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Using Emotion as Information in Future-Oriented Cognition: Individual Differences in the Context of State Negative Affect

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Abstract

Predictions about the future are susceptible to mood-congruent influences of emotional state. However, recent work suggests individuals also differ in the *degree* to which they incorporate emotion into cognition. This study examined the role of such individual differences in the context of state negative emotion. We examined whether trait tendencies to use negative or positive emotion as information affect individuals' predictions of what will happen in the future *(likelihood estimation)* and how events will feel *(affective forecasting)*, and whether trait influences depend on emotional state. Participants (*N*=119) reported on tendencies to use emotion as information ("following feelings"), underwent an emotion induction (negative versus neutral), and made likelihood estimates and affective forecasts for future events. Views of the future were predicted by both emotional state and individual differences in following feelings. Whereas following negative feelings affected most future-oriented cognition across emotional states, following positive feelings specifically buffered individuals' views of the future in the negative emotion condition, and specifically for positive future events, a category of future-event prediction especially important in psychological health. Individual differences may confer predisposition toward optimistic or pessimistic expectations of the future in the context of acute negative emotion, with implications for adaptive and maladaptive functioning.

Keywords

affective forecasting; emotion; pessimism; optimism; affect as information; future-oriented cognition

The ability to predict the future is a critical component of human cognition. People's forecasts about the future draw on memories of the past, affect their present experience, and guide decisions that can have important short- and long-term consequences, from making food choices based on predicted taste, to deciding among job offers based on predicted satisfaction (Mellers & McGraw, 2001; Wilson & Gilbert, 2003). Future-oriented cognition

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also plays a central role in mental health and psychological well-being. Pessimistic expectations for the future are associated with psychopathology and self-regulatory failures, from disordered eating to suicide attempts (see Marroquín, Nolen-Hoeksema, & Miranda, 2013), whereas optimistic expectations may motivate adaptive behavior in the pursuit of long-term reward (Wilson & Gilbert, 2003). Future-oriented cognition is directly influenced by state emotion, as well as by situational or contextual factors (e.g., relevance of emotion to tasks; Schwarz & Clore, 2007). However, recent work indicates that individual differences may also play an important role in whether and how present emotional experience influences one's view of the future. In the present study, we examined how individual differences in using emotion as information interact with state emotion to influence future-oriented cognition.

Affective Influences on Future-Oriented Cognition

Future-oriented cognition includes *likelihood estimation*, making predictions about what will happen in the future, and *affective forecasting*, making predictions about how future events will feel if they occur. Understanding affective mechanisms of future-oriented cognition is important partly because predictions guide behavior in the present (Mellers & McGraw, 2001). Moreover, future-oriented cognition depends on complex relations among cognitive and affective processes, and inaccurate predictions are commonplace. This inaccuracy can result in self-defeating behavior, such as investing cognitive resources in excessive and unproductive worry about anticipated negative outcomes (Golub, Gilbert, & Wilson, 2009). Individuals with depression and anxiety demonstrate maladaptive pessimistic views of the future, in both likelihood estimation and affective forecasting (Hoerger, Quirk, Chapman & Duberstein, 2012; Marroquín & Nolen-Hoeksema, 2015; Miranda, Fontes, & Marroquín, 2008; Yuan & Kring, 2009).

How do such views of the future come about? Early perspectives emphasized the ways state affect influences cognitive processing in mood-congruent ways (e.g., Bower, 1981; Isen, Shalker, Clark, & Karp, 1978). Individuals in negative moods estimate negative events to be more likely in the future, whether negative mood is experimentally induced (e.g., DeSteno, Petty, Wegener, & Rucker, 2000) or a component of the depressive state (e.g., Marroquín & Nolen-Hoeksema, 2015). The view of the future in depressive cognition is also notable for blunted expectancies for future positive events, reflecting congruence with negative and positive affect disturbance in mood psychopathology. However, research on "affect as information" theory shows that the *extent* to which affect is incorporated into cognition depends on a number of factors (Schwarz & Clore, 1983, 2007), such as mood source, relevance, and salience. For example, directing individuals' attention to unpleasant weather decreases the influence of their mood on judgments of life satisfaction, because they construe the external source of their mood as irrelevant to such judgments (Schwarz & Clore, 1983).

Recent work also points to a potentially important role of *individual differences* in the extent to which individuals use affect as information to guide cognition and behavior. People with trait tendencies to pay close attention to their emotions are more sensitive to emotional stimuli, exhibit stronger mood effects on judgments, and make more mood-congruent

likelihood estimates for future events (Gasper & Clore, 2000; Gohm, 2003). Gasper and Bramesfeld (2006) describe this individual difference as *following feelings* and have shown that people's tendencies to follow feelings are valence-specific. That is, beyond valence-general tendencies to attend to emotions more or less (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995), following negative feelings and following positive feelings are differentially associated with psychological well-being, approach and avoidance orientation, and noticing and responding to emotional stimuli in valence-specific patterns (Gasper & Bramesfeld, 2006).

Individual differences in valence-general affective traits (e.g., emotional clarity, emotional intelligence) are associated with future-oriented cognition (Dunn, Brackett, Ashton-James, Schneiderman, & Salovey, 2012; Hoerger, Chapman, Epstein, & Duberstein, 2012). However, it is unknown whether differentially following positive and negative feelings affects the view of the future, or whether trait tendencies affect future-oriented cognition over and above mood congruency. Marroquín and Nolen-Hoeksema (2015) recently demonstrated that the degrees to which individuals followed negative and positive feelings mediated the relations between depressive symptoms and pessimistic future event likelihood estimation and affective forecasting, suggesting that trait differences in following feelings may represent vulnerabilities to depressive pessimism. However, it is unclear whether this role of following feelings reveals a fundamental cognitive-affective process or is specific to depressive cognition.

In this study, we examined the extent to which following negative feelings and following positive feelings predicted likelihood estimates and affective forecasts for the future, within the context of a negative versus neutral emotional state in a nonclinical sample. We focused on effects of negative (rather than positive) emotional state for methodological and theoretical reasons. First, the majority of work on both mood congruency and affect-as-information theory has focused on negative affect; examining negative mood states allows more direct comparison of the potential role of following-feelings traits. Moreover, given the relevance of following feelings and future-oriented cognition to both adaptive and maladaptive functioning, we were interested in whether individual differences act as vulnerability or protective factors (i.e., toward pessimistic or optimistic future-oriented cognition) in the face of distress.

Our first hypothesis, consistent with a following-feelings account of future-oriented cognition, was that individuals' trait tendencies to follow negative feelings and positive feelings would be associated with, respectively, more pessimistic and more optimistic likelihood estimation and affective forecasting. Our second hypothesis, consistent with a mood congruency account, was that individuals would show more pessimistic future-oriented cognition in a negative versus neutral emotional state. Our third hypothesis tested the interplay between following feelings and state negative emotion in future-oriented cognition. We tested two competing predictions:

1. The pessimistic effect of following negative feelings and the optimistic effect of following positive feelings would be strongest in a negative emotional state (versus neutral). This pattern would evidence an interplay of state and trait affective

characteristics such that following negative feelings confers vulnerability to negative emotion effects, and following positive feelings confers protection against them.

2. The effects of following-feelings variables would be stronger in a neutral mood state (versus negative). This pattern would indicate that predispositions toward using emotion as information affect future-oriented cognition only when immediate negative emotional state is not in play.

Method

Participants and Procedure

Participants were 119 undergraduates and members of the community surrounding a university in the Northeastern United States, not prescreened for any characteristic. The sample included 65 women (55%) and 54 men (45%); mean age was 19.7 years (*SD* = 2.2; range = 18-30). Self-reported ethnicity was White (56%), Asian/Asian-American (17%), Hispanic (8%), Black/African-American (8%), multi-ethnic (8%), and other (3%).[1]

The study aim was described as developing personality-based algorithms to improve movie rental website recommendations (e.g., Netflix). Participants completed baseline measures of state emotion and trait following feelings, embedded among several filler tasks about movies, actors, and rental habits, as well as questionnaires about affect, reactions to emotion, and future-oriented cognition. They were then randomly assigned to view either a negative (*n* = 60) or neutral (*n* = 59) 5-min emotion induction film, ostensibly as one of several movie clips in the study. Participants assigned to the negative emotion condition viewed an emotional scene from the movie *Stepmom* (Columbus, 1998), in which a mother with terminal cancer says goodbye to her children. This clip reliably induces sadness (Joormann, Gilbert, & Gotlib, 2010). Participants in the neutral emotion condition viewed a scene from a home improvement television show that has been shown to not elicit emotion (Curby, Johnson, & Tyson, 2012). Participants then reported on post-induction emotion and made likelihood estimates and affective forecasts for future negative and positive events. Participants were then debriefed; procedures were approved by the IRB.

Measures

Following Feelings—Individual differences in the use of emotion as information were measured with the Following Negative Feelings and Following Positive Feelings subscales of the Following Affective States Test (FAST; Gasper & Bramesfeld, 2006). Each subscale includes 4 items (e.g., Following Negative: *I pay attention to my negative feelings; I always give in to my negative emotions;* Following Positive: *When I am feeling good about something I often pursue it; Positive feelings give direction to life).* Item responses range from 0 *(strongly disagree)* to 6 *(strongly agree);* subscale scores are averages across constituent items. The FAST has good test-retest reliability and convergent and discriminant validity; its subscales predict attention, responsiveness to emotional stimuli, and use of

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[1]Two additional participants were removed from the sample (prior to data analyses) because they had extreme values on future-oriented cognition variables that affected distributions.

affect in decision-making in valence-specific ways, and display incremental validity beyond general measures of emotional attention and mood monitoring (Gasper & Bramesfeld, 2006). Both subscales had adequate internal consistency (Following Negative α = .74; Following Positive α = .70) and were negatively correlated (*r* = -.35, *p* < .001).

Pre- and Post-Manipulation Emotion—Negative emotion and positive emotion were measured before and immediately after the emotion induction films. Participants reported state emotion on 4 items measured on a scale of 1 to 9, embedded among a variety of filler items unrelated to emotion (e.g., *frugal/decadent)* to obscure constructs of interest. The negative emotion composite was an average of responses to *sad* an*d depressed* items; the positive emotion composite was an average of responses to *happy* and *joyful.*

Likelihood Estimation—Perceived likelihood of future events was measured with the Future Events Questionnaire (FEQ; Miranda & Mennin, 2007), adapted from work by Andersen and colleagues (e.g., Andersen, Spielman, & Bargh, 1992). Participants rated the likelihood that 17 negative events (e.g., *Be rejected by a significant other)* and 17 positive events (e.g., *Be honored for a major achievement)* would happen in the future. In this study, participants rated likelihood from -5 *(certain that it will not happen)* to +5 *(certain that it will happen).* Likelihood estimation scores were calculated separately for negative events (FEQ-Neg) and positive events (FEQ-Pos) by averaging ratings across items of each valence. Both scores had high internal consistency (FEQ-Neg α = .89; FEQ-Pos α = .93).

Affective Forecasting—After completing the FEQ, participants were presented with each event again and made affective forecasts for the same events. They were instructed to imagine each event happening at some point in the future, and were asked, "If the event *happens* at some point in your future, how will you *feel*?" Participants forecasted affect from -5 *(extremely sad)* to +5 *(extremely happy).* Calculated as for likelihood estimation, both affective forecasting scores had good internal consistency (FEQ-AF-Neg α = .76; FEQ-AF-Pos α = .84).

Results

Baseline and Emotion Manipulation Check

Participants randomly assigned to the negative emotion condition did not differ in baseline tendencies to follow negative feelings (*M* = 2.92, *SD* = 1.16) or follow positive feelings (*M* = 4.35, *SD* = 0.87) compared to participants in the neutral condition (respectively, *M* = 2.76, *SD* = 1.22, *t*(117) = 0.74, *p* = .46; *M* = 4.38, *SD* = 0.83, *t*(117) = 0.15, *p* = .88). Similarly, participants in the negative and neutral conditions reported similar baseline levels of negative emotion (respectively, *M* = 2.95, *SD* = 1.72; *M* = 2.62, *SD* = 1.73; *t* (117)= 1.05, *p* = .30) and positive emotion (respectively, *M* = 5.73, *SD* = 1.36; *M* = 5.92, *SD* = 1.44; *t*(117) = 0.71, *p* = .48).

To examine emotion induction effects, we conducted repeated-measures ANOVAs with condition as a between-subjects factor and time (pre/post induction) as a within-subjects factor. As intended, main effects of condition, $F(1,117) = 14.90$, $p < .001$, $\eta^2 = .11$, and time, $F(1,117) = 51.41$, $p < .001$, $\eta^2 = .31$, on negative emotion were qualified by a

condition × time interaction, $F(1,117) = 31.30$, $p < .001$, $\eta^2 = .21$. Negative emotion increased significantly among participants who viewed the negative film ($M_{\text{pre}} = 2.95$, $SD = 1.72$; $M_{\text{post}} = 4.67$, $SD = 1.70$; paired $t(59) = 7.31$, $p < .001$), and remained stable among participants who viewed the neutral film ($M_{\text{pre}} = 2.62$, $SD = 1.73$; $M_{\text{post}} = 2.83$, $SD = 1.65$; paired $t(58) = 1.65$, $p = .11$). There was a significant main effect of time on positive emotion, $F(1,117) = 47.16$, $p < .001$, $\eta^2 = .29$, no main effect of condition, $F(1,117) = 2.48$, $p = .12$, $\eta^2 = .02$, and a marginally significant condition × time interaction, $F(1,117) = 3.89$, $p = .05$, $\eta^2 = .03$. Positive emotion decreased in both the negative ($M_{\text{pre}} = 5.73$, $SD = 1.36$; $M_{\text{post}} = 4.80$, $SD = 1.57$; paired $t(59) = 5.15$, $p < .001$), and neutral conditions ($M_{\text{pre}} = 5.92$, $SD = 1.44$; $M_{\text{post}} = 5.40$, $SD = 1.50$; paired $t(58) = 4.84$, $p < .001$). Nevertheless, as intended, following the induction participants in the negative condition were significantly higher in negative emotion and significantly lower in positive emotion than neutral condition participants, negative $t(117) = 5.99$, $p < .001$; positive $t(117) = 2.13$, $p = .035$.

Likelihood Estimation and Affective Forecasting

To test hypotheses regarding following feelings, state emotion, and their interaction, we conducted multiple regression analyses predicting each of the future-oriented cognition variables measured after the emotion induction (see Table 1). For each analysis, simple effects of following feelings can be interpreted in line with the role of individual differences in use of emotion as information, and simple effects of emotion condition can be interpreted in line with a state affect explanation. Interactions reflect the differential role of following feelings when in a negative versus neutral emotional state, capturing the mix of emotional state and individual difference we hypothesized to be implicated in future-oriented cognition.

Negative Events—Participants higher in following negative feelings estimated negative events to be significantly more likely, consistent with a trait-level emotion as information explanation. Participants in the negative emotion condition estimated negative events to be significantly more likely relative to those in the neutral condition, consistent with a state affect explanation. Neither following positive feelings nor any interactions were statistically significant, indicating that expectations for negative event likelihood depended independently on both negative emotion in the present and following negative feelings. In affective forecasting for these same negative events, there were no statistically significant effects of emotion condition, following feelings, or any interactions.

Positive Events—When predicting likelihood of positive events, estimates did not differ depending on emotion condition, inconsistent with a state affect explanation. Instead, they differed depending on following feelings. Simple effects indicated that following negative feelings was associated with expecting fewer positive events to occur. Moreover, both following negative and following positive feelings interacted with emotion condition, qualifying the simple effect of following negative feelings, and indicating that the effects of trait following feelings— both negative and positive—depended on current emotional state.

Simple slopes analyses revealed that following negative feelings was associated with lower likelihood estimates for future positive events among participants in the neutral condition, *b*

= -0.46, *SE* = 0.14, *t* = 3.31, *p* = .001, but not in the negative condition, *b* = 0.001, *SE* = 0.13, *t* = 0.01, *p* = .99. Conversely, following positive feelings was associated with higher estimates for positive events among participants in the negative condition, *b* = 0.57, *SE* = 0.17, *t* = 3.29, *p* = .001, but not in the neutral condition, *b* = 0.04, *SE* = 0.20, *t* = 0.20, *p* = .84 (see Figure 1a). Thus, individuals' tendencies to follow *negative* feelings influenced their expectations for positive event occurrence only in a *neutral* emotional context, indicating that trait following negative feelings was most influential when negative emotional state was not a factor. By contrast, tendencies to follow *positive* feelings mattered only in the context of *negative* emotion, indicating that this trait held sway specifically when negative emotion was a factor.

When forecasting affect for positive events, there were no simple effects of emotion condition, nor of following negative or positive feelings. Rather, a significant condition × following positive feelings interaction showed that following positive feelings was associated with more positive affective forecasts in the negative emotion condition, *b* = 0.31, *SE* = 0.09, *t* = 3.33, *p* = .001, but not in the neutral emotion condition, *b* = 0.02, *SE* = 0.11, *t* = .18, *p* = .86. Uniquely in a negative emotional state, then, trait use of positive emotion as information was associated with expecting positive events to be both more likely to occur in the future, and to feel happier when they do occur (see Figure 1b).

Discussion

Overall, findings supported the hypothesis that both following feelings and state emotion play roles in future-oriented cognition, and moreover, that the role of following feelings as a trait depends on emotional state. The trait tendency to follow negative feelings was associated with perceiving negative events as more likely regardless of current emotional state, indicating that one's trait use of negative emotion as information is associated with pessimistic cognition beyond mood-congruent effects of state emotion itself. However, effects of following negative feelings on lower positive event likelihood estimation occurred only in a *neutral* emotional state. Effects of following positive feelings in future-oriented cognition also depended on emotional state: whereas following positive feelings was unrelated to people's view of the future in a neutral emotional state, in a *negative* emotional state, following positive feelings was associated with perceiving future positive events as more likely, and forecasting more positive affect. Notably, models including state emotion and individual differences accounted for substantial variance in likelihood estimates for both negative and positive events (22% and 16% respectively), and affective forecasts for positive events (8%), suggesting meaningful roles of state and trait affective processes in future-oriented cognition.

These findings regarding likelihood estimation and affective forecasting extend previous work showing that individual variations in use of affect as information influence judgments (Gasper & Bramesfeld, 2006; Gasper & Clore, 2000; Gohm, 2003). The finding that future-oriented cognition is influenced not just by state emotion or situational factors, but also by individual differences, can improve understanding of the cognitive and affective mechanisms that guide behavior and drive decision-making (Wilson & Gilbert, 2003). It may also help explain how affect can have stable influences on decision-making and

behavior over time and across emotional situations, when individuals' decisions involve predicting consequences of behavior. Individual differences in following feelings may influence whether a person's response to emotional distress takes the form of ―seeing the light at the end of the tunnel‖ and adaptive perseverance toward valued goals, versus maladaptive or costly goal disengagement, or even pathological self-defeating behavior (Marroquín et al., 2013).

Individual differences in how people integrate emotion into cognition may prove informative in understanding fundamental affective mechanisms of future-oriented cognition across the spectrum of psychological health. Stable tendencies in the use of emotion as information may be especially important in conferring susceptibility to (or protection against) pessimism specifically during negative mood. In the present study, effects of following positive feelings depended on emotional state: only in a *negative* emotional state was following positive feelings associated with perceiving future positive events as more likely and as generating more happiness. The buffering pattern indicates that using positive emotion as information might shield one's view of the future from misfortune in the present in potentially clinically-significant ways. Low expectancies for positive future events, specifically, are the expectancies implicated in pessimism and hopelessness about the future, including in depressive cognition (e.g., Marroquín & Nolen-Hoeksema, 2015; Miranda et al., 2008).

The present findings indicate that not only is such depressive future-oriented cognition linked with ―underuse‖ of positive emotion, but also that higher use of positive feelings can buffer against such cognition during (nonclinical) negative mood. Perhaps in the face of negative emotion, the cognitive capacity to envision a positive future by drawing on whatever positive emotion is available—even when it is not much—can supplement the direct psychological benefits of positive emotion (Coifman & Bonanno, 2010; Fredrickson, 2001). These findings support the notion that one reason ―biased‖ use of emotion as information among individuals high in depressive symptoms accounts for pessimism about the future (Marroquín & Nolen-Hoeksema, 2015) may be that it confers vulnerability when facing negative emotional states.

Indeed, our findings suggest that distinct traits of following negative versus positive feelings play different roles in future-oriented cognition depending on emotional states. One explanation is that a dispositional tendency to highly weight negative emotion as information has less room to ―move‖ future-oriented cognition when state negative emotion is exerting direct effects, and conversely, that the tendency to weight positive emotion appears to move future-oriented cognition more when it is acting against negative emotion. This finding has potential relevance for theoretical approaches to affective systems in which stable individual differences dynamically organize individuals' state cognitive and affective experiences of immediate situations (Mischel & Shoda, 1995; Rosenberg, 1998). For example, an individual's trait tendency to attend to and rely on positive emotion as information may play a coordinating role in her more momentary, daily experiences, such that negative events are experienced less intensely or are cognitively construed as less negative because of relatively top-down processes.

This finding is also consistent with evidence that other factors can counteract mood-congruent effects of state emotion on future-oriented cognition. For example, individuals in an induced reflective versus ruminative state make more positive forecasts in a negative versus neutral mood (Buehler, McFarland, Spyropoulos, & Lam, 2007). Improved understanding of how trait following feelings interacts with state emotion may help specify how and when individual differences act in concert with versus against state factors in future-oriented cognition, including various dimensions of affect (e.g., arousal and valence) and characteristics of discrete emotions (e.g., sadness). In particular, positive affect is an important component of both healthy future-oriented cognition (Wilson & Gilbert, 2003) and, in its absence, psychopathology. Future work incorporating other emotion inductions is required to adequately address this question and capture the range of affect available for use as information.

Several limitations should be addressed in future work. First, because we were primarily interested in naturally existing individual differences, we did not experimentally manipulate use of emotion as information. Experimental work is required for stronger causal claims regarding the mechanisms of individual difference effects, and prospective work can test whether chronic differences in following feelings confer vulnerability to or protection from effects of naturally-occurring negative emotion. Second, although the FAST has good construct validity and psychometric properties with respect to following feelings, its scales are related to other personality constructs, including neuroticism, approach motivation, and avoidance motivation (Gasper & Bramesfeld, 2006). These constructs also plausibly affect relations between emotion and future-oriented cognition; future work should distinguish the role of following feelings from other affective traits. Third, although we sought to minimize the degree to which participants were aware of manipulations, our manipulation check required participants to attend to their emotions in ways that may have influenced findings. Future work would benefit from implicit assessment of emotion, such as measurement of autonomic systems or nonverbal behavior (Mauss & Robinson, 2009), as well as of future-event predictions (e.g., by using reaction time as an index of automaticity; Andersen et al., 1992; MacLeod & Campbell, 1992).

Finally, our measurement of emotional state (and affective forecasts) focused on sadness and happiness only. These are the primary emotions disturbed in depression and capture the major dimension of valence, but the sadness induction (involving loss of a parent) may have also affected other discrete emotions (e.g., anxiety/fear, anger) linked with future-oriented cognition (DeSteno et al., 2000). Future work should examine the specificity versus generality of discrete emotion effects on future-oriented cognition, even in a predominantly sad mood state, and whether a person's tendencies to use emotion as information draw more on valence or specific emotions (e.g., whether following positive feelings protects against pessimism in a state of anxiety as well as sadness). This is especially important because people commonly experience a mix of emotions (Larsen & McGraw, 2011).

In this study we did not seek to assess forecasting *accuracy*; our present interest was not in whether individuals correctly predict the future, but rather in how they perceive the future at any given point in the present—an important component in understanding optimism, pessimism, and behavior in the present. Importantly, results showed no effect of negative

emotion or following feelings on affective forecasts for negative events. This runs counter to findings that negative mood affects negative forecasts in nonclinical samples (see Wilson & Gilbert, 2003), but is notably consistent with studies comparing depressive versus nondepressive affective forecasting (e.g., Marroquín & Nolen-Hoeksema, 2015; Yuan & Kring, 2009), suggesting future work is needed to reconcile processes common to both healthy functioning and pathology.

In sum, this study supports the notion that one's view of the future—both what is expected to happen and how it is expected to feel—is affected by individual differences in using emotion as information, and that this role of trait differences interacts with state emotion. Understanding the role of affective factors in future-oriented cognition requires examining the dynamic interplay between internal and situational cognitive and affective processes.

Acknowledgments

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Highlights

- Future-event predictions are influenced by mood and use of affect as information

- Study compared effects of state mood and individual differences in use of affect

- State and trait factors affected likelihood estimation and affective forecasting

- Trait ―following‖ positive feelings linked with optimism despite negative mood

- Individual differences may determine adaptive/maladaptive cognition under distress

(a)

(b)
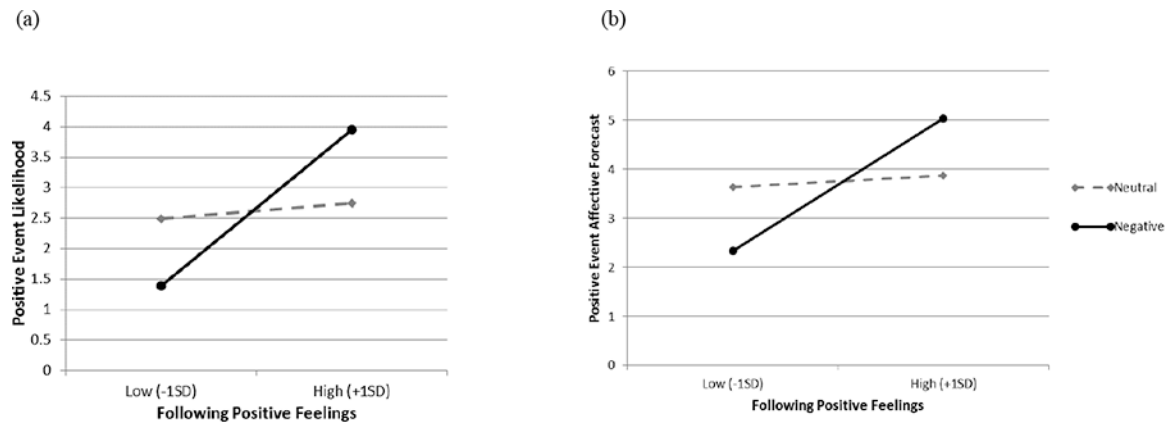
Figure 1.
Effect of following positive feelings on positive future-oriented cognition depends on mood state. (a) Positive event likelihood estimation; (b) Positive event affective forecasting.

Table 1

Effects of Mood Condition and Following Feelings on Likelihood Estimation and Affective Forecasting

	Likelihood-Negative Events	Likelihood-Positive Events	Forecast-Negative Events	Forecast-Positive Events
	β			
Mood Condition (Negative)	.18[*]	.05	-.01	-.07
Following Negative Feelings	.44[**]	-.44[**]	-.11	-.16
Following Positive Feelings	-.11	.03	-.05	.03
Condition × Following Negative	-.14	.31[*]	-.01	.08
Condition × Following Positive	-.14	.27[*]	-.12	.28[*]
$F(5, 113)$	7.79[**]	5.32[**]	0.66	3.07[*]
Adjusted R^2	.22	.16	-.02	.08

[*]
$p < .05$;

[**]
$p < .01$

Mood condition coded with neutral as the reference group. Likelihood = Predicted likelihood of future negative and positive events on Future Events Questionnaire; Forecasting = Affective forecasts for future negative and positive events from FEQ; Following Negative and Following Positive = subscales of Following Affective States Task, centered around their means.