Attaining Satisfaction

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It is self-evident that performing poorly on a task makes people dissatisfied relative to performing well. How can this negative affect be overcome? We provide an adaptive strategy for dealing with poor performance. Experiment 1 shows that poor performers tend to recruit the highest potential performance as a comparison standard and hence are dissatisfied. However, if they are reminded that they set their own low goals, and that these goals were met, they are as satisfied as better performers. Experiment 2 shows that incremental theorists who believe that they can improve their performance in the future tend to compare their performance to the initially set goal rather than the highest potential performance, and are hence as satisfied as better performers. These findings shed light on the dynamic comparison process underlying satisfaction judgment. Implications of these findings for perennial low goal setters and for satisfaction in general are discussed.

> There is no happiness except in the realization that we have accomplished something. (Henry Ford)

Consider Sally, a consumer who is considering investing in a mutual fund. She studies the performance of different funds, realizes that there is a trade-off between risk and reward, and decides to go with the highest performing fund (25% year-to-date return), despite the higher level of risk entailed. She receives her quarterly fund performance report and finds that the fund has met her expected rate of return and is satisfied with her choice. Now consider Harry, another consumer considering investing in a mutual fund. He realizes the risk-reward trade-off, and after examining the returns of different funds, decides to invest his savings in the lower performing fund (8% year-to-date return). When he receives his quarterly fund performance report, he finds that the fund has met his expected rate of return. Is he likely to be satisfied with his choice? If not, why? And how can his level of satisfaction be improved? These are the questions we pose in this article.

The well-known expectancy-disconfirmation model of satisfaction suggests that Sally and Harry should be equally satisfied because they have both met their expectations. The model assumes that performance is compared to expectancies (or goals); when goals are met, satisfaction results, but when goals are not met, dissatisfaction results (Oliver 1980). Thus, the key criterion that drives consumer satisfaction is the comparison standard used to evaluate the outcome (Fournier and Mick 1999; Parasuraman, Zeithaml, and Berry 1994). As Fournier and Mick (1999) point out, however, the judgment of satisfaction is likely to be more than the formulaic comparison of outcome to initial expectation; contextual factors could influence the comparison standard that is used. Thus, if consumers recruit a different standard of comparison than the goal, then performance relative to that standard will drive satisfaction. The critical question is the comparison standard that is spontaneously evoked when evaluating one's performance. If not the initial goal, what are the alternative comparison standards that might be used? The conceptual framework below addresses this question. We then describe two experiments that test the framework and conclude with the implications of our findings for theory and practice.

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CONCEPTUAL FRAMEWORK

The two alternative comparison standards that can be used in the investment scenario (other than the initial expectation) are the lowest possible rate of return or the highest possible rate of return. Of these two standards, research would suggest that the highest possible return, or potential, is more likely to be recruited. This is consistent with the counterfactual literature that holds that upward comparisons are adaptive and preparative (Roese 1997). Further, people are by nature forward-looking, and it is easier to think of the potential that relates to the future, rather than the expectation that relates to the past (Van Boven and Ashworth 2007). Hence, an investor is likely to compare the performance of his or her investment to the potential performance ("what might have been") rather than the initially set goal. This comparison is likely to result in lower satisfaction when a lower goal is met (vs. a higher goal) because of the larger gap between actual performance and the comparison standard (i.e., the highest potential performance) in this case.

Besides the preparative tendency to compare upward, a second factor that is likely to affect the comparison standard that is used is attainability of the potential performance. Consider an active investor assembling her portfolio of stocks. In this case, she plays an active role in determining the return of her portfolio, because she keeps track and constantly updates her portfolio. This investor is likely to compare performance of her portfolio to the initially set goals if she believes that the highest possible performance (the potential return) is one that can be attained in the future. The potential performance is the standard to shoot for in the future. One factor that affects whether the potential performance is considered attainable is whether people hold incremental theories of intelligence, that is, whether they believe that intelligence is not a fixed entity but can improve with practice (Dweck and Leggett 1988). When incremental intelligence beliefs are in place, the potential standard looks attainable in the future, and hence, current performance is likely to be compared to the initially set goal. This comparison is likely to lead to similar levels of satisfaction regardless of whether goals are low or high. However, when an entity theory of intelligence is in place, it suggests that intelligence is a fixed entity. In this case, performance is likely to be compared to the potential performance, which is presumed to be unattainable. In this case, low goals will lead to less satisfaction than high goals. Note that it is possible that incremental theorists also set higher goals than entity theorists; however, we do not examine the influence of lay theories on goal setting in this paper (conceptually or empirically), because our focus is on studying the impact of lay theories of intelligence in shifting the standard of comparison and hence satisfaction judgments.

EXPERIMENTAL STRATEGY

We present two experiments in the domains of financial decision making and puzzle solving to test the proposition that (*a*) people compare performance to highest potential and are hence dissatisfied with poor performance, (*b*) people can reduce dissatisfaction if they are reminded to compare performance to the initially set goal, and (*c*) incremental theorists spontaneously compare performance to the initially set goal and are, hence, satisfied regardless of level of performance. The financial decision-making experiment requires participants to set financial return goals and then construct a stock portfolio based on information about different stocks. Participants then receive feedback (always at the level of the goal) about the performance of their portfolio and provide satisfaction responses. Similarly, in the puzzle-solving experiment, participants set a performance goal, perform the puzzle-solving tasks, receive feedback on their performance, and finally report their level of satisfaction with their performance.

Testing the propositions outlined above requires a manipulation of goal level. One issue that we need to deal with is self-selection—if we use naturally set goals and examine low- versus high-goal setters, we might simply capture trait differences in satisfaction levels. In other words, those who set low goals may tend to be dissatisfied people. To guard against this issue, we manipulate antecedents to goal setting and examine satisfaction among those who set predictably low versus high goals.

Experiment 1 relies on previous findings regarding the effect of whether or not one expects to perform similar tasks in the future to manipulate goal level. Research on hedonic contrast finds that people believe that they will enjoy an experience more when it follows a worse experience and hence prefer an improving sequence of outcomes (Lowenstein 1993; Lowenstein and Prelec 1991; Novemsky and Ratner 2003). If people anticipate future episodes of the same task, the need to improve over time becomes salient (Lowenstein and Prelec 1991; Novemsky and Ratner 2003), resulting in initial setting of lower goals. Experiment 1 uses this factor to create the independent variable of low versus high goals.

We draw on motivation theory to create conditions of low- versus high-goal setting in experiment 2. Research on regulatory focus suggests that avoidance orientation (prevention focus) is associated with pursuing minimal goals, whereas approach orientation (promotion focus) is associated with pursuing maximal goals (Brendl and Higgins 1996; Forster, Higgins, and Idson 1998; Jain, Agrawal, and Maheshwaran 2006). Experiment 2 manipulates goal level by priming approach and avoidance motives.

EXPERIMENT 1

The goal of this study is to examine the proposition that individuals use potential performance rather than their previously set goal as the benchmark when they evaluate their performance and are hence dissatisfied. The experiment also demonstrates that reminding people of their initially set goal removes this effect by changing the comparison standard to the goal. Low- versus high-goal setting is manipulated via repeated versus one-shot decision-making situations as described above (details of the manipulation are below). Our

prediction is that people spontaneously recruit potential performance in order to evaluate their own performance and will therefore be less satisfied when they set and meet low versus high goals. If our hypothesis about this default comparison is correct, then making the highest potential salient at the time of feedback should also result in lower satisfaction under low versus high goals. In other words, those provided with only performance feedback should behave as if they are also provided with the highest potential performance at the time of feedback because they are spontaneously evoking this potential as the comparison standard. However, making the initially set goal salient at the time of feedback should result in no difference between the low- and high-goal conditions; both groups compare their performance to the salient goal and realize that they have met the goal and they should therefore be equally satisfied. We manipulate the information present at the time of performance feedback to test the preceding hypotheses.

Method

Design. We tested our hypothesis using a 2 (anticipate repeated decisions vs. anticipate single decision) × 3 (information at feedback: performance-only vs. performance-plus-goal vs. performance-plus-potential) between-subjects experiment conducted in the financial domain. Feedback was provided such that performance was always at the level of the goal; that is, goals were met in all conditions.

Procedure and Stimuli. One hundred thirty-four students participated in the experiment for an $8 incentive. The experiment was presented as an investment decision making study, and participants were told that they would make investment decisions and would receive feedback on their performance based on the actual performance of the stocks they picked. They were told:

> Imagine that you are living in a foreign country and need to invest your money. You have an investment budget of $5,400 and want to invest it in the stock market of this country. Given the market condition in this country, at the end of a month, you can expect your portfolio to yield between 6% and 20% in return. As with any investment in a financial market, investing in stocks involves risk.

Participants then picked a target rate of return. In addition, those in the anticipate-repeated condition were told, "You make investment decisions on the first of every month—that is, you trade on the 1st of each month," before picking their target return. All participants selected the level of return they would be satisfied with from the following possible target returns: 6%, 8%, 10%, 12%, 14%, 16%, 18%, and 20%. They then listed their thoughts about their choice of target return.

Next, participants constructed their stock portfolio. They were presented with a list of 20 fictitious stocks along with key information such as P/E (price/earnings) ratio, price, ROE (return on equity), debt-to-equity ratio, and EPS (earnings per share; quarter vs. year ago). The presentation used the information layout of the E*TRADE Web site. They were also given a packet that had additional information on each of the 20 individual stocks. Participants recorded the time they took to complete reading the information and then allocated their $5,400 budget across three stocks. Low-goal setters (goal ≤ median goal level of 14%) and high-goal setters (goal > 14%) did not differ in terms of the amount of time that they spent on the task (M_{LG} = 6 min. 37 sec. vs. M_{HG} = 7 min. 24 sec.; $F(1, 61) = 1.58$, NS).

After a 10-minute filler task, participants were given feedback and received the return of their stock portfolio, handwritten by the experimenter so that the return matched their goal (goal + .04%, the latter added to increase believability of the feedback). Participants were led to believe that their stock allocation had been entered into a database to get the actual returns for the month in which they made their decision. For the performance-only feedback condition, only the performance information was provided at feedback. Those in the performance-plus-potential at feedback condition were told, "If you recall, the range of typical return for the stocks in this country is 6% to 20%," before the performance was presented. Those in the performance-plus-goal at feedback condition were told, "You had predicted that you would be satisfied with (actual goal %) for the past month. Your portfolio has resulted in a return of (actual goal plus .04%)."

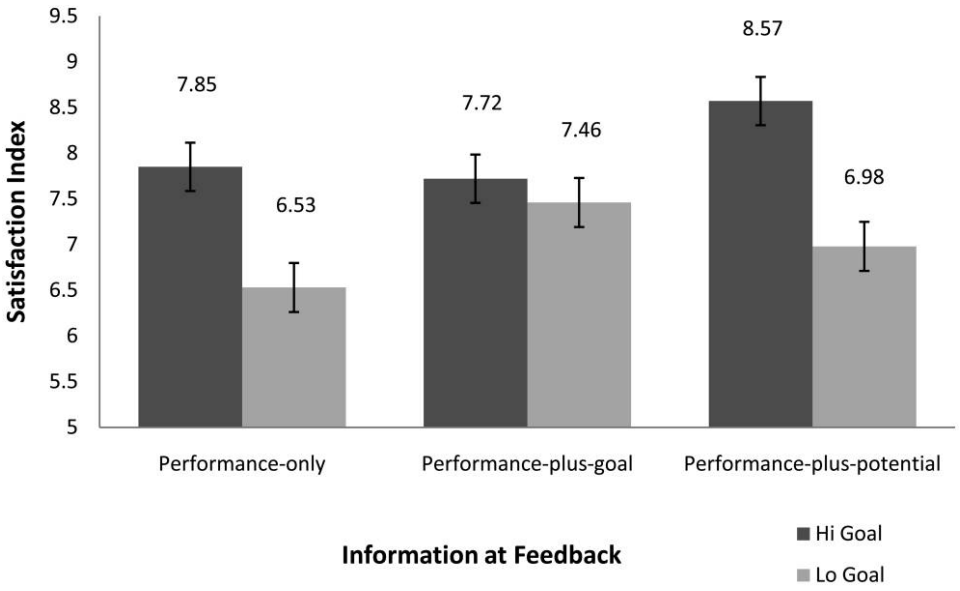
Respondents then recorded their thoughts about their performance ("Please write down all thoughts that came to your mind when you saw the level of performance for your stock portfolio"). Next, respondents rated their satisfaction with the performance of their stocks on 9-point scales ("How satisfied are you with the performance of your portfolio?"; "Given the identical set of stocks to choose from, I would make the same choice again"; "I am pleased with the performance of the stocks I chose"; averaged to form an index of satisfaction, Cronbach's alpha = .82). Involvement and expertise measures were also collected, and these did not differ across conditions.

Results

Manipulation Check. Thoughts listed immediately after respondents set their desired goal were coded by two coders to examine whether participants in the anticipate-repeated-decisions condition were more concerned with the need to improve compared to anticipate-single-decision participants. A focus on improvement was expected to result in lower goals being set by participants in the anticipate-repeated condition. Each thought was coded according to whether it was a thought about future performance (long term) or about the level of goal relative to the range. The two conditions did not vary significantly in the number of thoughts generated (2.16 vs. 1.55). In support of the intended manipulation, anticipate-repeated participants were more likely than anticipate-single participants to list thoughts about making, or repeating, stock decisions in the future (32% vs. 11%, with at least one "repeat" thought; $z = 2.12$, $p < .05$). In addition, the proportion of thoughts about the relative po-

FIGURE 1

EFFECTS OF LOW VS. HIGH GOALS ON SATISFACTION



NOTE.—$N = 77$. Satisfaction measured on 9-point scales (1 = not at all, 9 = extremely).

sitioning of the initial goal within the performance range provided (e.g., reference to a minimum level lower than the midpoint) was significantly higher for the anticipate-repeated condition compared to the anticipate-single condition (36% vs. 11%; $z = 2.28$, $p < .05$).

As expected, anticipating recurring goal-setting decisions (vs. one-time goal setting) resulted in lower goals (i.e., target rates of return) being set ($\beta = -.15$, $p < .10$). To prevent self-selection bias, analyses were conducted using the respondents in the anticipate-single-decision group who set their goals on the high end of the 6%–20% return scale (greater than the 14% median goal set) and those in the anticipate-repeated-decisions group who set their goals on the low end of the scale (≤14%; total $N = 77$). Reassuringly, all results reported below are replicated when the entire data set is used with goal level as the independent variable.

Consequences of Goal Setting on Satisfaction. The hypothesis was tested using regression analysis with the satisfaction index as the dependent variable and the selected goal level (mean-centered and used as a continuous variable, between 6% and 20% return) and feedback (performance-only vs. performance-plus-goal vs. performance-plus-potential) as the independent variables. Two variables were created using contrast codes to represent the three levels of feedback. The first variable contrasted providing a goal versus the other two conditions, and the second variable contrasted providing performance feedback only versus performance-plus-potential. The analysis revealed a significant main effect of goal level (goal $\beta = .38$, $p < .001$), such that satisfaction decreased as the level of goal decreased. There was a main effect of providing the goal at feedback such that reminding participants of their goal at feedback led to increased satisfaction ($\beta = -.24$, $p < .05$). As expected, the interaction between the first feedback variable (described above) and the goal level was significant ($\beta = .99$, $p < .05$), whereas the interaction between the second feedback variable and goal level was not significant ($\beta = .13$, $p > .2$).

Contrast analyses were conducted to follow up on the significant interactions. In these analyses, participants in the anticipate-repeated condition are considered low-goal setters (they set goals lower than or equal to the median of 14%), and participants in the anticipate-single condition are considered high-goal setters, as indicated in figure 1. Results in the performance-only feedback condition support the hypothesis that setting low goals results in lower satisfaction than setting high goals ($M_{LG} = 6.53$ vs. $M_{HG} = 7.85$; $F(1, 71) = 7.81$, $p < .01$). These results mimic those in the performance-plus-potential feedback condition ($M_{LG} = 6.98$ vs. $M_{HG} = 8.57$; $F(1, 71) = 8.78$, $p < .01$). However, when goal was made salient at the time of outcome feedback, that is, in the performance-plus-goal condition, the effect of goal level disappeared; satisfaction was not different between the low- and the high-goal groups ($M_{LG} = 7.46$ vs. $M_{HG} = 7.72$; $F < 1$).

Support for our process explanation that participants

spontaneously compared performance to the potential performance comes from examining the means within each goal level. In the low goals condition, satisfaction in the performance-only condition did not differ significantly from that in the performance-plus-potential condition ($M_{\text{LG/perf}} = 6.53$ vs. $M_{\text{LG/perf+pot}} = 6.98$; NS) but was significantly lower than that in the performance-plus-goal condition ($M_{\text{LG/perf}} = 6.53$ vs. $M_{\text{LG/perf+goal}} = 7.46$; $F(1, 71) = 5.38$, $p < .05$). When only performance was presented at feedback, participants reacted as if they were also presented with the potential, suggesting that the potential performance was spontaneously recruited and used as the comparison standard. When the goal was provided at feedback, this goal was used as the comparison standard and resulted in greater satisfaction with low goals (and performance) in this performance-plus-goal condition versus the other two conditions. In contrast, satisfaction among high-goal setters did not differ significantly across the three feedback conditions ($M_{\text{HG/perf}} = 7.85$, $M_{\text{HG/perf+pot}} = 8.57$, $M_{\text{HG/perf+goal}} = 7.72$). When high goals are met, comparison to the potential (spontaneously in the performance-only condition and as reminded in the performance-plus-potential conditions) or the goal (in the performance-plus-goal condition) results in high satisfaction because of the low gap between performance and potential. See figure 1 for the satisfaction results.

Thoughts. Thoughts in the performance-only feedback condition were analyzed to examine whether there was any evidence for the notion that performance is spontaneously (in the absence of any feedback other than simply performance) compared to potential, regardless of goal level. There is some evidence that participants think about the highest possible potential return in that 20% of participants in the high-goal condition and 25% of participants in the low-goal condition had at least one thought about the range of performance (i.e., the potential). Further, in support of the notion that comparisons to the potential drive down satisfaction, 50% of those in the low-goal condition (vs. 30% in the high-goal condition) had at least one counterfactual thought (e.g., "my portfolio could have done better") about their performance.

Discussion

Lower goals were set when participants anticipated repeating the financial decision-making task; however, satisfaction was lower when goals were set low versus high, even though performance was equal to goals. In some ways, repeating the task is similar to anticipating changing one's decision, although the constructs are distinct. In a parallel finding, Gilbert and Ebert (2002) found that the ability to change outcomes results in lower satisfaction than unchangeable outcomes (just as anticipating repeated decision making results in lower satisfaction vs. one-shot decision making). The authors explain this result by invoking the role of the psychological immune system, which is viewed as protecting people from suboptimal outcomes. When outcomes are not changeable, the psychological immune system kicks in and helps generate satisfaction; however, changeable outcomes preclude the possibility of self-generating satisfaction.

While our findings bear a surface similarity to Gilbert and Ebert's findings, they are different in two important ways. First, our construct of interest is anticipation of repeated decision making rather than changeability of a one-shot outcome. Second, self-generation of satisfaction in the unchangeable condition of Gilbert and Ebert's experiments is explained as a result of psychological processes that manufacture satisfaction. The nature of these psychological processes is not explicitly laid out. We propose and test the hypothesis that people compare their outcomes to the highest possible potential performance; this comparison results in satisfaction when goals are set high (one-shot decision) but in lowered levels of satisfaction when goals are set low (repeated decision).

Results of this experiment support the notion that dissatisfaction with lower performance can be offset by reminding people of their goals. We replicated the results in all conditions of this experiment in another experiment (not reported due to space constraints) where actual performance was held constant at 16% but participants were led to believe that performance of their portfolio was low versus high. The next experiment tests the prediction that incremental beliefs in intelligence result in spontaneous comparison of performance to the initially set goal rather than the highest potential, offsetting the lower satisfaction resulting from low performance.

EXPERIMENT 2

The purpose of this experiment is to replicate the key result that low-goal setters are less satisfied than high-goal setters in a puzzle-solving domain that retains the objectivity of the financial decision-making task. This experiment also examines the role of potential attainability as a moderator of this key result. If the potential performance on a puzzle-solving task is considered attainable in the future (because of beliefs that intelligence is incremental), we argue that performance will be compared with the initial goal rather than with the potential. Under these circumstances, low- and high-goal setters will not differ on satisfaction. However, if the potential is considered unattainable (because of entity beliefs of intelligence), performance will be compared with potential performance, resulting in lower satisfaction of low (vs. high) goal setters.

Method

Design. Two hundred and twenty-five individuals (ages 18–65) participated in this online experiment (advertised as a "set of studies") in exchange for entry into a lottery with a prize of $100 (odds of winning: 1/100). Participants were randomly assigned to one of eight conditions in a 2 (low vs. high goal, manipulated using avoidance vs. approach prime) × 2 (entity vs. incremental lay theory) × 2 (performance-only feedback vs. performance-plus-potential feedback) design.

As discussed above, we predicted that participants in the entity theory condition who set low goals would be less satisfied than those who set high goals, regardless of whether or not potential is provided at feedback. Potential performance is spontaneously evoked and used as the comparison standard. However, participants in the incremental theory condition are expected to compare their performance to spontaneously evoked goals (that are always met in our paradigm); low- and high-goal setters should be equally satisfied in this case. Providing the potential performance to participants in the incremental theory condition at the time of feedback will result in the potential being used as the comparison standard, resulting in low-goal setters being less satisfied than high-goal setters.

Procedure and Stimuli. This experiment used a similar procedure to the first experiment. The order of events was: (1) approach versus avoid priming task to induce high versus low goals, (2) goal setting, (3) puzzle task, (4) fixed versus malleable intelligence priming task, (5) false feedback of meeting goals, and (6) satisfaction responses. Note that the entity versus incremental theory was manipulated after the goal-setting task to ensure that goal level was not influenced by the lay theory.

Priming approach versus avoidance to induce high or low goals involved a reading comprehension task. Participants read a short biography of a thirteenth-century Russian general. Embedded in the biography were adjectives such as "ambitious" and "aim high" (high goal), or "cautious" and "conservative" (low goal), to describe the otherwise revered character. In all other respects, the contents of the reading tasks were identical. Participants were then asked whether they admired the general and went on to describe his three main qualities. The next (ostensibly unrelated) study informed participants that they would be presented with a word and had to find as many words as they could within this word; each word they found had to be at least four letters in length. They were also told that they would solve six "words-in-a-word" puzzles and that their performance would be evaluated relative to other participants on a percentile scale. Participants were told that their score would be calculated by adding up the correct words they formed across all six words-in-a-word puzzles, and that they would receive their total score at the end of the study. Participants were informed that "most people score between 20 and 90 words on this task." Participants then set a goal. They were asked, "With what level of performance would you be satisfied?" and responded using a percentile scale. Specifically, they were told:

> Your performance will be provided to you in percentile, that is, in comparison to how other players have performed. So for example, 40th percentile means you performed better than 40% of the total players. . . . A large sample of people is taking the study right now. Based on the range of scores (i.e., 20–90 correct words in six puzzles) that previous participants have received, how well do you think you will do compared to others taking the same study right now?

They were then presented with 10 possible goals to choose from: 0–10th percentile, 10th–20th percentile, . . . 90th–99th percentile.

All participants then completed the six words-in-a-word puzzles. Time invested on the six puzzles was not significantly different across the four conditions (M = 2 minutes and 25 seconds), suggesting similar levels of effort in all conditions. At the end of this task, they were informed that their relative score would be calculated and provided to them soon and that they would be asked to complete one more reading comprehension task while waiting for the results. The manipulation of entity versus incremental theories of intelligence was presented at this point under the guise of a reading comprehension task designed to assess how people read and process short paragraphs that contain subtle messages (Mukhopadhyay and Johar 2005). For the entity theory condition, respondents read a half-page paragraph that described human traits as fixed and predetermined; for the incremental intelligence condition, human traits were described as resembling a muscle, whereby putting in the effort to improve can increase intelligence and skill sets (Dweck 1999). After reading this paragraph, participants responded to two questions regarding the nature of intelligence, which served as manipulation checks ("Please indicate which of the following statements you tend to agree with:"). These questions measured beliefs in the two lay theories (7-point scales anchored at 1 = intelligence and capabilities are a limited resource, and 7 = intelligence and capabilities are an unlimited resource; 1 = intelligence and capabilities are a fixed quantity; 7 = intelligence and capabilities are a changeable quantity), and a measure of how convincing the given passage was (1 = not at all, 7 = extremely convincing).

Finally, participants were provided with feedback on their performance. All participants were told that they performed at the level of their goal, thus confirming their initial goal. On the next page, they responded to the main satisfaction questions ("How satisfied are you with your performance?" and "I am pleased with how I have performed on the words-in-a-word task"; $\alpha = 0.96$). This was followed by involvement and expertise ratings, which did not differ between conditions and are not discussed further.

Results

Manipulation Checks. For the approach versus avoid motivation manipulation, the approach prime led to higher goals than the avoid prime, as desired. The mean goal level in the avoid condition was the 40th–50th percentile range, whereas the mean goal level in the approach condition was the 70th–80th percentile range; $F(1, 211) = 85.65$, $p < .001$). Those who set their goals at or above the 60th percentile were classified as high-goal setters, and those who set their goals below the 60th percentile were classified as low-goal setters. Only those in the approach condition who set high goals and those in the avoid condition who set low goals were retained in the analyses, resulting in $N = 186$ (i.e., 12 and 14 responses were dropped from the approach

and avoid conditions, respectively). Given this was an online study, we also cleaned the data set based on responses to attention check questions. Nine participants were dropped, yielding a final pool of $N = 177$. Analyses using all 212 participants with low versus high goal as the independent variable provided similar results.

As expected, respondents who read the entity (vs. incremental) passage were significantly more likely to report that intelligence and capabilities were fixed ($M = 4.51$ vs. $M = 5.65$; $F(1, 175) = 39.17$, $p < .001$). Similarly, respondents in the entity (vs. incremental) condition were more likely to report that they believed intelligence and capabilities to be limited ($M = 4.84$ vs. $M = 5.78$; $F(1, 175) = 34.78$, $p < .001$). Respondents' ratings of how convincing the passage was did not differ between the two conditions ($M = 5.27$ vs. $M = 5.75$; NS).

Consequence of Goal Setting on Satisfaction. A 2 × 2 × 2 analysis of variance on the satisfaction index revealed a main effect of goal level such that satisfaction was lower under low versus high goal ($M_{LG} = 4.45$ vs. $M_{HG} = 6.56$; $F(1, 169) = 53.77$, $p < .001$; see fig. 2). This effect was qualified by a significant interaction between lay theory and goal ($F(1, 169) = 9.44$, $p < .05$). Satisfaction was lower under low (vs. high) goals in the entity theory condition, suggesting that low- and high-goal setters compared performance to the potential performance. This difference in satisfaction between low and high goals was attenuated in the incremental theory condition, where both low- and high-goal setters were expected to compare their performance to their initially set goals.

Analyzing the data within each theory condition revealed results consistent with the hypothesis. The feedback by goal interaction was significant within the incremental theory condition ($F(1, 90) = 3.37$, $p < .07$), but not within the entity theory condition ($F < 1$). Pairwise contrasts were run in the context of the complete 2 × 2 × 2 model. As predicted, participants who were induced to hold an entity theory of intelligence were less satisfied in the low- versus high-goal condition ($M_{LG} = 4.45$ vs. $M_{HG} = 6.56$; $F(1, 169) = 53.77$, $p < .0001$). Results in the performance-only feedback condition ($M_{LG} = 3.99$ vs. $M_{HG} = 6.97$; $F(1, 169) = 49.52$, $p < .0001$) mirror those in the performance-plus-potential feedback condition ($M_{LG} = 3.77$, $M_{HG} = 6.85$; $F(1, 169) = 31.93$, $p < .0001$), suggesting that the potential performance is the comparison standard that is used when only performance is provided at feedback. Further support for the potential as the comparison standard comes from the finding that low-goal setters in the performance-only condition have the same level of satisfaction as low-goal setters in the performance-plus-potential condition ($F < 1$).

Results are also as predicted among those induced to hold an incremental theory of intelligence. When only performance was presented at feedback, satisfaction did not differ between low- and high-goal setters ($M_{LG} = 5.40$ vs. $M_{HG} = 5.89$; $F < 1$), suggesting that performance was compared to the goal. When performance as well as potential performance were presented at feedback, low-goal setters were less satisfied than high-goal setters ($M_{LG} = 4.45$ vs. $M_{HG} = 6.40$; $F(1, 169) = 14.39$, $p < .001$). This is consistent with the results from previous experiments showing that the potential is used as the comparison standard when it is salient. In further support of our contention that incremental theorists spontaneously compare their performance to the goal rather than the potential, satisfaction is higher in the low-goal condition when only performance is provided at feedback compared to the low-goal condition when performance and potential are provided at feedback ($M_{LG/perf} = 5.40$ vs. $M_{LG/perf+pot} = 4.45$; $F(1, 169) = 3.41$, $p < .07$).

GENERAL DISCUSSION

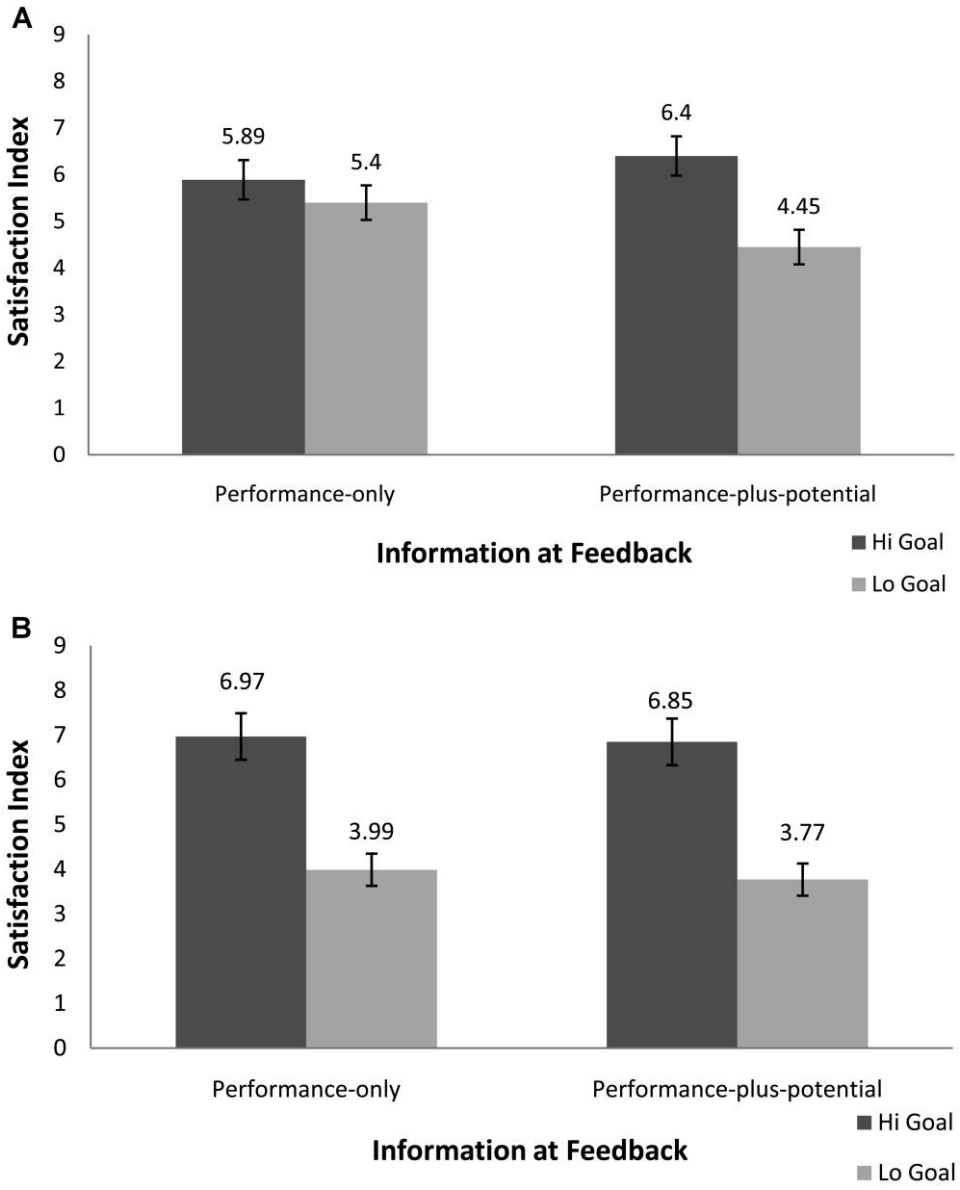
We began this paper by drawing on the satisfaction literature to state that the key criterion that drives consumer satisfaction is the comparison standard used to evaluate the outcome (Fournier and Mick 1999; Parasuraman et al. 1994). We show that in many instances, this comparison standard is the best possible outcome, what we term the potential. The use of the potential as the comparison standard implies that a low level of performance will result in low levels of satisfaction, even if the performance matches the goal. However, if people are reminded of their own goals at the time of outcome feedback, they resort to using the goal as the comparison standard, and low performers are as satisfied as high performers. People who hold an incremental theory of intelligence, and believe that intelligence is malleable, compare their performance to their initial goal. This leads to low performers being as satisfied as high performers. These results add to the literature on affect management and suggest possible interventions that can help consumer well-being.

Our findings raise questions about goal setting. When do people set low goals, and are they ironically doing so in the expectation of attaining satisfaction? There is some literature suggesting that this may be the case. For example, research suggests that, faced with uncertainty, certain types of consumers (e.g., satisficers, Schwartz et al. 2002; perfectionists, Kopalle and Lehman 2001) may be motivated to prepare for the worst by lowering one's target level of achievement. Recent research on temporally shifting expectations has also shown that people lower their expectations downward as uncertainty and the possibility of a negative outcome loom larger (Monga and Houston 2006; van Dijk, Zeelenberg, and van der Pligt 2003). The tendency to set low goals is likely to be exacerbated when consumers are concerned about minimizing the negative affect that accompanies failure (van Dijk et al. 2003).

The literature on defensive pessimism also suggests that anticipating negative outcomes and the negative affect that accompanies these outcomes often lead people to set lower goals as a defense strategy (Norem and Cantor 1986; Sanna 1998). According to research on self-handicapping, people often limit their own ability to succeed and deliberately impair themselves to avoid risk and maintain their self-esteem (Jones and Berglas 1978). The literature on bracing is also consistent with this general point (Shepperd et al. 2000;

FIGURE 2

(A) INCREMENTAL MIND-SET AND EFFECT OF LOW VS. HIGH GOALS ON SATISFACTION AND (B) ENTITY MIND-SET AND EFFECT OF LOW VS. HIGH GOALS ON SATISFACTION



NOTE.—N = 177. Satisfaction measured on 9-point scales (1 = not at all, 9 = extremely).

Sweeny and Shepperd 2007). The hallmark of defensive pessimism, self-handicapping, and bracing is setting low expectations in anticipation of failure, and the motivation to avoid the negative affect that is likely to accompany failure.

Study 2 is also consistent with the notion that people set low goals in order to avoid future disappointment and shows that this strategy can backfire. We provide no direct evidence for lowballing on goals as an affect regulation strategy but offer it as a promising avenue for future research. Another interesting avenue for future research is the examination of the focus at the time of goal setting versus goal attainment. We speculate that at the time of goal setting, people focus on attaining a goal, whereas at the time of goal attainment,

they focus on the level of performance rather than level of goal. A final piece of this puzzle would be a study of the differences between satisfaction of low performers who do not set any goal versus low performers who set a low goal.

A key theoretical contribution of this research concerns the articulation of the reasons why the highest potential is used as a comparison standard. People are wistful of "what could be" if they believe that they cannot attain the potential and, in these cases (e.g., entity theorists), tend to compare performance to the potential. Results of experiment 2 are telling in this regard—incremental theorists who believe that the potential is attainable in the future compare their performance to the goal. Low- and high-goal setters have similar levels of satisfaction in this case. One direction for future research is to examine whether entity theorists tend to set lower goals than incremental theorists. Our experimental setup precluded an examination of this issue.

Our findings also open up several other avenues for future research. For example, it is possible that the tendency to compare to the potential is moderated by individual differences such as future orientation or tendency to satisfice. While we pin down the comparison process that underlies satisfaction, other counterfactual processes may operate in tandem. For example, at the time of performance feedback, in addition to recruiting the potential as a comparison standard, people may also think about how their initially set goals affected their performance. Low-goal setters may infer low effort and hence be less satisfied. While this is a plausible explanation, our comparison standard explanation appears to dominate in that providing the goal at the time of feedback makes low-goal setters as satisfied as high-goal setters.

This research ties in with research on affective forecasting that suggests that people are poor predictors of their future affective states (Gilbert and Wilson 2000; Wilson and Gilbert 2003). Gilbert and his colleagues find that, in general, people exaggerate future affect, when in fact affect felt will be much lower in intensity, shorter in duration, or not felt at all. Recent research has found that such affective misforecasting occurs in consumer decision-making domains, such as purchase of functional (hiking boots and business suits) as well as hedonic (movies and foot massager) goods, and affects satisfaction (Patrick, MacInnis, and Park 2007). Our findings add to this literature by showing that people not only mispredict future affective states but also appear to mismanage them.

Our finding that people spontaneously evoke potential performance rather than the goal as a benchmark for comparison with performance has implications for the standard expectancy-disconfirmation model of satisfaction. The results are contrary to the model's prediction that confirmation of goals should ensure against disappointment. Our findings also speak to the call for understanding satisfaction judgments as a dynamic process (Fournier and Mick 1999). With changes over time in motivational concerns between the need to avoid losses and the need to achieve gains, our findings support the proposed but little-examined notion that comparison standards can shift along different consumption stages.

From a practical standpoint, this research has implications for the management of customer satisfaction. Our findings suggest that performance potential is evoked as a comparison standard regardless of individual goals. It may be tempting in this era of customization to allow different customers to select their own levels of product performance. However, even if the product lives up to an individual customer's goal, the longing for the potential is likely to color the customer's satisfaction. In cases where consumption does not have a clear or objective standard for evaluation, such as artwork, services, or really new products, the tendency to recruit higher potential or better imagined experience as a comparison standard may be exacerbated. Future research could focus on consumption domains where evaluative standards are subjective, such as movies, perfumes, pets, or restaurant meals (experience goods), or where evaluative standards are unavailable (credence goods, such as preventive medical treatment, higher education, or vitamin supplements).

In sum, satisfaction could be improved by encouraging people, both overtly and via subtle priming, to reflect on their initial starting point. The cost of this strategy in terms of goal striving and effort is left to future research to untangle.

REFERENCES

Brendl, C. Miguel and E. Tory Higgins (1996), "Principles of Judging Valence: What Makes Events Positive or Negative?" in *Advances in Experimental Social Psychology*, Vol. 28, ed. Mark P. Zanna, San Diego, CA: Academic Press, 95–160.

Dweck, Carol S. (1999), *Self Theories: Their Role in Motivation, Personality, and Development*, New York: Psychology Press.

Dweck, Carol S. and Ellen L. Leggett (1988), "A Social-Cognitive Approach to Motivation and Personality," *Psychological Review*, 95 (2), 256–73.

Forster, Jens, E. Tory Higgins, and Loraine C. Idson (1998), "Approach and Avoidance Strength during Goal Attainment: Regulatory Focus and the 'Goal Looms Larger' Effect," *Journal of Personality and Social Psychology*, 75 (5), 1115–31.

Fournier, Susan and David Glen Mick (1999), "Rediscovering Satisfaction," *Journal of Marketing*, 63 (October), 5–23.

Gilbert, Daniel and Jane E. Ebert (2002), "Decisions and Revisions: The Affective Forecasting of Changeable Outcomes," *Journal of Personality and Social Psychology*, 82 (4), 503–14.

Gilbert, Daniel T. and Timothy D. Wilson (2000), "Miswanting: Some Problems in the Forecasting of Future Affective States," in *Thinking and Feeling: The Role of Affect in Social Cognition*, ed. Joe Forgas, Cambridge: Cambridge University Press, 178–97.

Jain, Shailendra P., Nidhi Agrawal, and Durairaj Maheswaran (2006), "When More May Be Less: The Impact of Regulatory Focus on Responses to Different Comparative Frames," *Journal of Consumer Research*, 33 (1), 91–98.

Jones, Edward E. and Steven Berglas (1978), "Control of Attributions about the Self through Self-Handicapping: The Appeal of Alcohol and the Rate of Underachievement," *Personality and Social Psychology*, 4 (2), 200–206.

Kopalle, Praveen and Donald R. Lehmann (2001), "Strategic Management of Expectations: The Role of Disconfirmation Sen-

sitivity and Perfectionism," *Journal of Marketing Research*, 38 (August), 386–94.

Lowenstein, George (1993), "Preferences for Sequences of Outcomes," *Psychological Review*, 100 (January), 91–108.

Lowenstein, George and Drazen Prelec (1991), "Negative Time Preference," *American Economic Review*, 81 (2), 347–52.

Monga, Ashwani and Michael J. Houston (2006), "Fading Optimism in Products: Temporal Changes in Expectations about Performance," *Journal of Marketing Research*, 18 (November), 654–63.

Mukhopadhyay, Anirban and Gita Venkataramani Johar (2005), "Where There Is a Will, Is There a Way? The Effects of Consumers' Lay Theories of Self-Control on Setting and Keeping Resolutions," *Journal of Consumer Research*, 31 (March), 779–86.

Norem, Julie K. and Nancy Cantor (1986), "Defensive Pessimism: Harnessing Anxiety as Motivation," *Journal of Personality and Social Psychology*, 51 (December), 1208–17.

Novemsky, Nathan and Rebecca K. Ratner (2003), "The Time Course and Impact of Consumers' Erroneous Beliefs about Hedonic Contrast Effects," *Journal of Consumer Research*, 29 (March), 507–16.

Oliver, Richard L. (1980), "A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions," *Journal of Marketing Research*, 17 (November), 460–69.

Parasuraman, A. Parasu, Valarie A. Zeithaml, and Leonard L. Berry (1994), "Reassessment of Expectations as a Comparison Standard in Measuring Service Quality: Implications for Further Research," *Journal of Marketing*, 58 (January), 111–24.

Patrick, Vanessa M., Deborah J. MacInnis, and C. Whan Park (2007), "Not as Happy as I Thought I'd Be? Affective Misforecasting and Product Evaluations," *Journal of Consumer Research*, 33 (4), 479–90.

Roese, Neal (1997), "Counterfactual Thinking," *Psychological Bulletin*, 121 (1), 133–48.

Sanna, Lawrence J. (1998), "Defensive Pessimism and Optimism: The Bittersweet Influence of Mood on Performance and Prefactual and Counterfactual Thinking," *Cognition and Emotion*, 12, 635–65.

Schwartz, Barry, Andrew Ward, John Monterosso, Sonja Lyubomirsky, Katherine White, and Darrin R. Lehman (2002), "Maximizing versus Satisficing: Happiness Is a Matter of Choice," *Journal of Personality and Social Psychology*, 83 (5), 1178–97.

Shepperd, James A., Cynthia Findley-Klein, Kimberley D. Kwavnick, and Sylvia Perez (2000), "Bracing for Loss," *Journal of Personality and Social Psychology*, 78 (4), 620–34.

Sweeny, Kate and James A. Shepperd (2007), "Do People Brace Sensibly? Risk Judgments and Risk Prevalence," *Personality and Social Psychology Bulletin*, 33 (8), 1064–75.

Van Boven, Leaf and Laurence Ashworth (2007), "Looking Forward, Looking Back: Anticipation Is More Evocative than Retrospection," *Journal of Experimental Psychology: General*, 136 (2), 289–300.

Van Dijk, Wilco W., Marcel Zeelenberg, and Joop van der Pligt (2003), "Blessed Are Those Who Expect Nothing: Lowering Expectations as a Way of Avoiding Disappointment," *Journal of Economic Psychology*, 24 (4), 505–16.

Wilson, Timothy D. and Dan Gilbert (2003), "Affective Forecasting," in *Advances in Experimental Social Psychology*, Vol. 35, ed. Mark Zanna, New York: Elsevier, 345–411.

CORRECTION.—Since this article was published online on April 19, 2011, corrections have been made. In the last paragraph of the section entitled Conceptual Framework, the earlier version read: "however, we do not examine the influence of lay theories on goal setting in this essay"; "essay" has been changed to "paper." In the first sentence of the section entitled General Discussion, the earlier version read: "We began this essay"; "essay" has been changed to "paper." Also, titles for figures 1 and 2 have been revised. These changes were made in both the online and print versions of the article. Corrected on June 3, 2011.