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Short Communication

The role of mindfulness facets in affective forecasting

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ABSTRACT

Mindfulness is a nonjudgmental, present-centered attention to one's thoughts and emotions. Using a sample of 188 young adults who forecasted their emotions for the weeks following the 2008 Presidential election, we tested our prediction that facets of mindfulness would decrease the impact bias, a well-known error in affective forecasting. Mindfulness was measured with the Five Factor Mindfulness Questionnaire (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). One facet of mindfulness, observing one's internal state, was associated with more moderate affective forecasts as well as a decreased susceptibility to the impact bias. Findings highlight sources of individual differences in susceptibility to the impact bias and shed light on how to improve people's ability to forecast for emotional experiences.

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1. Introduction

Affective forecasting involves predicting one's future emotions (Wilson & Gilbert, 2003). People are generally poor at predicting how they will feel following emotionally-charged life events (Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998). In general, people err by over-estimating the impact of life events. They predict that they will be happier than they actually will be following positive events and unhappier than they actually will be following negative events.

The error of over-estimating an event's emotional impact is known as the impact bias (Wilson & Gilbert, 2003). Wilson and Gilbert (2003) suggested that focalism is a main reason why people make this error. Focalism causes people to concentrate solely on the specific event and fail to realize that other co-occurring events will influence their future emotions as well (Wilson, Wheatley, Meyers, Gilbert, & Axsom, 2000). Focalism occurs whether people are focusing on the emotional impact of a positive or negative event, and thus the impact bias explains affective forecasting errors observed across a wide range of events (Wilson et al., 2000).

Despite clear evidence for biases in affective forecasting, relatively little is known about factors that reduce these biases. One study found that East Asians were less susceptible to the impact bias than Euro-Canadians, likely because East Asians are more holistic in their thinking and, thus, more aware of all events that may be occurring and impacting one's emotional experiences

(Lam, Buehler, McFarland, Ross, & Cheung, 2005). These findings suggest that the perspectives people take on their emotional experiences may make them less susceptible to biases in affective forecasting.

We suggest that mindfulness represents a perspective on emotional experiences that is likely to influence people's affective forecasts. Mindfulness is a nonjudgmental acceptance of one's emotions and thoughts while being present-centered (Bishop et al., 2004). Although mindfulness has roots in Eastern philosophy, it has recently become a non-secular practice of many Westerners. Most definitions of mindfulness emphasize an awareness, observation, and acceptance without judgment of one's feelings and thoughts (Baer et al., 2008; Grossman, 2008). Mindfulness allows for an understanding that, although negative emotions may occur, they are not a permanent part of one's identity. Moreover, mindfulness may allow a person to respond to events more reflectively, rather than automatically (Bishop et al., 2004). Thus, a mindful perspective allows individuals to be more cognizant of how life events influence their emotional experiences, enabling individuals to make predictions that are less susceptible to the impact bias.

Several questionnaires (see Baer, Smith, & Allen, 2004; Baer et al., 2006) have been developed to measure individual differences in people's tendency to be mindful. The Five Factor Mindfulness Questionnaire (FFMQ; Baer et al., 2006) subsumes five previous mindfulness scales into five facets of mindfulness: observing, describing, acting with awareness, nonjudging of inner experience, and nonreactivity to inner experience. Each factor measures distinct skills inherent in the concept of mindfulness.

Although any of these mindfulness facets could be potentially important in the affective forecasting process, we hypothesize that two facets seem particularly relevant to predicting future

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Table 1
Correlations for major study variables.

		1	2	3	4	5	6
1	Nonreact	<i>$\alpha = .80$</i>	–	–	–	–	–
2	Observe	0.01	<i>$\alpha = .80$</i>	–	–	–	–
3	Aware	0.36***	–0.05	<i>$\alpha = .89$</i>	–	–	–
4	Nonjudge	0.29***	–0.19*	0.46***	<i>$\alpha = .91$</i>	–	–
5	Describe	0.23**	0.15*	0.29***	0.26	<i>$\alpha = .90$</i>	–
6	Forecasts	0.01	0.01	0.06	–0.07	0.03	–
7	Preferred candidate	–0.01	0.02	0.05	–0.05	–0.01	0.79***

Note: values in italics are alphas.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

emotions: observing and acting with awareness. The observe facet reflects how often an individual attends to internal experiences – such as sensations and emotions – as well as the outside environment. Thus, this perspective may allow individuals to avoid staying focused on a single event and be cognizant of how their emotional experiences tend to ebb and flow due to many influences. Another facet, acting with awareness, assesses how individuals attend to their activities with a careful consideration and concentration of the present moment. The ability to act with awareness may also reduce susceptibility to the impact bias, as those who tend to act with awareness may be more aware of the many events that co-occur at a given time in the future.

The current study examines how facets of mindfulness may reduce people's susceptibility to the impact bias. We predict that people who report a greater tendency to observe their emotions and act with awareness should be less prone to making affective forecasts that overestimate the emotional impact of an event on their future happiness. We used the 2008 United States presidential election as our focal event, as people are known to overestimate the extent to which the outcome of elections will impact their future happiness (Gilbert et al., 1998). Furthermore, we tested these hypotheses in a sample of young adults, many of whom would be participating in their first political election.

2. Method

2.1. Participants

Two hundred and twenty undergraduates completed either a paper or online questionnaire in exchange for course credit. Demographic information was available only for the online sample but were likely similar to the pencil and paper questionnaire sample. These 109 online participants (85 females) ranged in age from 18–45 ($M = 23.30$) and were primarily Caucasian (78.89%), African-American (8.25%), or biracial (7.34%).

2.2. Procedure

Participants were contacted beginning two weeks prior to Election Day to predict their affective forecast for two weeks after the election. Participants made their affective forecasts and then completed the FFMQ (Baer et al., 2006). We contacted participants two weeks after Election Day to complete an online survey about their experienced emotions. 32 participants did not provide follow-up data and were excluded from analyses, leaving a sample of 188 participants.

2.3. Measures

Forecasted affect was assessed using two questions. Participants checked the name of the candidates they wanted to see win the

election (“John McCain/Sarah Palin (Republican)” or “Barack Obama/Joe Biden (Democrat)”). Participants then rated how happy they thought they would be two weeks after the election if the Republican candidates won and if the Democrats candidates won. Given the outcome, the latter question was used as the measure of forecasted affect. Both questions used a 9-point scale, ranging from 1 (*not at all happy*) to 9 (*extremely happy*).

Experienced affect. Two weeks after Election Day, participants rated their current happiness on the same 9-point scale described above.

Mindfulness. The FFMQ is a 39-item scale that examines five distinct factors of mindfulness using a 5-point Likert scale. Reliabilities for the factors ranged from $\alpha = .80$ (observe factor) to .91 (nonjudge factor). Consistent with the notion that mindfulness represents a number of distinct skills, correlations between the factors were small, ranging from $r = -0.19$ to .46, with an average correlation of $r = .18$. Because these facets assessed unique constructs, they were used as independent predictors of affective forecasting (Table 1).

3. Results

3.1. Descriptive results

One hundred and forty-six participants preferred Democrats and thus were predicting emotional reactions for a win, and 42 participants preferred Republicans and thus predicting emotional reactions for a loss. Interest in the presidential election was high ($M = 5.23$, $SD = 1.42$) on a 1 (*no interest at all*) to 7 (*extremely interested*) scale, indicating that our sample viewed the election as an event of personal importance.

As expected, there was evidence of the impact bias across all participants. Among participants predicting for a win, forecasted happiness ($M = 7.83$, $SD = 1.39$) was significantly greater than experienced happiness ($M = 6.46$, $SD = 1.44$), $t(145) = 9.08$, $p < .001$. Among participants predicting for a loss, forecasted happiness ($M = 3.26$, $SD = 1.95$) was significantly lower than experienced happiness ($M = 6.33$, $SD = 1.49$), $t(41) = -8.31$, $p < .001$.

3.2. Facets of mindfulness and affective forecasts

We first examined whether mindfulness influenced the forecasts individuals made. As we expected that those predicting for a win would make forecasts in the opposite direction (i.e., greater predicted happiness) as those predicting for a loss, we examined the relationship between facets of mindfulness and forecasts separately for the two groups. Thus, we entered the five factors of mindfulness into a regression predicting forecasts separately for winners and losers (see Table 2). For individuals predicting an election win, the observe factor of mindfulness was the significant predictor of forecasts, ($\beta = -.17$, $t(146) = -2.04$, $p = .043$), showing that

Table 2
Regression analysis predicting forecasts.

Predictor	B	SE	β	t	p
<i>Positive event (n = 146)</i>					
Describe	0.27	0.14	0.16	1.84	0.068
Nonreact	−0.06	0.18	−0.03	−0.34	0.732
Nonjudge	−0.12	0.14	−0.09	−0.88	0.378
Aware	0.26	0.17	0.16	1.52	0.130
Observe	−0.32	0.16	−0.17	−2.04	0.043
Overall $R^2 = .06$					
<i>Negative event (n = 42)</i>					
Describe	−0.37	0.48	−0.14	−0.76	0.453
Nonreact	0.30	0.45	0.12	0.66	0.516
Nonjudge	−0.26	0.32	−0.14	−0.82	0.419
Aware	−0.05	0.39	−0.02	−0.12	0.908
Observe	0.88	0.50	0.29	1.75	0.089
Overall $R^2 = .13$					

individuals high on the observe facet predicted they would be less intensely happy at follow-up than those individuals low on the observe facet. For individuals predicting a loss, observe was a marginally significant predictor of forecasts, ($\beta = .29$, $t(42) = 1.75$, $p = .089$) with individuals high on the observe facet predicting they would be less intensely not happy than those individuals low on the observe facet. We note that although this relationship was not statistically significant among losers, it was of greater magnitude than that found among winners. Thus, the lack of significance was likely due to the relatively few individuals who experienced a loss in our sample. Contrary to predictions, the awareness facet was not significantly related to forecasts for either prediction of an election win or loss, $ps > .10$. Taken together, we found that for both winners and losers, the observe facet of mindfulness was indeed associated with less intense affective forecasts.

3.3. Facets of mindfulness and the impact bias

We calculated the magnitude of the impact bias by subtracting experienced happiness from forecasted happiness and then reversing this score for those forecasting for a loss (see Lam et al., 2005 for more details on this procedure). This measure represents the extent to which winners overpredicted how happy they would be and losers overpredicted how unhappy they would be, compared to their actual experience. Thus, higher scores represent greater impact bias, regardless of outcome. Table 3 presents the results of regressions predicting the impact bias from the five factors of mindfulness. Again, one factor of mindfulness – observe – was the sole significant predictor of the magnitude of the impact bias ($\beta = -.20$, $t(187) = -2.65$, $p = .001$). Individuals high on the observe facet made predictions that were less susceptible to the impact bias. Furthermore, in separate analyses we found that this relationship between the observe facet and the magnitude of the impact bias was as strong among winners ($\beta = -.22$) as it was among losers ($\beta = -.20$). Contrary to predictions, the awareness facet was not

Table 3
Regression analysis predicting impact bias across all participants ($n = 188$).

Predictor	B	SE	β	t	p
Describe	0.13	0.20	0.05	0.66	0.51
Nonreact	0.04	0.23	0.01	0.15	0.88
Nonjudge	−0.12	0.18	−0.06	−0.65	0.52
Aware	0.02	0.21	−0.01	−0.07	0.94
Observe	−0.58	0.22	−0.20	−2.65	0.01
Overall $R^2 = .04$					

significantly related to the magnitude of the impact bias across all participants, $ps > .10$.

4. Discussion

Biases in affective forecasting are well-documented, yet relatively little is known about the factors that reduce such biases. We hypothesized that facets of mindfulness – and, in particular, the facets of observe and acting with awareness – would make people less susceptible to a common error of affective forecasting, the impact bias. Consistent with predictions, the observe facet was associated with more moderate affective forecasts following both a positive and a negative event, as well as a reduced susceptibility to the impact bias. Contrary to predictions, the awareness facet was not related to either forecasts or the impact bias. Thus, we show that the observe facet of mindfulness, which reflects a person's knowledge of the interplay between internal emotions and external events, may make people more resistant to affective forecasting biases more so than the awareness facet, which mainly reflects a person's attention to the present moment.

Our findings extend the literature on affective forecasting by examining how individuals' perspectives on emotions may reduce common biases. Previous studies have attempted to reduce the impact bias by reminding individuals about their emotional responses to similar events in the past (Buehler & McFarland, 2001). However, this attempt at improving people's forecasts has not always been successful (see Wilson, Meyers, & Gilbert, 2001), suggesting that people may have difficulties learning directly from similar past experiences.

Many of our participants were voting for the first time and likely did not have prior personal knowledge of how their emotional reactions might wane in weeks following an election. Despite this, we found that individuals who were more observant – that is, who generally understood that internal and external events co-occur and affect emotions – made more moderate affective forecasts and showed less evidence of an impact bias. Thus, our findings are particularly important as they suggest that it is not event-specific knowledge that reduces the impact bias, but rather it is a more general knowledge of how both internal and external events affect emotions that improves affective forecasting. This general knowledge may come with age, as older individuals are less likely to fall prey to the impact bias (Wilson and Gilbert, 2003). Furthermore, cultural background may also shape people's views on their experiences in ways that influence their forecasts for future emotions (Lam et al., 2005). However, our study extends this prior research by isolating a particular belief that is uniquely tied to reduced susceptibility to the impact bias, something that these prior studies were not able to show.

Given that mindfulness is not only an individual difference but also a skill that can be cultivated, our findings show that people may be able to improve their forecasting abilities to the degree that training in mindfulness also improves individuals' ability to observe their thoughts and emotions as they relate to ongoing life events. Thus, our findings begin to shed light on how to improve peoples' ability to anticipate how life events will make them feel. Such an ability may allow people to begin to make life decisions in a way that is not overly-determined by emotions. Of course, emotions will accompany any life decision, but better decision-making may result from understanding that one's emotions, whether positive or negative, are inevitably fleeting. Being more mindful, and specifically being able to observe current experiences, may help people to realize that emotional reactions to positive events – such as wins by favorite political candidates – are often temporary reactions that will be tempered by other life events.

Such a realization may help people focus on pursuing events that provide longer-term satisfaction and fulfillment.

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