Focalism: A Source of Durability Bias in Affective Forecasting

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The durability bias, the tendency to overpredict the duration of affective reactions to future events, may be due in part to focalism, whereby people focus too much on the event in question and not enough on the consequences of other future events. If so, asking people to think about other future activities should reduce the durability bias. In Studies 1–3, college football fans were less likely to overpredict how long the outcome of a football game would influence their happiness if they first thought about how much time they would spend on other future activities. Studies 4 and 5 ruled out alternative explanations and found evidence for a distraction interpretation, that people who think about future events moderate their forecasts because they believe that these events will reduce thinking about the focal event. The authors discuss the implications of focalism for other literatures, such as the planning fallacy.

> The pleasures and pains, joys and sufferings, which people actually experience, often fall short of what they had anticipated . . . In anticipating a coming event we have it alone in mind, and make no provision for other occurrences. (Tatarkiewicz, 1962/1976)

If a genie popped out of a lamp and offered you three wishes, would you attain lasting happiness? Most of us think that, like Aladdin, we would become happier people. Perfect health, true love, and untold riches would be ours for the asking, and who would not enjoy blessings such as these? To obtain lasting happiness, however, people have to know what to wish for. In the present studies, we tested the hypothesis that people often think about the future in ways that reduce the accuracy of their affective forecasts.

Undoubtedly, people know a great deal about what will make them happy. Most of us recognize that it would be better to ask the genie for good health, true love, and lots of money than for severe arthritis, a dysfunctional marriage, and the minimum wage. However, predictions about the affective consequences of future events may not always be correct. *Miswanting* is the case in which people do not like or dislike an event as much as they thought they would (Gilbert & Wilson, 2000; Mitchell, Thompson, Peterson, & Cronk, 1997).

Gilbert and Wilson (2000) identified a number of sources of miswanting. Sometimes, for example, an affective forecast is based on a faulty understanding of exactly what the event will entail. When people think about winning a million dollars, they probably imagine spacious mansions, round-the-world trips, and a cavalier attitude toward their children's college tuition. They might not anticipate the difficulty of maintaining relationships with envious friends, the hundreds of annoying phone calls from needy people seeking handouts, and the late-night worries about taxes and investments. The events that we imagine occurring are often quite different from the events that actually occur (Griffin & Ross, 1991).

Even if people know exactly what will happen, however, they can still make inaccurate forecasts about the affective consequences of that event. This is particularly true when people think about the duration of their affective reactions. They may know exactly what winning a million dollars entails and may accurately predict that they will be ecstatic when Ed McMahon arrives at their doorstep and hands them a check with lots of zeros. They might overestimate, however, the duration of this ecstasy. Gilbert and Wilson (2000) argued that people often overestimate the duration of their emotional reactions to future events. This *durability bias* is important, because people typically wish for and work toward

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events that they believe will cause lasting happiness, not just a moment's pleasure. If they overestimate how long their pleasure will last, they might be working toward the wrong things.

Gilbert, Pinel, Wilson, Blumberg, and Wheatley (1998) found evidence for the durability bias in six studies that examined the accuracy of people's affective forecasts. In one study, assistant professors predicted that their tenure decision would have an impact on their happiness for several years, whereas former assistant professors who had achieved tenure were no happier than former assistant professors who had not. In another study, voters in a gubernatorial election predicted that they would be significantly happier a month after the election if their candidate won than if their candidate lost. In fact, the supporters of the winning and losing candidates were just as happy a month after the election as they were before the election. Wilson, Meyers, and Gilbert (1999) replicated this result in a study of the 1996 presidential election. Democrats predicted that they would be substantially happier the week after the election if President Clinton were victorious; in fact, they were no happier following the election than they had been before. Republicans predicted that they would be substantially less happy if President Clinton were victorious; in fact, they were only slightly less happy than they were before. The durability bias has proved to be a robust phenomena, obtained in diverse samples of people who made predictions about both short-term and long-term events (Gilbert et al., 1998; Wilson et al., 1999).

One cause of the durability bias is *immune neglect,* which is the failure to take into account how much one's psychological immune system will ameliorate reactions to negative events. When something bad happens, people work hard to reconstrue the event in ways that make it less painful. Because the psychological immune system operates largely outside of awareness, people do not take it into account when forecasting their future emotional reactions. They overpredict the duration of their reactions to future negative events because they do not appreciate the extent to which they will transform the events psychologically in a way that blunts their impact.

Gilbert et al. (1998) noted that immune neglect is not the only cause of the durability bias. Indeed, because the psychological immune system works to ameliorate negative affect but not positive affect (Taylor, 1991), immune neglect explains only mispredictions about the duration of reactions to negative events. Consistent with this prediction, Gilbert et al. (1998) found a stronger durability bias in reaction to negative than to positive events. There was, however, a positive durability bias in some of their studies. In subsequent research, we have found significant positive durability biases, such as the Wilson et al. (1999) study in which Democrats overpredicted how happy they would be after President Clinton's 1996 reelection. Clearly, an additional mechanism is needed to explain these findings.

We suggest that there is also a problem of *focalism,* whereby people focus too much on the occurrence in question (termed the focal event) and fail to consider the consequences of other events that are likely to occur.[1] People think about the focal event in a vacuum without reminding themselves that their lives will not occur in a vacuum but will be filled with many other events. As noted by Tatarkiewicz (1962/1976, p. 111) in the opening quote, people "make no provision for other occurrences" when predicting their happiness following a positive or negative event.

Other occurrences can mitigate the effects of a focal event in a number of ways, such as by reducing how much people think about the event, causing people to reframe the event, and by triggering affective reactions that compete with or nullify the consequences of the event. We will focus on the first of these possibilities, namely that by failing to consider the occurrence of other future events, people overestimate how much the focal event will occupy their thoughts and influence their happiness. When imagining a positive tenure decision, for example, assistant professors might not think about other events that will compete for their attention, such as the upcoming deadline for the chapter they have yet to write, the dinner party they are hosting in a week, and the fact that their car needs a new battery. By failing to consider other occurrences such as these, they will overestimate how much they will think about their tenure decision.

Given that some aspects of people's lives are predictable—for example, professors know what their teaching schedule will be the following semester and that they will have to endure several boring committee meetings—people are capable of taking some nonfocal events into account when predicting their future happiness. Because many aspects of the future are unpredictable, it would be unfair to chastise people for not taking into account events that they cannot know will occur. How could people anticipate that their car battery will die the week after their tenure decision? Our point is that whatever happens after the event will compete for people's attention, regardless of whether these events are unpredictable (the demise of a car battery) or predictable (boring committee meetings, playing with our children, reading a good book, or puttering around the vegetable garden). Research on subjective well-being suggests that people's attention turns quickly to their current concerns, reducing the impact of past events on their happiness (Frederick & Loewenstein, 1999; Suh, Diener, & Fujita, 1996). People do not have to be clairvoyant to appreciate this fact when making affective forecasts.

The focalism hypothesis is related to other well-known instances in which people give disproportionate weight to accessible information (Higgins, 1996; Schwarz, 1990). For example, when people explain why a given hypothesis might be true, they focus too much on reasons supporting the hypothesis and too little on reasons for alternative hypotheses. Similarly, when asked to imagine a specific behavior, such as giving blood, people focus too much on ways in which the behavior could occur and too little on ways in which the behavior might not occur (for reviews see Anderson, Krull, & Weiner, 1996; Koehler, 1991). Even when asked to think about ways in which an event might not have occurred, people tend to focus on a limited range of alternatives that are easy to bring to mind, at the expense of alternatives that are more difficult to imagine (Kahneman & Miller, 1986; Kahneman & Tversky, 1982; Roese & Olson, 1997). People are often content to focus on what comes to mind easily, without making the effort to think about alternative explanations, scenarios, outcomes, or beliefs (Gilbert, 1991).

Similarly, when people forecast their future happiness after an emotional event, they focus too much on that event. People could, in principle, go beyond what is accessible and think about the

[1] Schkade and Kahneman (1998) have independently called this a focusing illusion.

many other things that will occupy their future lives. Consistent with the research just mentioned, however, we hypothesize that when making affective forecasts, people focus too much on the focal event and too little on other events that will also transpire and require their attention.

If so, then it should be possible to reduce the durability bias by inducing people to think about the many other events that will transpire in the future. That is, if focalism is a cause of the durability bias, then reducing focalism (by inducing people to think about nonfocal events) should reduce this bias. If people are thinking not only about their tenure decision but also about what their future teaching schedule will be like and how often they will have to attend committee meetings, they should make more accurate estimates of the extent to which their tenure decision will influence their happiness. This hypothesis follows directly from studies in other areas that have asked people to go beyond the most accessible explanation or hypothesis that comes to mind, by thinking about alternative explanations and hypotheses (e.g., Hirt & Markman, 1995). Our studies followed the same logic, by asking people to think about other events that would transpire in the future, in addition to the focal event.

Specifically, we asked people to predict their overall level of happiness after an emotional event, with the expectation that they would overestimate how long that event would have an impact on their happiness (the durability bias). Before making their predictions, some participants completed a prospective "diary" (ostensibly as part of another study), in which they rated how much time they would spend on a variety of everyday activities on a specific future date. We hypothesized that people who completed the diary would predict that they would think less about the focal event in the future and that it would have less impact on their future happiness than would people who did not complete the diary. In studies 1–3 we tested these hypotheses with college football fans who predicted how happy they would be after a win and a loss by their college football team, whereas in Studies 4–5 we examined people's predicted happiness after hypothetical national events such as a space tragedy in which several astronauts were killed.

Study 1: They Foresaw a Game

Method

Overview

College football fans at the University of Virginia (UVA) and Virginia Polytechnic Institute and State University (Virginia Tech) predicted what their level of overall happiness would be immediately after the UVA–Virginia Tech football game and on each of the succeeding few days if their school lost and if their school won the game. They also predicted how much they would think about the game. Prior to making these predictions, some participants completed a prospective diary questionnaire, on which they rated how much time they would spend on a variety of everyday activities in the days after the football game. We hypothesized that people in the diary condition, relative to people in a no diary control condition, would predict that their happiness would not be as influenced by the outcome of the game and that they would think less about the game.

Participants

Participants were 36 students (19 women, 17 men) from UVA and 52 students from Virginia Tech (27 women, 25 men) who indicated that they were football fans and cared about the outcome of their school's football games (that is, they were above the median on the average of these two measures, which were highly correlated, $r = .71$). The students participated for partial fulfillment of a requirement in an undergraduate psychology course.

Procedure

Participants completed a prediction questionnaire 1–2 months prior to the 1995 football game between UVA and Virginia Tech in small groups or during class meetings. They were told that the packet contained questionnaires from different research projects and that they should go through the packet one page at a time without looking ahead.

Diary manipulation. Approximately half the participants (randomly assigned) first received a questionnaire labeled "diary study," on which they were asked to think about a specific day later in the semester and to estimate what they would be doing that day. They estimated the number of hours they would spend on 10 activities (e.g., going to class, socializing with friends, studying, eating meals) on a 7-point scale that ranged from *no time* to *four or more hours.* They then filled in 24 blanks, 1 for each hour of the day, according to what they thought they would be doing at that time. Participants completed the measures for either Monday, November 20 (2 days after the UVA–Virginia Tech football game) or Tuesday, November 21 (3 days after the football game). Participants in the control condition did not receive these measures. To equalize the length of the study and to be consistent with the cover story that they would be completing different questionnaires, control participants received a personality scale after completing the dependent measures.

Dependent measures. As a baseline measure of happiness, people were first asked, "How happy would you say you are these days?" They responded on a 9-point scale that ranged from 1 (*not happy*) to 9 (*very happy*). This question has been used in past studies and has been found to correlate highly with other scales of happiness and life satisfaction. For example, Gilbert et al. (1998) found that this item was correlated with items from Diener, Emmons, Larsen, and Griffin's (1985) Satisfaction With Life Scale ($r = .86$) and with Kamman and Flett's (1983) Affectometer 2 scale ($r = .83$). Participants were then reminded that UVA and Virginia Tech would play each other in football on Saturday, November 18, and were asked to predict what their "general level of happiness" would be right after the game and on each of the following 7 days, if their team lost and if their team won. Participants made their predictions on the same scale on which they had rated their current happiness. People also predicted how much they would think about the game right after it ended and on each of the following 7 days, if their team won and if their team lost. These predictions were made on 9-point scales that ranged from 1 (*not at all*) to 9 (*very often*). The order of the happiness and thought predictions was counterbalanced.

Results and Discussion

We asked people to predict their happiness and thoughts on the day of the football game and on each of the subsequent 7 days. This length of time was arbitrary because we did not know how long people believed a football game would impact their happiness. As it happened, people's predictions started to level off on the fourth day after the game, and there were few differences between conditions from this day onward. To simplify the presentation of the data, and to be consistent with subsequent studies, we report only people's predicted happiness right after the game and on the next 3 days. (The significant effects involving the diary manipulation remain significant when all days are entered into the analyses.) Initial analyses also revealed that there were no significant interactions between the diary manipulation and gender,

whether participants were students at UVA or Virginia Tech, or whether happiness or thought predictions were made first. We thus collapsed across these variables in subsequent analyses.

Happiness Predictions

There were no significant differences in baseline happiness between the control and diary conditions ($M = 6.47, SD = 1.51$ vs. $M = 6.67, SD = 1.41$, respectively), $t(86) < 1$, *ns*. To control for individual variation in initial happiness, we subtracted participants' baseline scores from their predictions to create an index of predicted change in happiness.

The scores were analyzed with a 2 (diary: diary vs. control) × 2 (outcome: predictions following a win vs. loss) × 4 (time: predictions for after the game and for the next 3 days) between-within analysis of variance (ANOVA).[2] Not surprisingly, there was a strong main effect of outcome, reflecting the fact that people predicted they would be happier if their team won than if their team lost, $F(1, 85) = 103.64, p < .001$ (see Figure 1). There was also a main effect of time, reflecting the fact that people predicted that their happiness would improve as time passed, $F(3, 255) = 11.62, p < .001$, and a significant Outcome × Time interaction, reflecting the fact that the difference in predicted happiness after a win versus a loss became smaller over time, $F(3, 255) = 102.29, p < .001$.

Of greater theoretical interest was the significant Diary × Outcome × Time interaction, $F(3, 255) = 4.23, p < .03$. As seen in Figure 1, this interaction reflects the fact that people in the diary conditions made more moderate (i.e., closer to baseline) affective predictions, at least on some days. A closer look at this interaction revealed that the diary had its strongest effects on people's predicted happiness on the 3 days after the football game. On predictions for the day of the game (Saturday), neither the main effect of diary nor the Diary × Outcome interaction was significant, Fs(1, 86) < 1.33, *ns*. On predictions for the 3 days after the game, the Diary × Outcome interaction was significant, $F(1, 85) = 4.05, p < .05$.

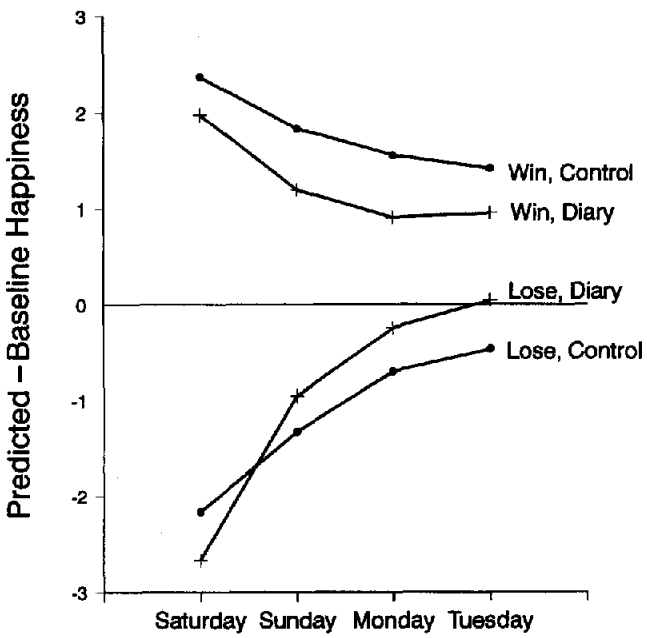

Figure 1. Study 1: Effects of diary on affective predictions. The higher the number, the happier people predicted they would be, relative to their baseline level of happiness.

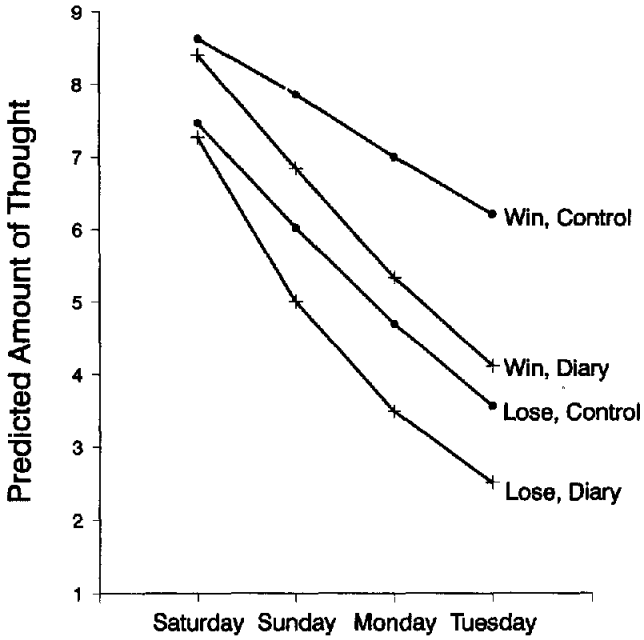

Figure 2. Study 1: Effects of diary on thought predictions. The higher the number, the greater the amount of predicted thought about the football game.

Thought Predictions

People's predictions about how much they would think about the game were analyzed with the same 2 (diary) × 2 (outcome) × 4 (time) between-within ANOVA. Not surprisingly, the main effect of time was significant, $F(3, 258) = 212.17, p < .001$, reflecting the fact that people said they would think less about the game as time passed (see Figure 2). The main effect of outcome was also significant, $F(1, 86) = 99.82, p < .001$, reflecting the fact that people said they would think about the game more after a win than a loss. These main effects were qualified by an Outcome × Time interaction, $F(3, 258) = 8.51, p < .001$, reflecting the fact that the difference in predicted thought following a win versus a loss got larger over time.

Of greater theoretical interest was the main effect of the diary manipulation, $F(1, 86) = 9.65, p < .005$ and a significant Diary × Time interaction, $F(3, 258) = 7.20, p < .001$. As seen in Figure 2, there was no effect of the diary on the amount of predicted thought right after the game (on Saturday). As expected, however, people

[2] In a repeated measures design with several measurements, it is possible to have an inflated Type I error due to a violation of symmetry assumptions. To avoid this problem, the p levels for all effects involving a repeated measures factor with more than 2 degrees of freedom, in all analyses in this article, were corrected using the Greenhouse–Geisser adjustment.

in the diary condition predicted that they would think about the game less on succeeding days.[3]

Mediation Analyses

We tested the hypothesis that the effect of the diary manipulation on predicted happiness was mediated by its effects on how much people said they would think about the game, using multiple regression (as described by Kenny, Kashy, & Bolger, 1998). As an overall index of predicted thought, we averaged people's thought forecasts over time and outcome. As an index of predicted happiness, we averaged people's happiness forecasts over time and then subtracted their predictions after a loss from their predictions after a win. (Thus, the larger the score on the happiness index, the more people thought that their happiness would be influenced by the outcome of the football game.) As seen in the first column of Table 1, there was a significant negative relationship between the dummy-coded diary condition (*control* = 0, *diary* = 1) and predicted thought (this is similar to the main effect of diary on predicted thought already reported, whereby people in the diary condition predicted that they would think less about the football game). The relationship between predicted thought and predicted happiness was also significant, adjusting for the effects of the diary condition. Table 1 also shows the relationship between the diary condition and predicted happiness, before and after adjusting for the amount of predicted thought. The reduction in beta weight after controlling for predicted thought was significant ($z = 2.12$, $p = .03$), supporting the hypothesis that predicted thought mediated the effects of the diary manipulation on predicted happiness (Kenny et al., 1998).

Table 1
Tests of the Mediating Role of Predicted Thought

Path	Study 1	Study 3	Study 4	Study 5
Diary condition → predicted thought	−0.530* (.171)	−0.574* (.214)	−1.043* (.467)	−1.473* (.564)
Predicted thought → predicted happiness	0.461* (.151)	0.942* (.490)	−0.412* (.104)	0.256 (.295)
Diary condition → predicted happiness (unmediated)	−0.369 (.250)	−1.613* (.551)	1.057* (.449)	−1.475 (.894)
Diary condition → predicted happiness (mediated)	−0.124 (.252)	−1.073 (.594)	0.627 (.423)	−1.086 (1.003)
z[a]	2.12*	1.50	1.90	0.77

Note. The values shown are the unstandardized beta weights and their standard errors (in parentheses). The beta between predicted thought and predicted happiness controls for diary condition. The first beta weight between diary condition and predicted happiness does not control for predicted thought, whereas the second beta weight does. A meta-analysis of the mediation effect across the four studies was significant, $z = 3.15$, $p = .002$.

[a] The test of the reduction of the unmediated path from diary condition to predicted happiness, when predicted thought is added as a mediator (Kenny, Kashy, & Bolger, 1998).

* $p < .05$.

Summary of Results

As hypothesized, people in the diary condition predicted that, as time passed, they would think less about the football game than did people in the control condition. They also predicted that their happiness would return more quickly to baseline levels. These results, and the mediation analyses just reported, are consistent with the focalism hypothesis. One reason that people make enduring predictions about the impact of future events on their happiness may be that they overestimate how much they will think about those events.

Because Study 1 did not include a measure of people's actual happiness after the football game, we cannot conclude that people in the diary condition made more accurate affective forecasts. On the basis of our previous research, we assumed that people in the control condition overestimated how long the football game would have an impact on their happiness and that this durability bias was corrected, at least in part, by completing the prospective diary. The purpose of Study 2 was to test this assumption by seeing whether college student football fans really are happier in the days after their team's victories than in the days after their team's losses. We assessed fans' happiness on several Mondays or Tuesdays in a subsequent fall semester after Saturdays on which their school had won a football game, lost a football game, or had an open date.

Study 2: They Experienced a Game

Method

Overview

College football fans at UVA and Virginia Tech rated their overall happiness on Mondays or Tuesdays for 5 weeks in the fall of 1997, after several Saturdays on which their schools played football games. The last ratings were made after the game between UVA and Virginia Tech. Some participants also listed what they had been thinking about each day. We predicted that the students' happiness would not be related to the fate of their school's football game on the previous Saturday, that the fans of the winner of the game between UVA and Virginia Tech would not be happier than the fans of the losers, and that the football games would not be prominent in the students' thoughts.

Participants

Participants were 96 students (52 women, 44 men) at UVA and 167 students (114 women, 53 men) at Virginia Tech who indicated that they were football fans, using the same criterion as in Study 1. Because the data were collected on 5 consecutive weeks in psychology classes, and several students missed at least one class, there were missing data on each of the measures.

Method

On Wednesday, October 29, 1997, or Thursday, October 30, 1997, participants rated their overall level of happiness on the same scale as used

[3] The diary manipulation appears to have had a somewhat larger effect when people were predicting a win than when they were predicting a loss, though neither the Diary × Outcome nor the Diary × Outcome × Time interactions reached conventional levels of significance, $F(1, 86) = 1.13$, *ns*, and $F(3, 258) = 2.56$, $p = .08$, respectively. The latter trend may be due to a floor effect, given that there was less room to move down on the scale when people made predictions about a loss than when people made predictions about a win.

in Study 1. Because people filled out this measure 4 or 5 days after the previous Saturday's football game, we considered it a baseline measure of happiness. Participants rated their overall happiness again on the Monday or Tuesday of each of the succeeding 5 weeks. (Virginia Tech students did not complete the measures on the fourth week because they were on Thanksgiving break.) On the Saturdays during this time period, each school's football team either won a game, lost a game, or had an open date with no game. The last time of measurement followed the football game between UVA and Virginia Tech, which was won by UVA.

Some participants received only the overall happiness question. Others first rated their happiness and then answered an open-ended question asking them to "jot down the things that you have been thinking about the most today." These participants were instructed to write down "the thing you have been thinking about the most first, the thing you have been thinking about second-most next, and so on."

Results and Discussion

Happiness Ratings

Preliminary analyses found no significant differences in happiness ratings on Mondays or Tuesdays of each week, $ts(153) < 1.23$, *ns*. Nor did the day people fill out the questionnaire interact significantly with whether a school's football team won, lost, or had an open date the previous Saturday, $Fs < 1.17$, *ns*. Therefore, we collapsed the data across these days. The relationship between students' happiness and the fate of their school's football team was assessed in two ways. First, we compared the average happiness ratings of students at each university following Saturdays on which their team won a game, lost a game, or had an open date, after subtracting people's baseline level of happiness from these ratings. Positive numbers thus mean that people reported greater happiness than their baseline level and negative numbers mean they reported less happiness than their baseline level. (Very similar results were obtained when we analyzed the ratings without subtracting baseline happiness.)

UVA students were slightly happier on the days following a loss than on the days after a win by their team ($M = 0.13$, $SD = 1.15$, vs. $M = -0.04$, $SD = 1.12$). They were happiest on the days following an open date ($M = 0.40$, $SD = 1.30$), which happened to be the week of the Thanksgiving holiday. The effect of game outcome was nearly significant, $F(2, 42) = 3.42$, $p = .07$, though in the direction opposite to that predicted by participants in Study 1 (i.e., contrary to these predictions, people reported less happiness after a win than a loss). Virginia Tech students had similar levels of happiness following a win by their team, a loss by their team, or an open date ($M = -0.15$, $SD = 1.22$; $M = -0.01$, $SD = 1.68$; and $M = -0.03$, $SD = 1.72$, respectively), $F(2, 206) = 1.12$, *ns*.

Second, we tested whether UVA students were happier than Virginia Tech students following UVA's victory over Tech. UVA students were only slightly higher than their baseline level of happiness ($M = 0.18$, $SD = 1.47$), whereas Virginia Tech students were about as happy as they were at baseline ($M = -0.01$, $SD = 1.68$). The difference between these means was not significant, $t(198) = 0.81$, *ns*.

Thought Ratings

Some participants in Study 2 answered an open-ended question about what they had been thinking about that day. A research assistant coded the number of times people made any mention of the prior Saturday's football game versus the number of times they mentioned other thoughts. (A second assistant independently coded a subset of the thoughts, and her ratings agreed perfectly with the first assistant's ratings.) The results were straightforward: Football was not focal in people's thoughts. In the UVA sample, there were a total of 90 responses to the open-ended question on the four Mondays or Tuesdays that followed a football game. None of these responses mentioned the prior Saturday's game. In the Virginia Tech sample, there were a total of 193 answers to the open-ended question over the four weeks that followed football games. People mentioned the prior Saturday's game only three times. Thus, the football game was mentioned only 3/283 (1%) of the time in people's thought listings.

Summary of Results

The results of Study 2 suggest that by the Monday and Tuesday after a college football game, football fans' happiness was not affected by the outcome of the prior Saturday's game. This result is consistent with prior research on happiness and subjective well-being, which has found that happiness is a fairly stable state that is relatively unaffected by minor past events (e.g., Suh et al., 1996). These results further suggest that people in the diary condition of Study 1 made more accurate affective forecasts than people in the control conditions, because they predicted that their happiness following a win or loss by their college's football team would be closer to their baseline level of happiness. People in the diary condition of Study 1 also predicted that they would think less about the game than people in the control condition did. Judging by the open-ended responses of people in Study 2, they were more correct about these predictions as well.

Comparisons across Studies 1 and 2 must be tentative, of course, because we cannot be certain how comparable the samples or football games were. For example, we cannot rule out the possibility that students' actual happiness was affected more by the outcome of the 1995 than the 1997 game. In Study 3, we used a within-subjects design in which the same participants predicted how happy they would be after a football game and reported their actual happiness after that game. We hypothesized that people in the diary condition would make more moderate affective forecasts and would predict that they would think less about the football game than would people in the control condition. Further, we hypothesized that the forecasts of people in the diary condition would be more accurate.

Study 3: They Foresaw and Experienced a Game

Method

Overview

College football fans at UVA predicted how happy they would be and what they would be thinking about on the days following a football game between UVA and the University of North Carolina at Chapel Hill (UNC). As in Study 1, some participants completed a prospective diary questionnaire prior to making these predictions. On the day after the football game, participants rated their actual happiness.

Participants

Participants were 27 students (19 women, 8 men) from UVA who indicated that they were football fans, on the same measures used in

Studies 1 and 2. The students participated in an initial session for partial fulfillment of a requirement in an undergraduate psychology course.

Procedure

Predicted happiness and thought. The procedure was identical to that of Study 1 with the following exceptions: Students participated approximately 2 months before the football game between UVA and UNC that was played on November 16, 1996. Those randomly assigned to the diary condition first completed the same diary questionnaire as in Study 1. The day they were asked to think about was Monday, November 18. All participants then predicted what their overall level of happiness would be following the football game (November 16) and on each of the succeeding 3 days (November 17, 18, and 19) if UVA lost and if UVA won the game.

We changed the way in which people predicted their thoughts in two ways. First, people were asked to predict not only how much they would think about the football game but also how much they would think about other matters. Half the participants were randomly assigned to make these predictions on the same 9-point scales used in Study 1. After rating how much they would think about the game, people rated how much they would think about their school work, social life, leisure time activities, paying job, family, and any other things not listed. The remaining participants received an open-ended question that asked them to complete the sentence, "I will be thinking mostly about these things." All participants predicted what they would think about after a UVA loss and a UVA win for each of three time periods (after the football game on Saturday, November 16, and each of the next two days).

Actual happiness. We assessed people's actual happiness on the day after the football game. Beginning a week before the game, participants were contacted and asked to pick up an envelope containing a questionnaire they could complete for credit or payment. We made no mention of the prediction part of the study that students had already completed. Participants were instructed to open the envelope on Sunday, November 17 (the day after the football game), after 5 p.m. Participants rated their overall level of happiness on the same scale on which they made their predictions at Time 1.

On subsequent pages of the questionnaire we included exploratory measures of how much people had been thinking about the game and their recall of their happiness immediately after the game. By necessity, these questions followed a mention of the football game (e.g., the thought question asked people how much they had been thinking about the UVA–UNC game). Because the reference to the football game might have triggered people's memory of the earlier, prediction part of the study, thereby contaminating their answers to the questions, these measures were exploratory.

Results and Discussion

Happiness Predictions

People in the diary and control conditions reported similar levels of baseline happiness (M = 7.46, SD = 1.27 and M = 6.71, SD = 1.54, respectively), $t(25) = 1.37$, $p > .18$. To control for individual variation in initial happiness, we subtracted baseline ratings from predictions to create an index of predicted change in happiness. As in Study 1, we performed a 2 (diary: diary vs. control) × 2 (outcome: predictions following a win vs. loss) × 4 (time: predictions for after the game and for the next 3 days) between-within ANOVA on these scores. Not surprisingly, there was a strong main effect of outcome, reflecting the fact that people predicted they would be happier if their team won than if their team lost, $F(1, 25) = 53.94$, $p < .001$ (see means in Figure 3).

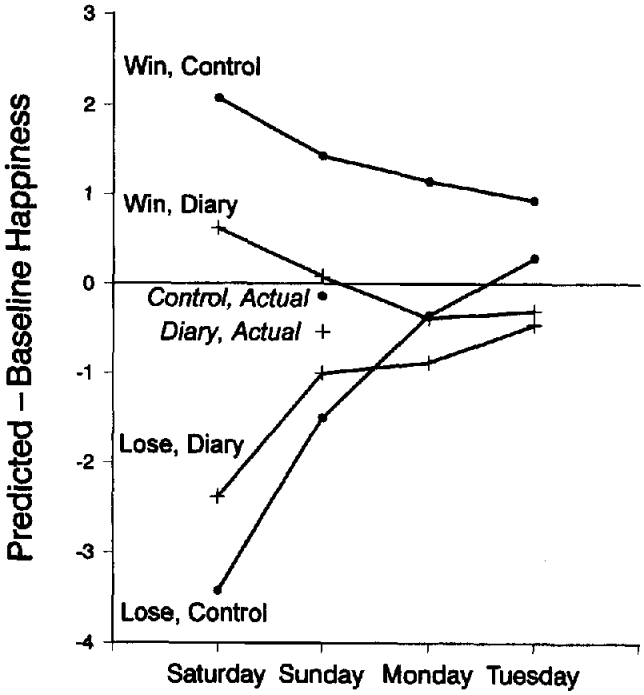

Figure 3. Study 3: Effects of diary on affective predictions. The higher the number, the happier people predicted they would be, relative to their baseline level of happiness.

There was also a main effect of time, reflecting the fact that people predicted that their happiness would improve as time passed, $F(3, 75) = 8.75$, $p < .001$, and a significant Outcome × Time interaction, reflecting the fact that the difference in predicted happiness after a win versus a loss got smaller over time, $F(3, 75) = 60.68$, $p < .001$.

Of greater theoretical interest were the significant Diary × Outcome and Diary × Outcome × Time interactions, $F(1, 25) = 8.30$, $p < .01$, and $F(3, 75) = 4.00$, $p < .03$, respectively. As in Study 1, these interactions reflect the fact that people in the diary conditions made more moderate (i.e., closer to baseline) affective predictions. In the control condition, both the effect of Outcome and the Outcome × Time interactions were highly significant, $F(1, 25) = 54.29$, $p < .001$, $\eta = .83$ and $F(3, 75) = 49.04$, $p < .001$, $\eta = .81$. Although still significant, these effects were, as predicted, smaller in the diary condition, $F(1, 25) = 9.61$, $p = .005$, $\eta = .53$ and $F(3, 75) = 16.82$, $p < .001$, $\eta = .63$.

Accuracy of Happiness Predictions

People's actual happiness ratings, made the day after the football game, are also shown in Figure 3. Because UVA won the football game, these happiness ratings were compared with people's predicted happiness following a win, with a 2 (diary: control vs. diary) × 2 (discrepancy: predicted vs. actual ratings) between-within ANOVA. As predicted, the simple effect of discrepancy was significant in the control condition, $F(1, 25) = 16.46$, $p < .001$, reflecting the fact that people in this condition predicted that they would be happier than they in fact were (M = 1.43,

SD = 1.34 vs. M = −0.14, SD = 1.46). Also as predicted, the simple effect of discrepancy was not significant in the diary condition, $F(1, 25) = 2.34$, $p = .14$, reflecting the fact that there was little difference between predicted and actual happiness in this condition (M = 0.08, SD = 1.38 vs. M = −0.54, SD = 1.27). The Diary × Discrepancy interaction was marginally significant, $F(1, 25) = 2.93$, $p = .10$. A focused contrast that tested the precise pattern of predicted means was significant, $F(1, 25) = 10.03$, $p < .005$. This contrast assigned a weight of 3 to the mean in the control–predicted happiness cell and a weight of −1 to the means in the other three cells.[4]

Thought Predictions

We assessed people's predicted thoughts in two ways: with an open-ended measure in which people described what they would be thinking about after the game and on each of the two succeeding days, and on a rating scale on which people rated how often they would be thinking about the game and several other topics during the same time periods. The responses to the open-ended measure were coded by a research assistant, who counted the number of thoughts about the game and not about the game. To check the reliability of these codings a second assistant independently coded the thoughts of 10 participants. The correlation between the codings of the first and second assistant was .97 for both game-related and other thoughts. To compare responses on the open-ended and rating scale measures, all scores were converted to standard scores. Because initial analyses revealed no significant effects of the type of thought measure people completed, we collapsed across this variable.

People's predicted thoughts about the game were analyzed with a 2 (diary) × 2 (outcome) × 3 (time) between-within ANOVA. Not surprisingly there was a strong main effect of Time, $F(2, 50) = 56.03$, $p < .001$, reflecting the fact that people said they would think less about the game as the days passed (see means in Figure 4). There was also a main effect of the diary manipulation, $F(1, 25) = 7.20$, $p < .01$. As hypothesized, people in the control condition predicted that they would think more about the game than did people in the diary condition. The Diary × Time interaction was nearly significant, $F(2, 50) = 3.00$, $p = .06$, reflecting the fact that the differences between the diary conditions became smaller over time. The Diary × Outcome interaction was also marginally significant, $F(1, 25) = 3.08$, $p = .09$, reflecting the fact that the effects of the diary manipulation were slightly stronger for predictions following a loss than a win.

People's predicted thoughts about other matters were analyzed with the same ANOVA. Although people in the diary condition tended to say they would think about other matters more than did people in the control condition (M = 0.27, SD = 0.95 vs. M = −0.25, SD = 0.75) the main effect of diary was not significant, $F(1, 25) = 2.42$, $p = .13$. The only significant effect in this ANOVA was a main effect of time, $F(2, 50) = 6.51$, $p < .003$, reflecting the fact that people said they would think less about other matters right after the game (M = −0.26, SD = 0.86), than on the succeeding two days (M = 0.14, SD = 1.01 and M = 0.12, SD = 0.99).[5]

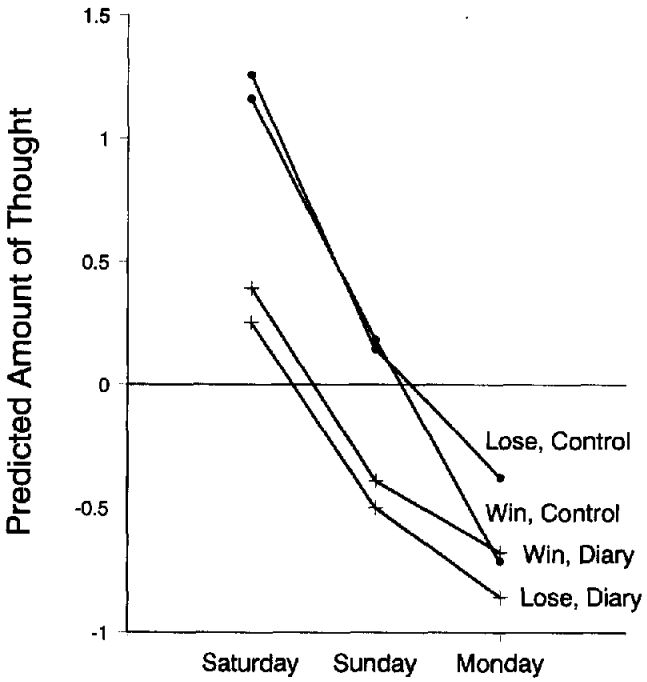

Figure 4. Study 3: Effects of diary on thought predictions. Predictions are standard scores, such that the higher the number, the greater amount of predicted thought about the football game.

Mediation Analyses

In the same manner as in Study 1, we tested whether the effects of the diary condition on predicted happiness were mediated by predicted thought. The results of this mediation analysis are shown in Table 1. As expected, the relationship between diary condition and predicted thought was significant, and the relationship between predicted thought and predicted happiness was significant, after controlling for diary condition. Further, the relationship between diary condition and predicted happiness was significant when we did not control for predicted thought and nonsignificant

[4] Because this contrast involved both between-subjects and within-subjects effects, and the corresponding error terms differed by more than a factor of 2, we adopted the conservative approach of using the larger (between-subjects) error term when computing this contrast (Rosenthal & Rosnow, 1985).

[5] As mentioned earlier, we included exploratory questions on the follow-up questionnaire, handed out the day after the football game, that asked people how much they had been thinking about the game and how happy they had been the day before. Because these questions came after a mention of the football game, we were concerned that they might trigger people's memory of the earlier, prediction part of the study, causing them to respond similarly to their predictions. This is what appears to have happened. For example, people in the control condition reported that they had been thinking more about the game than people in the diary condition did, which, as just seen, matched their earlier predictions. Although it is possible that the diary questionnaire people filled out 2 months earlier influenced how much they actually thought about the game, it seems more likely that the mention of the game on the questionnaire reminded people of their predictions, contaminating their responses.

when we did. However, unlike in Study 1, the drop in this beta weight was not significant ($z = 1.50$, $p = .13$), possibly due to the substantially smaller sample size in Study 3.

Summary of First Three Studies

College football fans overestimated the extent to which the outcome of a football game would influence their overall happiness, replicating the durability bias found by Gilbert et al. (1998). As expected, completing a prospective diary about one's future daily activities significantly moderated the durability bias. The simple reminder that one's day would be full of normal activities, such as going to class and socializing with friends, was enough to correct the durability bias, at least to some extent. The mediation analyses were in the predicted direction, providing evidence that it was a change in how much people anticipated that the game would dominate their thoughts that mediated the change in their affective forecasts. Combined across Studies 1 and 3, this mediation analysis was significant ($z = 2.56$, $p = .01$).

These results provide evidence for the focalism hypothesis, which argues that people focus too much on the focal event and fail to consider the consequences of other events that are likely to occur. Study 3 suggested that the diary manipulation reduced focalism by lowering people's anticipated thought about the focal event, and not by increasing people's anticipated thought about other events (as evidenced by the fact that the diary manipulation had no significant effects on people's predicted thoughts about other matters). Questions remain, however, about precisely how the diary manipulation led people to believe that they would think less about the focal event. We tested two possible mechanisms in Study 4.

First, it is possible that people who completed the diary realized that other events would dominate their thoughts and distract them from thinking about the game, which caused them to moderate their affective forecasts. According to this *distraction hypothesis*, people who think about future events moderate their forecasts because they believe that these events will occupy their thoughts and reduce thinking about the focal event.

Alternatively, it is possible that people focus more on the affective consequences of other events than on their distracting qualities. Not only do daily events take our mind off a focal event such as a football game, they also produce affective reactions that might "cancel out" or dilute the effects of the game. For example, when people think about the fact that they will have a lot of studying to do on Sunday and Monday, they might believe that the tediousness of studying will eliminate any lingering positive affect caused by Saturday's football victory. According to this *affective competition hypothesis*, it is not a reduction in predicted thought about the game that mediates the change in affective forecasts, but people's belief that the affect triggered by other events will nullify the affect caused by a football victory or loss. Although it might seem that the mediation analyses performed in Studies 1 and 3 (see Table 1) rule out this possibility, such analyses cannot definitely rule out the reverse causal order (Kenny et al., 1998). It is possible that the diary manipulation caused people first to lower their estimates of how much the game would influence their happiness, and then to lower their estimates of how much they would think about the game.

Another reason that Studies 1 and 3 cannot distinguish between these different mechanisms is that the diary manipulation asked people to rate positive (e.g., socializing with friends), negative (e.g., studying), and neutral (e.g., eating) events. According to the distraction hypothesis, the valence of these events was inconsequential because many future events, regardless of their valence, will be seen as distracting. According to the affective competition hypothesis, people focused on the fact that some of the activities would cause affect opposite to that triggered by the football game and would thus neutralize their mood.

The purpose of Study 4 was to test these mechanisms by manipulating the valence of the events that people rated on their diary questionnaires. As in the previous studies, participants were asked to predict how happy they would be after an event in the future. Prior to making these forecasts, people received one of two different versions of a diary manipulation. One was similar to the manipulation used in Studies 1 and 3, which asked people to rate how much time they would spend on positive, negative, and neutral activities. The other asked people to think exclusively about neutrally valenced activities such as cooking.

We asked people to predict their happiness following a negative event (a hypothetical accident in space in which several astronauts were killed). The affective competition hypothesis predicts that only the mixed diary manipulation will moderate people's forecasts, because it involves thinking about activities of the opposite valence to the focal event. According to this hypothesis the neutral diary manipulation should be less effective, because people will not think about events that will produce affective reactions opposite to those caused by the focal event. In contrast, we predicted that both the mixed and neutral diary manipulations would moderate people's forecasts. Consistent with the distraction hypothesis, people were expected to believe that the activities would take their mind off the focal event, even if they were all relatively neutral in valence.

Study 4: They Foresaw a Space Tragedy

Method

Overview

People were asked to imagine that a tragic accident, in which several astronauts were killed, occurred 12 weeks in the future. They estimated their level of overall happiness right after hearing about the event and on each of the next 3 days. They also rated how much they would think about the accident after it occurred. Before reading about the accident, people completed one of two diary questionnaires or no questionnaire. The events people were asked to think about on the diary questionnaires were either of mixed or neutral valence.

Participants

Participants were 73 students (33 women, 40 men) at UVA who participated in partial fulfillment of a requirement in an undergraduate psychology course. The sample size for some of the data presented below is slightly lower because of missing data.

Procedure

The procedure was identical to Studies 1 and 3 except for the following changes. People rated their current level of happiness "compared to how happy you are ON AVERAGE" by circling a number from 1 to 9, where 1 = *below average happiness*, 5 = *average happiness*, and 9 = *above*

average happiness. Several studies have found that when people are asked to rate their overall level of happiness, most people rate themselves as happy (Myers & Diener, 1995). We asked people how happy they are compared with their average level of happiness in an attempt to reduce the skewness of people's responses.

People were asked to imagine that the following event occurred on a Sunday 12 weeks in the future:

> The space shuttle *Columbia,* which was launched from the Kennedy Space Center in Florida the previous week, attempts to dock with *Mir,* the Russian space station. The goal of the mission is to transfer an American astronaut from *Mir* to the space shuttle, to bring him home. Due to pilot error on the part of one of the American astronauts on board the *Columbia,* a tragedy occurs. The space shuttle slams into *Mir* with such force that the Russian space station is destroyed, killing everyone aboard. The impact also tears a large hole in the space shuttle. The crew frantically tries to repair the damage but it is too late. All seven astronauts on board perish from a lack of oxygen.

Participants rated what their "general level of happiness" was likely to be right after hearing about the accident and on each of the succeeding three days, on the same scale on which they rated their current happiness. Finally, participants completed the same predicted thought scales as used in Study 3, on which they estimated how much they would think about the *Mir* accident and several unrelated things (e.g., their school work), immediately after the accident and on each of the 2 succeeding days.

Diary manipulations. Participants were randomly assigned to one of three conditions. The control condition was the same as in the first two studies. The procedure in the diary conditions was similar to the previous studies, except that we varied the valence of the activities people were asked to rate. In the mixed diary condition, 6 of the activities were positive (e.g., socializing with one or more friends, attending the lecture of a favorite class, and talking to a friend long distance), 6 were negative (e.g., attending their least favorite class, feeling stressed about their social life, and getting into a fight with a same-sex friend), and 4 were neutral (e.g., cooking or preparing food and watching TV). In the neutral diary condition, all of the activities were relatively neutral in valence. The specific activities were chosen on the basis of responses by pretest participants, who rated the positivity or negativity of 54 everyday activities. We chose events that occur frequently in students' lives and were rated by pretest participants as very positive or very negative (in the mixed diary condition) or near the midpoint of the scale (in the neutral diary condition).

Results and Discussion

Happiness Predictions

As in the previous studies there were no significant differences between conditions in people's baseline level of happiness, $F(2, 70) < 1$, *ns.* The means in the control, mixed diary, and neutral diary conditions were 5.58 (SD = 1.55), 5.18 (SD = 1.50), and 5.48 (SD = 1.29), respectively. We subtracted participants' baseline scores from their happiness predictions to obtain an index of predicted change.[6] As hypothesized, people in the mixed and neutral diary conditions made less extreme affective forecasts than people in the no diary condition did (see Figure 5). A planned comparison revealed that predictions made by people in the two diary conditions were significantly less extreme than predictions made by people in the no diary condition, $F(1, 70) = 5.38$, $p = .02$. The predictions in the two diary conditions did not differ significantly from each other, $F(1, 70) < 1$, *ns.* Neither of these contrasts interacted significantly with time, $Fs(3, 210) < 1.46$, $ps > .23$.

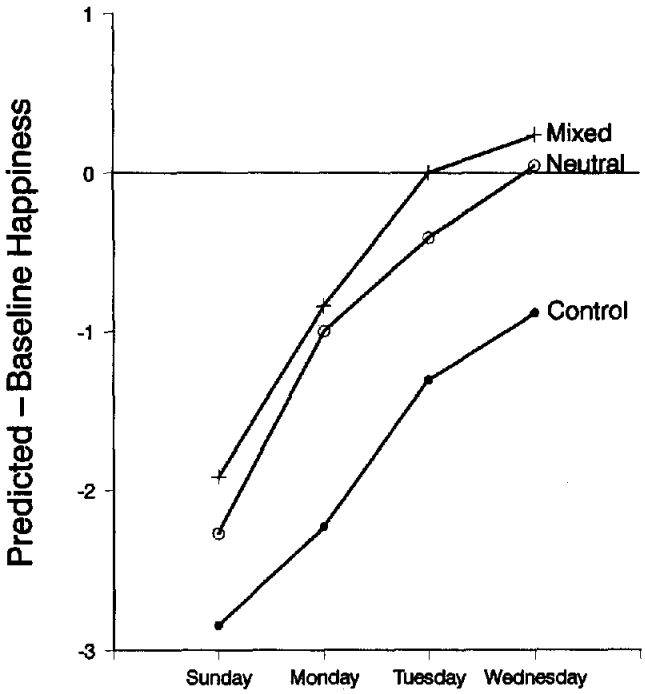

Figure 5. Study 4: Effects of mixed versus neutral diary events on affective predictions. The higher the number, the happier people predicted they would be, relative to their baseline level of happiness.

Thought Predictions

People in the two diary conditions predicted that they would think less about the *Mir* accident than people in the no diary condition did (see Figure 6). A planned comparison revealed that people in the two diary conditions predicted that they would think about the accident significantly less than did people in the no diary condition, $F(1, 70) = 4.94$, $p = .03$. The predictions in the two diary conditions did not differ significantly from each other, $F(1, 70) < 1$, *ns.* Neither of these contrasts interacted significantly with time, $Fs(2, 140) < 1$, *ns.*

As in Study 3, there were no significant effects of the diary manipulation on people's predicted amount of thought about things other than the focal event, $F(2, 70) < 1$, *ns.* There was a significant main effect of time, $F(2, 140) = 8.93$, $p < .001$, reflecting the fact that participants in all conditions predicted that they would think more about other matters as time passed. The Diary Condition × Time interaction was not significant, $F(4, 140) < 1$, *ns.*

Mediation Analyses

As in Studies 1 and 3, we tested whether the effect of the diary condition on predicted happiness was mediated by predicted

[6] Given that we asked people to predict how happy they would be compared with their average level of happiness, it might seem redundant to subtract their baseline level of happiness from their predictions. We believe that it is still best to subtract baseline levels because doing so corrects for individual differences in initial happiness. As it happened, it made little difference either way; the results were very similar (and equally significant) when the analyses were performed on people's raw predictions.

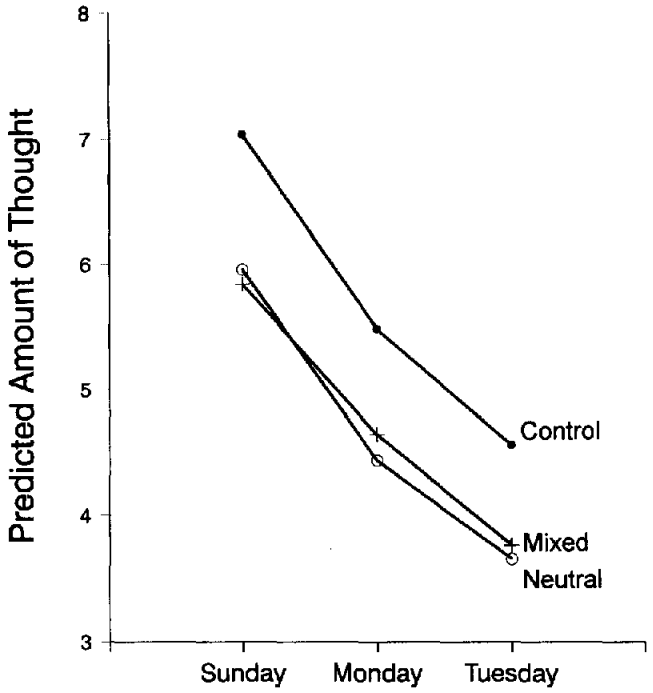

Figure 6. Study 4: Effects of mixed versus neutral diary events on predicted thought about the space tragedy. The higher the number, the greater the amount of predicted thought.

thought. People in the control condition received a 0 on the dummy coded variable whereas people in the mixed and neutral diary conditions received a 1. As seen in Table 1, the relationship between diary condition and predicted thought was significant and the relationship between predicted thought and predicted happiness was also significant, after controlling for diary condition. Further, the relationship between diary condition and predicted happiness was no longer significant after controlling for predicted thought. The difference between these beta weights was nearly significant ($z = 1.90$, $p = .057$), which is consistent with the hypothesis that predicted thought mediated the effects of the diary manipulation on predicted happiness (Kenny et al., 1998).[7]

The fact that the mixed and neutral diary manipulations were equally effective supports the distraction hypothesis, that people who think about future events moderate their forecasts because they believe that these events will occupy their thoughts and reduce thinking about the focal event. The affective competition hypothesis, that people believe that the affect triggered by future events will nullify the affect caused by the focal event, was not supported. It is possible, of course, that affective competition exists in other contexts. Surely people believe that the affect caused by one event (e.g., a job promotion) can nullify the affect caused by an event of the opposite valence (e.g., a loss by one's favorite sports team). It appears, however, that the affective competition process is not a necessary condition for focalism to reduce the durability bias. It is sufficient for people to believe that future events, even ones neutral in valence, will reduce the extent to which they will think about the focal event.

In Study 5, we tested another alternative explanation of the effects of the diary manipulation, namely that it moderated forecasts because of demand characteristics. Despite our efforts to convince people that the diary and affective forecast questionnaires were different studies, people probably noticed the overlap in dates on these questionnaires (e.g., that the diary questionnaire in Study 3 asked them to rate activities on November 18 and that the affective forecast questionnaire asked them to predict their happiness on November 17–20). Perhaps they guessed correctly that the diary questionnaire was supposed to moderate their forecasts and responded accordingly.

We collected additional data that are inconsistent with a demand interpretation. Participants were asked to predict their general level of happiness in the days following a hypothetical negative event, whereby Iraqi terrorists captured 143 hostages at Dulles Airport in Washington, DC, all of whom were killed in a failed rescue attempt. Some participants first completed the same diary questionnaire as used in Study 3, on which they rated how much time they would spend on various activities on a date in the future, which happened to be the day after the hypothetical terrorist tragedy. Consistent with our hypotheses, those who completed the diary questionnaire predicted that their happiness would be significantly closer to their baseline level of happiness than control participants did.

After making their predictions, participants in the diary condition were asked about the researchers' hypotheses. They were asked to check one of five options: (a) that they didn't think much at all about the hypotheses; (b) that the diary questionnaire was supposed to influence their affective predictions, but they weren't sure how; (c) that the diary questionnaire was supposed to increase their predictions of how much the terrorist event would influence their happiness; (d) that the diary questionnaire was supposed to decrease their predictions of how much the terrorist event would influence their happiness (the correct answer); and (e) that they did not think there was a connection between the diary questionnaire and the questionnaire on which they made their affective forecasts. Fifty-seven percent of the participants checked the first option, that they did not think much about the hypotheses. Twenty-nine percent thought that there was a connection between the diary and affective forecast questionnaires, but they were not sure what it was, and 14% thought that the diary questionnaire was supposed to *increase* the extent to which the terrorist event would influence their happiness. No one checked the correct answer (d). Finally, we debriefed a subset of the participants in this study individually and

[7] The signs of some of the beta weights in this study were the opposite of the signs in the other studies because people made predictions about a negative event only. For example, the more participants said they would think about the space accident, the less happy they predicted they would be, resulting in a negative beta. In Studies 1 and 3, people made predictions about both positive and negative events (wins and losses of a football game), and the data were coded such that the more people said they would think about the event, the happier they said they would be after a win relative to how happy they said they would be after a loss (resulting in a positive beta). Similarly, in Study 4, people in the control condition (dummy coded as 0) predicted they would be less happy after the accident than did people in the diary conditions (dummy coded as 1), resulting in a positive beta. In Studies 1 and 3, people in the control conditions predicted that they would be happier after a win relative to how happy they would be after a loss than people in the diary conditions did, resulting in a negative beta.

probed carefully for suspicions about the hypotheses. No participants guessed the hypotheses of the study correctly. Thus, although some people believed there was a connection between the diary questionnaire and the affective forecast "studies," no one guessed the hypotheses.

Despite this evidence, a more convincing argument against a demand interpretation would be to show that the effects of the diary manipulation do not depend on having people rate a specific date that happens to overlap with the dates on the affective forecast questionnaire. In Study 5 we asked participants to rate how much time they would spend on the activities on a typical weekday during the school year. No mention was made of specific dates, reducing the likelihood that participants would think that the diary questionnaire was designed to influence their affective forecasts about the specific days mentioned on the next questionnaire. We hypothesized that the effects of the diary manipulations would replicate under these conditions that were less susceptible to a demand interpretation.

Study 5: They Foresaw Peace

Method

Overview

Participants predicted their general level of happiness after a hypothetical positive event in the future, in which the United States won a war against Iraq by organizing a coup against Saddam Hussein. Participants in the diary condition first rated how much time they would spend on various activities on a typical day during the semester. We hypothesized that these participants would make more moderate affective forecasts than participants in a control condition, who did not complete a diary questionnaire.

Participants

Participants were 62 students (29 women, 33 men) from UVA who participated in return for partial fulfillment of a requirement in their undergraduate psychology courses.

Procedure

The procedure was identical to Study 4 with the following exceptions. People were asked to imagine that the following hypothetical event occurred approximately 7 months in the future (on Friday, October 8, 1999): A new Gulf war erupts in the Mideast after Iraqi troops invade Kuwait and Saudi Arabia. Because many U.S. forces have been committed to the conflict in Yugoslavia, there is talk of establishing a military draft in the U.S. for 18–25-year-old men and women, with no exemptions. Meanwhile, Iraqi terrorists take over a section of Dulles Airport outside of Washington DC, capturing and threatening to kill 43 hostages. Both crises end favorably for the United States as the result of two daring operations. In one, U.S. military special forces storm Dulles Airport, capture all the terrorists, and release the hostages unharmed. In the other, a U.S.-backed group of Iraqi military officers and opposition leaders overthrows Saddam's government. Saddam Hussein is captured and a new democratic, pro-United States government is installed in Iraq.

Participants were asked to predict what their general level of happiness would be right after hearing about the resolution of these crises and how happy they would be on each of the succeeding 3 days. In the typical day diary condition, people first completed the same diary questionnaire used in Study 3. However, instead of rating how much time they would spend on the activities on a specific day, they rated how much time they would spend on the activities on a "typical week day in the Fall 1999 semester."

Results and Discussion

Happiness Predictions

Initial analyses revealed that baseline happiness at the beginning of the study did not differ reliably by condition, $t(60) = 1.35$, $p = .18$. As in the previous studies, we subtracted participants' baseline scores from their predictions to create an index of predicted change in happiness. These scores were analyzed with a 2 (condition: control, typical day diary) × 4 (time: predictions for the day the crises are resolved and the next 3 days) between-within ANOVA. Not surprisingly, there was a strong main effect of time, reflecting the fact that people predicted they would be very happy right after the war ended and less happy over time, $F(3, 180) = 29.50$, $p < .001$. As hypothesized there was also a significant main effect of condition, $F(1, 60) = 4.67$, $p = .035$, reflecting the fact that people in the control condition made more extreme affective forecasts than did people in the typical day diary condition ($M = 2.16$, $SD = 1.88$ and $M = 1.08$, $SD = 2.03$, respectively). The Condition × Time interaction was not significant, $F(3, 180) = 1.12$, *ns*.

Predicted Thought

Participants in both conditions predicted that they would think less about the war with Iraq as time went by, as indicated by a main effect of time, $F(2, 58) = 37.52$, $p < .001$. There was also a significant main effect of condition, $F(1, 29) = 6.82$, $p = .014$. Consistent with our hypotheses, people in the typical day diary condition said they would think less about the war than people in the control condition did ($M = 5.79$, $SD = 1.45$ and $M = 7.27$, $SD = 1.52$, respectively). The Condition × Time interaction was not significant, $F(2, 58) < 1$, *ns*.[8] There were no significant effects of condition on how much people said they would think about matters other than the war.

Mediation Analyses

We performed the same mediation analyses as reported in Studies 1, 3, and 4, to test the hypothesis that the effect of the diary condition on predicted happiness was mediated by predicted thought. Although the beta weights were similar to those reported in the earlier studies (see Table 1), the drop in beta weight between diary condition and predicted happiness, after controlling for predicted thought, was not significant, $z = .77$, possibly due to the fact that the sample size in this analysis was the lowest of the four studies (see Footnote 8). It should be noted that the drop in the beta weight is significant when the results are averaged across Studies 1, 3, 4, and 5 ($z = 3.15$, $p = .002$). Further, there was no evidence that the mediation analyses differed significantly from each other across the individual studies, $\chi^2(3) = 1.05$, *ns*.

[8] Some participants did not make thought predictions until they had participated in another study, in which they were asked to imagine a negative event (in which several hostages captured by Iraqi terrorists were killed in a failed rescue attempt). We report the results only for people who made thought predictions right after making their happiness predictions (as in previous studies) because imagining the negative event reduced the extent to which control participants predicted they would think about the positive event.

After predicting their future happiness, participants were asked to guess the hypotheses of the study (with the same response options as in the unpublished study mentioned earlier). No participant in the typical day diary condition correctly guessed that the diary questionnaire was hypothesized to moderate their affective forecasts. We debriefed a subset of participants individually and probed carefully for suspicions. None of these participants guessed the correct hypotheses. The results of Study 5 thus suggest that demand characteristics are not a likely alternative explanation of our results.

General Discussion

The results of five studies provide evidence for the durability bias (the tendency to overpredict the duration of affective reactions to future events), a mechanism responsible for this bias (focalism, whereby people think too much about the focal event and fail to consider the consequences of other events that are likely to occur), and a way of reducing the durability bias (asking people to think about other future events that are likely to occupy their thoughts). Specifically, when people were first asked to think about the amount of time they would spend on several everyday activities, they made less extreme (and more accurate) affective forecasts. The mediation analyses suggested that the effects of the diary manipulation on affective forecasts were mediated by its effects on how much people believed they would think about the focal event, as predicted by the focalism hypothesis.

Before discussing the implications of our findings, it is important to address a possible alternative explanation. This alternative concerns our interpretation of the results in the control conditions in which people overestimated the duration of their happiness following affective events. We have argued that this result is evidence for the durability bias. Alternatively, it is possible that the inaccurate forecasts were an artifact of the way in which we asked people to predict their future happiness and report their actual happiness. When asked to predict their future happiness, people's attention was drawn to the focal event (e.g., the football game), which might have led them to interpret the overall happiness question to mean "How happy will I be when I am thinking about the game?" Because we did not draw people's attention to the focal event when we asked how happy they were after the game, they might have reported something different (their general level of happiness) than they predicted (their happiness when thinking about the game). Perhaps the durability bias was due to this "apples and oranges" problem, namely that the predicted and actual happiness measures tapped different states.

There is a sense in which this interpretation of our results is not an artifact but the point of the focalism hypothesis: When people make affective forecasts they exaggerate how much the event will be focal in their thoughts and thus overestimate how much it will influence their happiness. There is another sense, however, in which the "apples and oranges" problem could be an artifact. According to this interpretation, people know that they will not think about the event very often and know that their overall level of happiness will not be affected for very long. Further, they know that when they do think about the event, their temporary moods will be affected. Because people in our studies did not have the opportunity to express the belief that the events would have momentary effects on their moods, they expressed this belief on the general happiness questions. That is, because they were constrained by the kind of question we asked, they interpreted it differently than we intended (to mean that the events would influence their temporary mood while thinking about the event, but not their general level of happiness).

We have evidence from other studies that rules out this artifactual explanation of our results. In one study, people predicted how happy they would be if Bill Clinton or Bob Dole won the 1996 presidential election. When we measured people's actual happiness after the election, we reminded them of the focal event (the election) and still found evidence for the durability bias (Wilson et al., 1999). Thus, if people had interpreted the prediction question to mean, "how happy I will be when thinking about the election," they were wrong. When reminded of the election, they were still not as happy or unhappy as they had predicted they would be.

In another study, there was very little delay between the time people made their predictions and the occurrence of the focal event. In Study 6 by Gilbert et al. (1998), people were asked to predict how happy they would be immediately after learning that they did not get a desirable job and 10 min after learning that they did not get the job. Participants then found out that they did not receive the job and reported how happy they were at that moment and 10 min later. Consistent with the durability bias, people predicted that they would be more unhappy at both time points than they in fact were. Given that participants made their actual ratings only a few minutes after predicting their happiness, it is reasonable to assume that the focal event (not getting the job) was still very much in their thoughts. Thus, even if people interpreted the prediction question to mean, "How happy will I be when thinking about not getting the job?", they were incorrect.

Finally, we conducted a study that attempted to clear up the "apples and oranges" problem in a different way. If people know that focal events will have temporary effects on their moods (as opposed to their general happiness), then they should be more accurate if we asked them to predict how often they would be in good and bad moods after the event. To find out, we asked a sample of UVA students to predict the frequency of their good and bad moods on the days following the 1998 football game between UVA and Virginia Tech. The day after the game, we asked participants to report the actual frequency of their good and bad moods. Because UVA won the football game, we could test the accuracy of people's predictions following a win. As hypothesized, we still found a durability bias. People predicted that they would be in good moods more often than they in fact were ($M = 7.80$, $SD = 0.86$ vs. $M = 6.47$, $SD = 1.85$), $t(14) = 2.55$, $p = .02$. They predicted that they would be in bad moods less often than they in fact were ($M = 1.80$, $SD = 0.56$ vs. $M = 3.53$, $SD = 2.23$), $t(14) = -2.76$, $p = .02$. A 2 (good vs. bad mood) $\times$ 2 (predicted vs. actual) within-ANOVA revealed a significant interaction, $F(1, 14) = 7.57$, $p = .02$.

Thus, the "apples and oranges" problem does not appear to be a viable explanation of the durability bias. When we were more explicit about what we were asking people to predict, they still overestimated the duration of their emotional reactions to the focal event. When we measured happiness only minutes after the event such that it was still focal in people's thoughts, they still overestimated their emotional response to the event.

Returning to our finding that completing prospective diaries reduces the durability bias, the careful reader will have noted that

the form of this effect differed somewhat across studies. Specifically, the diary manipulation influenced predictions about positive outcomes somewhat differently than it influenced predictions about negative outcomes. For positive events, there was a main effect of the diary manipulation ($z = 3.42$, $p < .001$) and no interaction with time ($z = -.01$, *ns;* averaged across studies). For negative events, there was a nearly significant main effect of the diary manipulation ($z = 1.78$, $p = .08$), which was qualified by a significant Diary × Time interaction ($z = 2.81$, $p < .005$). The results of Study 1 exemplify this pattern of results (see Figure 1). For positive events, people in the diary condition made consistently more moderate predictions, both for the day of the event and subsequent days. For negative events, the diary manipulation changed people's forecasts only for the days after the event. For the day of the event, there was little difference between the diary and no diary conditions.

We offer the following speculation about the reason for this asymmetry in the results. There is evidence that positive emotional states are relatively fragile (e.g., more disrupted by distracting events) than negative emotional states are (e.g., Kanouse & Hanson, 1972). For example, thinking about how busy and distracted one will be the next day is probably more likely to ruin a good mood than it is to improve a bad mood. When predicting how happy they would be right after a focal event, the diary participants seem to have appreciated this fact. It is as if they were saying, "Right after the game I'll have a lot of things on my mind besides football, and that will bring me down from the high of a football victory. It will not, however, make me feel better about a football loss." Because we did not measure people's actual happiness immediately following the focal events (e.g., the football games), we cannot test the accuracy of these differential predictions for positive versus negative events on the day the events occurred. We can say that diary participants made more moderate forecasts for the days following positive and negative events, and, on the basis of the results of Studies 2 and 3, that these forecasts were more accurate than the forecasts made by control participants.

It is good news that we have found a way to make affective forecasts more accurate. When imagining how long they will feel sad after a negative event, it might be to people's advantage to remind themselves that life does, indeed, go on. They might think about the many daily activities that will compete for their attention in the days after experiencing the negative event. This mental exercise might well lead people to conclude that the negative event will fade from their thoughts relatively quickly and thus will not influence their happiness for as long as they might otherwise think.

We hasten to add, however, that the mental diary manipulation we have explored is not likely to be a magical cure for all durability biases. In Study 1, for example, the diary manipulation moderated people's forecasts but did not correct them completely (judging by people's actual happiness ratings in Studies 2 and 3). Furthermore, the kinds of focal events people imagined in our studies were relatively mild, compared with the major disappointments and extraordinary successes they sometimes experience. Imagining one's daily life might be well-suited to correct predictions about minor emotional events such as the outcomes of football games, but ill-suited to change predictions about major emotional events such as winning the lottery or becoming paralyzed in an accident. Focalism might be more difficult to correct in such instances, even though there is evidence that these life-changing events do not influence people's happiness for as long as they think (Brickman, Coates, & Janoff-Bulman, 1978; Wortman & Silver, 1989).

A Broader Look at Focalism

The tendency to think about a focal event, at the expense of other, unrelated events, is likely to influence judgments other than affective forecasts. In fact, there is evidence showing that focalism applies to thoughts about past emotional events and to predictions about nonemotional events.

Focalism and Postdictions About Past Affect

An interesting question is whether people display the durability bias when thinking about their past emotional lives and if so, whether focalism is one of the culprits. Gilovich and Medvec (1995) and Ross (1989) have noted that as time passes, people remember less about their actual experiences and rely more on their theories about what they must have been feeling and thinking. Consequently, when thinking about the duration of an emotional experience in the past, people might focus too much on a focal event and not enough on other events that influenced their thoughts and feelings, thus producing a retrospective durability bias. However, focalism might be weaker in retrospect than prospect. People might remember other events that were occurring at the time of the focal event and competing for their attention (e.g., "I remember that when the Broncos won the Super Bowl I had just changed jobs and was working 16-hour days.") Even if people cannot recall exactly what else was going on in their lives when thinking about a focal event, the past may be perceived as less of a vacuum than the future. People know that it was filled with many events and activities, even if they cannot remember precisely which ones.

Consistent with these hypotheses, Wilson et al. (1999) found that (a) people focused too much on a focal event even when thinking about the past, producing a retrospective durability bias (e.g., overestimating how happy they were after the 1996 presidential election); and (b) this retrospective durability bias was less extreme than it was when people predicted in advance how happy they would be after the event, possibly because the past seemed like less of a vacuum than the future did.

Focalism and Regrets About Past Inactions

Focalism is similar to a mechanism offered by Gilovich and Medvec (1995) to explain temporal patterns of regret. In their studies, people were most likely to regret errors of commission in the recent past (actions they wished they had not performed) but errors of omission in the more distant past (actions they wished they had performed but did not). "Forces that restrain human action may be inherently less salient than forces that compel action" (p. 390), they argued, especially over time as people forget the reasons they did not do something. This process bears some similarity to focalism, in that it involves too much focus on what is easy to bring to mind (the failure to act in a certain way and the reasons that action would have turned out well) and too little focus on what is more difficult to bring to mind (reasons the course of action would not have turned out well). If so, the present research suggests a way of reducing regret for foregone opportunities: Ask

people to think about all of the other things happening in their lives at that time. Doing so might trigger the realization that there were myriad forces making it difficult to act in the desired way.

Focalism and the Planning Fallacy

Buehler, Griffin, and Ross (1994) found that people underestimate how long it will take them to complete future tasks, such as homework assignments. They identified two mechanisms underlying this bias: A cognitive one, whereby people focus too much on the future task and not enough on past experiences with similar tasks, and a motivational one, whereby people engage in "wishful thinking," minimizing possible roadblocks that will get in their way (Buehler, Griffin, & McDonald, 1997). The first mechanism is similar to focalism, to the extent that people focus too much on a focal event when making a prediction about the future. However, this mechanism differs from focalism in what it is that people are said to neglect to think about. Buehler et al. (1994) suggest that people would make more realistic predictions if they thought more about past experiences similar to the focal event; that is, if they made more of a connection between their past and future experiences. Although this is surely true, the focalism hypothesis suggests that people would also make more realistic estimates if they thought more about nonfocal events in the future that would impede their progress, such as other assignments they have that week, how busy their social life will be, and whether their parents will be visiting that weekend. Note that such mental correction does not necessarily involve thinking about past experiences. People could correct their predictions in this manner even if they did not have any previous experience with the task.

Focalism and the Near Versus Distant Future

An issue we have not addressed is whether focalism is more likely to influence forecasts in the distant versus the near future. Although we are unaware of research that directly addresses this question, it seems likely that the focalism bias is worse when predicting the distant future. When people imagine how they will feel next week, they are likely to recognize that their lives will be full of other activities, such as their upcoming dentist appointment and soccer game. When imagining how they will feel next year, they probably think about the focal event in more of a vacuum, without considering the fact that their lives will be just as full then as they are now.

There are two sources of evidence consistent with this hypothesis. First, Liberman and Trope's (1998) temporal construal theory states that people use low-level construals when thinking about the near future and high-level construals when thinking about the distant future. In one study, for example, people were asked how many hours they would spend on academic and nonacademic activities during the next week or a week 1 year in the future. When thinking about the following week, people took into account how busy their lives would be and estimated that they would spend relatively little time on each activity. When thinking about a week in the distant future, people focused more on the desirability of the activities and less on how busy they would be with other activities. That is, consistent with our results, people making distant predictions focused more on the focal event they were considering and less on the other activities that would fill up their lives.

Similarly, Gilovich, Kerr, and Medvec (1993) found that people are more confident that they will do well on a task the further in time they are from the event, either in prospect or retrospect. They point to a number of reasons for this finding, such as the fact that people feel more accountable for their performance when the task is close in time, which makes them focus more on reasons why they might do poorly on the task. Consistent with temporal construal theory, it might also be that the further people are from the task the more they think about it in a vacuum, without considering the many other factors that will compete for their attention. When predicting how they will do on an exam they will take in 3 months, for example, people might think exclusively about the test and how likely they are to know the material. They might not think about other factors that will be going on in their lives that could influence their performance, such as how much sleep they will get the night before, how healthy they will feel, and other demands on their time. If so, then a manipulation similar to our prospective diary questionnaire might make people think more about other events that will impede their performance, thereby moderating their predictions.

In sum, focalism appears to be a quite general process that helps explain several phenomena, such as the durability bias and the planning fallacy. Any time people think about how an event in the future or the past will or did affect them, they are likely to focus too much on that event and not enough on other occurrences that will or did occupy their thoughts and influence their behavior. Whereas we agree with Buehler et al.'s (1994) statement that "The act of prediction, by its very nature, elicits a focus on the future rather than the past" (p. 367), we would add an addendum. By its very nature, prediction and postdiction focus attention on the focal event, at the expense of other occurrences that influence people's emotions, judgments, and behavior.

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