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"WOW, I COULD'VE HAD A V8!": THE ROLE OF REGRET IN CONSUMER CHOICE

By J. Jeffrey Inman and Marcel Zeelenberg

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"Wow, I Could've Had a V8!": The Role of Regret in Consumer Choice[*]

J. Jeffrey Inman
University of Wisconsin-Madison

Marcel Zeelenberg
Tilburg University

Abstract

While it offers great potential in this regard, the implications of regret theory to the context of complex, multi-attribute decision-making has gone largely unexplored. In this paper we examine the role of regret in consumer choice across three studies. In the first study, we examine the process by which regret influences subsequent decisions. We find that satisfaction only partially mediates the effect of regret on repurchase intentions. In the second study, we examine the consequences of maintaining the status quo (repeat purchase) versus action (switching) in the context of prior experience being either positive or negative. Results are consistent with prediction, offering evidence counter to the prevailing theory that action is necessarily regretted more than maintaining the status quo. Decision-makers seem less likely to blame themselves for a decision when there were good reasons (e.g., a negative prior experience) supporting it. In our final study we examine the role of anticipated regret in contexts where risk is relatively low (e.g., long distance telephone providers) and relatively high (e.g., personal computers). We manipulate the probability of feedback, predicting that subjects will gravitate toward the alternative on which feedback will be received. Results are largely supportive of our predictions. Choice share for the risky alternative is greater when feedback is expected to be received on it and is less when feedback is expected to be received on the less risky alternative. Thus, consumers appear to be *regret averse* in addition to exhibiting risk aversion. Further, this effect is greater as switching costs increase. Implications for researchers and practitioners are discussed.

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[*] J. Jeffrey Inman is associate professor of marketing at the University of Wisconsin-Madison, Madison, WI 53706, E-mail: *jinman@bus.wisc.edu* and Marcel Zeelenberg is assistant professor of marketing at Tilburg University, PO Box 90153, 5000-LE Tilburg, The Netherlands, E-mail: *M.Zeelenberg@kub.nl*. The authors thank Tracy Bell, Warren Malueg, and Ned Winsborough for their assistance with data collection and analysis.

> Let us consider some of the consequences to be expected if there does, indeed, exist such immediate post-decision salience of dissonance. Phenomenally, such salience of dissonance might be experienced as a feeling of regret, something that most of us have felt, probably, at one time or another. A person, for example, may shop around for an automobile to buy, investigate several kinds, and finally decide on which to purchase. As soon as the purchase is accomplished and final, he may well be assailed by a sudden feeling of "Oh, my, what have I done!" (Festinger 1964, p. 99)

Regret is "the painful sensation of recognizing that 'what is' compares unfavorably with 'what might have been'" (Sugden 1985, p. 77). The experience of post-decisional regret is conditional for the most part on knowledge of the outcomes of rejected alternatives. In other words, regret results from comparing the outcome (either realized or potential) of the chosen alternative to the outcome of a forgone alternative. When the forgone outcome exceeds the chosen outcome, regret follows. If the forgone outcome is worse than the received outcome, rejoicing is experienced.

As suggested by the excerpt above, regret has primarily been examined as a post-decision construct in the psychology literature (e.g., Gilovich and Medvec 1995). The retrospective mental construction of the forgone alternative (i.e., in instances where the forgone outcome is not directly observed) has been a topic of increased interest in social psychology, spawning a special volume devoted to the subject of "counterfactual thinking" (Roese and Olson 1995). In contrast, regret has been studied as a pre-choice construct by decision analysts (e.g., Bell 1982; Loomes and Sugden 1982). Empirical support for regret theory has been reported in the context of lotteries (e.g., Josephs et al. 1992; Ritov 1996; Zeelenberg et al. 1996), simple investment decisions (e.g., Zeelenberg and Beattie 1997), and negotiations (Larrick and Boles 1995). Regret has even been the subject of a best-selling non-fiction book (Landman 1993).

It is relatively easy to imagine how regret can occur in consumer brand choice - any instance in which a consumer chooses between alternatives and may later discover the performance of a forgone alternative. For example, when dining in a restaurant, someone else in the party may order a forgone alternative. Alternatively, a consumer may purchase a product, only to subsequently see the product and the forgone alternatives rated by *Consumers Reports*. While regret is by definition a post-outcome construct, a central concern vis-à-vis consumer choice is the effect of potential regret (Janis and Mann 1977) in the choice process.

Surprisingly, regret theory has received little attention in the context of the more complex, multi-attribute decisions frequently encountered by consumers. Post-consumption regret effects on satisfaction have been demonstrated (Inman, Dyer, and Jia 1997; Taylor 1997) and anticipatory regret effects have been reported in the context of whether to take advantage of a promotion (Inman and McAlister 1994; Simonson 1992). However, while it offers great potential, the relevance of regret theory to the context of brand choice has been relatively unexplored. Such is the purpose of this research – the examination of regret's effects in consumer decision-making. We begin by outlining how regret can exert an influence at several stages in the consumer decision-making process. We then explore several aspects of these influences across a series of three studies and end with a discussion of the studies' implications and directions for future research.

REGRET AND DECISION-MAKING

Figure 1 diagrams the role of regret throughout the decision-making process. Working our way backward through Figure 1, post-decision regret may result in "downstream effects" whereby psychological consequences (e.g., post-choice valuation, satisfaction) are influenced. At least two studies (e.g., Inman et al. 1997; Taylor 1997) have demonstrated that forgone outcomes influence satisfaction independently of the expectancy-disconfirmation paradigm (e.g., Oliver 1977, 1980). Further, the influence on satisfaction should lead to a corresponding effect on behavioral consequences such as repurchase intentions (Anderson and Sullivan 1993; Bearden and Teel 1983).

Whether satisfaction completely mediates the regret-repurchase intentions relationship has heretofore never been subjected to empirical test. This is the focus of Study 1. We do this by manipulating outcome feedback and assessing the effects of regret on satisfaction and subsequent purchase probability using the method described by Baron and Kenny (1986). As shown in Figure 1, we expect satisfaction to mediate the effect of regret on behavioral consequences (e.g., purchase intentions).

- Insert Figure 1 about here –

As mentioned earlier, regret occurs as a result of outcome feedback. Thus, feedback is a central issue in regret theory and several studies have shown that feedback indeed influences levels of experienced regret (e.g., Ritov and Baron 1995). Further, regret is not uniform for all decisions. Several aspects of the decision context have been shown to influence feelings of regret. For instance, decisions to take action rather than maintain the status quo tend to result in greater regret (e.g., Gilovich and Medvec 1995), as do contexts wherein the decision-maker feels more responsible for the outcome (e.g., Zeelenberg, van Dijk and Manstead 1998c). These and the other contextual variables shown in Figure 1 should moderate regret effects and are a ripe area for research.

In our second study, we examine the consequences of inaction versus action in the context of prior experience being either positive or negative. As we subsequently discuss in more detail, the decision-making literature has consistently reported that inaction tends to be valued over action (e.g., Roese and Olson 1995), presumably because the forgone alternative is more salient in the case of action (i.e., the forgone alternative is the "status quo"). We argue that there are also situations where regret may be greater in the case of inaction than action. For instance, if negative information on the current course of action is experienced but no action is taken, then greater regret should be experienced if the subsequent outcome is also negative. In such instances, action should be preferred to inaction. Thus, we anticipate a disordinal action × prior experience interaction.

Finally, regret can have "upstream effects" to the extent that feelings of regret are anticipated and considered during the decision (e.g., Janis and Mann 1977). Several researchers (Bell 1982; Inman et al. 1997; Loomes and Sugden 1982; Mellers et al. 1998) have formulated decision theories that take the probability of regret into account. Classical, prospect-based, decision making theories assume that an alternative's expected utility is solely dependent on the probabilities of the positive and negative outcomes associated with that alternative. In contrast, regret theory posits that an alternative's utility is also dependent on the potential feelings evoked by the outcomes of rejected alternatives (weighted by their probability of occurrence). Empirical work provides support for the notion that people take regret into account when making decisions (e.g., Parker, Stradling and Manstead 1996; Richard, van der Pligt, and de Vries 1996; Simonson 1992). These studies address the effect of the anticipation of regret on risk attitude and have argued that regret results in risk aversion. Several studies have found this effect on risk attitude, focusing on manipulations that make the possibility of post-decisional regret more salient.

Simonson's (1992) paper is the seminal work regarding regret effects in consumer choice. His study focused on (a) consumer decisions to make a promotional purchase in the current period versus waiting for a possibly better sale in the next period and (b) trade-offs between brand name and price. Subjects in the regret condition were asked to anticipate feelings of regret and responsibility associated with their decision and were explicitly told that they would receive outcome feedback on sale prices in both periods. Expectations of feedback and consideration of feelings of regret and responsibility resulted in subjects being more likely to make their purchase in the earlier period. Paradoxically, subjects reported that they would feel greater regret if they selected the well-known, more expensive brand, but were more likely to choose this brand than the lesser-known, cheaper alternative. A possible explanation for this is that they perceived the probability of actually regretting the purchase of the well-known brand to be very low.

In our final study we examine whether potential regret can influence consumer choice. We expand the understanding of anticipatory regret effects on several dimensions. First, we argue that the anticipation of regret could result in either risk aversion or risk seeking. Which of the two results obtains is dependent on whether feedback is expected on the risky alternative or on the less risky alternative (Zeelenberg et al. 1996). In other words, there are situations in which the risky option is the regret minimizing option (i.e., situations in which there will always be feedback on the outcome of the risky option, while the safe option will only be resolved if chosen). We manipulate probability of feedback across alternatives in four scenarios, alternating the option (i.e., risky or less risky) on which feedback will be received. If consumers are regret averse, they should choose the alternative on which feedback will be received. Interestingly, this can result in *risk seeking* behavior. Further, we expect stronger effects in contexts where switching costs are relatively high than where switching costs are relatively low.

STUDY 1

In the first study we focus on the downstream part of our regret effects continuum. This study was designed to investigate both the psychological and behavioral consequences of regretted consumer decisions. In so doing, we replicate the satisfaction-related findings of Inman et al. (1997) and Taylor (1997) and extend their work to behavioral consequences. More precisely, we test the notion that when consumers opt for a particular brand, the satisfaction they experience depends not only on the performance of the chosen brand, but also to a large extent on the regret and rejoicing produced by the feedback on the forgone alternative(s). Second, we also test whether these regret effects carry over and influence purchase intentions as well or are mediated by satisfaction.

The setup of the study is as follows. We have subjects make a choice between two products. After having chosen, they use this product in order to have direct experience with it, simulating a normal consumption experience. In addition to the information subjects may obtain from their own experience, they receive outcome feedback for both the chosen and the forgone product. This feedback is provided in the form of "*Consumer Reports*" evaluations. The evaluation of the forgone product could be better than (regret condition), worse than (rejoicing condition), or similar (neutral condition) to the chosen product. Next, satisfaction, purchase intentions and several possible covariates were assessed. This experimental setup allows us to test for psychological (i.e., satisfaction) and subsequent behavioral consequences (i.e., purchase intention) of regretted consumer decisions. It also enables us to test whether satisfaction mediates the effects of regret on subsequent purchase intentions.

Relatively little is known about the possible consequences of retrospective regret on satisfaction. Findings of three recent studies by Inman et al. (1997), Taylor (1997) and Zeelenberg et al. (1998b) provide some insight as to how this influence could take place and what form it could take. Inman et al. (1997) develop a generalized utility model of choice that incorporates regret effects. In a study involving lotteries, they find strong support for their assertion that regret influences post-choice valuation and satisfaction. Taylor (1997) makes a similar prediction and in a study of satisfaction with movies, finds that expectations concerning forgone alternatives can influence satisfaction with the chosen film. Finally, Zeelenberg et al. (1998b) focus on the phenomenology of regret and show that the experience of regret involves the tendency to kick oneself, the tendency to correct one's mistake, and the motivation to undo the event.

We predict that in the present study, consumers' satisfaction with the obtained product is partially dependent on the regret or rejoicing caused by the feedback on the forgone alternative, so that regret subjects will be less satisfied (and rejoicing subjects more satisfied) relative to subjects in the neutral condition. However, we go one step beyond simply testing for regret effects on satisfaction. We also study regret effects on subsequent purchase intentions. As can be seen from Figure 1, we expect that this effect is mediated by satisfaction with the chosen product/service. The influence of the experience of regret on consumer intentions, behavior after a regretted decision, or subsequent purchase decisions have not yet been subjected to empirical investigation.

The only published study of which we are aware that experimentally investigates the impact of experienced regret on subsequent decisions is Zeelenberg and Beattie (1997, Experiment 3). However, this study focussed on regret effects in a rather formal negotiation setting, the ultimatum game (e.g., Camerer and Thaler 1995). After subjects made their ultimatum offer they learned that it had been accepted. Next, subjects received feedback on how much less they could have offered and still had their offer accepted. Subjects whose offer could have been 10 Guilders lower experienced more regret than did subjects whose offer could have been only 2 Guilders lower. Importantly, when participants were asked to play a second round of the ultimatum game (against another responder) their offers were influenced by the amount of regret experienced - the more they regretted having offered too much money to the responder in the first game, the lower their second offer. It therefore seems that subjects engaged in a sort of regret management; they behaved in such a way that their current regret would be minimized and future regret would be avoided.

In our study, we make a number of important extensions to previous work. First, we test for regret effects in a consumer decision-making context. Most consumer choices are multi-attribute decisions, where comparisons of different products involve much more cognitive processing, integration of information, and trade-offs between different attributes, as opposed to a situation where the outcomes are monetary. Second, the subjects in our study are given direct experience with the product. Having subjects actually use the product is a way to produce stable attitudes toward the product that are more predictive of future behavior and resistant to change (e.g., Fazio and Zanna 1981), and thus provides a more conservative test of the predictions. Finally, in the present study satisfaction with the obtained product is assessed, allowing us to test for the mediational role of satisfaction to better understand the *process* by which regret influences subsequent behavior.

METHOD

Subjects and Design. Seventy-six undergraduate business students at a large Western university participated in the first study. We manipulated outcome feedback at three levels (regret, neutral, rejoicing) in a between-subjects design.

Procedure. Subjects were asked to choose between two brands of writing instruments. Half of the subjects chose between brands of retractable pens (Sheaffer and Parker) and the other half chose between brands of mechanical pencils (Staedtler and Pentel).[1] Subjects were told that the study regarded consumer decision-making for writing instruments. Upon debriefing, two subjects guessed the study's actual purpose and their results were omitted from the analysis. Prior to making their choice, subjects were informed that they would be allowed to keep the writing instrument that they chose to evaluate. This was done to increase subjects' involvement with the task. Subjects were run individually to eliminate external influences.

Subjects were given the writing instruments in the original packaging and were asked to imagine that they were considering purchasing a writing instrument for themselves. Upon deciding which writing instrument to evaluate, subjects were given that instrument to evaluate. Each subject was asked to print and write a given sentence using the chosen instrument. Following this, subjects were asked several filler questions regarding their usage of pens/pencils, brand awareness, salient attributes, and distribution channels.

Subjects were then exposed to the manipulation: a "*Consumer Reports*" evaluation of both writing instruments. Subjects were randomly assigned to one of three conditions: regret, neutral, and rejoicing. In the regret condition, subjects were exposed to a favorable evaluation of the forgone pen, coupled with an unfavorable evaluation of the chosen pen.

The valence of the evaluations was reversed in the rejoicing condition. In the neutral condition, the two pens were evaluated be being quite similar to one another. A sample condition is shown in the appendix.

Measures. Subjects were then asked several questions, scaled 1-12: difficulty in initially deciding between the two writing instruments (12=difficult), satisfaction with the chosen alternative (12=satisfied), overall evaluation of the chosen alternative (12=very good), likelihood to make the same selection given what they had learned about the two writing instruments (12=yes), importance of price (12=important), and familiarity with each brand (12=familiar). The satisfaction and evaluation measures were summed to create a satisfaction measure (α=0.90). As a manipulation check, subjects were also asked the price they would expect to pay for each writing instrument.

In terms of the purchase intentions question, we made it clear that subjects were to provide their likelihood of making the same selection "given what you know now" (i.e., the performance of the chosen writing instrument and the "*Consumer Reports* evaluation" of both writing instruments). We designed the question to provide a measure of the effect of regret on the subsequent choice (i.e., on repurchase probability). This is particularly important in a marketing context where a product's performance is fairly consistent over time and where outcome feedback may affect the repurchase decision.

RESULTS

Table 1 shows the means by condition. First, the manipulation appears to have been successful. Subjects expected to pay more for the chosen alternative than for the forgone alternative in the regret condition (i.e., $2.29 more) and to pay less than the forgone alternative in the rejoicing condition (i.e., $2.22 less). Subjects expected to pay slightly more for the chosen alternative than for the forgone alternative in the neutral condition (i.e., $0.88 more). A 2 (pen or pencil) × 3 (regret, neutral, rejoicing) ANOVA with the difference in expected price between the chosen and forgone alternative as the dependent variable suggests that the manipulation worked. The effect for feedback condition is significant ($F(2,69)=5.96$, $p<.01$), while the category effect is not ($F(1,69)=1.34$, NS).

[1] The effect of writing instrument was not significant in any of the analyses reported subsequently.

- Insert Table 1 about here -

Our focus is the impact of choice feedback on satisfaction and purchase intentions. We expect to replicate the results of previous work on regret and satisfaction and extend this work to examine the mediating role of satisfaction in regret effects on purchase intention. On the first count, the results indeed seem to replicate prior findings. Subjects in the regret condition were less satisfied with their writing instrument than subjects in the rejoicing condition, while responses for subjects in the neutral feedback condition were between those for the regret and rejoicing groups. A 2 (pen or pencil) × 3 (regret, neutral, rejoicing) ANOVA of satisfaction with choice difficulty, importance of price, and difference in familiarity of the two brands as covariates supports our thesis that regret impacts satisfaction ($F(2,67)=7.90$, $p<.001$). The only other significant factor was choice difficulty ($F(1,67)=4.25$, $p<.05$). Interestingly, satisfaction and choice difficulty were inversely related - the more difficult the choice, the less satisfied the subjects seemed to be with their chosen alternative.

We use the method described by Baron and Kenny (1986) to test the mediational role of satisfaction in the regret-purchase intentions relationship. Specifically, we estimate the effect of outcome feedback on the proposed mediator (i.e., satisfaction) and the dependent variable (i.e., purchase intentions), both with and without incorporating the effect of the mediator. Perfect mediation is demonstrated if the independent variable exerts significant effects on the mediator as well as the dependent variable but the effect of the independent variable on the dependent variable falls to insignificance when the mediating variable is incorporated as a covariate. If the effect remains significant but the effect size significantly reduces, partial mediation is demonstrated.

We have already demonstrated the direct effect of outcome feedback on satisfaction, so we turn to the analyses involving purchase intentions as the dependent variable. As expected, the 2 (pen or pencil) × 3 (regret, neutral, rejoicing) ANOVA of purchase intentions with choice difficulty, importance of price, and difference in familiarity of the two brands as covariates returns a significant effect for outcome feedback ($F(2,67)=16.38$, $p<.001$). Purchase intentions monotonically decreased from the rejoicing condition (10.8) to the neutral condition (8.7) to the regret condition (4.9). As before, the only other significant effect is for choice difficulty ($F(1,67)=31.61$, $p<.001$) – as choice difficulty increased subjects were less likely to purchase the same brand.

When satisfaction is added as an independent variable, it demonstrates a strong effect on repurchase intentions ($F(1,66)=30.41$, $p<.001$), while the effect of choice difficulty is undiminished ($F(1,67)=26.96$, $p<.001$). Conversely, the effect of outcome feedback is slightly reduced, but remains clearly significant ($F(2,67)=9.19$, $p<.001$). Since the outcome feedback effect falls from an F statistic of 16.38 to an F statistic of 9.19 when satisfaction is added to the analysis, we conclude that *satisfaction only partially mediates the effect of regret on purchase intentions.* In other words, our results suggest that feedback has a direct effect on likelihood of repurchase. Figure 2 depicts the average level of satisfaction and purchase intention elicited at the three different levels of regret. It clearly shows why satisfaction fails to completely mediate the regret effects on purchase intentions. Between the neutral level and rejoicing, satisfaction and purchase intentions are collinear. However, they diverge in the regret condition. This pattern of results shows that insight into consumers feelings of regret may provide marketing managers with information about future purchase intentions that cannot be derived from consumer satisfaction assessments alone. It thereby underscores the importance of regret for consumer behavior researchers.

- Insert Figure 2 about here –

STUDY 2

Study 2 explores three main issues. First, we examine the differential effects of switching versus repeat purchasing on regret. Second, we expect an interaction between action and prior experience. Specifically, switching should lead to less regret when the prior experience was negative while repeat purchase should result in less regret when the prior experience was positive. Finally, we examine this phenomenon across several different consumer choice contexts.

In order to address the question of whether repeat purchases or brand switching will result in more regret we draw on the extensive stream of social psychology research addressing regret following action versus inaction (for a review see Gilovich and Medvec 1995). Virtually all of these studies show that outcomes realized through a decision to act lead to more regret than the same outcomes realized through a decision not to act. Gilovich and Medvec (1995) conclude that this is "the clearest and most frequently replicated finding" (p. 380) in the field.[2] Here our aim is to build on recent work by Zeelenberg et al. (1998a), who show that in some instances people may regret inaction more than action. Specifically, they report that subjects indicated more regret for soccer coaches who decided to act and change their team before the next match, than for soccer coaches who decided not to act. However, when the soccer team had lost the prior match, coaches who decided to act were judged as less regretful than those who decided not to act. Zeelenberg et al. conclude that prior outcomes can provide reasons for action and that these reasons may attenuate the regret felt when decisions goes awry. In other words, since regret is related to blaming oneself, decision makers are less likely to blame themselves for a decision when there were good reasons supporting it.

Relating this to consumer research, research in marketing has consistently shown that consumers are more likely to switch brands when a prior experience is negative. When the experience is positive or neutral consumers tend to remain inactive and stick to their chosen brand (e.g., Tellis and Gaeth 1990). It may be the case that both regret aversion and the action-inaction dichotomy play a role. It is conceivable that consumers have a tendency to repeat purchases (i.e., inaction) following a good experience because they anticipate the regret they may feel following a switch that turns out to be unsatisfactory. By the same token, they may be inclined to switch brands (i.e., action) following a bad experience (even when this was a highly unprobable event) because they anticipate the regret they would feel if the decisions turns out to be unsatisfactory again.

In our second study we test the central assumption underlying this reasoning - consumers regret switching more when prior experiences are good and they regret repeat purchases more when prior experiences are bad. Identifying such a pattern makes a twofold

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[2] Gilovich and Medvec (1995) present data showing that in the long run people seem to regret inaction more than action. In response, Kahneman (1995) argues there are two different types of regret: hot regret and wistful regret. Hot regret refers to the direct, more intense, emotional reaction to a decision outcome and is typically associated with the tendency to 'kick yourself'. Wistful regret, being the less intense emotion, is "associated with pleasantly sad fantasies of what might have been" (Kahneman 1995, p. 391). In a recent joint publication Gilovich, Medvec and Kahneman (1998) agree on the existence of both types of regret. We focus here on the more typical "hot" regret.

contribution to the literature. First, it extends the action/inaction research to the domain of consumer decisions. More importantly, it offers evidence counter to the claim that action is universally regretted more than inaction.

METHOD

Subjects and Design. One hundred and forty nine undergraduate business students at a large Midwestern university participated in the study and were compensated by extra credit. We manipulated action between subjects at two levels (switch or repeat purchase) and prior experience between subjects at two levels (positive or negative).

Procedure. Each subject examined three scenarios describing a situation regarding an experience with a service or product. One scenario described an airline, a second involved a backpack, while the third described a hotel stay. Prior experience was manipulated straightforwardly by describing the experience as being either incident-free (positive) or unpleasant in some fashion (negative). The subject was then described as either switching to a different alternative on the subsequent choice occasion or selecting the same alternative as in the prior experience. In order to induce a sense of regret, the second experience was always negative regardless of condition. Scenario order was randomized. An example of each scenario is shown in the appendix.

Measures. Following the scenario, subjects completed three summated scales. All responses were on a 10 point scale. The first was a three-item scale (α=0.94) assessing the study's believability (anchored by "very unrealistic-very realistic," very implausible-very plausible," and "very unbelievable-very believable"). The second, two-item scale (α=0.79) assessed empathy with the character in the scenario in terms of how much the subjects felt they could identify with the character (anchored by "did not identify at all-identified a great deal") and how easily they could imagine themselves in that situation (anchored by "not easy at all-very easy"). The final scale assessed subjects' regret with the decision to switch or repeat via three questions (α=0.73): *How much would you regret your decision to stay with (switch to) a ____?* (anchored by "not regret at all-regret very much"), *If you could do it over, would you change your decision?* (anchored by "definitely would change-definitely would not change"), and *How much happier would you have been if you had made a different decision?* (anchored by "not much happier-much happier").

RESULTS

We analyze the data using a 2 (positive/negative experience) × 2 (action/inaction) × 3 (context) repeated measures ANOVA. Means by condition are given in Table 2. Subjects are nested within experience and action/inaction condition. Thus, we test the experience and action main effects and the experience × action interaction using the subject mean square as the denominator in the F test (Edwards 1985). Similarly, we test the scenario main effect and all other interactions using the scenario × subject mean square as the denominator in the F test. The results reveal the expected interaction between action and experience ($F(1,145) = 45.62$, $p<.01$). Further, the main effect of action is significant ($F(1,145) = 11.06$, $p<.01$). Neither the prior experience main effect ($F(1,145)=1.20$, NS) nor the context main effect ($F(2,285)=0.58$, NS) are significant. Unexpectedly, the three-way interaction between action, experience, and context is significant ($F(2,432)=4.90$, $p<.01$). No other significant effects emerged.[3]

– Insert Table 2 about here –

Figures 3a and 3b show the pooled results and scenario-specific results, respectively. As expected, regret is significantly greater ($t_{1,110}=7.61$, $p<.01$)[4] in the switch condition when the prior experience is positive (7.5) than when it is negative (5.8). The reverse is the case in the repeat condition; regret is significantly greater ($t_{1,110}=5.69$, $p<.01$) when the prior experience is negative (8.1) than when it is positive (6.8). The result is a significant disordinal interaction between action and experience.

- Insert Figures 3a and 3b about here –

Interestingly, the main effect of action is driven by regret being <u>greater</u> for repeat purchasing (7.4) than for switching (6.7). This is counter to the literature on status quo bias, but is quite consistent with our thesis that providing reasons for the decision mitigates regret. Specifically, subjects seem to have reasoned that at least they had tried to avoid the regret by switching in response to the prior outcome. The pattern of results suggests that subjects did

[3] The believability and empathy scales were included as covariates, but had no impact on the results.

not feel that switching or repeating were much different in light of a positive prior. However, subjects felt much more strongly when the prior was negative.

It is readily apparent from Figure 3b that the three-way interaction is driven by disparate responses in the backpack scenario versus the airline and hotel scenarios. Separate ANOVAs on each scenario[5] reveals a significant action × experience interaction in each scenario, but a significant action main effect only in the airline ($F(1,142) = 7.98$, $p<.01$) and hotel ($F(1,141) = 8.71$, $p<.01$) scenarios. Interestingly, subjects were less extreme in their feelings about regret in the backpack scenario. This could be driven either by the relative extremity of the prior experience described in the scenarios or by the magnitude of the loss (airlines and hotels are much costlier than backpacks). Untangling these effects presents an interesting direction for future research.

STUDY 3

In the third study we focus on the upstream part of our regret continuum and examine the role of potential regret in consumer choice. Specifically, we test the proposition that expectations of outcome feedback can lead to consumers making riskier choices. Our thesis is that consumers are regret averse, that is, they have a preference for options that minimize future regret. Hence, anticipated regret may promote either risk aversion or risk seeking depending on which option is regret-minimizing. Unfortunately, in most studies of regret, regret aversion and risk aversion are confounded. For example, in the often-used choice between a gamble and a sure thing, if a subject opts for the sure thing s/he normally does not learn whether the gamble would have been better. Conversely, if s/he opts for the gamble s/he will always learn the outcome of the gamble and the outcome of the sure thing. Choosing the sure thing offers protection from regret. Thus, someone who anticipates regret should opt for the sure thing, thereby revealing risk aversion.

Evidence for regret aversion that avoids this confounding of regret aversion and risk aversion is scarce. Zeelenberg et al. (1996) were the first to disentangle regret aversion and risk aversion, showing that anticipated regret may also cause a preference for risk-seeking.

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[4] We use the experiment-wide estimate of error in all of our t-tests.

[5] These are available from the authors.

However, they only consider matched gambles. In their studies, participants were presented with two equally attractive gambles, one being relatively risky and the other being relatively safe. All three experiments included a *Feedback Safer Gamble* condition in which the safer gamble would always be resolved and a *Feedback Riskier Gamble* condition in which the riskier gamble would always be resolved. In addition to this feedback all participants expected to learn the outcome of the chosen gamble. As predicted, participants in *Feedback Safer Gamble* condition opted predominantly for the safer gamble, which would provide them with feedback only on the chosen gamble and thereby protect them from threatening feedback on the riskier gamble. Conversely, participants in the *Feedback Riskier Gamble* condition opted predominantly for the riskier gamble.

Similarly, Zeelenberg and Beattie (1997, Experiments 2a and 2b) present results of two studies involving the expectation of feedback in the ultimatum game. They find that proposers made lower (i.e., riskier) offers when they knew that they would find out the lowest acceptable offer to the responder. Importantly, Zeelenberg and Beattie (1997, Experiment 1) also consider the richer context of investment decisions. Participants were asked to choose between two investment options that differed in riskiness. Participants in the *Riskier Feedback* condition were told that their sister had invested in the risky option (thus, they would receive feedback on this option). In the *No Feedback* condition this information was absent. Consistent with regret aversion, the *No Feedback* participants preferred to invest in the safer investment, while the *Riskier Feedback* participants preferred the riskier investment. Unfortunately, in this study feedback was confounded by the fact that the protagonist's sister invested in the risky option. The results may be driven by the additional information provided by knowledge of the sister's decision. Further, there was no condition in which feedback was forthcoming on the less risky investment.

To date, little is known about whether this tendency to avoid post-decisional regret exists in real-life consumer decision making. In the present study we therefore test these notions in the context of brand choice, involving complex, multi-attribute decision-making. Moreover, we do so with choices that vary in terms of their overall riskiness, allowing us to test the generality of our predictions for several different consumer decisions.

In our third study we had subjects make choices between pairs of consumer goods that differed in the amount of risk that was associated with them. One was less risky (e.g., moderate quality but relatively certain), the other more risky (potentially better quality, but a chance of worse quality). There were three feedback conditions: the no feedback condition, the less risky feedback condition, and the more risky feedback condition. In the no feedback condition subjects did not expect to obtain outcome feedback on the unchosen alternative. They did expect outcome feedback on the chosen alternative because they would experience this during consumption. We predicted that these subjects would have a preference for the less risky alternative, showing overall risk aversion. Subjects in the risky feedback condition expected to obtain outcome feedback on the risky alternative (e.g., this alternative would be evaluated in the next issue of *Consumer Reports*). If they were to opt for the less risky alternative they would be able to compare the performance of the chosen less risky alternative to that of the unchosen risky alternative. This comparison could produce regret. Opting for the risky alternative protects them from this regret. Therefore we predict that subjects in the risky feedback condition will show an increased preference for the risky alternative, compared to the no feedback subjects. Similarly we predict that participants in the less risky feedback conditions will show an increased preference for the less risky alternative.

In addition to the manipulation of feedback we also manipulated the overall riskiness of the choice contexts. Recent research by Ritov (1996) suggests that it is not only the expectation of feedback that influences whether decision makers take into account the possible future regret, but also the expected amount of the regret (i.e., the magnitude of the potential regret). When choices are more risky the expected value of postdecisional regret is greater. Therefore we predict stronger effects for the more risky choice contexts.

METHOD

Subjects and Design. Subjects were 67 undergraduate students at a large Midwestern business school who completed the survey in return for course credit. We manipulated outcome feedback between subjects and riskiness of the choice within subjects in a mixed design.

Procedure. Similar to Study 2, subjects read scenarios describing various decision situations involving a choice between two alternatives. Each scenario was pretested so that one alternative was judged to be inherently more risky than the other. Further, the decision contexts were designed so that some decisions were riskier than others, then pretested. Based on the pretest, scenarios concerning selection of an apartment and a personal computer (6.3 and 5.3, respectively, on a 10 point scale) were judged to be riskier than choice of an answering service and selection of a long distance provider (3.3 and 3.9, respectively). The order of presentation was randomized.

As already described, we manipulated outcome feedback at three levels: risky alternative, less risky alternative, and none. For example, when outcome feedback was be to forthcoming on the risky long distance carrier, subjects read "You pick up an issue of the local paper to discover that new smaller long distance carriers will be reviewed in an upcoming issue." As mentioned above, outcome feedback was manipulated between subjects, while riskiness of the choice was manipulated within subject. An example of each scenario is shown in the appendix.

Measures. Immediately following the scenario, subjects were immediately asked to record which option they would choose. They were then asked their likelihood of choosing each of the options on a 10 point scale (anchored by "definitely not choose-definitely choose"). These questions were followed by several manipulation checks. The first two questions assessed subjects' perceived risk of each option on a 10 point scale (to test the manipulation of the relative riskiness of each alternative). These were followed by a question asking how risky the subject felt the overall choice context to be (to test the decision risk manipulation). Finally, the subject was asked whether additional information would be forthcoming on each alternative (to test the outcome feedback manipulation). Unfortunately, the feedback manipulation check for the answering service was not significantly different between feedback groups. The mean in the less risky option feedback condition should have been less than in the more risky option feedback condition, but for some reason the means were almost identical (5.1 and 5.2 for the less risky and more risky option conditions, respectively). Thus, we did not include the answering service scenario in the subsequent analyses.[6]

RESULTS

Means by condition are shown in Table 3. In order to test whether the feedback scenarios manipulated the perceived riskiness of the choice as intended, we ran a 3 (feedback conditions) × 3 (scenarios) ANOVA using riskiness of the overall choice as the dependent variable. As hoped, the scenario effect is significant ($F(2,192)=24.87$, $p<.001$), while neither the feedback condition effect ($F(2,192)=0.14$, NS) nor the feedback × scenario interaction ($F(4,192)=0.92$, NS) are significant. Thus, the manipulation seems to have achieved the desired effects. The scenarios successfully manipulated riskiness of the choice and feedback condition exerted no influence in this regard.

- Insert Table 3 about here –

We then conducted a similar 3 × 3 ANOVA using choice likelihood of the risky alternative as the dependent variable. We added the difference in perceived risk between the higher risk and lower risk alternatives as a covariate.[7] Inclusion of this variable allows us to control for differences in relative risk between the two options across scenarios. We refer to this variable as the *risk gap*. The effect of risk gap is significant ($F(1,188)=27.43$, $p<.001$), suggesting that as the difference in perceived risk increased, subjects were increasingly reticent to choose the riskier alternative (i.e., subjects displayed risk aversion on average).

Similar to Study 2, subjects are nested within feedback condition so we test the feedback main effect using the subject mean square as the denominator in the F test and test the scenario main effect and feedback × scenario interaction using the scenario × subject mean square as the denominator. As expected, the feedback main effect ($F(2,64)=4.13$, $p<.05$) is significant. Subjects gravitated toward the option on which feedback was forthcoming. Choice likelihood monotonically increased from the less risky option feedback condition (7.2) to the control, no feedback condition (8.4), to the risky option feedback condition (9.5).

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[6] Results are substantively unchanged if the answering service condition is included.
[7] As in Study 2, we included believability and empathy as covariates. Again, neither is significant.

Further, the scenario main effect ($F(2,124)=5.52$, $p<.01$) is significant. As predicted, subjects were more regret averse in contexts where greater risk was involved (the apartment and the computer purchase) than where the choice could be easily reversed later (the long distance service provider). The feedback × scenario interaction is not significant ($F(4,124)=0.47$, NS), suggesting that the feedback effect was robust across the scenarios.

Similarly, as shown in Table 3, the risky option's *choice share* increased by 16 share points (from 21.0% to 37.0%) when feedback was forthcoming on the riskier option and declined by almost half (to 10.6%) in the less risky option feedback condition ($\chi^2=12.2$, $p<.01$). Results of a binomial logit model with choice of the risky option as the dependent variable mirror those for the choice likelihood analysis. Main effects are evident for feedback condition ($\chi^2=9.7$, $p<.01$), risk gap ($\chi^2=7.8$, $p<.01$), and scenario ($\chi^2=4.6$, $p<.10$). The interaction between feedback condition and scenario is not significant ($\chi^2=1.0$, NS).

Figures 4a and 4b show the choice share of the risky option and its choice likelihood across scenarios, respectively. Both graphs show a clear pattern of effects across levels of feedback. Specifically, subjects were more likely to choose the risky option (compared to the no feedback condition) if they knew that they would subsequently receive outcome feedback on it and were less likely to choose it if feedback was forthcoming on the less risky option.

- Insert Figures 4a and 4b about here –

DISCUSSION

The contributions of this research are fourfold. First, we present theory depicting the role of regret throughout the consumer decision-making process. Second, we show that satisfaction does not completely mediate regret effects on subsequent behavior. Third, we find that (contrary to previous research) inaction can lead to greater regret than action and that action interacts with previous experience in driving felt regret. Finally, we present an examination of the role of *potential* regret in consumer decision making and find that consumers' decisions are influenced by the specter of regret.

The first empirical finding suggests that Figure 1 is in need of modification. We need to add a direct effect of regret on behavioral consequences in addition to the indirect effect mediated by the psychological consequences. This finding is very important as it indicates a "double whammy" effect of regret. Regret influences purchase intentions not only through satisfaction, but directly as well. This highlights the need for service providers and product manufacturers to adopt a broader perspective to their outcome measurement and in setting performance objectives. In other words, simply meeting expectations is insufficient. If forgone alternatives are seen as superior, satisfaction and, more importantly, repeat purchase rates suffer.

The second finding has implications for the stream of research on action versus inaction. It suggests that previous information or experience regarding the underlying reasons for the decision can have a pronounced impact on felt regret. If there is sufficient motivation to warrant a switch, then consumers feel less regret in the face of a subsequent negative performance by the chosen alternative. For practitioners, this implies that feelings of regret are mitigated to the extent to which the consumer retrospects and concludes that the decision was appropriate given the available information. Interestingly, at least in the context of brand choice, switching seems to produce less regret than repeat purchase. In light of our findings in Study 3, consumers who anticipate greater regret for repeat purchase than for switching should be more likely to switch as a result. This phenomenon could be caused by consumers' high expectations of service providers and product manufacturers. Failures are perceived as intolerable events and to be avoided by switching to an alternative provider.

Finally, the third empirical finding implies that potential feedback has a marked influence on choice behavior. Consumers seem to avoid potential regret by choosing the alternative on which feedback will be forthcoming. Importantly, this influence can lead them to choose riskier alternatives rather than becoming risk averse. This is an important finding for behavioral researchers in that it demonstrates that regret aversion and risk aversion are distinct constructs and that failure to consider regret aversion effects can lead to false interpretation of the process underlying consumer choice behavior.

For practitioners, this suggests that a brand's share should increase monotonically as its relative probability of feedback increases. This would partially explain why investors gravitate to blue chip stocks – they may feel that the probability of feedback on their performance is greater relative to smaller cap stocks. Similarly, Coke's large advantage in fountain service might explain its advantage in retail sales. Consumers know that they are much more likely to be exposed to Coke than to its competitors in institutional settings. Of course, these musings are somewhat speculative and need to be empirically examined.

We also find that the effect of potential regret on choice is greater in instances where switching costs are higher. This makes sense in that finding that one has made a poor choice should induce less regret if the decision is easily undone (e.g., Zeelenberg et al. 1998b). Thus, potential regret's influence on the decision should be less. Alternatively, as the stakes increase and the consequences of the decision are more permanent, potential regret increases and regret aversion should play a larger role in the decision-making process. This presents a double-edged sword for practitioners. On the one hand, making the decision easy to undo (e.g., money back guarantees) is advantageous, particularly for riskier brands, as this lessens the effect of potential regret and lowers the decision stakes. On the other hand, lower risk (e.g., high quality) brands should attempt to increase the stakes. For instance, many popular mutual funds charge fees for redemption of funds invested less than 90 days and on-line services often charge a disconnect fee. Such fees make consumers "think twice" about switching. Of course, the advantages of such fees must be balanced against the cost of potentially deterring new customers who anticipate the second order regret involved with switching services in the future.

We feel that forgone outcome feedback is not a rare occurrence in consumers' lives. Rather, it occurs quite frequently, either intentionally through actively seeking feedback on forgone alternatives (e.g., reading *Consumer Reports*) or unintentionally (e.g., casual word of mouth). It is interesting to note (see Table 3) that subjects across feedback conditions did not tend to use the extremes of the feedback scales for the manipulation check in Study 3. Rather, the means were all between five and eight on our 1-10 scale. Subjects seemed to allocate some probability to receiving outcome feedback regardless of whether this was directly indicated in the scenario. This suggests that consumers may anticipate receiving feedback on forgone alternatives on a regular basis, perhaps through advertising, word of mouth, or direct observation.

One issue that we have not addressed is whether the experience and consideration of regret leads to better or worse decisions. On balance, we feel that, over the long term, anticipating regret is a positive aspect of choice. By anticipating not only outcomes but the consequences thereof, consumers should be in a position to make choices that deliver greater overall utility. However, regret minimization per se is probably a suboptimal choice rule, as minimizing regret may result in an increase in other types of decision-related affect such as disappointment (e.g., Inman et al. 1997; Zeelenberg et al. 1998b).

While anecdotal evidence regarding regret's role in consumer decision-making effect is plentiful, heretofore no one has systematically explored regret's role throughout the whole consumer choice process, including the behavioral consequences that follow from a regretted decision. For instance, regret has clear implications for new product sampling programs by making the forgone alternative more salient. Letting consumers "know what they've been missing" should increase subsequent switching to the sampled brand. Similarly, strategies that remove or lessen the potential for regret should increase purchase likelihood. "Low price guarantees" and guaranteed software upgrades are examples of such strategies. Both seek to assure consumers that they will receive the benefit of a lower price or performance enhancements should they subsequently become available in the market.

Our results clearly show that consumers are motivated to avoid regret. In other words, consumers seem to be regret averse (cf. Zeelenberg et al. 1996; Zeelenberg and Beattie 1997). Indeed, individuals who do not anticipate feelings of regret are arguably more likely to be at risk of engaging in maleficent behavior. Hence, persuasive communications that elicit or enhance this regret aversion may be efficient tools for marketers, consumer groups, or government agencies. For instance, promotion restrictions such as time limits (e.g., Inman and McAlister 1994) seek to enhance consumer regret by making the approaching expiration date (and loss of the opportunity to avail oneself of the deal) salient. Regret appeals such as "Think of how you'll feel if you miss this sale!" may be quite effective in this regard. As the title of this paper suggests, practitioners already apply these "regret appeals," albeit in a naïve and ad hoc fashion. A similar communication strategy is currently seen in the "Well, not exactly" campaign for Hertz.

A recent British prevention campaign "the choice is up to you," promoting safe sex, uses a different type of regret appeal (see, Richard, van der Pligt and de Vries 1995). Part of this campaign is an ad with a photograph of a young man and woman in bed. Two scenarios are depicted next to the photograph. In the first scenario the reader of the ad is encouraged to imagine having had unprotected sex the night before, followed by the question asking how the reader would feel now ("perhaps a little worried?"). This is followed by general information about AIDS transmission. In a second scenario the reader of the ad is encouraged to imagine having had sex the night before, using a condom. This is again followed by the question asking how the reader would feel now, suggesting the experience of positive emotions. Obviously this campaign attempts to influence behavior by increasing the salience of post-decision regret that could be the result of unsafe sex as well as the salience of post-decision rejoicing that could be the result of protected sex. In recent empirical work, Richard et al. (1996) test a similar strategy and find it to be effective both in changing intentions to use condoms and in increasing condom use following a five month period.

Both types of regret appeal can be useful in helping consumers construct mental simulation of states of the world which may increase their likelihood of making choices consistent with achieving desirable states and avoiding undesirable states. The difference in these two regret appeals is that the first ("Wow, I could have had a V8") focuses the consumer on the *outcome* of the decision (and the accompanying regret), whereas the second emphasizes the *process* by which one can arrive at a regrettable outcome. In analog to these two types of regret appeals, Taylor et al. (1998) distinguish between two types of mental simulation, outcome simulation and process simulation. The findings from their research suggests that the latter type of regret appeal has a greater impact on behavior. Process-focussed regret appeals not only motivate consumers to avoid regret, but in addition they provide guidance as to how to do so.

LIMITATIONS AND FUTURE RESEARCH

Continued research on the role of regret in consumer choice is needed to increase our understanding of the role of regret appeals and regret–oriented marketing strategies (e.g., price guarantees, free upgrades, samples) in the choice process. Specifically, the prediction that process-focused regret appeals are more impactful than outcome–focused appeals is an intriguing direction for future research. Further, profiling those types of individuals who (a) feel that they might receive feedback and (b) anticipate the regret which would occur as a result and (c) take this into account in their decision-making would be a fruitful task in targeting individualized preventive communications campaigns.

We focused here only on regret. It would be worthwhile to examine the role of other decision-related emotions (both anticipated and experienced). One likely candidate is disappointment, the feeling experienced in comparing a received outcome versus prior expectations (e.g., Bell 1982; Loomes and Sugden 1982). Disappointment has been shown to influence post-choice valuation (Inman et al. 1997) independently of regret effects. Inman et al. (1997) and Mellers et al. (1998) both present utility conceptualizations describing how both regret and disappointment influence choice and post-choice valuation. However, more work is needed to examine the relative role of each in decision-making. For example, priming subjects on choice versus consequences could make quite a difference in the relative impact of disappointment versus regret. Further, the temporal patterns of disappointment and regret are unexplored. Regret may be much more salient temporally proximate to the decision. However, over time this effect may decline as counterfactuals emerge and consumer engage in post hoc rationalization to ameliorate the pain of regret.

In all of our studies, we did not allow consumers to delay their decision to cope with regret. Research suggests that consumers might either avoid feedback (e.g., Janis and Mann 1977) or avoid decisions altogether (e.g., Beattie et al. 1994; Luce 1998) as mechanisms of dealing with potential regret. This area represents a fascinating direction for future work. As discussed earlier (see footnote 2), researchers argue that there are different types of regret (e.g., Gilovich, Medvec, and Kahneman 1998). "Hot" regret is strongest immediately following decisions involving action, while "wistful" regret is manifested over time and tends to be associated with inaction. The relevance of such a distinction in the consumer domain remains unknown.

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Appendix
Sample Stimuli from Each Study

Study 1: Regret Condition

Forgone Pen Evaluation

"The {forgone pen} is a very good pen overall. It fits well in the writer's hand. After using it for an extended period, we found it to remain comfortable. The ink flow was very smooth and it did not skip or blob at all. Even the retracting mechanism functioned smoothly, never sticking as did many other pens.

This pen upholds the tradition of high quality that {forgone pen} has earned. However, the packaging will probably lead many consumers to underestimate this pen. Overall, it is the equal of 'Cross-class' pens in the \$10-\$15 range."

Chosen Pen Evaluation

"The {chosen pen} is a rather poor pen overall. The ink flow was not as smooth and uniform as many other pens which we tested. Also, it often failed to write immediately, perhaps because the ball has a tendency to dry out. Over an extended period, we found it to be increasingly uncomfortable to grip.

We found that this pen did not live up to the reputation of {chosen pen}. This pen is something of a "knockoff" of higher quality pens. We would compare it to 'Bic-class' pens in the \$1-\$1.50 range."

Study 2: Positive Prior, Repeat Purchase Condition

Airline Scenario
You've graduated from school and landed a job that you're excited about and carries a lot of responsibility. One Monday morning you learn you have to fly out to Omaha on Wednesday to meet with a client. Your assistant books you on Air Nebraska. On Wednesday your flight is uneventful and you spend the next couple of days with the client.

You're back in the office on Friday and realize you have to return to Omaha the next week to wrap up business. You look at flying Great Plaines Airlines but decide to have your assistant book you on Air Nebraska again. When you arrive in Omaha, they've lost your luggage so you can't change out of your casual clothes before your meeting.

Backpack Scenario
It's fall and you're about to start your freshman year at college. The time has come to go shopping for those essential items every college student needs: jeans, sweatshirts and a new backpack. The Toughpack you purchased for your senior year in high school is in good shape, but it's too small for all those college textbooks you just bought.

When you go shopping this time, you look at Sturdypack, but decide to buy another Toughpack with the same features, only it's bigger. All of your books fit perfectly and you're off to class. A week later however, as you're leaving your dorm room, the seams burst and all of your books spill to the floor.

Hotel Scenario
You're excited because you've traveled to a distant city for your second job interview with a company you'd like to work for. The company lets you choose the hotel so you decide to stay at SnugInn. You room is comfortable and quiet. You wake refreshed and ready for your interview.

Several weeks later a friend and you decide to go on a long car trip. You consider stopping at a hotel chain called Sleeptight, but decide to stay in a nearby SnugInn again. You arrive and change to go out for dinner forgetting your watch on the nightstand. When you come back your watch is missing. The manager refuses to compensate you.

Study 3: Feedback on Less Risky Alternative Condition

Apartment Scenario
For your last year at the University you decide to find an apartment by yourself. It will cost a little more but will be quiet when you need to study and you won't have to worry about privacy or who's going to do the dishes. Your budget is tight and you want to save as much as you can. You have narrowed your choice down to two places.

When you went to look at Doty Apartments, you thought you could hear someone in the apartment above you so you're concerned about how soundproof it will be. The other place, Palantine Village, is a really good deal on a month-to-month lease, but you've heard a rumor the entire building might be converted into condominiums. If that happened your lease would be terminated and you'd have to find a new place in the middle of the semester where you could stay until you graduate in May. You have a friend of a friend who is moving into Doty Apartments, so you know you will find out if the building is soundproof.

Computer Scenario
It's a month before the beginning of your Junior year. You've decided buying a computer for your apartment would be a good investment and have narrowed the choice down to a local retail store or a distant mail-order company. You have $3000 to spend. The local computer store has a solid reputation. You feel you can trust the local store to build a quality machine for you, while you're much less certain about the mail-order company as you have heard it takes forever to get through to customer service and if something went wrong with your new machine you would have to mail it back to the company for repair.

The reason you're considering the mail-order company is you can purchase a significantly faster, upgradeable machine with more components than you could buy from the local store with the same amount of money. You need to make a purchase decision now because you know you'll need the machine immediately for a heavy course load. You pick up an issue of the *Isthmus* to discover computers from the local store will be reviewed in an issue next month.

Long Distance Service Scenario
You're excited for school to begin this year you've moved out of the dormitory into your own place with a couple of friends. It's about one week before the beginning of your lease and you've decided now would be a good time to call and setup phone service. You're not quite sure which long distance carrier to choose, but have decided the carrier will either be the dominant ABC company or the new, smaller DDE company. ABC offers a low rate guarantee paying double the difference back for an overcharge while DDE is a new carrier promising the same low rates and claims service just as good as ABC. You pick up an issue of the *Badger Herald* to discover large long distance carriers like ABC will be reviewed in an upcoming issue.

Table 1
Study 1 Means Across Conditions
(Standard deviation in parentheses)

	Regret (n=25)	**Neutral (n=25)**	**Rejoicing (n=24)**
Satisfaction	7.0 (2.65)	8.2 (2.37)	9.6 (1.07)
Purchase Intentions	4.9 (3.83)	8.7 (3.58)	10.8 (1.30)
Choice Difficulty	4.2 (3.52)	3.6 (3.37)	2.6 (2.15)
Price Importance	6.2 (3.80)	8.0 (3.46)	6.5 (3.43)
Choice Familiarity Difference (Chosen-Forgone)	1.4 (5.64)	-0.72 (6.11)	-1.42 (5.20)

Table 2
Study 2 Means Across Conditions
(Standard deviation shown in parentheses)

	Repeat		Switch	
Scenario	**Negative Prior**	**Positive Prior**	**Negative Prior**	**Positive Prior**
Pooled (n=444)	8.1 (1.56)	6.8 (1.88)	5.8 (1.49)	7.5 (1.82)
Airline (n=148)	8.1 (1.46)	6.7 (1.85)	5.5 (1.36)	7.7 (1.90)
Backpack (n=149)	7.8 (1.73)	7.1 (1.79)	6.3 (1.39)	7.4 (1.82)
Hotel (n=147)	8.3 (1.47)	6.6 (2.02)	5.6 (1.63)	7.5 (1.78)

Table 3
Study 3 Means Across Conditions

		Feedback Condition		
	OVERALL	**Less Risky Option**	**No Feedback**	**More Risky Option**
POOLED				
Risky Option Choice Share	21.9%	10.6%	21.0%	37.0%
Risky Option Choice Likelihood	8.3	7.2	8.4	9.5
Risk Gap*	3.1	3.3	3.6	2.5
Choice Risk	5.3	5.3	5.3	5.4
Feedback Manip Ck		5.8	NA	7.5
APARTMENT				
Risky Option Choice Share	21.2%	9.5%	18.5%	38.9%
Risky Option Choice Likelihood	8.5	7.7	8.3	9.8
Risk Gap*	2.7	2.4	3.3	2.3
Choice Risk	6.3	6.2	6.5	6.3
Feedback Manip Ck		6.3	NA	7.4
COMPUTER				
Risky Option Choice Share	31.3%	13.6%	33.3%	50.0%
Risky Option Choice Likelihood	9.2	7.7	9.7	10.3
Risk Gap*	3.4	3.5	4.0	2.1
Choice Risk	5.7	5.9	5.7	5.4
Feedback Manip Ck		5.7	NA	7.2
LONG DISTANCE SERVICE				
Risky Option Choice Share	13.4%	9.1%	11.1%	22.2%
Risky Option Choice Likelihood	7.2	6.1	7.1	8.5
Risk Gap*	3.5	3.9	3.5	3.0
Choice Risk	3.9	3.7	3.6	4.6
Feedback Manip Ck		5.3	NA	7.8

* Risk gap is calculated as the difference in perceived risk (1-10 scale) between the two options.

Figure 1
Continuum of Regret Effects on the Consumer Decision-Making Process

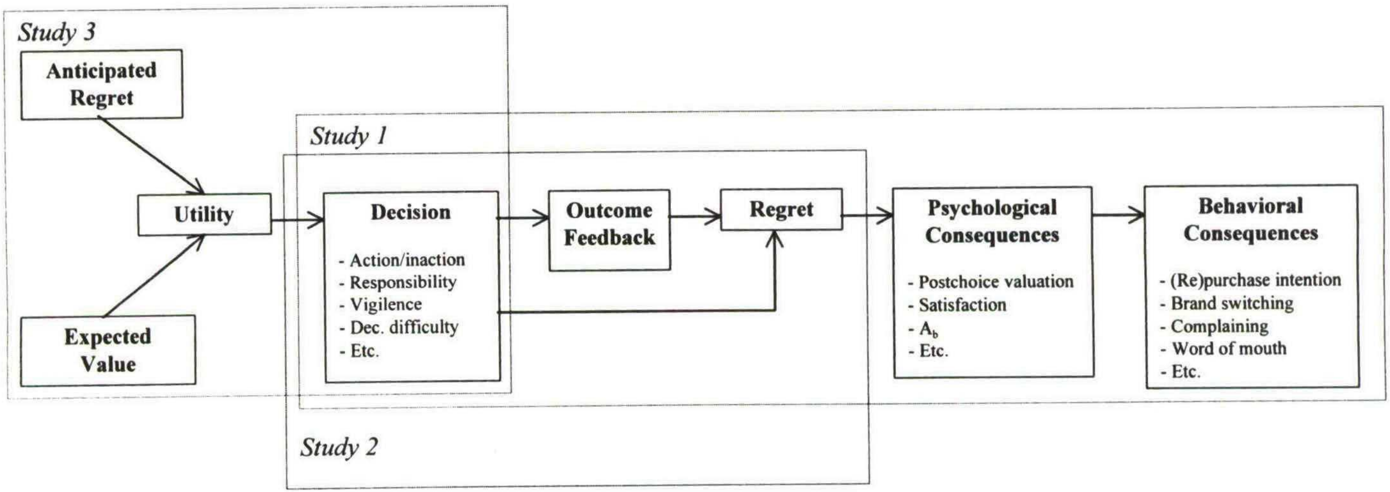


Figure 2

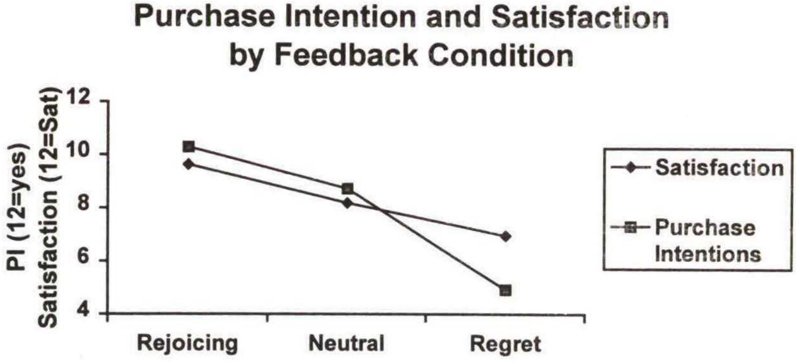

Purchase Intention and Satisfaction
by Feedback Condition
PI (12=yes)
Satisfaction (12=Sat)
12
10
8
6
4
Rejoicing
Neutral
Regret
Satisfaction
Purchase Intentions

Figure 3a

Action x Experience Interaction
Pooled Across Scenarios

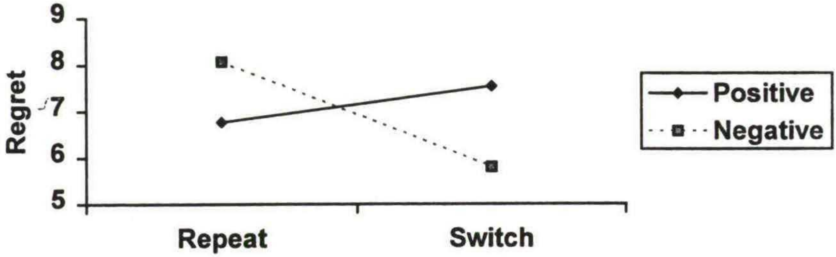


Figure 3b

Action x Experience Interaction
By Scenario

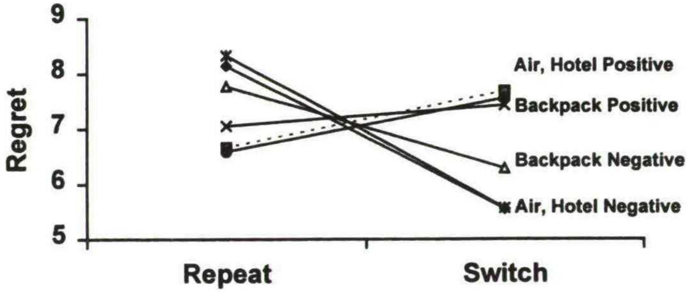


Figure 4a

Choice Share of Riskier Option By Scenario and Feedback Condition

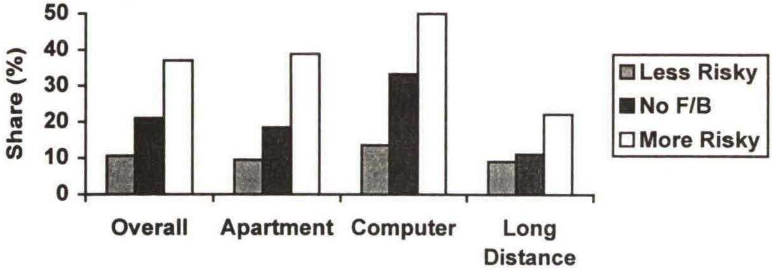
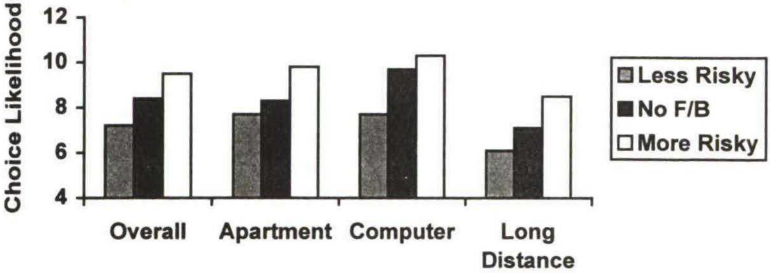


Figure 4b

Choice Likelihood of Riskier Option By Scenario and Feedback Condition



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