JOURNAL OF CONSUMER PSYCHOLOGY, *15*(4), 316–324

The Role of Anticipated Emotions in the Endowment Effect

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This research explored the role of anticipated negative feelings in the observed disparity between buying and selling prices for the same endowed object. We assumed that anticipated negative reactions to losses deter people from trading an endowed object and therefore psychological variables that attenuate the emotional response to negative events should further reduce the price disparity between buyers and sellers. In 3 studies, we tested whether factors that either decrease concern about negative feelings (e.g., positive mood, framing of the transaction as involving no action) or increase the anticipated negative reaction to failure to act (e.g., priming errors of omission) further eliminate the disparity between buying and selling prices. These studies provide a novel conceptualization of the endowment bias and, more generally, illustrate the role of anticipated negative feelings in decision making.

The processes of price setting tend to vary systemically between buyers and sellers such that the minimum amount of money that people request in order to part with an object (e.g., a coffee mug) typically exceeds the maximum amount they are willing to pay for this same object (Kahneman, Knetsch, & Thaler, 1990; Knetsch & Sinden, 1984, 1987; Thaler, 1980). This price disparity between buyers and sellers, also known as the *endowment effect*, may be influenced by the anticipated negative reaction to making wrong trading decisions (either buying or selling). To minimize the possibility of regret from making wrong decisions, buyers and sellers both adopt extreme thresholds for conducting the transactions. To this extent, situational factors that decrease individuals' concern regarding negative feelings that may result from making a trade should reduce the size of the endowment bias. In this article we examine this possibility by exploring variables that influence traders' anticipated negative affective experiences, which are expected to moderate the effect of the transaction role (buyers vs. sellers) on price setting for the same endowed object.

THEORETICAL BACKGROUND

The Endowment Effect

The *endowment effect* is defined as the gap between the price that buyers are willing to pay in order to acquire an object and the price that sellers would demand in order to part with this object (Carmon & Ariely, 2000; Kahneman et al., 1990; Knetsch & Sinden, 1984, 1987; Thaler, 1980; van Dijk & van Knippenberg, 1996). This effect is usually referred to in terms of *loss aversion* (Kahneman et al., 1990). According to prospect theory, the curve relating the psychological value of objects to the objective value is steeper for losses than for gains. Thus, individuals evaluate losses more extremely than gains of similar size (Kahneman & Tversky, 1979). Parting with an object represents a loss that is subjectively greater in magnitude than the gain that results from acquisition. Consequently, the compensation required to sell the object typically exceeds the amount of money one would offer in order to obtain it (Kahneman et al., 1990).

Implicit in this line of reasoning is that people are mostly concerned about losing what they already have. Thus, when determining an appropriate transaction price for an endowed object, sellers emphasize the loss incurred from parting with an object more than the benefit acquired from the money that they would receive from selling it, whereas buyers consider the loss of cash more than the benefits from acquiring the object. Both buyers and sellers attach greater value to things they already have and would lose (money for buyers and the endowed object for sellers) than to things they do not have and would gain (the endowed object for buyers and money for sellers). These similar motives, in turn, lead to different prices for buyers and sellers (see also Carmon & Ariely, 2000).

However, whereas previous conceptualizations of the endowment effect have assumed that people *evaluate* losses more extremely than gains of similar value, we suggest that

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people *experience* losses more extremely than gains, and it is therefore the experience of losses that produces the price disparity between buyers and sellers. To investigate this proposition, we manipulated traders' anticipated negative feelings and tested for the size of the price disparity between buyers and sellers. Whereas the evaluation of losses should be unaffected by our manipulations, an increased concern for negative feelings should increase the price disparity between buyers and sellers. Correspondingly, a decreased concern should reduce this price disparity. Some support for our hypothesis was obtained by Liberman and her colleagues (Liberman, Idson, Camacho, & Higgins, 1999; see also Higgins, 2002), who manipulated regulatory focus and measured willingness to trade. This research found that a priming promotion (vs. prevention) focus, which entails less concern with negative outcomes, increases willingness to give up one prize in return for another. On the basis of this research, it seems plausible that a direct manipulation of participants' anticipated negative experience would further affect the size of the price gap between buyers and sellers. However, past research has not directly manipulated participants' anticipated negative feelings. In this investigation, we determined whether the price disparity between buyers and sellers diminishes when individuals' sensitivity to the experience of negative outcomes, —in particular, regret—is attenuated.

Situational Determinants of Anticipated Negative Feelings

The emotional reaction to various future outcomes serves as an important cue for decision makers who are generally motivated to maximize future positive experiences and minimize future negative experiences (Bar-Hillel & Neter, 1996; Fong & Wyer, 2003; Kahneman & Miller, 1986; Mellers, 2000; Mellers, Schwartz, & Ritov, 1999; Simonson, 1992). In particular, regret research has shown that individuals prefer choices that entail minimal potential negative consequences, that is, anticipated regret (e.g., Bell, 1982; Gilovich & Medvec, 1995; Kahneman & Miller, 1986; Loomes & Sugden, 1982, 1986; Roese & Olson, 1995). In transactional situations, buyers may offer a low price for a product in order to avoid the regret they might experience if they paid more for the product than it is worth. Similarly, sellers may demand a high price in order to avoid the regret that would result from selling a product for less than it is worth. As a result, there is a persistent price disparity between buyers and sellers. If this interpretation is correct, however, situational variables that decrease people's anticipated emotional reactions to a trading decision should decrease the size of the buyer–seller price disparity. We next consider three such variables: (a) positive mood, (b) awareness of errors of omission, and (c) framing the transaction as the default option.

First, people's tolerance of negative feelings depends on their current mood. Research on mood as information (Schwarz & Clore, 1983, 1996, 2003) suggests that people interpret their positive feelings as an indication that the situation they are in is benign and that their actions are likely to succeed (Isen & Geva, 1987; Wright & Bower, 1992); thus, they anticipate fewer negative feelings. On the other hand, people interpret their negative feelings as an indication that the situation is problematic, and therefore they anticipate increased negative feelings. In addition, positive mood acts as a buffer or a resource against the immediate emotional costs of bad decisions; that is, it decreases the concern about negative feelings, whereas negative mood increases the concern about these feelings (Aspinwall & Taylor, 1997; Raghunathan & Trope, 2002; Trope & Fishbach, 2005). Thus, a positive mood should increase the willingness to trade, thereby decreasing the price gap between buyers and sellers. Conversely, a negative mood should make traders more concerned about the negative feelings that might result from trading and should lead them to set more extreme prices for conducting the transaction.

Second, people anticipate regretting errors of commission (i.e., the negative consequences of an action) while neglecting the regret that is associated with errors of omission (i.e., the negative consequences of a failure to act; Inman & Zeelenberg, 2002; Johnson, 1993; Ritov & Baron, 1992, 1995; Samuelson & Zeckhauser, 1988; Spranca, Minsk, & Baron, 1991). As is often indicated in research on norm theory (Kahneman & Miller, 1986), counterfactual thinking (Miller & Taylor, 2002; Roese & Olson, 1995, 1997), and the status quo bias (Luce, 1998), actions are more mutable and receive more attention than inactions and therefore are associated with more intense concern for negative feelings. For example, anticipated regret from giving up a winning lottery ticket decreases people's willingness to exchange a lottery ticket for a new ticket, even if the new ticket yields greater expected return (Bar-Hillel & Neter, 1996). However, we expect that calling people's attention to past errors of omission (e.g., failure to take a valuable class) would increase the salience of the negative feelings that are associated with a failure to act. Consequently, it should lead buyers to offer a higher price and sellers to accept a lower price than they otherwise would, thereby reducing the price disparity between buyers and sellers. It is important to note that whereas positive mood decreases anticipated negative feelings regarding trading, recalling errors of omission increases anticipated negative feelings regarding failure to trade. The results should be similar, that is, reduced price disparity between buyers and sellers.

A third possibility also assumes that buyers and sellers regret incorrect actions more than failures to act. If this is so, a passive framing of the transaction as the default option—which requires no action—should entail less anticipated regret and, therefore, an increased willingness to trade. For example, sellers should be less reluctant to part with the object if they frame the action as "not keeping" it (i.e., an inaction framing of the transaction) rather than as "selling" the object (i.e., an action framing of the transaction). This hypothesis is

consistent with evidence that individuals are most likely to engage in counterfactual thinking and regret their decisions if these decisions are active and can be easily reversed in their mind (e.g., Kahneman & Miller, 1986; Miller & Taylor, 2002; Roese & Olson, 1995; Wells & Gavanski, 1989; Zeelenberg, van den Bos, van Dijk, & Pieters, 2002). Because actions promote more intense negative feelings than inaction, they increase the reluctance to trade and therefore enlarge the price disparity between buyers and sellers. However, framing of the transaction as a default elicits less anticipated regret, and so the prices set by buyers and sellers should become less extreme.

Research Overview

Three studies tested for the general proposition that people use anticipated negative feelings about the loss of what they own as a basis for price setting. Participants in all three studies were given the opportunity to use a popular office pen (about a $2 value). Half of the participants (sellers) were then told that the pen was theirs to keep (i.e., endowed to them) but were offered an opportunity to sell it back to the experimenter. The remaining participants (buyers) were offered the opportunity to buy the pen. All buyers had cash on them, and real transactions were always conducted on the basis of the price offered by buyers or the price requested by sellers. All participants were informed that the real value of the pen would be revealed right after they named a price but that the transaction would depend on the prices they provided. Using this procedure, the feedback on whether they were offering too much (as buyers) or asking for too little (as sellers) was immediate, and participants could easily imagine themselves stating another price and regretting their previous action. The size of the endowment effect was indicated by the disparity between the prices offered by buyers and those demanded by sellers. In Study 1, we investigated the effects of participants' mood on the magnitude of the endowment effect. In Study 2, we tested whether inducing participants to focus on past errors of omission would reduce the endowment bias. Finally, in Study 3 we determined whether framing the exchange as inaction (as opposed to action) would eliminate this bias by reducing concern with potential regret.

STUDY 1: EFFECTS OF MOOD ON WILLINGNESS TO TRADE

We hypothesized that people in a positive mood are less concerned with negative affective outcomes than people in a neutral mood and therefore would be relatively more willing to exchange an endowed object. People in a negative mood, by contrast, should be more reluctant traders because of their decreased tolerance for a negative outcome. Initial support for this hypothesis came from a pilot study in which undergraduates were asked to elaborate on different life events before conducting a transaction. Elaborating on positive life events, which presumably induced participants to feel happy (Schwarz & Clore, 1983), reduced the disparity between buying and selling prices relative to elaborating on negative ones. On the basis of these findings, this study investigated the size of the endowment effect under three mood conditions: (a) positive, (b) neutral, and (c) negative.

Method

Participants and design. One hundred fourteen undergraduate students (67 women and 47 men) participated in the study in return for $1. Participants were approached at a large campus café, and those who agreed to participate were led to a desk nearby to complete the study. They were randomly assigned to cells composing a 3 (mood: positive vs. negative vs. neutral) × 2 (transaction role: buyer vs. seller) between-subjects design.

Procedure. Participants were introduced to the experiment with instructions that we wished them to complete a battery of unrelated surveys. On this pretext, we gave them a Uniball pen (about a $2 value) to use. The nature of the survey varied, depending on the mood condition to which participants were assigned. Participants in *negative mood* conditions were asked to complete a survey on negative life events that was pretested to elicit negative feelings. The survey included seven negatively valenced questions (e.g., "Did you ever lose someone you really loved?" "Are you sometime[s] jealous of your friends?" and "Do you often feel like you are being pushed around?"). Participants were told that their task was to pretest the survey by rating the extent to which each item evoked negative feelings.

Participants in *positive mood* conditions were asked to pretest a "funny thoughts" survey, which was pretested to elicit positive feelings. This survey included seven positively valenced questions (e.g., "Why do we drive on parkways and park on driveways?" "If 7–11 is open 24 hours a day, 365 days a year, why are there locks on the doors?" and "Why are they called apartments, when they are all stuck together?"). Participants were asked to rate the extent to which each item was amusing. Finally, participants in the *neutral mood* condition were asked to pretest a general knowledge survey. These participants were asked to rate the extent to which different questions indicated people's knowledge about the United States (e.g., "How many amendments are there to the Constitution?" "How many states are there in the United States?" and "Which President is called 'the father of our country'?"). All ratings were made on 7-point scales ranging from 1 (*not at all*) to 7 (*very much*).

The second part of the study assessed participants' willingness to exchange the pen they had used to complete the mood manipulation survey. After completing the mood manipulation surveys, participants were handed an allegedly unrelated marketing survey on pricing. They were informed

that we were interested in the processes of valuation and price setting and that their task was to determine an appropriate price for the Uniball pen they had used in the first part of the experiment. *Sellers* were told that the pen was theirs to keep but that they could sell it back to the experimenter. They were then asked to specify the minimum amount of money they would accept to sell it. *Buyers* were told that they could purchase the pen from the experimenter and were asked to specify the maximum price they would pay for it. Both buyers and sellers could list $0 to indicate that they were not interested in the pen.

Similar to the procedure used by Plott and Zeiler (2003), all participants further read that a predetermined price would be revealed after they provided their answers. The sellers were informed that the transaction would take place immediately and that if their demanded selling price was lower than the set price, they would get to keep the pen. In contrast, buyers were informed that if their offered buying price was higher than the set price, they would leave without the pen. All the participants were further informed that it was in their interest to indicate what the pen is truly worth to them. The predetermined price was $2, and real transactions were made with buyers who offered $2 or more and sellers who demanded $2 or less.

Results and Discussion

Manipulation check. To demonstrate the effect of the mood manipulation, another group of 60 undergraduates (recruited at the same location and drawn from the same student population) completed the mood manipulation in three conditions (positive vs. neutral vs. negative) and then indicated how they felt "right now, at this very moment" on a 7-point scale ranging from 1 (*very bad*) to 7 (*very good*). In addition, to test for the effect of the manipulation on concern with negative feelings, these participants rated the extent to which they did not mind doing something they might later regret on a 7-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*). These items were embedded in a supposedly unrelated survey to regret feelings.

As expected, analysis of participants' mood ratings yielded a main effect, $F(2, 57) = 12.16$, $p < .001$. A linear contrast indicated that participants in the positive mood condition ($M = 5.10$) felt better than participants in the neutral mood condition ($M = 3.80$), who further felt better than participants in the negative mood condition ($M = 2.95$), $F(1, 57) = 23.96$, $p < .001$. In addition, an analysis of participants' concern with regret yielded a main effect, $F(2, 57) = 6.84$, $p = .01$. A linear contrast indicated that participants in the positive mood condition ($M = 2.35$) were less concerned with negative feelings than participants in the neutral mood condition ($M = 3.10$), who were further less concerned with negative feelings than participants in the negative mood condition ($M = 3.65$), $F(1, 57) = 23.96$, $p < .001$. We further observed a negative correlation between mood and concern with regret ($r = –.27$, $p < .05$). This relation suggests that better mood predicts less concern about negative feelings. After establishing the effect of the manipulation on mood and general concern with negative feelings, we tested for the effect the manipulation on willingness to trade.

Willingness to trade. Price estimates are shown in Table 1 as a function of mood and transaction role. Analyses of these data yielded an interaction of these variables, $F(2, 108) = 7.65$, $p < .001$. As shown in the table, participants' selling price exceeded the buying price in both the negative mood condition ($3.40 vs. $0.85) and the neutral mood condition ($2.76 vs. $1.69), but not in the positive mood condition ($1.85 vs. $1.58, *ns*). The price disparity was significantly larger in the negative mood condition than in the neutral mood condition, $F(1, 70) = 4.50$, $p < .05$.

In addition to the comparisons within each mood state, we analyzed the listed prices within the role of buyers and sellers, respectively. In support of our predictions, compared with sellers in a neutral mood, sellers in a positive mood demanded a lower price, $t(35) = 2.65$, $p < .05$, whereas those in a negative mood asked for a higher price, $t(38) = 2.07$, $p < .05$. On the buyers' side, although buyers in a positive mood did not offer significantly from buyers in a neutral mood, those in a negative mood offered less than buyers in a neutral mood, $t(37) = 2.51$, $p < .05$.

This study provided a conceptual replication of the endowment effect under neutral mood. However, whereas negative mood increased the disparity between buying and selling prices, under positive mood conditions this price disparity diminished and was even slightly reversed. Thus, when people do not anticipate negative feelings (as under positive mood conditions), buyers and sellers offer similar prices, but when people anticipate more negative feelings (as under negative mood conditions) the buying and selling price disparity increases. This pattern of results is consistent with research on mood as a resource (e.g., Raghunathan & Trope, 2002) and mood as information (e.g., Schwarz & Clore, 2003), which attests that people's positive emotions increase their tolerance of potential negative outcomes. However, it is less consistent with mood maintenance conceptualizations (Isen, Shalker, Clark, & Karp, 1978), which suggest that people are motivated to maintain their positive mood. Appar-

TABLE 1
Monetary Prices as a Function of Mood and Transaction Role: Study 1

	Mood Condition		
Transaction Role	*Negative*	*Neutral*	*Positive*
Buyer	0.85_a	1.69_c	$1.85_{c,e}$
Seller	3.40_b	2.76_d	1.58_e

Note. Values with unlike subscripts differ at $p < .05$, two-tailed.

ently, in this study positive mood was more likely to be "consumed" by increasing tolerance of negative events.

STUDY 2: OMISSION VERSUS COMMISSION REGRET AND WILLINGNESS TO TRADE

Whereas in Study 1 less anticipated negative feelings over trading increased willingness to trade, in Study 2 we sought to reduce the endowment bias by increasing the anticipated regret that is associated with the often-neglected consequences of failures to trade (e.g., Ritov & Baron, 1992). We assumed that anticipated negative feelings regarding commission errors (i.e., wrong actions) are responsible for the price disparity. Therefore, we hypothesized that elaborating on past errors of omission (i.e., failure to act) would reduce the size of the endowment bias by increasing people's awareness that negative outcomes could arise from failure to act.

Method

Participants and design. One hundred two undergraduates (57 women and 45 men) participated in the experiment in return for $1. They were randomly assigned to cells composing a 2 (regret prime: commission vs. omission) × 2 (transaction role: buyer vs. seller) between-subjects design. The endowed object was a pen that participants used to complete the experimental survey.

Procedure. Participants were introduced to the experiment, which included some allegedly unrelated surveys. The first survey, on "regrettable events," was designed to prime omission versus commission regret. Participants in the *omission regret* condition were asked to describe three things that they have not done but wished they had, whereas participants in the *commission regret* condition were asked to describe three things that they had done but wished they had not. The first instruction elicited events such as failing to ask the right person out and missing a computer sale, and the second elicited events such as going out with the wrong person and starting a fight. In addition, to rule out the possibility that recalling errors of commission (vs. omission) induced a bad mood, which would increase the size of the endowment bias, all participants were asked to rate their mood on a 7-point scale ranging from 1 (*very bad*) to 7 (*very good*).

Endowment bias. Participants were then handed a second "marketing survey" on pricing that was identical to the one used in Study 1. They were asked to determine an appropriate price for the pen they were using. Those in the *selling condition*, who were told the pen was theirs to keep, specified the minimum amount of money that would make them sell the pen, whereas those in the *buying condition* specified the maximum price they would offer to buy the pen. Real transactions were made with buyers who offered $2 or more and sellers who demanded $2 or less.

Results and Discussion

Manipulation check. To demonstrate the effect of the recall manipulation on anticipated regret of commission, another group of 39 undergraduates (recruited in the same location and drawn from the same population) completed the regret manipulation in one of two regret conditions. The participants then rated their willingness to take actions they might regret later on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). In support of the manipulation, participants who recalled errors of omission were more confident in taking further actions they might later regret (M = 4.00) than participants who recalled errors of commission (M = 2.63), $t(37) = 3.19$, $p < .01$.

Willingness to trade. Price estimates are shown in Table 2 as a function of transaction role and priming. An analysis of these prices indicated that buyers generally offered less money than sellers were willing to take ($0.88 vs. $1.21), $F(1, 97) = 26.30$, $p < .01$. However, this analysis further yielded an interaction, indicating that the difference between buyers and sellers was significantly greater when participants were primed to think about errors of commission, that is, things they had not done but should have ($0.72 vs. $1.86) than when they were primed to think about errors of omission, that is, things they had done but should not have ($1.04 vs. $1.39), $F(1, 97) = 7.59$, $p < .01$. Furthermore, as shown in Table 2, the first difference was quite significant, but the second was not.

This pattern of results is consistent with the hypothesis that anticipated regret from errors of commission generates the endowment effect. Specifically, consistent with the idea that anticipated negative feelings are responsible for the endowment bias, when participants were disposed to anticipate the negative consequences of failing to take an action, buyers' offered price increased, and sellers' requested price decreased. This effect of the priming was independent of participants' mood while completing the task, which was similar under both priming conditions (Ms = 3.24 and 3.03 for commission vs. omission errors, *ns*). It appears that recalling past errors of omission reduced the size of the endowment bias by

TABLE 2
Monetary Prices as a Function of Type of Regret and Transaction Role: Study 2

	Primed Regret Type	
Transaction Role	*Omission Regret*	*Commission Regret*
Buyer	0.72_{a}	4.04_{ac}
Seller	1.86_{b}	$1.39_{b,c}$

Note. Values with unlike subscripts differ at $p < .05$, two-tailed.

increasing awareness that negative outcomes could also arise from failure to act, rather than by decreasing the negative experience associated with wrong actions (as in Study 1).

STUDY 3: ACTION FRAMING AND WILLINGNESS TO TRADE

People tend to regret errors of commission, and thus actions entail more anticipated regret than inaction (e.g., Anderson, 2003; Miller & Taylor, 2002). We therefore predicted that the gap between buying and selling prices would diminish when the acts of buying and selling are framed as inactions or as the default option. In this study we manipulated the framing of a transaction as being an active decision (i.e., a decision that requires action) or a passive decision (i.e., a decision that requires no action) and aimed to demonstrate that participants' willingness to trade, measured by their offered and demanded prices, varied as a function of these framings.

Method

Participants and design. One hundred two undergraduates (53 women and 49 men) participated in the experiment in return for $1. Participants were recruited on campus and completed the study in an experimental laboratory. They were randomly assigned to cells composing a 2 (framing: action vs. inaction) × 2 (role: buyer vs. seller) between-subjects design. The endowed object was again the pen that participants used to complete the experimental surveys.

Procedure. Participants were introduced to the experiment that included some allegedly unrelated surveys. Participants were first handed a filler survey that was meant to familiarize them with the endowed pen. Next, all participants moved on to a "marketing survey" about pricing. Participants in the *seller condition* were told then that the pen was theirs to keep. Half of the sellers, who were assigned to the *action selling condition*, were asked to consider whether they would like to sell the pen to the experimenter. After considering whether to sell the pen, they were asked to specify the minimum offered price they would accept and sell the pen. The rest of the sellers, who were assigned to the *inaction selling condition*, were asked to consider whether they would like to keep the pen. After considering whether they would like to keep the pen, these sellers were asked to specify the maximum price they would reject if offered and keep the pen.

Similarly, half of the buyers, who were assigned to the *action buying condition*, were asked to consider whether they would like to buy the pen from the experimenter. After considering whether they would like to buy the pen, they then had to specify the maximum requested price they would accept to buy the pen. The rest of the buyers, who were assigned to the *inaction buying condition*, were asked to consider whether they would like to return the pen to the experimenter. After considering whether they would like to return the pen, they had to specify the minimum requested price they would reject (and return the pen) if it were offered.

To ensure that participants had followed the instructions, we conducted a thorough debriefing by the end of the experiment. All participants indicated that they had no difficulties understanding the trading instructions. As in Study 2, the predetermined price for this pen was $2, and real transactions were made with buyers who offered at least this amount and sellers who asked for no more than this amount.

Results and Discussion

Manipulation check. To test for the effect of the framing manipulation on participants' anticipated emotional reactions to the trade options, another group of 50 undergraduates (recruited in the same location and drawn from the same population) rated the extent to which each transaction framing was associated with anticipated regret. Half of them were assigned to action framing and rated the extent to which they would experience regret if (a) they sold an item and later realized they need it and (b) they bought an item and later realized they do not need it. The rest of them were assigned to the inaction framing and rated the extent to which they would experience regret if (a) they did not keep an item and later realized that they need it and (b) they did not return an item and later realized that they do not need it; all ratings were made on 7-point scales ranging from 1 (*not at all*) to 7 (*very much*). Analysis of these ratings yielded the expected main effect of transaction framing, $F(1, 48) = 11.36$, $p < .01$, indicating that action framings were associated with greater anticipated regret, (Ms = 4.80 for sellers and 5.08 for buyers) than inaction framings (Ms = 3.68 for sellers and 4.20 for buyers). No other effects emerged in this analysis and, in particular, there was no difference in reported regret between buyers and sellers within each action framing condition. It appears that action framing is associated more with anticipated regret than inaction framing is.

Willingness to trade. Transaction prices as a function of framing and transaction role are shown in Table 3. The interaction of these variables was significant, $F(1, 94) = 6.39$, $p < .05$. When the choice alternatives were framed in terms of actions, sellers requested higher prices (M = $2.23) than buy-

TABLE 3
Monetary Prices as a Function of Transaction Framing and Transaction Role: Study 3

	Transaction Framing	
Transaction Role	*Action Framing*	*Inaction Framing*
Buyer	0.71_{a}	$1.07_{a,c}$
Seller	2.23_{b}	1.31_{c}

Note. Values with unlike subscripts differ at $p < .05$, two-tailed.

ers were willing to pay (M = $0.71). However, when they were framed in terms of inactions, buyers and sellers offered similar monetary prices ($1.31 and $1.07, respectively).

These results reveal that the price disparity between buyers and sellers diminishes when trading is framed passively as the default option. Thus, whereas in Study 2 awareness of the negative experience that is associated with inactions increased participants' willingness to trade by increasing concern with regret, here participants' relatively low concern with the regret that is associated with inactions increased willingness to trade. It is interesting that this pattern of results suggests that in natural settings the price disparity between buyers and sellers should not necessarily emerge, as emergence depends on whether the transaction is the default option. To the extent that buyers and sellers view the transaction as a default (e.g., when the transaction takes place between a salesperson and a customer), the price disparity should be minimal. However, to the extent that buyers and sellers do not view the transaction as a default (e.g., when people consider parting with their beloved family van), the regret associated with conducting the transaction is relatively high, and the threshold for trading increases.

GENERAL DISCUSSION

People's anticipated reaction to losses has a powerful influence on their everyday decisions (e.g., Bar-Hillel & Neter, 1996; Gilovich & Medvec, 1995; Kahneman & Miller, 1986). Our research demonstrates the effect that anticipated negative outcomes have on determining transaction prices. In three studies, we found that variables that decrease the negative experience associated with wrong actions, or that increase the negative experience associated with failing to act, can ultimately decrease the size of the disparity between buying and selling prices. Specifically, Study 1 showed that the endowment bias diminishes under positive mood conditions when individuals perceive transactions as involving lower risks and have more emotional resources to cope with possible negative feelings. However, the endowment effect is amplified under negative mood conditions, when the perceived risks are high and individuals' psychological coping resources are low. It appears that, unlike mental biases that are more pronounced under positive mood and that reflect one's sense that the situation is benign (e.g., increased heuristic processing; Bodenhausen, Kramer, & Suesser, 1994), the endowment bias represents concern with negative affective outcomes and therefore is more pronounced under negative mood conditions when the situation seems problematic.

Study 2 revealed that directing individuals' attention to the anticipated regret from failure to act reduces the size of the endowment bias by increasing concern regarding errors of omission. Finally, Study 3 showed that individuals are more willing to exchange the endowed object when the transaction is framed as default or inaction, which elicits few anticipated negative feelings. This result suggests that the endowment bias is less likely to emerge between natural buyers and sellers (e.g., a salesperson and a customer), who view their actions as default. Taken together, these three studies provide an affect-based account of the process of price setting and the observed disparity between buyers and sellers.

More generally, consistent with regret theory (Bar-Hillel & Neter, 1996; Loomes & Sugden, 1982), the price gap between buyers and sellers was mainly affected by negative (vs. positive) affective cues, that is, regret-type feelings that are associated with losing possession of a potentially valuable object (for sellers) or losing money on a potentially worthless purchase (for buyers). Furthermore, these findings are consistent with a growing amount of evidence in favor of the role of affective cues in self-regulation and decision making (e.g., Fishbach, Shah, & Kruglanski, 2004; Higgins, 1997; Mellers et al., 1999; Roese & Olson, 1995). Previous research has shown that affective evaluations of different action alternatives provide important feedback that signals to the individual which actions should be selected and pursued. In line with this research, in this investigation (in Study 1) we found that people's ongoing feelings interact with anticipated feelings to influence the processes of price settings.

Implications for Research on Anticipated Emotions

Our results are consistent with research attesting that decisions are influenced by anticipated emotional reactions, particularly the negative emotions that people anticipate in response to negative outcomes (e.g., Fong & Wyer, 2003; Kahneman & Miller, 1986; Mellers, 2000; Mellers et al., 1999). We demonstrated the unique effect of anticipated feelings by manipulating variables that are associated with anticipated regret (e.g., Anderson, 2003; Miller & Taylor, 2002; Ritov & Baron, 1992) in Studies 2 and 3 and by directly testing for the effect of mood on anticipated negative feelings (Study 1). Our results provide further support for the role of anticipated feelings in daily decisions. As shown in these studies, anticipated feelings, rather than anticipated consequences, influence the price disparity between buyers and sellers.

Consistent with research on norm theory and counterfactual thinking (e.g., Kahneman & Miller, 1986; Roese & Olson, 1995), we further assume that specific concern with anticipated regret influences the processes of pricing. However, whereas the results of our studies are consistent with a regret-based interpretation, this research is not set to distinguish between a variety of negative affective cues that may be operating to influence people's judgment about the appropriateness of prices. As the effects of mood in Study 1 suggest, a variety of anticipated negative feelings (e.g., disappointment), and not only regret, might influence the price difference between buyers and sellers. Future research might ex-

plore the specific negative feelings that alter individuals' decisions.

However, it is important to note that whereas general concern with negative feelings may account for the results obtained in Study 1, in Studies 2 and 3 we directly manipulated factors that influence the experience of anticipated regret (e.g., omission–commission priming and action–inaction framing). Therefore, although other negative emotions might contribute to people's general reluctance to trade, anticipated regret might have a unique influence on the processes of price setting.

Implications for Research on Loss Aversion

A general question concerns the contribution of this research beyond previous conceptualizations of the endowment effect in terms of loss aversion. By exploring the role of anticipated negative reactions, what have we learned about loss aversion? We would like to point out first that our current analysis fits well into loss aversion's account for the endowment effect, mainly because in this research participants were also generally more concerned with the negative (vs. positive) affective consequences of their actions. After all, it was participants' motivation to minimize losses rather than to maximize gains that was responsible for the endowment bias.

By identifying the effect of affective cues in the processes of price setting, this research further advances our understanding of the psychological mechanisms by which loss aversion comes into play in everyday decision making. Our research explored the possibility that evaluation of loss is not only a matter of evaluation, as suggested by prospect theory, but also a matter of experience, thus being dependent on situational determinants such as mood state. Furthermore, our research promotes a close investigation of a variety of situational factors that determine the experience of negative feelings and may in turn exert an effect on the perceived acceptability of prices. However, many other situational variables that influence the experience of losses should also affect the mental biases that are associated with loss aversion. An exploration of these possibilities is a goal of our future research.

ACKNOWLEDGMENTS

This work was supported by the William S. Fishman Faculty Research Fund at the Graduate School of Business, the University of Chicago, to Ayelet Fishbach.

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Received: January 3, 2005
Accepted: March 9, 2005