

Focalism and the Underestimation of Future Emotion: When It's Worse Than Imagined

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People typically exaggerate the emotional impact of future events. This occurs because of focalism, the tendency to focus on one event and neglect to consider how emotion will be mitigated by the surrounding context. Neglecting context, however, should lead people to underestimate future emotion when context focuses attention on the event. In Study 1, participants underestimated the intensity of their future negative emotions when they reported reactions to a romantic break-up on Valentine's Day versus 1 week before. This relationship was mediated by how frequently they thought about the break-up. In Study 2, participants underestimated the emotional impact of a lost prize when the experimental context forced them to focus on the prize versus when the prize was less evident. Thus, failing to account for the extent to which context would focus attention on the event, a form of focalism, led to underestimation of emotional reactions to a negative event.

Keywords: affective forecasting, focalism, anticipated emotion, emotion, bias in predictions

Imagine that you watch as your favored presidential candidate loses and the victor, a candidate you dislike and distrust, takes the stage to accept his win. Most people would expect to feel intense negative emotions in this situation and in other similarly negative situations. However, research has shown that actual emotions are typically less intense than expected because people fail to take into account the surrounding context that mitigates the intensity of their reactions after an event (Gilbert & Wilson, 2009; Wilson & Gilbert, 2005; Wilson, Wheatley, Meyers, Gilbert, & Axsom, 2000). Imagine further, however, that instead of watching the election results alone in your home, you attend an election party with a group of like-minded voters. After the results are announced, you spend hours talking with others and hashing out the ramifications of the loss. In the present investigation, we address the possibility that people's distress in this situation may actually be more intense than they predict because they fail to account for how the context of the party will focus their attention on the negative event. In past research the tendency to neglect context when predicting future emotions, called focalism, has been shown to result in overestimation of future emotion. We sought to determine whether the mechanism of focalism can be extended to explain situations in which people's emotional reactions to future events are more intense than they imagined. Specifically, we

examined whether people underestimate, rather than overestimate, the impact of future negative events on their emotions when the surrounding context focuses attention on the emotion-eliciting event. In other words, we anticipated that people would be insensitive to the impact of future contexts on their emotions when making predictions.

Bias in Affective Forecasting

People use forecasts of their future emotional reactions to guide their choices in the present and to prepare themselves for the future (Shepperd, Findley-Klein, Kwavnick, Walker, & Perez, 2000; Wilson & Gilbert, 2005). Estimates of future emotions allow people to invest effort and resources in pursuing their goals and preparing for negative eventualities (Gilbert & Wilson, 2009). Thus, people should make better decisions and spend their time and resources more effectively if they can anticipate the intensity of their future emotional reactions. Recent research suggests, however, that people have difficulty accurately predicting their future emotions and instead demonstrate an "impact bias" such that they overestimate the impact of future events on their emotional reactions (e.g., Gilbert, Driver-Linn, & Wilson, 2002). Overestimation of future emotional reactions has been shown across a range of situations, including the dissolution of romantic relationships, failure to achieve tenure, receipt of negative personality feedback, and rejection by a prospective employer (Eastwick, Finkel, Krishnamurti, & Loewenstein, 2008; Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998; Mellers & McGraw, 2001; Wilson & Gilbert, 2003).

Impact bias is due in part to focalism, the tendency to focus solely on one event when estimating its impact on future emotion and to neglect the surrounding context that also affects the intensity of emotional response (Dunn, Forrin, & Ashton-James, 2009;

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Kahneman, Krueger, Schkade, Schwarz, & Stone, 2006; Schkade & Kahneman, 1998; Wilson et al., 2000). When asked to anticipate their future emotional reactions after the win of a favorite football team, for example, people thought solely of the win and did not consider other things they might be thinking about and doing on that day (Wilson et al., 2000). Emotional reactions to events are often not as intense as anticipated because the surrounding context both lessens the attention devoted to the event and elicits other emotional reactions that mitigate the impact of that event (Schkade & Kahneman, 1998; Wilson & Gilbert, 2005; Wilson et al., 2000). Thus, people neglect to consider the context in which an event will occur when forecasting their future emotional reactions. This is not to say that people are incapable of taking context into account—indeed, forcing people to think about events that are likely to co-occur with a focal emotional event has been shown to reduce the impact bias (Wilson et al., 2000)—but rather that they do not typically do so.

Are Emotional Reactions Always Overestimated?

Although people generally overestimate the impact of future events, there are cases in which people are caught off guard by the intensity of their emotions. Widows and widowers, for example, often report reactions to the anniversary of the death of their spouse that surprise them with their intensity (Carnelley, Wortman, Bolger, & Burke, 2006). If people generally overestimate the impact of future events, what accounts for instances when emotional reactions are more intense than anticipated? The assumption that underlies focalism as an explanation for the impact bias is that people are generally enmeshed in a complex variety of emotional and neutral events. The impact of any one event on emotional reactions is thus diminished because people are attending to and influenced by multiple events (Wilson & Gilbert, 2005; Wilson et al., 2000).

The fact that people are ignorant of, or ignore, the surrounding context when they anticipate the impact of future events could cut both ways, however. Focalism when forecasting future events may lead people to underestimate the impact of future events, and experience more intense emotions than anticipated, if the surrounding internal or external context focuses attention on the event. A number of studies, though not dealing specifically with forecasting bias, suggest that emotions may be intense in contexts that highlight particular events. After the terrorist attacks on September 11th 2001, for example, people with ties to New York City and those who watched extensive TV coverage of the attacks experienced more intense and more persistent stress and anxiety symptoms than others with less exposure (Blanchard et al., 2004; Blanchard, Rowell, Kuhn, Rogers, & Wittrock, 2005; Silver, Holman, McIntosh, Poulin, Gil-Rivas, 2002). People also often make different choices than anticipated because internal context highlights the importance of an outcome, such as when satiated addicts fail to anticipate how drug cravings will impact their future actions (e.g., Loewenstein, 1996).

In summary, the context in which events occur may conspire to increase the intensity of people's negative emotions beyond what they imagine. People may be no better at anticipating the effects of contexts that increase the intensity of emotions than they are at anticipating the effects of contexts that mitigate emotional intensity. If people focus only on one event when forecasting their future reactions, this focalism could lead to emotional reactions

that are more or less intense than expected, depending on whether the context highlights or diminishes the attention allocated to that event. Understanding the conditions that lead to underestimating emotional reactions is important because anticipated emotions guide decision making and coping efforts. If people underestimate the intensity of their reactions to a future event, they may not attempt to prepare themselves for the event. Moreover, because unexpected events elicit more intense emotions than expected events (Lang, 1995; Västfjäll & Gärling, 2002), the unexpected nature of the reaction itself may further intensify emotional responses. Thus, the ability to predict and explain situations in which people underestimate their future reactions has important implications for models of well-being and mental health.

The Present Investigation

Two studies examined the influence of context on the discrepancy between forecasted and experienced emotion. In Study 1, participants forecast how they would feel on February 7th or 14th about the end of a romantic relationship, an event often used in studies that have shown impact bias (Eastwick et al., 2008; Gilbert et al., 1998). They later reported their experienced emotions either on a day 1 week before Valentine's Day (February 7th) or on Valentine's Day (February 14th), a U.S. cultural holiday that celebrates romantic relationships. The effect of attention allocated to the focal event was measured by assessing the frequency of intrusive thoughts and feelings about the end of the relationship. In Study 2, we experimentally manipulated the extent to which the outcome of an event captured attention at the time participants reported their experienced emotions. Participants forecast how they would feel about the loss of a small prize in a game if the prize was hidden or in front of them; they later reported their reactions to the loss with the prize hidden or in front of them. In both studies, participants were expected to feel worse than anticipated after a negative event if their attention was focused on that event by cultural or experimental context.

Study 1

Study 1 examined bias in forecasted emotion for the end of a romantic relationship. This emotion-eliciting event was chosen because past affective forecasting research has examined relationship dissolutions (Eastwick et al., 2008; Gilbert et al., 1998) and found that participants overestimated the impact of a breakup on their emotions. Participants forecasted how they would feel about the end of their current relationship on February 7th and on February 14th. They later reported their emotions about the break up either 1 week before Valentine's Day (February 7th) or on Valentine's Day (February 14th). Thus, participants forecast their reactions for a specific day and then later reported their reactions on that specific day, giving them opportunity to anticipate the effects of context (Valentine's Day) on their reactions.

The procedure allowed us to test our hypothesis that participants would show the typical overestimation bias 1 week before Valentine's Day but underestimate on Valentine's Day, and to rule out several alternative explanations for the proposed effect. First, all participants rated their predicted reactions to the break up on both February 7th and 14th. We asked participants to forecast how they would feel on both days in order to fully utilize the potentially

small sample of students whose relationships ended within the study time frame, but use of this procedure also made it likely that participants would attend to context when making their predictions. That is, participants had the opportunity to compare how they would feel on the 7th versus the 14th and extrapolate that they would be more upset on Valentine's Day than on the 7th (Hsee & Zhang, 2004). Research on affective forecasting has revealed that people tend to focus on features that differentiate two future events when making forecasts about their reactions to the two events (Dunn, Wilson, & Gilbert, 2003; Schkade & Kahneman, 1998). The differentiating feature in this case would be the date and thus participants could reasonably be expected to predict that they would feel more intense negative emotion on Valentine's Day than 1 week before. Second, the timing of the forecasts potentially worked against our predictions. Because emotional intensity typically fades over time, distress over the dissolution of a relationship would also be expected to diminish over time for all participants making it more likely that the intensity of emotion will be overestimated at a later date (Eastwick et al., 2008; Gilbert et al., 1998). Despite this, we expected participants to experience more intense reactions, and hence underestimate, on a date that was chronologically later (February 14th) compared with an earlier date (February 7th). Thus, the procedures we used were designed to rule out the alternative explanations that participants did not have the opportunity to consider context when forecasting emotion and that differences in experienced emotion were due to time since the event.

We predicted that bias in anticipated emotions would be related to the attention given to the event at the time that participants described their actual emotions. Specifically, we predicted that participants who rated their experienced emotions 1 week before Valentine's Day would not feel as badly as they had anticipated, but participants who rated their emotions on Valentine's Day would feel worse than they had anticipated. In addition, participants reported on the attention given to the breakup by estimating how frequently their thoughts and feelings focused on the end of the relationship within the last two days and this measure was expected to mediate the relationship between day and emotional reactions.

Method

Participants. Undergraduates in an introductory psychology course participated for partial course credit. Participants rated their predicted, and later their experienced, emotional reactions to the dissolution of a relationship. At Time 1, they completed a screening questionnaire and predicted their reactions to the end of their relationship. Only participants who indicated that they were in a relationship at Time 1 were invited to complete the second questionnaire ($n = 336$). A subset of these participants reported at Time 2 that their relationship had ended and were the focus of analyses ($n = 65$).

Time 1 procedure. All students in an introductory psychology course were invited to complete a screening questionnaire at the start of the Spring semester (January 26th). Participants indicated whether they were currently involved in a romantic relationship, defined as "exclusive, monogamous relationships that both partners expect to endure for a significant period of time" (Gilbert et al., 1998). If participants were in a relationship, they indicated how they would feel if that relationship ended. Specifically, participants forecast how they would feel about the end of the rela-

tionship on February 7th and on February 14th by rating how intensely sad, angry, and anxious they would feel about the end of the relationship using scales ranging from 1 (*not at all intense*) to 7 (*extremely intense*). Ratings were highly intercorrelated and were combined into a single measure representing negative emotion ($\alpha = .79$). Participants also reported how many months they had been in a relationship. (Six participants did not respond to this question and were excluded only from the relevant analysis.)

Time 2 procedure. Students who completed the Time 1 survey were sent an e-mail invitation indicating that they had 24 hours to complete a web-based questionnaire. Participants were randomly assigned to one of two groups that received the invitation to complete the second questionnaire on different days. Half of the participants were invited to complete the questionnaire on February 7th; half were invited on Valentine's Day, February 14th. A subset of these participants reported at Time 2 that their relationship had ended. Thirty-six of the respondents on February 7th indicated that their relationship had ended; 29 of those who responded on February 14th indicated that their relationship had ended. Valentine's Day was chosen as the reference date because a large industry focusing on romantic relationships has grown around this holiday. Supporting this, the number of media reports in major newspapers and publications reported in the database Lexis-Nexis that mentioned romance on February 7th was 124, compared to 216 reports on February 14th.

Participants were asked if their relationship had ended since the start of the semester. If it had, they rated, on a scale ranging from 1 (*not at all intense*) to 7 (*extremely intense*), how sad, angry, and anxious they were feeling about the break-up. Negative emotions again were highly correlated and combined into a single measure ($\alpha = .83$). Participants also indicated whether they or their partner had ended the relationship; rated how happy they had been in the relationship; and indicated whether they had experienced previous break-ups. Finally, participants completed the intrusion items from the Revised Impact of Event Scale (Horowitz, Wilner & Alvarez, 1979). Participants rated the frequency of intrusive thoughts and feelings about the break-up over the past two days, on seven items (e.g., "pictures about it popped into my mind") using a scale ranging from 1 (*not at all*) to 4 (*often*).

Results and Discussion

Preliminary analyses. Relationships had, on average, lasted 18.36 months ($SD = 13.91$ months). Participants reported that they had been happy in their relationships ($M = 5.12$ on a 7-point scale, $SD = 1.56$). Forty percent of the relationships were ended by the participant and 60% were ended by the partner. Most participants (58%) reported that they had experienced a previous break-up. No differences between groups were found in relationship length, $F(1, 57) = 1.04$, not significant (ns); in how happy participants were in the relationship, $F(1, 62) = 0.40$, ns; in who ended the relationship, $\chi^2(1) = 0.07$, ns; or in whether they had experienced a previous break-up, $\chi^2(1) = 0.17$, ns.

Bias in anticipated emotion. Figure 1 shows the mean intensity of anticipated and experienced negative emotion concerning the dissolution of a romantic relationship. A significant Time (predicted emotion, experienced emotion) \times Day (February 7, 14) interaction was found, $F(1, 63) = 10.40$, $p < .005$, $\eta^2 = .14$. Participants who reported their experienced negative emotion

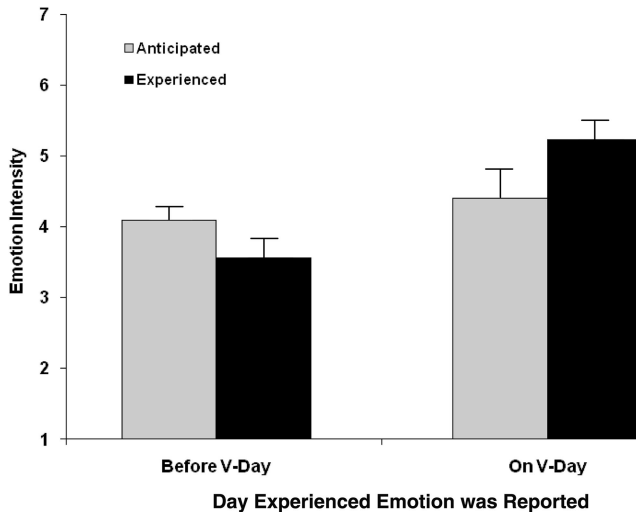


Figure 1. Bias in anticipated negative emotion after a future break-up was influenced by whether experienced emotion was reported on Valentine's Day or 1 week before (*SE* bars).

1 week before Valentine's Day showed the typical affective forecasting bias of overestimating their negative emotions, $t(35) = 2.53, p < .05$. Participants who completed the questionnaire on Valentine's Day, however, experienced more intense negative emotions after the break-up than they had anticipated, $t(28) = 2.12, p < .05$. These findings were driven by differences in experienced negative emotion. As shown in Figure 1, participants in the February 14th and February 7th conditions did not differ in how upset they anticipated feeling about the end of their relationship, $t(63) = 0.39, ns$. The two groups did differ in experienced negative emotion, $t(63) = 5.09, p < .001$. Thus, the surrounding context when participants reported their emotions influenced whether they experienced more or less intense emotions than they had anticipated.

We conducted a series of regression analyses to examine whether attention given to the break-up, reflected by self-reported intrusive thoughts and feelings about the relationship on the Revised Impact of Event Scale, mediated the relationship between the day that participants reported their emotions and the intensity of experienced negative emotion. We included forecast negative emotion as a control in the analyses in order to examine the relationship between day, intrusion scores, and the variance in experienced emotion that was not accounted for by forecast emotion (i.e., the misestimation of experienced negative emotion). Identical to the analysis reported above showing the effect of condition on experienced emotion, the day of completion (Valentine's vs. 1 week before) predicted the intensity of negative emotion, controlling for forecast negative emotion, $\beta = .52, t(63) = 4.96, p < .001$. When intrusion scores were entered, they significantly predicted negative emotion, $\beta = .62, t(63) = 7.48, p < .001$, and the relationship between day of completion and negative emotion was reduced, $\beta = .30, t(63) = 3.64, p < .05$. A mediational test confirmed that intrusion scores partially mediated the relationship between the day of completion and negative emotion, $Sobel = 2.93, p < .005$ (95% confidence interval of .27 to 1.24; consistent with guidelines for testing mediation in small samples,

this test was conducted using bootstrapping with 3000 resamples (Preacher & Hayes, 2004, Preacher & Hayes, 2008). Thus, the tendency of participants to experience more intense negative emotions than they anticipated on Valentine's Day compared to 1 week before was partially accounted for by the attention devoted to the end of their relationship, as reflected in self-reported intrusive thoughts and feelings about the relationship.

Study 2

In Study 1, we relied on the cultural context of Valentine's Day to assess the impact of a context that focused attention on relationships. This procedure allowed us to examine reactions to an event with important personal and social implications for the individual and that has previously been used in studies showing overestimation of future emotions. The design, however, made it impossible to rule out some potential threats to internal validity. There was a possibility, for example, that participants who were home on Valentine's Day to complete the survey were more distressed than participants who were home on February 7. In Study 2, we therefore experimentally manipulated the salience of a negative event at the time participants reported their experienced emotions. All participants played a game with the opportunity to win a cookie. They forecast how intensely they would feel positive and negative emotions if they won or lost the game, and hence the opportunity to eat the cookie. Participants were explicitly asked to predict their reactions to the loss of the game, and the opportunity to eat the cookie, if the cookie was in a box in the corner or freshly baked on a plate in front of them. Thus, as in Study 1, participants were given the opportunity to anticipate their reaction to winning or losing the game in a specific context. The specification of the location of the cookie during prediction potentially worked against our hypothesis. To the extent that participants thought it was odd that we specified the location of the cookie, they should have been more likely to exaggerate the impact of the cookie's location on their future emotional reaction and, as a result, accurately anticipate or overestimate their reactions to losing the cookie when it was placed in front of them (Dunn et al., 2003; Schkade & Kahneman, 1998). At the end of the session, all participants were told that they had lost the game. They then reported their emotional reactions to losing the game while the cookie was in a box in the corner or freshly baked on a plate before them.

Past research on focalism shows that people typically focus on a focal event, or feature of an event, when predicting their emotional response and ignore contextual information likely to mitigate the intensity of their response (Dunn et al., 2003; Gilbert, Gill, & Wilson, 2002; Schkade & Kahneman, 1998). Extending this view, we hypothesized that participants would neglect to consider the potential impact that the location of the cookie would have on their emotional reaction to losing the game. We thus predicted that participants who rated their experienced emotion with the cookie in a box would not feel as badly as they had anticipated, but that participants who rated their experienced emotion with the cookie directly in front of them would feel worse than they had anticipated.

Method

Participants. Undergraduates in an introductory psychology course participated for partial course credit ($N = 66$). Potential

participants were instructed to sign up for the study only if they could eat foods that contained sugar.

Procedure. Participants were told that they would be playing a game with the opportunity to win a chocolate-chip cookie. A cookie was used as the prize because it is a desirable outcome but not an extreme one. Food is typically considered to be primary reinforcement and cookies can be tempting regardless of current hunger state. The loss of a cookie, however, is unlikely to be an extremely negative event or the worst thing to happen to an undergraduate during the week, day, or even hour. Participants in the low-focus condition forecast how they would feel if they won or lost the game and the cookie was in a box in the corner; participants in the high-focus condition forecast how they would feel if they won or lost the game and the cookie was freshly baked on a plate in front of them. The questions about winning the game were included only to reduce participant suspicions about the game and are not discussed further. Participants forecast their reactions, by responding to the questions: “if you were to lose the game, how intensely would you feel sad/anxious/angry if the cookie were in the box in the far corner/freshly baked on the plate in front of you” on 7-point scales from 1 (*not at all intense*) to 7 (*extremely intense*). Negative emotion ratings were again highly correlated and were combined ($\alpha = .74$).

Participants then played the game, which consisted of watching a complex series of images and answering questions about whether or not a particular image would be the next to occur in the series. At the conclusion of the game, participants were told that they would find out in a few moments whether they won or lost the game. They then completed a filler task that involved estimating the likelihood of a number of potential future events. Participants were then informed that they had lost the game and would not receive the cookie. Half of the participants were told that the cookie they could have won was in the box in the corner (the low-focus condition) and half of the participants had a freshly baked cookie in front of them (the high-focus condition). They then reported their experienced emotional reactions to losing the game, “how intensely do you feel sad/anxious/angry about losing the game?” on a 7-point scale ranging from 1 (*not at all intense*) to 7 (*extremely intense*). As a manipulation check of focus on the cookie, participants also reported how attractive they found the cookie, using a 7-point scale ranging from 1 (*not at all*) to 7 (*extremely*).

Results and Discussion

Manipulation check. A manipulation check was conducted to determine whether participants found the cookie more attractive in the high-focus condition than in the low-focus condition. As expected, participants in the high-focus condition found the freshly baked cookie on a plate before them more attractive ($M = 5.33$, $SD = 1.73$) than participants in the low-focus condition with the cookie in a box in a corner ($M = 4.03$, $SD = 1.68$), $t(64) = 3.10$, $p < .005$.

Bias in anticipated emotion. A significant Time (predicted emotion, experienced emotion) \times Condition (high-focus, low-focus) interaction was also found for negative emotion about the loss, $F(1, 64) = 7.98$, $p < .01$, $\eta^2 = .11$. As shown in Figure 2, participants who reported their experienced negative emotion with the cookie hidden in the corner (the low-focus condition) margin-

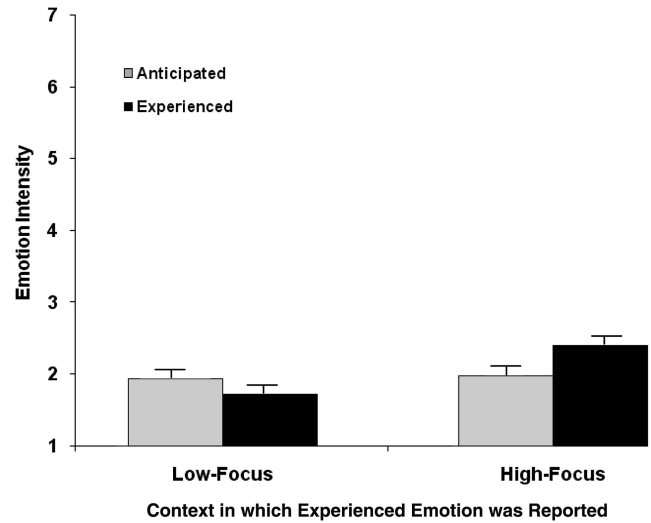


Figure 2. Bias in anticipated negative emotion after losing a game was influenced by the experimental context (*SE* bars).

ally overestimated their negative emotion, the typical impact bias, $t(32) = 1.95$, $p = .06$. Participants in the high-focus condition, with the cookie in front of them, underestimated negative emotion, experiencing more intense negative emotions than they had anticipated, $t(32) = 2.14$, $p < .05$. These findings were again driven by differences in experienced negative emotion, because participants in the high-focus and low-focus conditions predicted equally intense reactions, $t(64) = .24$, ns, but participants in the high-focus condition experienced more intense negative emotion than participants in the low-focus condition, $t(64) = 2.86$, $p < .01$. As in Study 1, then, the context in which participants reported their negative emotion influenced whether they experienced emotion that was more or less intense than they had anticipated. Participants failed to take into account how the context, which included their own internal visceral reactions to the cookie, would influence the intensity of their experienced emotion.

General Discussion

This investigation demonstrates that the well-documented impact bias in affective forecasting, that people overestimate the impact of future events on their emotions, can be reversed if the surrounding context leads people to focus on the emotion-eliciting event. In Study 1, students whose romantic relationship had recently ended experienced more intense negative emotion than anticipated if they reported their emotions on Valentine’s Day but less intense negative emotion than anticipated if they reported their emotions 1 week earlier. The relationship between day and the intensity of negative emotion was mediated by the frequency of intrusive thoughts and feelings about the breakup. In Study 2, participants overestimated their disappointment about losing a game if the prize was discretely hidden but underestimated their disappointment if the prize was sitting attractively before them. These findings indicate that people can experience either more or less intense negative emotion than anticipated after an event, depending upon whether the context leads them to focus their attention on the event or not. Thus, forecasts are not inherently

biased in the direction of overestimates or underestimates; rather forecasts are frequently inaccurate when the context surrounding the event increases or decreases the attention allocated to the event. This finding is important because it specifies boundary conditions for prior findings that people overestimate the impact of future events on their emotions, and because it has implications for understanding people's emotional experiences more generally.

Implications of Failing to Account for Context

A variety of studies have demonstrated that people are not very adept at considering the surrounding context when they forecast their future emotional reactions (Dunn, Biesanz, Human, & Finn, 2007; Loewenstein, O'Donoghue, & Rabin, 2003; Loewenstein, Prelec, & Shatto, 1998; see Wilson & Gilbert, 2005, for a review). The present findings are consistent with these studies, but extend the explanatory mechanism to account for instances when people experience more intense emotion than they had anticipated. We suggest that both overestimation and underestimation of future emotion can result from focalism—the failure to consider the impact of surrounding context when forecasting future emotional reactions. In the present investigation, a cultural holiday and an experimental manipulation were used to manipulate context. However, any situation in which the context encourages people to focus on a particular event could lead to similar underestimation of future emotional reactions to that event, including anniversaries of significant life events (Carnelley et al., 2006).

This explanation also helps to resolve an apparent paradox in the literature regarding people's accuracy in predicting their future emotions and behaviors. As discussed, research on affective forecasting suggests that people generally overestimate their future emotional reactions. Research on hot–cold empathy gaps, however, suggests that people generally underestimate the impact that future emotional states will have on their behavior (e.g., Loewenstein, 1996). For example, students predicted that they would be willing to sing in front of the class in the future, but when the day arrived most students backed out due to fear of embarrassment (Van Boven, Loewenstein, Dunning, & Welch, 2004). The paradox, then, is that people overestimate the intensity of future emotional states but underestimate the impact of those states on their behavior (Dunn, et al., 2009; Van Boven & Kane, 2006). The current findings suggest that people will also underestimate the intensity of their future emotions when the context serves to focus their attention on the event. It is likely, for example, that students would also underestimate how anxious they would feel when preparing to sing in front of a classroom of fellow students because they fail to account for the enormous impact of the context. Also consistent with empathy gap findings, people failed to account for how their own internal context, visceral reactions to the presence of the cookie in Study 2, would influence their emotions (Loewenstein, 1996). Thus, the paradox may be resolved by recognizing that people underestimate, not only the impact of emotion on behavior, but also the intensity of future emotions in “hot” contexts. Future research should examine whether people underestimate both the intensity of future emotional reactions, and the impact of those reactions on behavior, when the context in which emotion is experienced focuses attention on the emotional event.

To fully understand the causes and consequences of biases in affective forecasting it is important to note that the same forecast

may become an over- or underestimation depending on whether the context in which emotion is experienced increases or decreases attention to the focal event. As suggested by previous forecasting studies, life often goes on as usual after anticipated positive and negative events actually occur, and the emotional intensity elicited by those events quickly diminishes. Except, of course, when it does not. The present findings suggest that people will sometimes underestimate the intensity of their future emotional reactions and we submit that situations in which people experience emotions that are more intense than they anticipated are likely to have especially pernicious consequences for well-being. Wilson and Gilbert (2005) suggest that people who overestimate the impact of future events may waste time or energy pursuing outcomes that will have little overall impact on their lives. For example, they may invest money in music or a car that they forecast will bring great pleasure only to find that they are bored or complaining about the price of gas. If, however, people *underestimate* the impact of a future negative event, the consequences are potentially more severe. They may suffer intense negative reactions not only because the event is negative but also because they are taken aback by the intensity of their emotional response (Lang, 1995; Västfjäll & Gärling, 2002).

The general tendency to overestimate distress after future events, often reported in affective forecasting studies, may motivate people to strive to prevent and prepare for future negative events because they can anticipate that they will be distressed. For example, participants generally overestimated their future pain in a series of electric shocks (Rachman & Arntz, 1991). Any time that participants underestimated their pain, however, they experienced the pain as more aversive and were more likely to overestimate future pain in similar situations (Arntz, van Eck, de Jong, van den Hout, 1990; Rachman & Arntz, 1991). These findings suggest that underestimating future reactions can lead to more intense reactions and result in people exhibiting a tendency to later overestimate the intensity of future reactions. Thus, the frequently demonstrated impact bias may arise because it is relatively more adaptive to overestimate than to underestimate future emotional reactions.

Limitations and Future Directions

One limitation of the present investigation was that we focused primarily on the implications of the external context, such as Valentine's Day. It is possible that individuals who ruminate more or who spend more time discussing a negative event with friends will also be more likely to feel worse after negative events than they had anticipated. Supporting this, the frequency of self-reported intrusive thoughts and feelings about the breakup in Study 1 mediated the relationship between external context and experiencing emotional reactions that were more intense than anticipated. Future research should identify the impact of these idiosyncratic contexts on bias in affective forecasting. To some extent several studies have addressed this point and have demonstrated that individual differences in emotional intelligence and emotion regulation strategies predicts the degree of bias in affective forecasts (Dunn, Brackett, Ashton-James, Schneiderman, & Salovey, 2007; Loewenstein, 2007). We predict that people will feel worse than anticipated any time that external or internal contexts focus their attention on the event. Future work should also determine how long the focusing effect of context on emotional reactions

persists and whether a similar effect can also occur for positive emotional reactions (Koo, Algoe, Wilson, & Gilbert, 2008).

Conclusions

The present investigation revealed that people underestimate the impact of future negative events when the surrounding context focuses attention on the event. Focalism, the tendency to focus on one event and neglect to consider how emotion will be altered by the surrounding context, can explain instances when people underestimate and when they overestimate future emotional reactions. These findings highlight that effects of the surrounding context on attention to the event must be considered to determine whether and how judgments about future emotions will be biased. Examination of this surrounding context is important for understanding the functions of biases in judgment and for understanding the potential implications of reducing these biases. A complete understanding of emotional experience requires that theories account for times when people fare better than they thought and times when reactions are worse than imagined.

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