors can act to increase or decrease one’s anticipated feelings of regret. These are worth brief consideration, because manipulation of these variables should affect decision avoidance according to the rational–emotional model. Figure 3 presents a model, derived from the literature on regret, detailing how these contributors influence anticipated regret. This model is used as a guide for the discussion, with more direct influences discussed first.

*Reversibility.* A decision is reversible if its outcome can be altered after the fact; irreversible decisions are permanent. For example, consumers can often reverse their purchase decisions within a certain time period by returning products to the store where they purchased them. Decision makers might anticipate less regret for decisions that are reversible compared with similar irreversible decisions (Zeelenberg, Beattie, van der Pligt, & de Vries, 1996).

Research with hypothetical scenarios demonstrates that individuals do think that less regret is associated with reversible outcomes (Tsiros & Mittal, 2000). Although these researchers asked about postdecisional regret, this is best thought of as an anticipated regret effect because participants were attempting to predict how someone would feel in those situations. It is interesting, though, that this seems to be an inaccurate anticipation of how people feel about changeable outcomes. Research that compared predicted satisfaction with experienced satisfaction with reversible and irreversible choices shows that, although individuals do predict more satisfaction with reversible choices, this prediction is incorrect (Gilbert & Ebert, 2002). In fact, people experience less satisfaction with reversible decisions compared with irreversible decisions. Assum-

ing that satisfaction is inversely correlated with regret, this implies that the Tsiros and Mittal (2000) model is valid only as a model of anticipated regret. However, both studies affirm the anticipation effect, which is of current concern in describing potential influences on decision avoidance. Irreversible decisions should produce more anticipated regret and thus should increase the tendency toward decision avoidance.

*Expected outcome feedback.* Initially, regret theory suggested that counterfactual mutation of potential outcomes was a unilaterally applied process in decision making under uncertainty. Currently, consensus is building that counterfactual thinking and, thus, anticipated regret occur within certain boundary conditions. One of those conditions is the expectation of feedback regarding the outcome of nonselected, foregone options. In other words, after making a decision, outcome feedback entails learning what would have occurred had one chosen a different option. Anticipated regret is dependent on a decision maker’s expectation of encountering this information (Larrick & Boles, 1995; Ritov, 1996; Ritov & Baron, 1995; Tsiros & Mittal, 2000; Zeelenberg & Beattie, 1997; Zeelenberg et al., 1996).

*Degree of loss aversion.* Although not explicitly experimented with, this theory suggests that loss aversion is an important factor in effects of anticipated regret on decision making. Loss aversion refers to the human tendency to weight outcomes viewed as losses from an arbitrary reference point more heavily than equivalent gains. This is arguably important for effects of regret on overt decision avoidance because otherwise downward counterfactuals (comparisons between an outcome and worse outcomes) would have an equal effect on anticipated emotion, and anticipated rejoicing would cancel out effects of anticipated regret (Baron &

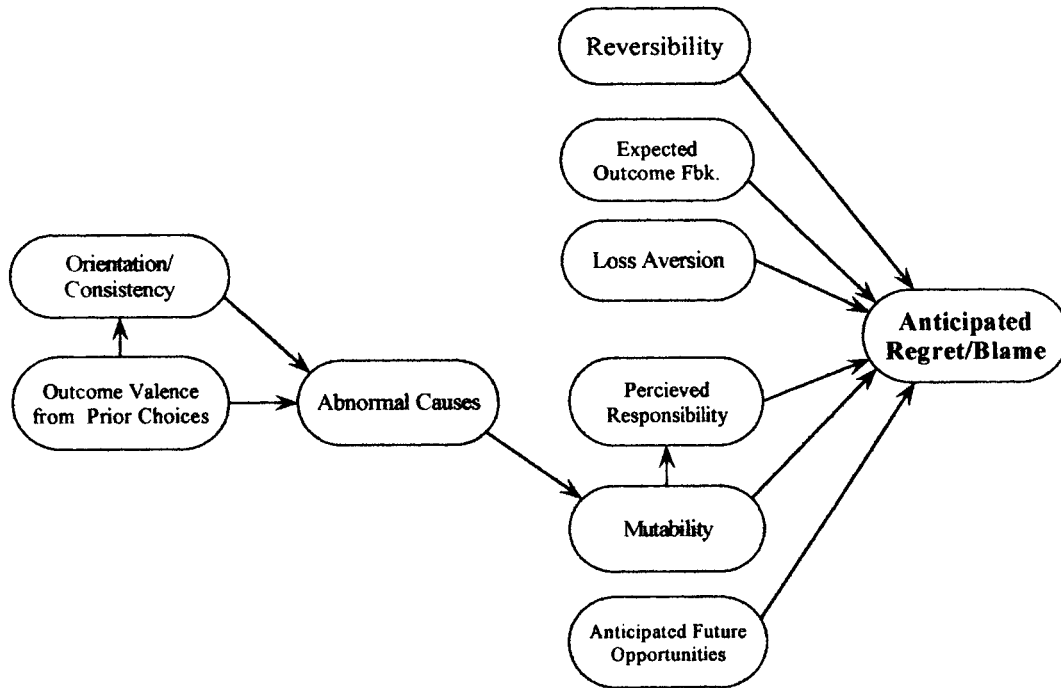


Figure 3. A model of the contributors to anticipated regret. Bold text indicates emotional contributors to decision avoidance. Fbk. = feedback.

Ritov, 1994; Ritov & Baron, 1995; note also that this is a modification to the original regret theory). To the extent that decision makers differ in the degree of their loss aversion, the decision weight disparity between regret and rejoicing varies.

*Perceived responsibility.* Decision makers also are more likely to anticipate regret when they perceive themselves as personally responsible for the outcome. For certain reasons, acts and changes to the status quo lead decision makers to feel more responsible for outcomes, a finding I take up in the discussion of abnormal causes (see *Abnormal options* section). A lesser degree of regret results when people make a choice that seems well justified or not causally related to an experienced bad outcome (Inman & Zeelenberg, 2002; Kordes-de Vaal, 1996; Simonson, 1992; van Dijk et al., 1999; Zeelenberg et al., 2002). This probably occurs because regret involves aspects of self-blame in addition to the counterfactual comparison considered central in regret theory.

There has been some disagreement over the role responsibility plays in moderating the influence of contextual factors on regret. Connolly et al. (1997) claimed that responsibility is neither a necessary nor substantial component of regret. However, these researchers used a nonspecific measure that may not primarily reflect regret. Further studies with procedural and measurement modifications supported the view that responsibility is one important moderator of regret; although it is not clear whether it is a necessary condition for regret, some evidence is consistent with this hypothesis of responsibility having a necessary role (Ordonez & Connolly, 2000; Zeelenberg, van Dijk, & Manstead, 1998, 2000). Furthermore, some experiments that did not measure responsibility as a moderating variable are likely to have affected it with their manipulations, as in research on the effect of consistency on regret (Anderson, 2002b; Seta, McElroy, & Seta, 2001).

*Mutability.* The mutability of an outcome refers to the ease of constructing counterfactual alternatives to it. For example, if Ms. E misses her flight by 5 min and Ms. L misses hers by 37 min, one would expect Ms. E to feel more regret because it is far easier for her to undo any number of prior actions that could have changed the result. It would be more difficult for Ms. L to construct a scenario in which she does not miss the plane, as her negative outcome is what is referred to as less *mutable*.

Mutability of alternatives could influence anticipated regret directly, in that the number and intensity of counterfactuals that could be produced is usually associated with more regret and thus is factored into anticipations of regret. Alternatively, in some cases, a more mutable outcome might be associated with more perceived responsibility for the outcome. In the example above, Ms. E may imagine herself as more responsible for the bad situation because it is easy to imagine personally having done something different to alter the outcome. It is also the case that the most immutable outcomes are those that one feels were out of one's control—further justifying a link between mutability and responsibility. Whether mutability directly affects anticipated regret, is moderated by perceived responsibility, or both is a fairly speculative consideration; therefore, both of the links are modeled to represent the current state of knowledge about this variable.

Several studies demonstrate an effect of mutability on regret (Inman & Zeelenberg, 2002; Kahneman & Miller, 1986; Kahneman & Tversky, 1982; Landman, 1988; Tykocinski & Pittman, 2001); these are typically associated with the mutability of abnormal causes, discussed below in the *Abnormal options* section.

There are two studies purporting to find no association between counterfactual mutation and experienced regret (N'gbala & Branscombe, 1997; Seta et al., 2001). However, there are several unaddressed problems in the measurements of counterfactual thinking and regret that are used in these studies, as discussed earlier.

*Anticipated future opportunities.* One can account for some apparently contradictory results by noting that anticipated regret in decisions that can be made at multiple points in time is affected by what the decision maker believes about the nature of future opportunities at any given decision point being investigated. It has been suggested that the primary motivation for upward counterfactuals is to improve future outcomes in similar situations, making regret more likely when it is believed a similar decision must be made in the future (Markman, Gavanski, Sherman, & McMullen, 1993).

There is evidence to suggest that regret judgments made in time-sensitive decisions are more influenced by future opportunities that will be foregone by accepting a current offer than by opportunities that have already been foregone (Cooke et al., 2001). If it is believed that future opportunities may dominate the presently available alternatives, more regret will be associated with taking action than with deferring. However, if future opportunities could be dominated by the currently available alternatives, more regret should be associated with deferral (Simonson, 1992). Because deferral can be associated with more or less regret depending on beliefs about future opportunities, it is important to consider this variable in interpreting studies that show increased immediate action resulting from a regret-producing situation. This result does not undermine the association of regret with deferral but demonstrates that it can reverse, depending on an individual's beliefs about the future.

*Abnormal options.* A normal cause of an outcome would be an ordinary, expected decision or state of the world—that is, the “norm.” Kahneman and Miller (1986) presented a detailed model of how norms are generated and suggested that these norms influence counterfactual thinking. When the cause of an outcome departs from the norm (i.e., is an abnormal cause), generation of counterfactuals is more likely than when the cause is normal because the norm is a highly salient counterfactual alternative, whereas abnormal causes are not. Thus, one expects that abnormal causes are more mutable, lead to more anticipated regret when negative outcomes are at stake, and are associated with more perceived responsibility for the negative outcomes. In this treatment, abnormal causes are referred to as *abnormal options*, for when they are considered prior to a decision, they have not yet caused an outcome.

Originally, it appeared that actions were always abnormal options and that omissions were salient, normal alternative causes that produced less anticipated regret (Kahneman & Miller, 1986; Kahneman & Tversky, 1982; Landman, 1988). When two people experience the same negative outcome, observers rate the person who reached that outcome by means of inaction as experiencing less regret. However, results showing that regrets recalled from long-term autobiographical memory are more frequently omissions challenge the generality of this statement (Feldman, Miyamoto, & Loftus, 1999; Gilovich & Medvec, 1995a). These results can be reconciled by considering the subsequent factor.

*Outcome valence from prior choices.* Earlier, it became apparent that omission and status quo choice cannot be clearly and consistently considered normal options. The variables considered in this final stage of the model clarify this situation and also interact with the difficulty path.

Decision makers rarely make choices in a vacuum, and especially in cases in which status quo or repeated decisions are involved, they may rely on memory to guide their understanding of a problem. A particularly salient dimension in such choices is the outcome of prior related decisions. New findings indicate that status quo and omission options do not always modulate regret in real-world situations because decision makers draw on information about prior outcomes to guide their judgments (Inman & Zeelenberg, 2002; Zeelenberg et al., 2002). If a decision in the past led to negative results, taking no action to change (maintaining the status quo) would be considered an abnormal cause, leading to more perceived responsibility and thus more regret. The results of Inman and Zeelenberg (2002) and Zeelenberg et al. (2002) support this contention, having demonstrated that when prior outcomes were positive or unknown, decision makers tended to associate less responsibility and regret with the status quo–omission option. The status quo and omission options were confounded in these studies; therefore, it is unclear whether the effect applies to both status quo and omission choices. Intuitively, it seems most natural for prior outcomes to affect primarily status quo choices rather than omission choices, as the two are not the same. I also hypothesize that the outcome of prior choices affects the decision maker's predilection for consistency, which is considered in the *Consistency with orientation* section. When prior outcomes are negative, the impact of a preference for consistency should be lowered.

Finally, research also suggests that prior outcomes can generate ambient negative emotion if they involve a risky decision or a decision that involves choosing among different degrees of losses (i.e., avoidance–avoidance conflicts; Riis & Schwarz, 2000). This negative emotion generates differences in selection difficulty, as described in the sections detailing the difficulty path.

The consideration of prior outcome valence also has implications for work with inaction inertia. It has been predicted that if the previous opportunity were worse than the current opportunity, regret effects should motivate one to take action (Zeelenberg et al., 2002). Initial research on this “inaction mobilization” effect has found some cases in which this appears to happen (Anderson & Zeelenberg, 2002).

*Consistency with orientation.* One last factor that is associated with regret is the decision maker's orientation with regard to basic dimensions of the options (e.g., Is one in an active mood? Is one generally an active person? Do one's goals involve taking more action or avoiding it?, etc.). Seta et al. (2001) claimed to have discovered that orientation is a different cause of regret, but upon reflection this component fits into the framework that emerges from the other research on regret reviewed herein. Their research demonstrates that when orientation is manipulated in hypothetical others, regret tends to follow decisions that are inconsistent with that orientation, whether it be active or inactive. Thus, omission can be associated with more regret—if a person is described as a risk seeker. This effect generalizes to past and present personally made decisions in which orientation is manipulated by mood induction.<sup>4</sup>

*Selection difficulty.* Selection difficulty is difficult to operationalize or define independently of the variables that produce it. Beattie and Barlas (2001) asked participants to self-rate the difficulty of a decision with some success; other researchers have implied that a form of psychological conflict mediates between their manipulation and the participant response without specifying it in their measures (e.g., Tversky & Shafir, 1992). Perhaps others would equate it with the negative emotion that is experienced alongside certain decision-task environments (e.g., those in Luce, 1998). It is also tempting to use avoidant choice selection as a behavioral indicator of difficulty, but this is unwise if one wishes to examine difficulty as an influence on avoidance. It is also unwarranted given the current understanding of avoidant choice as influenced by multiple factors; it is at best an impure measure of selection difficulty.

It is important, but difficult to specify on the basis of present evidence, what this component means. Perhaps there are neurological indicators of difficulty that allow for specification of the component independently of manipulations assumed to produce it and responses presumed to reflect it (see Greene, Somerville, Nystrom, Darley, & Cohen, 2001; Gur, Skolnick, & Gur, 1994, for potential starting points relevant to the responses examined in this article). Otherwise, it would appear that measurement of difficulty is limited to essentially introspective self-report that researchers might wish to eschew (Dennett, 1991; Nisbett & Wilson, 1977). Such self-reports may be most useful in conjunction with converging neurological and behavioral measures, when available.

I begin attempting to define selection difficulty by explaining what it is not. It cannot be equated with preference uncertainty, as there may be many options among which people may be relatively indifferent but which would not pose especially difficult decisions for most of them. Consider this example: A student forgets to bring a pencil for a test and is offered two different brands of pencil from a classmate. The student has no reason to see either pencil as superior; the student's primary goal is to obtain a pencil quickly rather than spend time thinking or accept the status quo of not having one. Likewise, it should not be equated with negative emotion per se, because the individual may be situated with ambient negative emotion or may be faced with an easy, but unpleasant decision. Consider the example of a virologist who had a plan to spare 99% of a population from an epidemic, but because

<sup>4</sup> The researchers concluded that consistency of orientation has its effect through its impact on the desirability of different options; however, their data are more consistent with a view that a manipulation of orientation is equivalent to a manipulation of desirability because the measures of each are highly correlated and entering one of them into a regression equation predicting regret has an effect equivalent to the other. It is more likely that when a decision maker has an active orientation, actions become the norm and thus a salient counterfactual alternative that produces more regret than counterfactuals of omission, as described by Kahneman and Miller (1986). Recent data from a number of studies (see Anderson, 2002b) support this interpretation. Also, orientation is likely to be influenced by prior experiences, regardless of whether one is satisfied with one's decision making record. Thus, the valence of prior outcomes is likely to affect whether orientation is adhered to. When prior outcomes are unsatisfactory and stem from an aspect of the decision maker's orientation, orientation-inconsistent behavior becomes a more salient alternative, and consistency could be associated with more regret.

of a mistake, must choose between two equally costly courses of action, one that would lead to a loss of 1.5% of the population and one that would lead to a loss of 4% of the population—an obvious decision that probably produces a variety of negative emotions nonetheless. Selection difficulty is thus experienced when individuals find it difficult to choose a particular course of action, but it may occur in the absence of uncertain preferences or negative emotion, although these are strong correlates of difficulty. Although it is a central experiential component of decision making that is familiar to most humans, little is scientifically known about choice difficulty (Hastie, 2001; some notable attempts to characterize the related concept of *conflict* may be found in the work of Janis & Mann, 1977a; Lewin, 1931; Miller, 1944, 1959). In addition to the potential remedies outlined above, it may be useful to have individuals rank various decisions in terms of difficulty in addition to timing them, because investigators cannot use decision time as an indicator of difficulty without circularity and oversimplification as regards the rational–emotional model of decision avoidance.

Although more precision is desirable regarding the nature of selection difficulty, the general hypothesis being advanced is clear: Increases in selection difficulty lead to increases in the shares of decision-avoidant options. Evidence for this hypothesis is presented in Table 2.

### *Contributors to Selection Difficulty*

As with regret, I examine some of the important factors that produce selection difficulty because these manipulations should, and in some cases have been shown to, affect decision avoidance. Figure 4 presents a model, derived from the literature on selection difficulty, detailing how these contributors influence difficulty. This model is used as a guide for the discussion, with more direct influences discussed first. (Outcome valence from prior choices is excepted from this section, as its influence on both emotional factors is discussed above.)

*Decision strategy.* Decision makers adopt different strategies for choosing on the basis of a number of considerations; one distinction within these strategies that is especially relevant is between compensatory and noncompensatory decision rules (Payne, Bettman, & Johnson, 1993). When adopting a compensatory approach, the decision maker is willing to trade off the value of one attribute on one option with a value of another attribute within or across options. For example, a negative safety rating on an automobile might be compensated for by a lower price on that same automobile. In following this approach, one adopts the general idea of a particular prescriptive framework for decision makers faced with conflicts between attributes: multiattribute utility theory.

Often, an individual is reluctant to make these trade-offs. In a noncompensatory strategy, trade-offs are not considered. The automobile's safety may be paramount, and no difference in price can persuade some consumers to risk endangering the vehicle's passengers. Taking a noncompensatory approach to decision making is not normative but does serve to make selection easier in most cases. It does not require as much thinking as a compensatory strategy because entire alternatives can be eliminated for displaying unsatisfactory values on important attributes, and one need not compute myriad comparisons among the remaining alternatives.

Furthermore, one may also mitigate the negative emotion that is frequently generated in the process of making trade-offs by adopting a noncompensatory strategy that eliminates the trade-off process. This leads to an interesting quandary for normative theories of decision making: Because the normative compensatory strategy entails more difficulty when enacted by actual human decision makers, decision makers using this strategy tend to produce more potentially suboptimal deferral, status quo, and omission choices. Via the selection of a strategy for deciding, decision makers may unwittingly predispose themselves toward or against choosing decision avoidance (Dhar, 1996, 1997a; Dhar & Nowlis, 1999; Luce, 1998; Luce et al., 1997).

*Reasons.* A justification for a decision is equivalent to having a reason for selecting a particular option. The meaning of a *reason* for making a decision has been recently investigated and refined by Schick (1997). Briefly, the classic formulation of a reason is a mental state that includes components of belief and desire; it is a cognitive evaluation that an option will produce certain results and a motivational orientation toward those results. Schick's reformulated definition includes an understanding of an option in terms of the attributes toward which one has particular beliefs and desires. Most options could produce a variety of results and be interpreted in the framework of several cognitive schemata, and a reason for a decision is situated within a particular framework, an understanding of the relevance of the decision to other knowledge.

Decisions in which there are few potential reasons for making a particular choice are likely to be more difficult. The context in which options are situated can add or remove context-dependent reasons for choice, making the decision easier or more difficult (Redelmeier & Shafir, 1995; Tversky & Shafir, 1992). The ratio of reasons for selecting one option over another, the salience of reasons, and the subtlety of differences among those reasons (i.e., on how many dimensions of a reason the options vary) are probably quite important, although current research does not permit more precise statements on how reasons influence difficulty.

*Preference uncertainty.* Preference uncertainty is a state of being unsure of which of two or more options best meets one's goals or criteria for choice. Preference uncertainty can be distinguished theoretically from decision difficulty, as outlined above, because trivial choices in which one is uncertain may not be difficult, but the two components generally are related in consequential decisions. Although this caveat about trivial decisions is worth bearing in mind, preference uncertainty is expected to produce more difficult decisions (Dhar, 1996, 1997a, 1997b; Dhar & Nowlis, 1999; Dhar et al., 1999; Dhar & Sherman, 1996; Tversky & Shafir, 1992). Even relatively insignificant choices may be slightly more difficult in the condition of preference uncertainty. Two of the factors discussed below (option attractiveness difference and option set size) have their effect on selection difficulty through preference uncertainty.

*Degree of structure.* Unstructured, ill-defined decisions should be more difficult than well-defined decisions. This structure is usually revealed in the degree to which algorithmic methods can be applied to produce a solution. In a well-defined problem, the relevant variables are known, their values are retrievable, and the process of combining this information is mechanical and guaranteed to produce a solution of a determined nature. Many decisions lack these attributes and are, consequently, more difficult. This difficulty is produced by doubt about the relevance, accuracy, or



Table 2  
*Studies Suggesting a Link Between Selection Difficulty and Decision Avoidance (DA) by DA Form*

Study	DA measure	Manipulation of selection difficulty	Major findings and/or interpretation
			Deferral
Tversky & Shafir (1992)	Choice	Attractiveness difference, no. of options	Participants were more likely to ask for added option when present options were similar in attractiveness; they were also more likely to prolong search when both options were weak. Participants postponed choice more often with increased number of options; thus, nonpreferred deferral option becomes preferred when new (even inferior) option is added (transitivity violation).
Beattie et al. (1994)	Preference	Fairness, accountability	Participants were more decision averse in situations that involved potentially inequitable outcomes for others, particularly when they expected to be held accountable for the decision.
Dhar (1996)	Choice	Alternative, attribute-based presentation; compensatory, nonrule training	Deferral was increased when alternatives were presented simultaneously (attribute-based processing) compared with sequentially (alternative-based). Attribute-based processing increases uncertainty, whereas alternative-based processing promotes satisficing. Effect of processing focus was qualified by compensatoriness of decision rule. Alternative-based processing only decrease deferral when participants used compensatory rule. A reverse effect of compensatory strategy is obtained when processing is attribute-based.
Dhar & Sherman (1996)	Choice	Unique good and bad features	Deferral increased with common good–unique bad features on options. Shared features were underweighted because of attention. Also, trade-offs between bad features may be more difficult.
Dhar (1997a, Exp. 1 & 2)	Choice, protocols	Added attractive and inferior options (few vs. many trade-offs)	An additional attractive option increased choice deferral. An added inferior option decreased choice deferral (transitivity violation). Increased deferral correlated with more thoughts, and participants had roughly equal numbers of favorable thoughts for each option.
Dhar (1997a, Exp. 3)	Choice, protocols	Attractiveness difference	The author found more deferral with similar options and more thoughts from deferring participants in this condition. There was an equal ratio of favorable to unfavorable thoughts for deferring participants in this condition.
Dhar (1997a, Exp. 4)	Choice	Compensatory strategy	Participants trained in this strategy were more likely to defer; thus, strategy decreased perceived attractiveness differences, increasing difficulty.
Dhar (1997a, Exp. 5)	Choice	Nonexclusive choice	Participants exhibited less deferral when allowed to select multiple options. Deferral thus cannot be solely attributed to desiring more options—difficulty and uncertainty in selection are important.
Dhar (1997a, Exp. 6)	Choice	Trade-off practice (multiattribute utility theory)	Deferral decreased when participants practiced normative compensatory strategy. This demonstrates decreased difficulty when attractiveness difference is held constant.
Dhar (1997a, Exp. 7)	Choice	Trade-off practice, dominated option	Practice did not affect deferral when a dominated option was present. Trade-off practice to reduce difficulty was instrumental only in situations of preference uncertainty.
Luce et al. (1997)	Strategy, negative emotion	Vividness, likelihood of negative consequences; attractiveness difference, no. of trade-offs	Likelihood of negative outcomes increased negative task emotion. Higher emotion groups had more information acquisitions, more time deciding, and more attribute-based processing. This supports negative emotion minimization as a third factor in processing strategy selection. Trade-off difficulty increased negative emotion much more in high conflict choices. Increased number of acquisitions and time spent is a function of conflict. Emotion mediates effect of conflict manipulations on processing strategy.
Mann et al. (1998)	Decisiveness	Sel.: culture	Asian participants rated selves as more likely to engage in “buck passing” and decision procrastination, forms of defensive avoidance. They also rated selves as having less confidence in decision-making ability.
Dhar & Nowlis (1999)	Choice, process tracing	Time pressure (TP), attractiveness difference, attractiveness of common features, type of conflict, primacy of selection	Deferral decreases under TP, but only under high conflict. TP favors noncompensatory strategy, which decreases difficulty. Deferral decreases when overall (common) attractiveness high; this effect decreases under TP, which shifts attention away from common features. TP has no effect when selection decision is not primary. TP also tends to decrease deferral in approach–approach conflicts because attention is shifted to positive features.
Dhar et al. (1999)	Choice, process tracing	Unique good and bad features, similarity and dissimilarity judgments	Choice deferral increased for unique good option pairs following similarity judgment, vice versa for unique bad pairs. Attentional focus mediates this interaction.
Ji et al. (2000)	Decisiveness, decisiveness values	Sel.: culture	Japanese participants were more indecisive than American and Chinese participants, which suggests avoidant choice patterns may be consistent within individuals and influenced by local norms. Value ratings obtained from participants in different cultures were mapped closely onto their personal patterns of decisiveness.
Beattie & Barlas (2001)	Time to decide, rated difficulty, choice	Category of options requiring trade-offs	Noncommodities (Ncs) are more difficult to trade off than currencies or commodities (Cs). Nc–Nc trade-off decisions are slowest; C–C decisions are faster. Ncs were traded off with either other category fastest, perhaps because participants used difficulty-reducing noncompensatory strategy.

(table continues)

Table 2 (continued)

Study	DA measure	Manipulation of selection difficulty	Major findings and/or interpretation
Inaction inertia <sup>a</sup>			
Luce (1998)	Choice, emotion, latency decision	Availability of avoidant options, trade-offs on valued attributes, imagery	Trade-off difficulty is positively related to negative emotion; presence of avoidance options is negatively related. Trade-off difficulty has greater effect when no avoidant option is present. Increased preference for avoidant option only under high trade-off difficulty. This suggests that difficult trade-offs increase selection difficulty and negative emotion and that choosing deferral, status quo, or default options may serve to reduce negative emotion. Imagery increases negative emotion. Increased latency follows more trade-offs and imagery instructions; this result weakens after avoidant options are introduced. More status quo choice was found in conditions associated with negative emotion. Initial negative emotion and response time mediate the effects of manipulations on avoidant choice.
Status quo and omission option confounded			
Redelmeier & Shafir (1995)	Choice	No. of alternatives	Added options similar to preferred option led to increased selection of options (including status quo) considered inferior in dichotomous choice (transitivity violation). This may be due to difficulty of selection between similar options; thus, participants avoid difficult trade-offs by choosing a dissimilar option.
Riis & Schwarz (2000)	Choice	Order of decisions, emotionality of decisions	Status quo selection increased when decision was preceded by negative emotion eliciting risky choice, compared with same decision presented without a prior choice or following a nonemotional choice. Fewer participants chose the status quo option on a nonemotional decision preceded by an emotional decision, compared with no preceding decision. Negative emotion apparently does not affect avoidant option selection when selection is not difficult for other reasons.

Note. Exp. = experiment; Sel. = selected variable.

<sup>a</sup> This study could meet criteria for any of the three decision avoidance forms identified in the current article (omission, status quo, deferral).

use of information one has acquired that is assumed to be relevant to the decision.

*Attractiveness of option set.* Another direct influence on selection difficulty is the overall attractiveness of the options available to the decision maker. *Attractiveness* is a common term in this literature and presumably means something similar or equivalent to utility. It is typically manipulated by varying values of attributes whose dichotomous poles can be safely assumed to have a particular valence for all participants in a study. In particular, overall attractiveness is manipulated by altering the values of shared features of options.

This relationship is inverse: If the overall attractiveness is low, there is very little motivating the individual to select any option. Likewise, if the attractiveness of the option set is greater, the individual stands to do well by choosing any option, even if there is little to distinguish the options from each other. If the attractiveness of common (unvarying) features is increased among options in a set while utility differences are held constant, choice deferral decreases (Dhar & Nowlis, 1999). Presumably this occurs because it is less difficult to choose when any option available satisfies goals adequately than when the options generally fail to meet goals.

*Cultural values.* There is some recent research that is suggestive of an influence of culture on tendencies to delay decisions. Ji, Yates, and Oka (2000) found that self-reports, anecdotes, and assessments of values all indicated that Chinese and American persons tend to be more decisive than Japanese persons. Although it is too early to know how general and large these cultural differences are, these authors suggested that culture has its influ-

ence on decisiveness through local norms and values. Cultures vary in terms of who makes decisions of varying importance. Ji et al. (2000) suggested that Japanese participants whose decisiveness differed from that of American students had assimilated values that promoted building group consensus at the expense of individual initiative, relative to American values. Chinese culture also differs from American culture, but Chinese people's decisiveness does not, perhaps because, although individuals are looked down on for making unauthorized decisions, decision-making power is valued and aspired to, even though it is not held by most people for a wide sphere of decisions. American culture emphasizes individual decision making through concepts such as *freedom* and *rights*. I believe that these values do not directly produce differences in the probability of deferral, but they make decisions more or less difficult for individuals holding various values.

With regard to the cultures described above, it is worth noting that there is some conflicting evidence regarding Chinese culture and decisiveness (Mann et al., 1998; Tse, Lee, Vertinsky, & Wehrung, 1988). In some studies (Tse et al., 1988), Chinese officials were more indecisive than their Western counterparts, which is unexpected given Ji et al.'s (2000) analysis above, in which it was noted that authorities are vested with individual decision-making power and that others aspire to be like them in this regard. These studies were interpreted by Tse et al. (1988) in the light of predilections for probabilistic or nonprobabilistic thinking in different cultures (as opposed to differences in values). According to this analysis, participants from the Chinese sample were less decisive because they viewed outcomes of decisions as either certain or uncertain rather than making distinctions in prob-

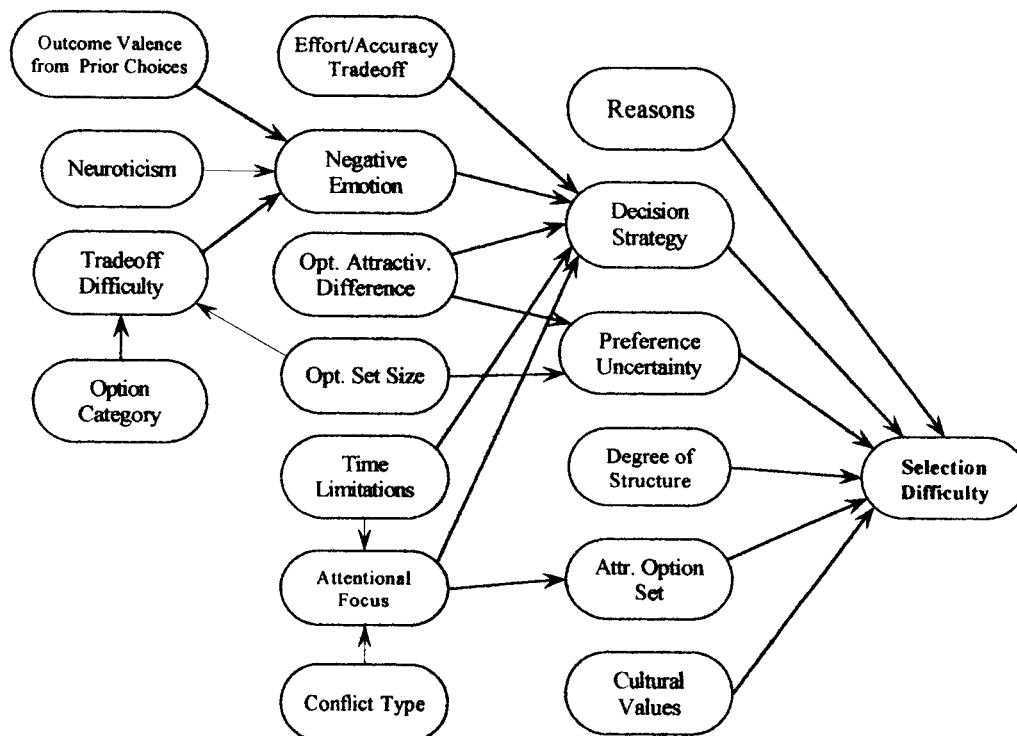


Figure 4. A model of the contributors to selection difficulty. Thin arrows indicate linkages for which evidence is scant or uncertain. Opt. = option; Attractiv. = attractiveness; Attr. = attractive.

abilities and weighting them to the extent that a Western decision maker might. When the outcomes are uncertain, as they frequently are, it is considered more prudent to hesitate than to act as if one had certainty, whereas someone who makes probability judgments can estimate the best course of action and act on that. Mann et al. (1998) also found that confidence in decision-making ability is lower in Eastern cultures, occurring alongside an increased tendency to pass the buck or procrastinate on a decision.

The basic effect of culture is reliable, but the mechanism of the effect has remained unclear. It has recently been suggested that culture may influence decision making through the reasons for choice that individuals in a culture are likely to consider (Briley, Morris, & Simonson, 2000). As predicted by this hypothesis, East Asian–North American cultural differences were more evident in environments that required decision makers to consider reasons for their decisions (Briley et al., 2000).

Because it is the beliefs and values associated with a culture that seem to produce these differences in selection difficulty, other sources of differing values within a culture should also produce differences in decision avoidance. Consistent with this suggestion, subcultural differences in religious beliefs about predestination and the “direct will of God” seem to be associated with differences in decisiveness (Anderson, 2002c).

*Effort–accuracy trade-off.* Decision strategies are selected on the basis of several considerations, the most basic of which are trade-offs between the cognitive effort required by the strategy and the accuracy of the results it produces. Of the two strategies discussed earlier, compensatory strategies tend to require more effort and result in more accuracy, *accuracy* being defined as

conformity to a normative solution preferred in a utility theory analysis. When individuals prefer to expend less effort and are willing to accept suboptimal decisions as a result, they use a noncompensatory strategy. The issue of how these trade-offs are made and influenced is a complex matter best treated elsewhere; fortunately, several excellent reviews already exist (Payne, 1982; Payne et al., 1993; see also discussion of Luce et al., 1997, below).

*Negative emotion.* Current research has been unspecific about the nature of negative emotion generated prior to avoidant decisions. I have tentatively suggested that negative emotions may be associated with the anticipatory emotions of fear, anxiety, and despair as discussed by Loewenstein et al. (2001). The available evidence is consistent in indicating that some form of negative emotion generated by aspects of the choice itself (Beattie & Barlas, 2001; Luce, 1998; Luce et al., 1997) or by prior circumstances (Riis & Schwarz, 2000) precedes decision avoidance. According to the detailed investigations of Luce (1998) and colleagues (Luce et al., 1997), negative emotion is often generated when many trade-offs are possible, especially when those pertain to valued attributes. Coping with this negative emotion then becomes a third goal in the selection of a decision strategy. Participants in these experiments (Luce, 1998; Luce et al., 1997) who displayed more intense negative emotion acquired more information and spent more time analyzing information; their processing also became more attribute based. Conflict, as manipulated by differences in attractiveness of options, had similar effects, and these two factors interacted such that the most attribute-based, information-acquisitive behavior occurred under high conflict and high negative emotion (produced by trade-off difficulty). In other words,

processing became more vigilant. If any of the avoidant options were present in the choice set, individuals were much more likely to select those options when they were experiencing negative emotion. The presence of those options served to decrease negative emotion associated with the choice context, and actually choosing one of the avoidant options decreased negative emotion even further (Luce, 1998).

Other research has demonstrated that negative emotion generated by prior choices can increase decision avoidance even for nonemotional decisions (Riis & Schwarz, 2000). Apparently, lingering or ambient negative emotion can also lead decision makers to adopt more vigilant processing strategies. Although this study did not address intervening variables, it is consistent with the notion that difficult decisions put individuals on alert, thereby altering their processing strategies for subsequent decisions, even if they are apparently unrelated.

*Option attractiveness difference.* The most straightforward manipulation of preference uncertainty involves altering the attractiveness difference between the various choice options by minimizing the differences on their feature values. It is not required that a researcher know exactly what the participants value most in the decision; so long as differences between the options on their features are smaller, the attractiveness difference must be smaller regardless of the direction and weight of individuals' preferences.

Smaller differences in the attractiveness of options produces more preference uncertainty. This uncertainty tends to cause greater difficulty in selection, motivating decision avoidance. These manipulations are frequently reported to be successful in producing changes in the degree of preference for decision avoidance, other things being equal (Dhar, 1997a; Dhar & Nowlis, 1999; Luce et al., 1997; Tversky & Shafir, 1992). Smaller attractiveness differences also produce more vigilant decision strategies, involving more acquisitions of information and time spent viewing information, and smaller attribute differences also promote attribute-based processing. All of these findings are compatible with the idea of using a compensatory strategy for a more difficult choice (Luce et al., 1997).

*Option set size.* Increasing the number of options available results in a concomitant increase in preference uncertainty. As more options are added, the tendency is for any dominant options to diminish in superior status. Decision makers then need to prioritize among the features of options that are most important to them to determine which option best meets their goals. This process is complicated as options are added, making it more difficult to discriminate between the subjective utilities of options—that is, if the decision maker even applies such a normative strategy to large option sets. Often, decision makers may respond to such a situation by adopting a policy of satisficing or using an elimination-by-aspects rule. I propose further that another outcome of decision difficulty produced in this way is decision avoidance. Several experiments support this notion, finding that when an avoidant option, such as a deferral or default option, is available, the preference for it is increased by adding more options (Dhar, 1997a; Tversky & Shafir, 1992; Redelmeier & Shafir, 1995). From a normative perspective, this is puzzling because more options only implies more potential for incrementally higher utility achievements. Of course, this is completely unrepresentative of the perception of such situations by a human decision maker; added options often only complicate the task and motivate one to avoid

the decision. In this regard, increasing the size of option set can also remove simple reasons for selecting an option, such as dominance, from the potential justifications for a choice.

*Time limitations.* Time limitations impose constraints on the strategies for selection a decision maker can use. This component is manipulated by speeding the decision process, which leads to the counterintuitive result of less choice deferral and inaction inertia (Anderson, 2001a, 2001b; Dhar & Nowlis, 1999). One might expect that decision makers with less time to decide would prefer an option that extends the search for alternatives, having judged their limited processing as inadequate. This might be the case, but only if the decision maker is already committed to using a compensatory strategy that requires difficult, time-consuming comparisons. Instead, it seems that expediting the decision process leads most decision makers to adopt a noncompensatory strategy that makes selection easier, thus decreasing the preference for a deferral or other avoidant option. The strategic analysis of the effect is supported by online process tracing measures of information acquisition.

*Attentional focus.* Finally, it has been suggested that manipulations of attention can influence choice deferral (e.g., Dhar & Nowlis, 1999). Attentional focus is defined as the time spent analyzing particular features of options and the direction of shifts in attention (comparisons made within an option or across options). By focusing attention on particular features of options, a choice set can be made to seem more or less attractive from the perspective of the decision maker. Those who attend to negative features of the choice set should see the overall set composition as less attractive, increasing the difficulty of selecting any particular option (Dhar & Nowlis, 1999; Dhar et al., 1999; Dhar & Sherman, 1996). For example, Dhar and Nowlis (1999, Experiment 5) found that the ratio of unique to common features attended to increased under time pressure. The unique features were positively valenced in all choices. This decreased choice deferral, but only in cases in which the selection decision was primary (i.e., choosing between two brands). This allowed the attentional focus to indirectly influence selection difficulty. If the deferral decision was primary (i.e., "deciding whether to decide"), there was no influence of time pressure on deferral, presumably because the selection difficulty component was factored out of the choice. This also demonstrates that time limitations have an effect on attention in these choice tasks.

Dhar (1996) also demonstrated that the kind of attentional shifts that are made after analyzing particular features (i.e., comparisons) are also important in indirectly influencing the tendency to avoid choosing. Two basic kinds of attentional shifts that can be identified are those to other features within the same option or those to features of alternative options. Simultaneous presentation of two options should encourage across-option shifts, whereas sequential presentation should encourage within-option shifts (comparisons). Across-option shifts of attention are consistent with the more difficult compensatory decision strategy, and consistent with this interpretation, simultaneous presentation of alternatives led to increased choice deferral. A follow-up experiment (Dhar, 1996) that also manipulated rules that participants were trained to use supports this interpretation; in that study, comparing across alternatives increased choice deferral when participants used a compensatory rule.



*Conflict type.* Studies of choice deferral have also indicated that manipulations embedded in the typology of conflict proposed by Kurt Lewin (1931) and explored by Neal Miller (1944, 1959) may exert an influence on decision avoidance. In Miller's (1944, 1959) drive theory of conflict, goals are of two basic types: approach and avoidance, signifying whether the organism seeks to obtain or to avoid goal objects. Conflicts can arise when an organism has to choose between two mutually exclusive goal objects it desires (approach–approach), between two that it wishes to avoid (avoidance–avoidance), or how to act toward a goal it is both attracted to and repulsed by (approach–avoidance).

Dhar and Nowlis (1999) manipulated the type of conflict human decision makers were faced with through the valence of the common and unique features of choice options. If the two options had unique bad features and common good features, the researchers characterized the situation as *avoidance–avoidance*, assuming the common features cancelled out and the decision maker would have to choose which undesirable feature was less repulsive. When the situation was reversed and the options had common bad and unique good features, the conflict was termed *approach–approach* (approach–avoidance conflicts were not included in this experiment). When the researchers manipulated time pressure alongside type of conflict, they found that the time pressure manipulation decreased choice deferral as predicted, but only when the individual faced an approach–approach conflict. They interpreted this as the effect of increased attention to the unique good features, which thus increased the perceived attractiveness of the option set. However, this interpretation implies that avoidance–avoidance conflicts would, under time pressure, lead to more attention to negative features and lead to more choice deferral under time pressure compared with unlimited time, a result that did not obtain.

In Miller's (1944, 1959) theory and research on conflict, approach–approach conflicts were supposed to produce only minimal vacillation. Vacillation is a state in which the organisms tested would either falter in their intentional movements and halt or would move toward one goal, slow their approach, and retreat, only to cease retreat and begin approaching again. It may be likened to a behavioral measure of indecision. According to Miller's (1944, 1959) analysis, only avoidance–avoidance and approach–avoidance conflicts produced any important degree of conflict, as measured by vacillation. To the degree that Miller's (1944, 1959) conflict can be mapped on to selection difficulty and vacillation can be mapped on to choice deferral, these results conform well to the original predictions. Because approach–approach conflicts are not associated with a high degree of conflict, time pressure could easily sway an individual to cease indecisive behavior and act. When there is no pressure to decide quickly, though, the individual may prefer to prolong search because deferral may be rewarded by superior options that erase the conflict altogether. Avoidance–avoidance and approach–avoidance conflicts are less susceptible to this manipulation because the conflict is difficult and entails potential negative consequences. An individual does not yield to time pressure and choose because the aversive contingencies of the choice powerfully motivate organisms to escape these situations; so long as avoidant options are available, they are preferred regardless of time limitations. These competing interpretations of the effect of conflict cannot be arbitrated with the insufficient evidence available: Avoidance–avoidance claims that attentional focus and preference

uncertainty mediates the effect of conflict type, whereas approach–avoidance holds a more important, direct influence for conflict type on the difficulty of the decision. Both paths have been tentatively sketched into the model.

*Neuroticism.* Although individual differences have not been studied in mainstream decision avoidance research, they are of primary interest to researchers in the field of procrastination, itself an individual difference. There are several definitions of procrastination, but the studies most relevant to decision avoidance use a definition based on an individual's hesitation to make decisions, termed *decisional procrastination*.

In a set of correlational studies, the personality factor of Neuroticism (emotional reactivity) accounted for most of the observed variance in decisional procrastination (Milgram & Tenne, 2000). The increased anxiety experienced by individuals who score higher on indicators of neuroticism may account for their predilection for avoiding choice. Thus, I have tentatively linked neuroticism to negative emotions generated by a choice situation, with all the concomitant influences on decision making that anticipatory negative emotions have been shown to produce thus implied. Although evidence is just beginning to accumulate regarding this potential link, there are other studies in the area of procrastination that are suggestive of a link between personality factors related to neuroticism or trait anxiety and decisional procrastination (Berzonsky & Ferrari, 1996; Effert & Ferrari, 1989; Ferrari, 1991; Ferrari & Dovidio, 2000; Haycock, McCarthy, & Skay, 1998; McCown & Johnson, 1991; Orange, 1997).

*Trade-off difficulty.* As discussed earlier, trade-offs between valued attributes produce negative emotions before a choice is made, thus differentiating this factor from regret or anticipated regret. Research demonstrates that simply manipulating the number of trade-offs is sufficient to produce this effect (Luce, 1998; Luce et al., 1997). A trade-off is said to be required if an option is not clearly superior on all features compared with its alternatives but is deemed both more and less desirable on the basis of comparisons of particular features or attributes. The more such comparisons are required to assess the differences between the options, the more trade-offs are required to reach a choice. (For a review of the effects of trade-off difficulty on negative emotion and decision making, see Luce, Bettman, & Payne, 2001.)

*Trade-off category.* The category of the attributes that must be traded off against each other merits consideration when predicting trade-off difficulty. Beattie and Barlas (2001) demonstrated that noncommodities (attributes that are not typically traded in a market) are difficult to trade off with other noncommodities, as measured by decision time. In that study, noncommodities were traded with commodities or currencies fastest, apparently because participants used a lexicographic choice rule that dictated preference of the noncommodity over the other two categories. Consistent with this notion, noncommodities were rated as more important and less tradable than the other two categories. I hypothesize that the observed differences in decision time in this study are consistent with preferences for decision avoidance, although these reactions have not been measured. The path from trade-off category to decision avoidance is long and indirect but fundamentally simple: The categories of attributes influence the difficulty of trade-offs, and difficulty of trade-offs influences decision strategy. When trading noncommodities off with other noncommodities, individ-

uals feel more negative emotion because of the increased importance and difficulty associated with these decisions. Thus, they are more vigilant in the processing and use more compensatory strategies, which further increase decision difficulty. When the trade-offs are between commodities and other commodities or noncommodities and other categories, they are less difficult; less negative emotion is experienced, and noncompensatory rules may be used (especially in the case of trade-offs between noncommodities and other categories).

### *Consequences of Decision Avoidance*

*Experienced regret.* The actual level of emotions that are anticipated earlier in the decision-making process should be measured. Regret can be measured by direct self-report, although this method has pitfalls, such as the slippage between the participant's definition of regret versus the experimenter's theoretical definition (Ordóñez & Connolly, 2000; Zeelenberg, van Dijk, & Manstead, 2000). Thus, a more formal definition is appropriate: Regret is a negatively valenced emotion that is marked by generation of upward counterfactual thoughts. Individuals mentally simulate prior event sequences, altering details (particularly their own actions and decisions) and observe imagined outcomes. Upward counterfactuals define regret in that the comparison of the counterfactual outcome to the achieved outcome alerts decision makers to the fact that they could have obtained a better outcome, and negative emotions are experienced concomitantly with this recognition. Although two studies have challenged the association of counterfactuals with regret (e.g., N'gbala & Branscombe, 1997; Seta et al., 2001), these studies contradict themselves by including counterfactual thinking as part of the definition of the theoretical term *regret*. This term need not correspond exactly to folk-psychological definitions of regret, which participants are ostensibly using in these studies. Such studies base their claims on nonrelationships between number of specific counterfactuals and general, self-reported regret. The measurements operate at different levels of specificity, and furthermore, correlations of a scale to an open-ended tabulation result in a regression equation prone to restricted range limitations. Moreover, the absolute number of counterfactuals may not be the only or most important aspect of counterfactual thinking; indeed, it may be that the ease of generating a counterfactual, the amount of time spent thinking counterfactually, or the vividness of the thoughts is more important than the raw number of thoughts (Anderson, 2002b). Subsequent research should take up these issues in accounting for these apparent anomalies in the definition of regret, but it is satisfactory for the time being to note that most researchers are satisfied by the identification of experienced regret with unpleasant emotions associated with ex post facto upward counterfactuals (see Table 3).

Other things being equal, selection of status quo, omission, or deferral options should act to reduce regret when bad outcomes are experienced. There are cases in which deferral is expected to lead to more regret, such as those in which one expects future opportunities to be worse (Simonson, 1992). Thus, this relationship may not be linear, but interactive, depending on the level of other variables. It should be noted that *actual regret* as depicted here would likely have a large residual. Experienced postdecisional regret is affected by many factors other than the description of the

choice made. Presently, there is no reason to believe that the factors that affect anticipated and actual regret are any different; therefore one may assume that each link made from other variables to anticipated regret also will hold at the level of actual regret. In other words, there is no evidence to suggest that anticipated regret is not essentially accurate; individuals may make errors in their predictions of future emotion, but there are no known systematic biases in this forecast. It is possible that new research could find situations that produce inaccuracy in anticipated regret; there is research with emotions other than regret that demonstrates bias in the prediction of emotion (Read & Loewenstein, 1999; Ubel et al., 2001; see also Loewenstein & Schkade, 1999, for a review).

*Fear regulation.* I propose that a second kind of emotion is affected by decision avoidance. In contrast to anticipated regret, the second form of emotional outcome deals with the regulation of emotions that were occurring continuously prior to selection. As actual regret is the outcome pertinent to anticipated regret, fear regulation is the outcome pertinent to the anxiety generated by selection difficulty. It is difficult to say much specific about this emotional outcome, though it has occasionally been measured following decision avoidance.

In the empirical work identifying this outcome (Luce, 1998; Luce et al., 1997), it was referred to solely as *negative emotion*. Other researchers have demonstrated that it is important to be specific about the emotion that is hypothesized to have an impact on choice or judgment (van der Pligt, Zeelenberg, van Dijk, de Vries, & Richard, 1998; Zeelenberg, van Dijk, Manstead, & van der Plight, 2000). To this end, it is worthwhile to examine the method Luce (1998) and Luce et al. (1997) used to assess this emotional outcome. Participants in these studies were asked to complete an adjective checklist for emotions they were experiencing; the list of critical negative emotions included *afraid*, *edgy*, *guilty*, *irritable*, and *worried* (fillers such as *emotional* and *peaceful* were also included). Thus, a limitation of the research is that the dependent measure is very general—even regret was included as a factor. No measures of specific emotions following decision avoidance have been reported to date. Many of the emotion terms map on to what Loewenstein et al. (2001) termed *anticipatory emotions*, unpleasant states experienced in advance of a risky decision (e.g., afraid, anxious, nervous, tense, etc.). But there are almost as many that do not (e.g., angry, remorseful, regretful, sad, etc.). Research is lacking that identifies even categories of negative emotion resulting from or reduced by decision avoidance. Thus, what is put forth here in discussing this second emotional outcome is, of necessity, speculative.

I have termed the outcome *fear regulation* on the hypothesis that what differentiates these emotions from postdecisional regret is that they are emotions experienced prior to the decision; that is, they are anticipatory emotions that can be summarily categorized as fear. Individuals fear failing at challenging tasks such as forming optimal decisions in uncertain task environments in which adverse outcomes are possible (i.e., decision making under risk). Choosing an avoidant option does decrease the composite measure of negative emotion (Luce, 1998; Luce et al., 1997). Assuming this effect is not carried solely by the measure of regret (a highly unlikely circumstance), it is possible that the reduced negative emotion is due primarily to a decrease in anticipatory negative emotions generated earlier in the decision process. In the case that

Table 3  
*Some Key Definitions of and Statements Pertaining to Regret in Recent Psychological Literature*

Study	Quote
Definitions of regret	
Bell (1982)	$v(x) - v(y)$ measures regret [ $x$ = final assets; $y$ = foregone assets that could have been obtained from an alternative course of action; $v$ = a subjective value function]. (p. 966)
Loomes & Sugden (1983)	If [counterfactual outcome] $x_{2j}$ is a more desirable consequence than [experienced outcome] $x_{1j}$ , the individual may experience regret. (p. 808)
Landman (1987)	If regret is an emotion, it is an emotion that is largely cognitive. (p. 137)
	Regret is a more or less painful cognitive/affective state of feeling sorry for losses, transgressions, shortcomings or mistakes. (p. 153)
Zeelenberg (1999)	Regret is a negative, cognitively based emotion that we experience when realizing or imagining that our present situation would have been better, had we decided differently. (p. 94)
Regret and choice	
Zeelenberg & Beattie (1997)	Regret is experienced when it turns out, in retrospect, that you should have chosen something different. . . . Regret is an aversive state, and . . . we are apt to choose in such a way that we minimize future regrets. (p. 64)
Tsiros & Mittal (2000)	Comparison between the chosen and foregone alternative can influence behavior. If the comparison is unfavorable (foregone brand performs better than chosen brand), the consumer will experience regret. (p. 401)
Regret and responsibility	
Simonson (1992)	Regret and responsibility should be regarded as separate constructs. Regret represents sorrow over something done or not done, regardless of whether the decision maker was responsible for the outcome. (p. 117)
Connolly et al. (1997)	Within the confines of our procedure, it seems difficult to argue for any large role of regret in the sense of self-blame for a poor decision. (p. 83)
Zeelenberg et al. (1998)	Contrary to the findings of Connolly et al. (1997) the present research shows clear effects of responsibility on regret. (p. 267)
Ordonez & Connolly (2000)	The original claim . . . that regret is unaffected by decision responsibility is wrong. . . . Such responsibility does appear to increase the expectation of regret, but not to be a necessary precondition for it. (p. 138)
Zeelenberg, van Dijk, & Manstead (2000)	As they correctly point out, a nonnegligible level of regret is reported by participants in [the condition in which participants are ostensibly not responsible for the outcome]. However, it is worth noting the responsibility ratings in these conditions are also greater than 1 (i.e., the minimum point on the scale). (p. 151)
Regret and counterfactual thinking	
Kahneman & Miller (1986)	The difference in affective state . . . appears to arise from the availability of a counterfactual construction. . . . A preferred alternative is more available (normal) . . . which makes [the] experience more upsetting. (p. 145)
Gilovich & Medvec (1995b)	The concern in this case is how outcomes are compared, not to preexisting expectations about what should have been, but with after-the-fact representations of what might have been. (p. 259)
N'gbala & Branscombe (1997)	In general, mutating the action or inaction is not correlated with regret ratings. (p. 341)
Seta et al. (2001)	Decisions to act or not to act that are especially desirable may produce especially low levels of regret, independent of perceivers' ability to engage in counterfactual thinking. (p. 861)
Anderson (2002b)	These findings strongly support the hypothesis that counterfactual thinking is indeed crucially linked to regret and is also affected by inconsistency, contrary to prior claims.

other emotional measures contribute to this composite decrement, this conclusion holds: One can still differentiate anticipatory emotion, and other emotions, so long as they are not solely responsible for the effect, are not important outcomes in this model. Regret and fear have been specified as interesting outcomes because they refer back to states earlier in the model of the decision process; I

recognize that there are many outcomes of decision avoidance not specified here, and these may even include some other emotions.

Finally, note that emotions are usually measured in decision studies by self-report. Although this may be justifiable on the grounds that many consider emotions to exist primarily as phenomenological states, it would be useful to measure physi-

ological correlates of emotion and arousal, at least as an adjunct, in some future work on the topic. Hastie (2001) called the attention of decision theorists to the fact that there is little agreement on the definition of emotion and proposed the following three-level answer: Emotions consist of cognitive appraisals, particular physiological responses, and a phenomenological experience. Thus, it is important for research not only to be specific about the emotion under investigation but also to measure it at multiple levels.

### *Summary of the Rational–Emotional Model*

Although a myriad of factors have been discussed as indirect and direct influences on decision avoidance, and although I have also discussed some consequences of decision avoidance that pertain to its causes, the basic picture remains simple. Individuals may choose decision avoidance for unambiguously rational reasons: the costs of alternatives to those avoidant options outweigh the benefits of inaction, they want to maintain the status quo, or they want to prolong the choice. Furthermore, high levels of anticipated regret associated with some of the choice options can motivate an individual to seek escape by means of a justification such as the default option or by prolonging the decision in hopes of avoiding responsibility for it. The third basic path to decision avoidance has its effect through the selection difficulty an individual faces; when it is unclear which option best meets one's important goals, one may either anticipate regret if preferences are not met by his or her choice or simply choose an avoidant option (especially deferral) in hopes of escaping the decision, mitigating negative emotion, or later discovering a clearly superior option.

Throughout the discussion of different factors, alternative hypotheses have been suggested that cannot be disproven on the basis of present research. I have also found areas in which the evidence for linkage is weak or for which there are alternative mechanisms that could be postulated for an indirect influence. The model should be looked at as a summary of what can be concluded on the basis of present evidence and as a guide for future research that may undermine the links presented in the model and/or suggest new mechanisms, new components, and the elimination or replacement of present components.

I invite empirical criticism of the model because the primary motivations for presenting it have been to (a) introduce this research to a wider audience that may have new ideas, (b) to represent the field to itself in a way that individual researchers may not see it, and (c) to suggest a few ways in which no one may have seen this area of research along the way. Such a representation is useful to the extent that it invites revision and argumentation that can only promote accuracy. The accuracy of this model is important because decision avoidance has societal consequences. To choose an example of just one area of life in which decision avoidance is relevant, consider health care decisions. As the consumer movement grows and patients seek to have more say about medical decisions involving their life, it is important that the potential for decision avoidance be minimized (Spranca, 2001). The intensity of selection difficulty and anticipated regret in this area of decision making can be very high, and as decisions are increasingly shifted to consumers, they may seek avoidant options when confronted with difficult decisions. The consequences of accepting inaction or the status quo in maintaining one's health can

be too high to justify reduction of fear and coping with anticipated regret, but health care consumers are likely to respond to immediate emotional concerns rather than projected outcomes. Spranca's (2001) call for research on how information can be made available to consumers in a way that increases their confidence in their ability to make a decision is important to attend to, and some of the factors reviewed in this article may assist in the effort to improve health care—but only to the extent that theory supplies an accurate model. The only way to improve the accuracy of this model in many of the areas is to provide more empirical research and perhaps to use some common procedures in the research that would permit quantitative comparisons of multiple studies.

*Summary of contribution and suggestions for future research.* The rational–emotional model of decision avoidance suggests that several observed patterns of decision making are united by common antecedents and consequences, reflecting common underlying motivations. I have marshaled evidence from previous literature to compel this case, but it remains for future work to test how far the components of this model can be pushed in explaining avoidant decisions.

There is significant advantage to be gained by viewing decision avoidance phenomena as related and using this framework of common causes as a heuristic for guiding future research. The effects described in this article should not be viewed in isolation; results from a study on one form of decision avoidance now have testable implications for all of the other forms because the rational–emotional model suggests that most causes of decision avoidance are nonspecific to any individual form of avoidance. By extension, the model shows that inasmuch as there is a great deal of overlap in the identified causes of decision avoidance, more needs to be done to understand why an individual might prefer one form of decision avoidance over another in a situation in which there is a choice.

The rational–emotional model also implies that the effects of emotion on choice are more general than the emotions people experience and anticipate regarding the details of an option. More abstract properties such as the category of the option are relevant, and there may be categories of options other than avoidant and nonavoidant that are affected by emotion in similar ways. In other words, emotions affect not only particular options people are attracted to or repelled from but also their decisions about whether to make a decision between alternatives in a systematic manner.

One particular element of the model that needs attention is the claim that the causes of decision avoidance are sufficient but not necessary. If true, this should have considerable implications for study in areas of the literature in which investigations have been focused on one, or a subset, of the proposed causes. It is an important claim because if it is correct, prior hypotheses about the causes of any particular form of decision avoidance that appear to be disconfirmed (by showing a decision avoidance effect in the absence of the proposed cause) might have been inappropriately discarded because the cause was inaccurately thought of as necessary and sufficient.

The Appendix presents a variety of unanswered questions raised by viewing forms of decision avoidance within the rational–emotional model. For the most part, these focus on outlining testable new predictions implied by the current model (points 1, 2, 3, 4, 5a, and 5b), but they also identify major gaps in the literature (points 1b, 1c, 3, 4, 5c, and 6). Clearly, there is much to



be learned about decision avoidance, and much of what remains unknown is central to a clear understanding of decision avoidance.

In summarizing the literature with this model, several recommendations for hesitant decision makers emerge. These suggestions remain preliminary, given the unknowns remarked on above, and themselves may be tested as interventions that could provide circumstantial evidence regarding the rational–emotional model. In many cases (e.g., quantum physics), what convinced a larger group of a theory’s soundness was not esoteric experiments, but rather that it produced tangible benefits (Horgan, 2000). It is thus important that as scientists we focus, not on vague distinctions between basic and applied research, but on the principle that so-called applied work reinforces theory. Thus, the rational–emotional model and future advances in decision avoidance should suggest practical applications that should then be tested. Thus, Table 4 lists the most salient interventions for indecisive individuals implied by the rational–emotional model.

There are many other questions about decision avoidance that are of interest. For one, how should these phenomena be considered from the standpoint of rationality? Are they irrational because they sometimes lead one to violate the rules of coherence, or are they rational because they serve one’s affective goals? Does the answer perhaps depend on whether the decision is private (affects primarily the decision maker) or public (a decision made on behalf of others and primarily affecting others)? These questions are important to address, especially in light of research suggesting that public officials and professionals are just as affected by emotional components of the model that pertain only to them, which could affect the decisions they make for others. In fact, there may be important public policy implications of research and theory along these lines.

Another interesting question regards the costs of decision avoidance. What tangible costs do we as individuals, organizations, or societies trade off for the (often temporary) security provided by

decision avoidance? Are these costs more, less, or about equal to what we anticipate when making avoidant decisions? As noted above, it is difficult to identify and quantify all these costs (though it should be possible to manipulate in experimental research), but in formulating policy recommendations, or even recommendations to individuals, it is important to know what they are.

*Conclusion.* People are used to thinking of emotion as a lawless force that impels them to various actions. *Crimes of passion* are extreme cases of emotional influence, but the term actually represents a biased belief, propounded in both intellectual circles and in folk theories, that emotion is a force that moves individuals toward ever more irrational and extreme behaviors. A common belief is that humanity needs to exercise prudence, restraint, and rationality in the face of these puzzling emotions with which it is saddled. This idea is not unique to the present time, having been advocated by the Stoics of Greece and Rome (200–300 B.C.E.). Psychological research is beginning to paint a different, complementary picture in which emotion is a prime source restraining humanity from taking action, from changing the status quo, from creativity, and from acting quickly.

For a large part of the 20th century American psychology generally portrayed humans as rather active, busy organisms engaging in many behaviors, whereas European psychology tended to envisage a humanity in constant contemplation, in line with stereotypes of these two cultures. Assuming this is an accurate characterization, perhaps the research reviewed in this article and the further investigation stimulated by that research will go some way in bridging significant theoretical gaps in psychology. In understanding decisions not to act and to prolong information search, the field may reveal something about distinctions and relationships among cognition, emotion, and action; we as researchers might hope to bridge the psychology of placid, removed information processing and the active psychology of behavior.

Table 4

*Recommendations to the Indecisive Based on the Rational–Emotional Model of Decision Avoidance*

Recommendation	Explanation
Determine whether the indecision is justified.	There may be reasonable costs of changing the status quo, acting, or deciding too soon that one is attempting to avoid incurring.
Reevaluate the importance of protecting oneself from regret or anxiety.	Research suggests that negative emotion due to selection difficulty and postdecisional regret are feelings one attempts to minimize by avoiding a decision. When troubled by indecision, determine whether this may be the source of indecisiveness and then decide whether meeting this emotional goal is worth the potential costs of indecisiveness.
Reexamine beliefs or justifications that prevent decisiveness.	Many people have beliefs or values instilled by their culture, subculture, or family that undermine their confidence in or willingness to make decisions. These values are arbitrary, to a degree, and worth reconsidering if they create difficulties in decision making.
Seek more conclusive information to resolve preference uncertainty.	Part of the motivation for deferring choice is uncertainty about which alternative would best meet one’s goals. If this is the case, hesitation might be reasonable, but one should be certain that the time gained by deferral is spent seeking information that would resolve the dilemma rather than prolonging it by avoiding reminders of the anxiety-provoking decision.
Use a decision rule appropriate to the situational demands.	Considering trade-offs is valuable when making a decision, but it takes time and tends to promote deferral and other avoidant choices. Determine whether the decision is important enough to expend this effort, as well as whether one has time to use this strategy. If the answer to either question is “no,” consider using a simpler decision rule that is based on one or a few important features of the alternatives rather than considering every detail.
Heed this practical advice to resolve preference uncertainty.	When faced with preference uncertainty between two mutually exclusive courses of action, flip a coin to “decide” the course of action. Before observing the outcome, one may note a desire to observe the coin favoring one course over the other, and perhaps this resolves the preference uncertainty, making the coin’s “choice” irrelevant.

Finally, a cautionary note about debating the rationality of emotional influences on decision: It would appear that in some ways, the classic version of rationality espoused by philosophers and decision theorists alike may be a false ideal. Instead of trying to reconcile regret and actual human behavior with a rational scheme, perhaps psychologists should instead be investigating the “why” behind emotional influences on behavior at the level of individual effects as well as at the level of the species. Why would evolution produce organisms that are sensitive to emotions that produce suboptimal decisions? Evolution by means of natural selection also produced interesting and useful adaptations such as legs and wings, yet the wheel has eluded the process entirely. Perhaps the same holds true for rationality; rational human decision making, much like the wheel, has to be invented. But it would be unwise to saw off our legs for wheel implants without understanding why and how the legs got there in the first place. Understanding decision avoidance is one step toward placing emotions in context, and much remains to be learned about it, including its functionality.<sup>5</sup>

<sup>5</sup> For a few starting points into this sort of inquiry, including both kinds of analyses, see Damasio (1994), Dawes (2001), Hammond (2000), and Lazarus and Lazarus (1994).

## References

- Anderson, C. J. (2001a, April). *Inaction inertia and counterfactual regret: Byproduct or cause?* Poster presented at the annual meeting of the Eastern Psychological Association, Washington, DC.
- Anderson, C. J. (2001b, November). *Regret as an illusory motivator of inaction inertia: Introspections diverge from observations.* Poster presented at the annual meeting of the Society for Judgment and Decision Making, Orlando, FL.
- Anderson, C. J. (2002a). *Inaction inertia with and without regret.* Manuscript in preparation, University at Albany, State University of New York.
- Anderson, C. J. (2002b). *Paths from inconsistency to regret and rejoicing lead through counterfactual thinking.* Manuscript submitted for publication.
- Anderson, C. J. (2002c). *The will of God and the ability to decide: Subcultures influence decisiveness through values.* Manuscript in preparation, University at Albany, State University of New York.
- Anderson, C. J., & Zeelenberg, M. (2002). *Inaction as a mobilizing force.* Manuscript in preparation.
- Arkes, H. R., Kung, Y., & Hutzel, L. (2002). Regret, valuation, and inaction inertia. *Organizational Behavior and Human Decision Processes*, 87, 371–385.
- Baron, J. (1992). The effect of normative beliefs on anticipated emotions. *Journal of Personality and Social Psychology*, 63, 320–330.
- Baron, J. (1994). Nonconsequentialist decisions. *Behavioral and Brain Science*, 17, 1–10.
- Baron, J., & Ritov, I. (1990). Reluctance to vaccinate: Omission bias and ambiguity. *Journal of Behavioral Decision Making*, 3, 263–277.
- Baron, J., & Ritov, I. (1994). Reference points and omission bias. *Organizational Behavior and Human Decision Processes*, 59, 475–498.
- Beattie, J., & Barlas, S. (2001). Predicting perceived differences in tradeoff difficulty. In E. Weber, J. Baron, & G. Loomes (Eds.), *Conflict and tradeoffs in decision making* (pp. 25–64). New York: Cambridge University Press.
- Beattie, J., Baron, J., Hershey, J. C., & Spranca, M. D. (1994). Psychological determinants of decision attitude. *Journal of Behavioral Decision Making*, 7, 129–144.
- Bell, D. E. (1982). Regret in decision making under uncertainty. *Operations Research*, 30, 961–981.
- Bell, D. E. (1985). Putting a premium on regret. *Management Science*, 29, 117–120.
- Berzonsky, M. D., & Ferrari, J. R. (1996). Identity orientation and decisional strategies. *Personality and Individual Differences*, 20, 597–606.
- Briley, D. A., Morris, M. W., & Simonson, I. (2000). Reasons as carriers of culture: Dynamic versus dispositional models of cultural influence on decision making. *Journal of Consumer Research*, 27, 157–178.
- Butler, A., & Highhouse, S. (2000). Deciding to sell: The effect of prior inaction and offer source. *Journal of Economic Psychology*, 21, 223–232.
- Connolly, T., Ordóñez, L. D., & Coughlan, R. (1997). Regret and responsibility in the evaluation of decision outcomes. *Organizational Behavior and Human Decision Processes*, 70, 73–85.
- Cooke, A. D., Meyvis, T., & Schwartz, A. (2001). Avoiding future regret in purchase-timing decisions. *Journal of Consumer Research*, 27, 447–459.
- Damasio, A. R. (1994). *Descartes' error: Emotion, reason, and the human brain.* New York: Putnam.
- Dawes, R. (2001). *Everyday irrationality.* Boulder, CO: Westview.
- Dennett, D. (1991). *Consciousness explained.* Boston: Little, Brown.
- Dentsu Reports. (1999). Increasingly “indecisive” people. Retrieved January 2002 from [http://www.dentsu.com/trendbox/report/report\\_four.html](http://www.dentsu.com/trendbox/report/report_four.html)
- Dhar, R. (1996). The effect of decision strategy on the decision to defer choice. *Journal of Behavioral Decision Making*, 9, 265–281.
- Dhar, R. (1997a). Consumer preference for a no-choice option. *Journal of Consumer Research*, 24, 215–231.
- Dhar, R. (1997b). Context and task effects on choice deferral. *Marketing Letters*, 8, 119–130.
- Dhar, R., & Nowlis, S. M. (1999). The effect of time pressure on consumer choice deferral. *Journal of Consumer Research*, 25, 369–384.
- Dhar, R., Nowlis, S. M., & Sherman, S. J. (1999). Comparison effects on preference construction. *Journal of Consumer Research*, 26, 293–306.
- Dhar, R., & Sherman, S. J. (1996). The effect of common and unique features in consumer choice. *Journal of Consumer Research*, 23, 193–203.
- Dhar, R., & Simonson, I. (1999). Choice deferral. In P. Earl & S. Kemp (Eds.), *The Elgar companion to consumer research and economic psychology* (pp. 75–81). New York: Elgar.
- Effert, B. R., & Ferrari, J. R. (1989). Decisional procrastination: Examining personality correlates. *Journal of Social Behavior and Personality*, 4, 151–156.
- Feldman, J., Miyamoto, J., & Loftus, E. F. (1999). Are actions regretted more than inactions? *Organizational Behavior and Human Decision Processes*, 78, 232–255.
- Ferrari, J. R. (1991). Procrastination and project creation: Choosing easy, nondiagnostic items to avoid self-relevant information. *Journal of Social Behavior and Personality*, 6, 619–628.
- Ferrari, J. R., & Dovidio, J. F. (2000). Examining behavioral processes in indecision: Decisional procrastination and decision-making style. *Journal of Research in Personality*, 34, 127–137.
- Gilbert, D. T., & Ebert, J. E. J. (2002). Decisions and revisions: The affective forecasting of changeable outcomes. *Journal of Personality and Social Psychology*, 82, 503–514.
- Gilovich, T., & Medvec, V. H. (1995a). The experience of regret: What, when, and why. *Psychological Review*, 102, 379–395.
- Gilovich, T., & Medvec, V. H. (1995b). Some counterfactual determinants of satisfaction and regret. In N. J. Roese & J. M. Olson (Eds.), *What might have been: The social psychology of counterfactual thinking* (pp. 259–282). Mahwah, NJ: Erlbaum.
- Greene, J. D., Somerville, B., Nystrom, L. E., Darley, J. M., & Cohen, J. D.

- (2001, September 14). An fMRI investigation of emotional engagement in moral judgment. *Science*, 293, 2105–2108.
- Gur, R. C., Skolnick, B. E., & Gur, R. E. (1994). Effects of emotional discrimination tasks on cerebral blood flow: Regional activation and its relation to performance. *Brain and Cognition*, 25, 271–286.
- Hammond, K. R. (2000). *Judgments under stress*. New York: Oxford University Press.
- Hastie, R. (2001). Problems for judgment and decision making. *Annual Review of Psychology*, 52, 653–683.
- Haycock, L. A., McCarthy, P., & Skay, C. L. (1998). Procrastination in college students: The role of self-efficacy and anxiety. *Journal of Counseling and Development*, 76, 317–324.
- Horgan, J. (2000). *The undiscovered mind: How the human brain defies replication, medication and explanation*. New York: Touchstone.
- Inman, J., & Zeelenberg, M. (2002). Regret in repeat purchase versus switching decisions: The attenuating role of decision justifiability. *Journal of Consumer Research*, 29, 116–128.
- Isen, A. M. (2001). An influence of positive affect on decision making in complex situations: Theoretical issues with practical implications. *Journal of Consumer Psychology*, 11, 75–85.
- Janis, I., & Mann, L. (1977a). *Decision making: A psychological analysis of conflict, choice, and commitment*. New York: Free Press.
- Janis, I., & Mann, L. (1977b). Emergency decision making: A theoretical analysis of responses to disaster warnings. *Journal of Human Stress*, 3, 35–48.
- Ji, L., Yates, J. F., & Oka, T. (2000, November). *Are Americans more decisive than Japanese and Chinese?* Poster presented at the Society for Judgment and Decision Making Conference, New Orleans, LA.
- Kahneman, D., & Miller, D. T. (1986). Norm theory: Comparing reality to its alternatives. *Psychological Review*, 93, 136–153.
- Kahneman, D., & Tversky, A. (1982, January). The psychology of preferences. *Scientific American*, 246, 160–173.
- Kordes-de Vaal, J. (1996). Intention and the omission bias: Omissions perceived as nondecisions. *Acta Psychologica*, 93, 161–172.
- Landman, J. (1987). Regret: A theoretical and conceptual analysis. *Journal for the Theory of Social Behavior*, 17, 135–160.
- Landman, J. (1988). Regret and elation following action and inaction: Affective responses to positive versus negative outcomes. *Personality and Social Psychology Bulletin*, 13, 524–536.
- Larrick, R. P., & Boles, T. L. (1995). Avoiding regret in decisions with feedback: A negotiation example. *Organizational Behavior and Human Decision Processes*, 63, 87–97.
- Lazarus, R. S., & Lazarus, B. N. (1994). *Passion and reason: Making sense of our emotions*. New York: Oxford University Press.
- Lewin, K. (1931). Environmental forces. In C. Murchison (Ed.), *A handbook of child psychology* (pp. 590–625). Worcester, MA: Clark University Press.
- Loewenstein, G., & Schkade, D. (1999). Wouldn't it be nice? Predicting future feelings. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: Foundations of hedonic psychology* (pp. 85–105). New York: Russell Sage Foundation.
- Loewenstein, G. F., Weber, E. U., Hsee, C. K., & Welch, N. (2001). Risk as feelings. *Psychological Bulletin*, 127, 267–286.
- Loomes, G., Starmer, C., & Sugden, R. (1991). Observing violations of transitivity by experimental methods. *Econometrica*, 59, 425–439.
- Loomes, G., Starmer, C., & Sugden, R. (1992). Are preferences monotonic? Testing some predictions of regret theory. *Economica*, 59, 17–33.
- Loomes, G., & Sugden, R. (1983). Regret theory: An alternative theory of rational choice under uncertainty. *Economic Journal*, 92, 805–824.
- Luce, M. F. (1998). Choosing to avoid: Coping with negatively emotion-laden consumer decisions. *Journal of Consumer Research*, 24, 409–433.
- Luce, M. F., Bettman, J. R., & Payne, J. W. (1997). Choice processing in emotionally difficult decisions. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 23, 384–405.
- Luce, M. F., Bettman, J. R., & Payne, J. W. (2001). Emotional decisions: Tradeoff difficulty and coping in consumer choice. *Monographs of the Journal of Consumer Research*, 1.
- Mann, L., Radford, M., Burnett, P., Ford, S., Bond, M., Leung, K., et al. (1998). Cross-cultural differences in self-reported decision-making style and confidence. *International Journal of Psychology*, 33, 325–335.
- Markman, K. D., Gavanski, I., Sherman, S. J., & McMullen, M. N. (1993). The mental simulation of better and worse possible worlds. *Journal of Experimental Social Psychology*, 29, 87–109.
- McCown, W., & Johnson, J. (1991). Personality and chronic procrastination by university students during an academic examination period. *Personality and Individual Differences*, 12, 413–415.
- Milgram, N., & Tenne, R. (2000). Personality correlates of decisional and task-avoidant procrastination. *European Journal of Personality*, 14, 141–156.
- Miller, N. E. (1944). Experimental studies of conflict. In J. McVicker Hunt (Ed.), *Personality and the behavior disorders* (Vol. 1, pp. 431–465). New York: Ronald Press.
- Miller, N. E. (1959). Liberalization of basic S-R concepts: Extensions to conflict behavior, motivation, and social learning. In S. Koch (Ed.), *Psychology: Vol. 2. A study of a science* (pp. 196–292). New York: McGraw-Hill.
- N'gbala, A., & Branscombe, N. R. (1997). When does action elicit more regret than inaction and is counterfactual mutation the mediator of this effect? *Journal of Experimental Social Psychology*, 33, 324–343.
- Nisbett, R. E., & Wilson, T. D. (1977). Telling more than we can know: Verbal reports on mental processes. *Psychological Review*, 84, 231–259.
- Orange, C. (1997). Gifted students and perfectionism. *Roeper Review*, 20, 39–41.
- Ordóñez, L. D., & Connolly, T. (2000). Regret and responsibility: A reply to Zeelenberg et al. (1998). *Organizational Behavior and Human Decision Processes*, 81, 132–142.
- Payne, J. W. (1982). Contingent decision behavior. *Psychological Bulletin*, 92, 382–402.
- Payne, J. W., Bettman, J. R., & Johnson, E. J. (1993). *The adaptive decision maker*. New York: Cambridge University Press.
- Read, D., & Loewenstein, G. (1999). Enduring pain for money: Decisions based on the perception and memory of pain. *Journal of Behavioral Decision Making*, 12, 1–17.
- Redelmeier, D. A., & Shafir, E. (1995). Medical decision making in situations that offer multiple alternatives. *Journal of the American Medical Association*, 273, 302–305.
- Riis, J., & Schwarz, N. (2000, November). *Status quo selection increases with consecutive emotionally difficult decisions*. Poster presented at the meeting of the Society for Judgment and Decision Making, New Orleans, LA.
- Ritov, I. (1996). Probability of regret: Anticipation of uncertainty resolution in choice. *Organizational Behavior and Human Decision Processes*, 66, 228–236.
- Ritov, I., & Baron, J. (1990). Reluctance to vaccinate: Omission bias and ambiguity. *Journal of Behavioral Decision Making*, 3, 263–277.
- Ritov, I., & Baron, J. (1992). Status quo and omission biases. *Journal of Risk and Uncertainty*, 5, 49–62.
- Ritov, I., & Baron, J. (1995). Outcome knowledge, regret, and omission bias. *Organizational Behavior and Human Decision Processes*, 64, 119–127.
- Ritov, I., & Baron, J. (1999). Protected values and omission bias. *Organizational Behavior and Human Decision Processes*, 79, 79–94.
- Roese, N. J. (1997). Counterfactual thinking. *Psychological Bulletin*, 121, 133–148.
- Roese, N. J. (1999). Counterfactual thinking and decision making. *Psychonomic Bulletin and Review*, 6, 570–578.
- Sabini, J., & Silver, M. (1982). *Moralities of everyday life*. New York: Oxford University Press.

- Samuelson, W., & Zeckhauser, R. (1988). Status quo bias in decision making. *Journal of Risk and Uncertainty*, 1, 7–59.
- Schick, F. (1997). *Making choices: A recasting of decision theory*. New York: Cambridge University Press.
- Schweitzer, M. (1994). Disentangling status quo and omission effects: An experimental analysis. *Organizational Behavior and Human Decision Processes*, 58, 457–476.
- Schweitzer, M. (1995). Multiple reference points, framing, and the status quo bias in health care financing decisions. *Organizational Behavior and Human Decision Processes*, 59, 69–72.
- Seta, J. J., McElroy, T., & Seta, C. E. (2001). To do or not to do: Desirability and consistency mediate judgments of regret. *Journal of Personality and Social Psychology*, 80, 861–870.
- Simonson, I. (1992). The influence of anticipating regret and responsibility on purchase decisions. *Journal of Consumer Research*, 19, 105–118.
- Spranca, M. D. (2001). Designing websites to empower health care consumers. In E. Weber, J. Baron, & G. Loomes (Eds.), *Conflict and tradeoffs in decision making* (pp. 300–322). New York: Cambridge University Press.
- Spranca, M. D., Minsk, E., & Baron, J. (1991). Omission and commission in judgment and choice. *Journal of Experimental Social Psychology*, 27, 76–105.
- Starmer, C., & Sugden, R. (1996). Testing for juxtaposition and event-splitting effects. *Journal of Risk and Uncertainty*, 6, 235–254.
- Starmer, C., & Sugden, R. (1998). Testing alternative explanations of cyclical choices. *Economica*, 65, 347–361.
- Sugden, R. (1985). Regret, recrimination and rationality. *Theory and Decision*, 19, 77–99.
- Tse, D. K., Lee, K., Vertinsky, I., & Wehrung, D. A. (1988). Does culture matter? A cross-cultural study of executives' choice, decisiveness, and risk adjustment in international marketing. *Journal of Marketing*, 52, 181–195.
- Tsiros, M., & Mittal, V. (2000). Regret: A model of its antecedents and consequences in consumer decision making. *Journal of Consumer Research*, 26, 401–417.
- Tversky, A., & Shafir, E. (1992). Choice under conflict: The dynamics of deferred decision. *Psychological Science*, 3, 358–361.
- Tykcinski, O. E., & Pittman, T. S. (1998). The consequences of doing nothing: Inaction inertia as avoidance of anticipated counterfactual regret. *Journal of Personality and Social Psychology*, 75, 607–616.
- Tykcinski, O. E., & Pittman, T. S. (2001). Product aversion following a missed opportunity: Price contrast or avoidance of anticipated regret? *Basic and Applied Social Psychology*, 23, 149–156.
- Tykcinski, O. E., Pittman, T. S., & Tuttle, E. S. (1995). Inaction inertia: Foregoing future benefits as a result of an initial failure to act. *Journal of Personality and Social Psychology*, 68, 793–803.
- Ubel, P. A., Loewenstein, G., Hershey, J., Baron, J., Mohr, T., Asch, D. A., & Jepson, C. (2001). Do nonpatients underestimate the quality of life associated with chronic health conditions because of a focusing illusion? *Medical Decision Making*, 21, 190–199.
- van der Pligt, J., Zeelenberg, M., van Dijk, W. W., de Vries, N. K., & Richard, R. (1998). Affect, attitudes, and decisions: Let's be more specific. *European Review of Social Psychology*, 8, 34–66.
- van Dijk, W. W., van der Pligt, J., & Zeelenberg, M. (1999). Effort invested in vain: The impact of effort on the intensity of disappointment and regret. *Motivation and Emotion*, 23, 203–220.
- Zeelenberg, M. (1999). Anticipated regret, expected feedback, and behavioral decision making. *Journal of Behavioral Decision Making*, 12, 93–106.
- Zeelenberg, M. (2002). *Inaction inertia is not caused by regret*. Manuscript in preparation, Tilburg University, the Netherlands.
- Zeelenberg, M., & Beattie, J. (1997). Consequences of regret aversion 2: Additional evidence for effects of feedback on decision making. *Organizational Behavior and Human Decision Processes*, 72, 63–78.
- Zeelenberg, M., Beattie, J., van der Pligt, J., & de Vries, N. K. (1996). Consequences of regret aversion: Effects of expected feedback on risky decision making. *Organizational Behavior and Human Decision Processes*, 65, 148–158.
- Zeelenberg, M., van den Bos, K., van Dijk, E., & Pieters, R. (2002). The inaction effect in the psychology of regret. *Journal of Personality and Social Psychology*, 82, 314–327.
- Zeelenberg, M., van Dijk, W. W., & Manstead, A. S. R. (1998). Reconsidering the relation between regret and responsibility. *Organizational Behavior and Human Decision Processes*, 74, 254–272.
- Zeelenberg, M., van Dijk, W. W., & Manstead, A. S. R. (2000). Regret and responsibility resolved? Evaluating Ordonez & Connolly's (2000) conclusions. *Organizational Behavior and Human Decision Processes*, 81, 143–154.
- Zeelenberg, M., van Dijk, W. W., Manstead, A. S. R., & van der Pligt, J. (2000). On bad decisions and disconfirmed expectancies: The psychology of regret and disappointment. *Cognition & Emotion*, 14, 521–541.



## Appendix

## Issues for Further Research in Decision Avoidance and the Rational–Emotional Model

1. *Are the direct antecedents of decision avoidance in the rational–emotional model accurate?*

- a. Are these causes truly only sufficient but not necessary?
- b. Are the effects only additive, as an initial assumption about the model might suggest, or do they interact? For example, a confluence of two or all three direct causes of decision avoidance might lead to more decision avoidance than predicted from the individual effects; or, there may be no effect without more than one cause present, potentially bearing on point 1a.
- c. Are there other variables that must be considered (e.g., self-regulation, as in the alternative explanation of inaction inertia)? Will new variables have their effect through one of the existing rational or emotional direct links, or will revision to the model be required?

2. *If correlational data were collected on avoidant and nonavoidant decisions, would it fit the full rational–emotional model?*

- a. Factor analysis could be used to determine whether a number of variables load on a few factors that represent something like anticipated regret, anxiety from selection difficulty, and a rational cost–benefit factor.
- b. Alternatively, LISREL could be used to model such decisions to determine whether they fit a more elaborate path model that includes variables that affect the direct links to decision avoidance in the rational–emotional model.

3. *Do all of the earlier antecedents in the model (those that influence the direct emotional factors) influence decision avoidance in the way they should? Many of the variables have been tested extensively with only one form of decision avoidance.*

These questions have to do with the “substitutability” of the different forms of decision avoidance: Is one form of decision avoidance substitutable for another; that is, when placed in the same situations, is one form of decision avoidance really as good as any other? Are there conditions in which a form of decision avoidance is nonsubstitutable? Current research has not identified such conditions.

- a. For example, the effects of preference uncertainty, culture, and currently experienced negative emotion in general have been tested

primarily on choice deferral; according to the model, such variables should affect status quo and omission choices in the same way.

- b. Likewise, the effects of regret have primarily been studied with regard to status quo and omission choice (and by extension, inaction inertia).

4. *Does anticipated blame account for some decision avoidance?*

In the current article, I suggest anticipated blame as a complement to anticipated regret for decision avoidance in cases in which the decision maker’s own emotions are not highly relevant. However, no one has tested whether counterfactual inferences about others’ emotions and attributions influence decision avoidance.

5. *There is substantial ambiguity regarding the inaction inertia effect: Does it fit into the model as presented here?*

- a. Is anticipated regret in fact relevant to this effect? Some initial studies that manipulate responsibility suggest it is not.
- b. If the effect can be shown to occur independently of regret, is this because regret is merely a sufficient cause, as the model contends (i.e., does regret have an effect on inaction inertia even if the effect is found without it)? The model predicts that the anxiety of selection difficulty, or a rational influence, produces inaction inertia in the absence of anticipated regret.
- c. Are there other, nonemotional contributors to inaction inertia, such as a self-regulatory function that is perhaps served by anticipated regret?

6. *When there are multiple decision-avoidant alternatives available, what then determines the particular form of decision avoidance that is preferable?*

Very few studies have included more than one kind of avoidant option, and none of these has examined determinants of preference between various forms of decision avoidance.

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