Causes and Interventions of Affective Forecasting Bias

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Abstract

Affective forecasting bias is a phenomenon of discrepancy between predicted and actual emotional responses to future events. A review of research literature in this field from the recent decade (2009-2019) reveals that key research themes encompass the phenomena, causes, and interventions of the bias, which can be summarized as three main findings: affective forecasting bias is highly prevalent, its causes are multifaceted, and it is amenable to intervention. Future research should focus on the occurrence patterns and psychological mechanisms of affective forecasting bias, strive to reveal the neuropsychological mechanisms of specific biases, and comprehensively examine the occurrence mechanisms of the bias from evolutionary and cultural perspectives.

Full Text

Causes and Interventions of Affective Forecasting Bias

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Abstract

Affective forecasting bias refers to the divergence between predicted emotional responses to future events and actual emotional experiences. A review of literature from the past decade (2009–2019) reveals that research hotspots have focused on three aspects: the phenomenon of bias, its causes, and interventions. Three main findings emerge: affective forecasting bias is highly prevalent, its causes are multifaceted, and it can be effectively intervened upon. Future research should prioritize examining the patterns and psychological mechanisms

underlying affective forecasting bias, elucidate the neuropsychological mechanisms of specific biases, and investigate the mechanisms of bias from evolutionary and cultural perspectives.

Keywords: affective forecasting bias; interpersonal affective forecasting; causes of bias; intervention strategies

Affective forecasting, also known as emotional forecasting, is the process of predicting emotional responses to future events (Gilbert & Wilson, 2009; Miloyan & Suddendorf, 2015), with the predicted outcome termed anticipated emotion. As research has progressed, the role of affective forecasting in decision-making (Geng & Jiang, 2017), health (Brenner & Ben-Zeev, 2014; Hoerger, Scherer, & Fagerlin, 2016; Thompson et al., 2017), education (Chen et al., 2013), and sports (Loehr & Baldwin, 2014; Ruby et al., 2011) has become increasingly recognized.

Numerous studies have found that people generally struggle to accurately predict their future emotional reactions (Wilson & Gilbert, 2003), often exhibiting affective forecasting biases—a phenomenon characterized by the discrepancy between predicted emotional responses to future events and actual emotional experiences (Chen, 2014). Since the 1990s, this phenomenon has attracted widespread attention from psychological researchers, with Liu, Zhang, and Yu (2010) providing a comprehensive review. However, a decade has passed since then, during which empirical research on affective forecasting bias has continued to advance both domestically and internationally, making it a hot topic in psychological research. A search of APA/EBSCO databases for English literature (as of February 15, 2020) using the keywords "emotional forecasting/affective forecasting" yielded 227 articles since 2010, with 76 directly addressing bias-related themes, complemented by several Chinese-language reports. Reviewing these publications reveals that research over the past decade has primarily addressed three aspects: the phenomenon of bias, its causes, and interventions, leading to three main conclusions: affective forecasting bias is highly prevalent, its causes are multifaceted, and it can be corrected.

2. Universality of Affective Forecasting Bias

Kahneman and Snell (1992) conducted pioneering research on affective forecasting bias, asking participants to predict their emotional responses to eating yogurt or ice cream over eight consecutive days and concluding that "emotional change is difficult to predict." Subsequent studies have demonstrated that this bias emerges across diverse populations and situations, manifesting in both negative and positive events (Chen, 2014). Over the past decade, this universality has been further confirmed across different age groups and contexts.

2.1 Age-Related Universality

While previous research has established that affective forecasting bias is widespread among healthy adult populations (Wilson & Gilbert, 2005, 2013), recent studies indicate that minors also exhibit bias when making emotional

predictions. Kopp et al. (2017) found in a sticker task experiment that children aged 3–5 overestimated their negative emotions when receiving one sticker instead of four. Gautam et al. (2017) discovered that children overestimated their sadness about losing a game but did not overestimate their happiness about winning, demonstrating negative intensity bias in affective forecasting among 4–5-year-old preschoolers. In China, Geng et al. (2019) found through laboratory and real-world studies that middle school students overestimated both the positive emotions resulting from positive learning outcomes and the negative emotions resulting from negative learning outcomes. Scheibe et al. (2011) asked participants of different ages to predict their emotions regarding the U.S. presidential election results, finding that although older adults (40–60 years) and elderly adults (over 60) were more accurate than younger adults (under 40), they still exhibited bias when predicting their emotional responses to their preferred candidate' s loss. Collectively, these studies suggest that affective forecasting bias may be prevalent throughout human development.

2.2 Situational Breadth

Affective forecasting bias commonly appears in both self-emotional forecasting and interpersonal emotional forecasting, demonstrating broad situational applicability—a significant new finding from the past decade. Early research primarily examined self-emotional forecasting bias, focusing on decision-making and daily life contexts (Gilbert & Wilson, 2009; Wilson & Gilbert, 2003). Recently, contexts such as sports (Loehr & Baldwin, 2014; Ruby et al., 2011) and health (Brenner & Ben-Zeev, 2014; Thompson et al., 2017; Hezel et al., 2019) have gained researchers' attention. Ruby et al. (2011) found that participants generally underestimated their enjoyment of exercise, suggesting that controlling or overcoming this underestimation could potentially increase exercise intentions. Loehr and Baldwin (2014) similarly found that people tend to underestimate the pleasure derived from physical activity, a forecasting bias that may weaken motivation for regular exercise. In health contexts, research has shown that if individuals overpredict the emotional stress associated with taking medication, they may avoid taking it (Brenner & Ben-Zeev, 2014).

Human emotional life does not occur in a vacuum; we frequently communicate, share, and discuss emotions related to future events with others. When we predict the emotions that others will experience when future events happen to them, we engage in interpersonal emotional forecasting (Chen, 2014), also termed empathic forecasting (Pollmann & Finkenauer, 2009). A series of studies have demonstrated that interpersonal affective forecasting bias is also widespread. For example, Pollmann and Finkenauer (2009) asked participants to predict others' emotions following test success or failure, finding that participants overestimated emotional responses for both strangers and familiar friends (Experiments 1 and 2), and this bias persisted even when participants received more reference information (Experiment 3). Subsequently, Green et al. (2013)

used a longitudinal design to examine participants' predictions of their own emotions and their partners' emotions when transgressions occurred, revealing that participants overestimated the sadness experienced by transgression victims. Chinese researchers (Chen et al., 2013; Chen, 2014) investigated teacher-student emotional forecasting in typical educational contexts through multiple between-subjects designs, finding that teachers exhibited bias when predicting individual students' and groups of students' emotions, confirming the existence of an interpersonal empathy gap in erroneously predicting others' emotions.

3. Causes of Affective Forecasting Bias

Exploring the causes of affective forecasting bias to provide a basis for effective correction strategies has long interested researchers. As early as 2003, Wilson and Gilbert systematically constructed a process model of bias emergence, analyzing nearly ten specific sources of bias from various stages of the affective forecasting and emotional experience processes. However, these causes were largely confined to cognitive aspects. Over the past decade, researchers have not only expanded understanding of cognitive causes but also explored bias causes from motivational and personality perspectives.

3.1 Cognitive Perspective

As affective forecasting represents a high-level cognitive capacity, cognitive approaches to understanding its bias have received considerable attention, with focalism and memory bias being the most extensively examined cognitive limitations.

Focalism refers to the unreasonable or erroneous allocation of attentional resources. Early research defined focalism as the tendency to believe that attended events are more important than unattended ones, leading to misestimation of the emotional impact of focal events (Luo et al., 2013; Geng & Zhang, 2015). Over the past decade, understanding of focalism' s nature and types has expanded and deepened, which can be summarized in five points:

First, from a temporal perspective, during a complete activity, if people focus only on the relatively difficult initial stage (the "hard beginning"), they will bias their emotional predictions for the entire activity, particularly its outcome. In Ruby et al.' s (2011) study, participants overly focused on the unpleasant emotions at exercise onset, using this unpleasant starting point as an anchor for predictions, leading to significant underestimation of their enjoyment of physical activity. Ruby et al. termed this type of focalism "forecasting myopia."

Second, from a spatial context standpoint, emotional forecasting always occurs within specific environmental backgrounds. If people fail to notice how environmental factors attract and influence their emotions—a phenomenon termed "environmental impact neglect"—they will also make erroneous judgments about future emotional responses. In Lench et al.' s (2011) Study 2, two groups of participants were asked to imagine their emotions after winning or losing a game,

with the low-focus group having prizes placed outside their visual field and the high-focus group having prizes in a box directly before them. The latter group underestimated their negative emotional responses to losing, clearly due to failing to consider the prizes' attractiveness (environmental impact neglect) during prediction.

Third, in interactive situations, focusing on differences rather than similarities between parties and on negative rather than positive performance also constitutes attentional focus errors that produce forecasting bias. Mallett et al. (2008) proposed the concept of intergroup forecasting error, which occurs when people focus on differences between themselves and others while failing to notice similarities, leading them to overestimate their own negative emotions in interactions. In their experiments, when white participants were instructed to focus more on similarities with black participants, their emotional predictions became more positive and intergroup forecasting error decreased significantly. Levine and Cohen (2018) recently found that participants feared and even disliked honest communication in interpersonal interactions because they erroneously predicted the negative emotions honesty would bring them, a forecasting bias stemming from participants focusing only on others' negative reactions.

Fourth, in previous research, immune neglect was typically considered another important source of affective forecasting bias alongside focalism. However, failing to notice one's own psychological immunity and emotional adaptation capacity is essentially also a form of attentional misallocation or focalism, consistent with Schkade and Kahneman' s (1998) early judgment. Recent empirical research supports this view. For instance, in loss contexts, people focus more on the loss or harm itself (Pedersen et al., 2011), and when predicting emotional responses in future loss situations, they tend to underestimate their ability to minimize or rationalize the loss, resulting in greater forecasting bias (Dolan & Metcalfe, 2010). However, continued loss experiences provide opportunities to adjust attention, making people realize their capacity to minimize and rationalize losses, thereby adjusting emotional predictions to match reality (Fu et al., 2018).

Fifth, in interpersonal affective forecasting contexts, focalism manifesting as stereotypes or egocentrism constitutes an important source of bias. Moons et al. (2016) found through two experiments that stereotypes influence predictions of others' emotions, with resulting biases ultimately affecting predictors' behaviors before and during social interactions. Kumar and Epley (2018) demonstrated that expressers significantly underestimated recipients' positive emotions upon receiving gratitude while overestimating their embarrassment. The researchers argued that although expressing gratitude—this prosocial behavior—can increase well-being for both expressers and recipients, expressers often exhibit egocentric bias, leading them to systematically underestimate the positive impact of expressing gratitude on recipients. Chen et al. (2013), using teachers predicting students' emotions as an example, similarly confirmed that focusing on oneself while neglecting others' perspectives in interpersonal affective

forecasting contexts produces bias.

Memory bias is another extensively examined cognitive cause of affective forecasting bias. Drawing on life experience, we might ask: Life consists of a series of situational recurrences with emotional accompaniments, so why can' t people learn from past experiences to accurately predict emotional reactions when similar situations recur?

As early as 2001, Wilson et al. proposed the learning-from-experience hypothesis to explain this memory bias phenomenon, arguing that learning from past emotional experiences requires simultaneously meeting three conditions: First, the mental effort criterion, which requires people to actively compare past and future emotional experiences rather than thinking about future events in isolation without reference to past experiences; second, the consistency criterion, which requires selecting past experiences that match the forecasting context; and third, the accuracy criterion, which requires accurately recalling past emotional experiences after selecting past experiences consistent with future situations. However, people often fail to meet one or more of these conditions, leading to erroneous predictions of emotional reactions to similar recurring events. Meeting the accuracy criterion is particularly difficult because atypical events, while easily remembered, lack typicality (Morewedge et al., 2005), and relying on emotional experiences from such atypical events to predict future emotional reactions can lead to bias. Therefore, researchers propose that the key to avoiding memory bias is extracting typical events from memory during affective forecasting (Chen et al., 2014). Other researchers offer different explanations for memory bias, such as Meyvis et al.' s (2010) misremembering past forecasting hypothesis, which suggests that people' s failure to learn from past experiences and their repeated forecasting biases stem from their erroneous memory of previous emotional predictions.

3.2 Motivational Perspective

Recent studies show that affective forecasting bias originates not only from cognition but also has motivational underpinnings. Research in this area remains unsystematic, with limited studies primarily addressing motivational processes and properties such as strategy selection and regulatory focus.

Research indicates that individuals' affective forecasting strategies influence forecasting bias. Gilbert and Wilson (2009) found that when participants first predicted future emotional experiences and then considered how events would affect emotions, versus directly considering how events would affect emotions and making predictions, the results differed. Morewedge and Buechel (2013) provided empirical evidence for the important influence of motivated reasoning on affective forecasting bias, showing that when individuals believed they could influence outcomes, they exhibited greater impact bias than when they believed they could not, suggesting that emotional predictions may be strategically exaggerated by decision-makers. Pauketat et al. (2016) demonstrated through two

experiments that self-affirmation motivation can reduce emotional forecasting bias for negative events. Geng and Jiang (2017), based on motivational regulation theory, examined the motivational sources of affective forecasting bias from a regulatory focus perspective, finding that promotion-focused individuals overestimated positive emotions after goal success more than prevention-focused individuals, while prevention-focused individuals overestimated negative emotions after goal failure more than promotion-focused individuals, and that individuals exhibited greater bias under regulatory fit than non-fit conditions. Recently, researchers have also proposed the role of justice motivation in forecasting, suggesting that people predict good people are more likely to experience positive outcomes and bad things should happen to bad people who should feel worse (Mata & Simão, 2019). These studies provide new motivational perspectives for exploring the causes of affective forecasting bias.

3.3 Personality Perspective

Recent studies have found that the occurrence of affective forecasting bias, particularly its direction and intensity, requires explanation from personality factors. Hoerger and Quirk (2010) used Valentine' s Day breakups as situational events, asking 226 college students to report anticipated and actual emotions while completing the Big Five personality test. They found that neuroticism and extraversion dimensions correlated with mood, emotional experience, and anticipated emotions, thereby producing bias. Later, Hoerger' s team conducted a series of studies across six different situational events, finding that personality factors explained 30% of the consistency between anticipated and actual emotional reactions (Hoerger, Chapman, & Duberstein, 2016). The team also found that emotional intelligence facilitates subsequent affective forecasting (Hoerger et al., 2012), because emotional intelligence improves the acquisition and memory of emotional knowledge, thereby promoting experience acquisition and reducing affective forecasting bias. Zelenski et al. (2013) conducted five experiments and found that introverted individuals exhibited greater affective forecasting bias, specifically overestimating negative emotions.

4. Interventions for Affective Forecasting Bias

Although affective forecasting bias may have survival significance from an evolutionary perspective (Marroquin et al., 2013), in most cases, bias has important negative impacts on well-being, health, public policy, economics, and interpersonal relationships (see Dunn & Laham, 2006). Consequently, as understanding of affective forecasting bias causes has grown, researchers have explored methods to reduce this bias, representing a notable trend in the field over the past decade. Moreover, considerable evidence indicates that interventions targeting specific sources of affective forecasting bias are typically effective, confirming Dunn and Laham' s (2006) assertion that "biases are as common as acne, but can be treated like acne."

4.1 Interventions Targeting Focalism

As discussed above, focalism is an important source of affective forecasting bias. Since it represents unreasonable or erroneous allocation of cognitive resources, prompting people to adjust their focus and think more about non-focal events—that is, defocusing—can correct bias. The most common operational method is the diary task. Wilson et al. (2000) found that participants in diary conditions made predictions closer to actual emotional experiences, whereas control group participants without diary tasks believed events (such as football games) would occupy their thoughts in subsequent days, leading to erroneous predictions.

Why can diary tasks reduce affective forecasting bias? Researchers have proposed three hypotheses: The affective competition hypothesis suggests diary tasks affect predictions by priming people to think about emotional outcomes of other events (Ayton et al., 2007); the distraction hypothesis proposes that diary tasks cause participants to focus attention on other events (Hoerger et al., 2010); and the interference hypothesis argues that diary tasks deplete working memory resources, interfering with the emotional evaluation system that often leads to biased predictions (Sevdalis & Harvey, 2009). These explanations are not contradictory; rather, they reveal the mechanisms of defocusing strategies, including diary tasks, from different perspectives. In recent years, researchers have proposed and tested methods such as self-relevant defocusing (Pedersen et al., 2012) and defocusing exercises (Geng & Zhang, 2015). In interpersonal affective forecasting contexts, Chen et al. (2013), based on Van Boven et al.' s (2005) dual-judgment model of emotional perspective-taking, constructed and tested an interpersonal affective forecasting theoretical model. Their experimental results showed that shifting attentional resources from self to other, breaking free from egocentric constraints, and "objectifying" the self can bridge the interpersonal empathy gap.

Recent studies have also examined the relationship between mindfulness and affective forecasting bias. Emanuel et al. (2010) used the Five Facet Mindfulness Questionnaire (FFMQ) to measure participants' trait mindfulness and found that individuals with high trait mindfulness, who can better think about, notice, and reflect upon themselves, demonstrated higher affective forecasting accuracy. Kong (2015) similarly found that people with high trait mindfulness more accurately predicted their adaptive anxiety, whereas neuroticism negatively correlated with forecasting accuracy. Based on these studies, researchers have begun exploring mindfulness interventions for affective forecasting bias. Hong et al. (2016) used examinations as a specific event to examine both trait mindfulness and mindfulness practice effects on affective forecasting bias, finding that mindfulness practice promoted both positive and negative emotion forecasting, while trait mindfulness showed complexity in positive emotion forecasting. We propose that mindfulness is effective because it promotes stable and sustained attention and awareness, enabling individuals to better connect current emotions and experiences with past ones (Brown et al., 2007), thereby making more accurate future emotional predictions. Thus, mindfulness methods

primarily address immune neglect.

4.2 Interventions Targeting Memory Bias

According to the learning-from-experience hypothesis, learning from past experiences is not easy (Wilson et al., 2001). However, if people can be facilitated to learn from past emotional experiences—that is, if conditions are created to help them meet the three criteria of the learning-from-experience hypothesis—this should help reduce affective forecasting bias. To test this hypothesis, Hoerger et al. (2012) had participants complete two affective forecasting tasks (each containing 20 emotional stimulus pictures), with participants reporting anticipated emotions, actual emotions, immediate recall emotions, and delayed recall emotions for each task. The researchers inferred that if prediction accuracy for the second set of pictures improved, participants had learned from past experiences. The results confirmed that participants extracted memories and learned from emotional experiences, thereby promoting forecasting accuracy. In interpersonal affective forecasting contexts, Chen et al.' s (2014) experimental results using an exemplar priming paradigm showed that participants' predictions based on typical emotional exemplars in memory were more accurate. Thus, the key issue is not whether people can learn from past experiences, but what they learn and whether they learn typical experiences. Unfortunately, intervention research targeting memory bias remains scarce.

4.3 Interventions Targeting Motivation

Recently, researchers have begun targeting motivational sources of bias. For example, Pauketat et al. (2016) showed that activating self-affirmation can activate coping resources, which influence event evaluation and thereby reduce emotional forecasting bias for negative events. Geng et al. (2019) found in Experiments 2 and 3 that beliefs about learning agency influenced affective forecasting bias in middle school students' learning behaviors, moderated by the valence of predicted events. These results suggest that intervening on adolescents' beliefs about learning agency may help correct bias and thereby promote academic performance.

Over the past decade, researchers have continuously explored the phenomenon, causes, and interventions of affective forecasting bias, making it a prominent research hotspot. However, a hot topic does not equate to a mature field, and current research on affective forecasting bias still has unresolved issues and room for development. For instance, at the methodological level, measurement methods have specific sensitivity to different dimensions of emotion (Mauss & Robinson, 2009), and using absolute versus relative differences between anticipated and actual emotions yields different degrees of bias (Mathieu & Gosling, 2012). Therefore, different emotional measurement methods and bias statistical methods may themselves be sources of affective forecasting bias. However, few previous studies have discussed bias sources and causes from a methodological perspective. Based on the issues discussed in this paper, future research should

focus on examining the patterns and psychological mechanisms of affective forecasting bias in the following areas.

First, based on further examination of affective forecasting bias causes, future research should deeply reveal the patterns and psychological mechanisms of specific biases. On one hand, affective forecasting includes predicting future emotion valence, specific emotions to be experienced, emotion frequency, intensity, and duration. On the other hand, affective forecasting always targets specific situational events, with different types and natures of events constituting different forecasting contexts. What are the patterns and specific mechanisms of concrete forecasting biases corresponding to these contexts? How do these specific biases relate to cognitive, motivational, and personality causes? Previous research has given little consideration to these questions. Recently, Lench et al. (2019) constructed a new model for assessing people' s ability to predict key features of emotions, distinguishing for the first time between various biases in intensity and frequency predictions. In five subsequent studies, they found that emotion intensity prediction bias was caused by changes in perceived event importance, while emotion frequency prediction bias was caused by changes in thought frequency about events. Additionally, Buechel et al. (2017) proposed the concept of outcome specification, suggesting that forecasters are more sensitive than experiencers to event outcome features such as importance, probability, psychological distance, and duration, and that these outcome features can predict and reveal people' s bias patterns (overestimation versus underestimation) (Wang & Xie, 2019). Both studies examined bias patterns and their mechanisms when people predict emotions, but overall, such research remains scarce, and results from general bias cause studies remain limited in explaining the patterns and psychological mechanisms of various specific biases.

Second, based on the universality of affective forecasting bias, future research should further examine individual differences in bias and their underlying mechanisms. Existing research has found age differences in affective forecasting bias, with older individuals showing less prediction bias than younger individuals (Pergamin-Hight et al., 2016), and older adults predicting lower intensity for high-arousal emotions but higher intensity for low-arousal emotions when imagining future negative events (Scheibe et al., 2011). However, whether these age differences stem from older adults' richer emotional experiences and memories or from their reduced susceptibility to focalism remains uninvestigated. Additionally, research has found personality differences in affective forecasting bias. For example, Verner-Filion et al. (2012), based on Vallerand' s (2010) dualistic model of passion, found that fans with harmonious passion characteristics were more accurate in affective forecasting, whereas obsessive passion produced greater bias. Do more personality differences exist in the affective forecasting process? Does personality cause bias by regulating anticipated emotions or actual emotional experiences? Such questions currently lack sufficient evidence.

Third, future research should employ cognitive neuroscience techniques to reveal the neural foundations of affective forecasting and the neuropsychological

mechanisms of bias. Neuroscience research indicates that we allocate substantial mental activity to the future to envision how we will be at that time and place (Gilbert & Wilson, 2007), with some neuroimaging studies providing evidence of prefrontal cortex activation during affective forecasting (Mitchell et al., 2011; Ran et al., 2018). Recently, Zhang et al. (2019) used fMRI technology to explore the neural mechanisms underlying affective forecasting deficits in individuals with social anhedonia, finding altered functional connectivity characteristics in the insula and hippocampus. These studies suggest that affective forecasting, as a high-level cognitive activity, may involve multiple brain regions. However, to date, these studies have only preliminarily examined brain region activity during affective forecasting, with limited in-depth investigation of the brain-physiological basis, structural connectivity, and functional levels. Moreover, research on the neuropsychological mechanisms of affective forecasting bias remains rare, constraining our understanding of the neuropsychological roots of bias.

Fourth, future research should examine the psychological mechanisms of affective forecasting bias from an integrated evolutionary and cultural perspective. As previously discussed, affective forecasting bias is highly prevalent, possibly representing an evolutionary-derived universal tendency. As researchers have noted, affective forecasting bias "adds fuel to the fire," with overestimation bias enhancing motivation (Wilson & Gilbert, 2003), which is necessary for socialization, survival, reproduction, and environmental adaptation. Thus, from an evolutionary perspective, forecasting bias may be inevitable and even necessary. Meanwhile, research has shown that Eastern and Western cultural backgrounds moderate the influence of anticipated emotions on decision-making (Falk et al., 2010), with East Asians showing less overestimation of emotional intensity than Westerners (Lam et al., 2005). These findings suggest that affective forecasting bias and its specific manifestations may be influenced by social culture, warranting further investigation into the cultural construction patterns and sociocultural causes of forecasting bias. In summary, integrating evolutionary and cultural perspectives to synthesize the causes of affective forecasting bias and examine its emergence and evolution mechanisms represents an important future research direction.

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On the causes and interventions of affective forecasting bias

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Abstract: Affective forecasting bias is a type of separation phenomenon between affective forecasting and affective experience. According to the literature from the past decade (2009 ∼2019), the popular research topics involve bias phenomena, causes, and interventions. Accordingly, three main findings are presented: Affective forecasting bias is very common, the causes of bias are extensive, and interventions can be conducted. Future research should especially focus on revealing the mechanism of affective forecasting bias, such as the psychological mechanism of specific biases and neuropsychological mechanism of biases and its evolutionary and cultural mechanisms.

Keywords: affective forecasting bias; intervenability interpersonal affective forecasting; bias causes;

Note: Figure translations are in progress. See original paper for figures.