# Research Idea and Literature Review on the Effect of Affective Forecasting on Emotional Experience

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**ABSTRACT:** *According to the study by Timothy Wilson and Daniel Gilbert on affective forecasting (2003), people's prediction of their emotional reactions towards future events could influence their actual emotional responses. The aim of this research idea is to further investigate the impact of affective forecasting on the intensity of affective experience by conducting two experiments in which participants would be divided into two groups based on their predictions of the intensity of their emotional experience towards a fear-inducing event and a happiness-inducing event, and the intensity of the actual emotional experience of the two groups would be recorded and compared. Several related studies on affective forecasting are reviewed in the introduction section.*

**KEYWORDS:** *Affective Forecasting, Affective Experience, Expectation Effect, Literature   Review, Research Proposal*

## Introduction

Affective forecasting [1] is the prediction of one's future affect/feelings when experiencing certain events. The concept was first investigated by Kahneman and Snell as "hedonic forecasts" when they examined it impact on decision making in 1990 [2]. In 2003 psychologists Timothy Wilson and Daniel Gilbert coined it with the name of "affective forecasting" [1]. While earlier researches focused on the emotional forecasts rather than the actual response, other researchers (e.g. Baron, 1992; Gilbert, Driver-Linn, & Wilson, 2002; Gilbert & Wilson, 2000; Gilbert, Wilson, 2003; Loewenstein & Frederick, 1997) later moved on to examine the accuracy of forecasts by measuring both predicted and experienced emotional response. According to Gilbert and Wilson's research paper published in 2003 [1], affective forecasts can be divided into four components: 1) predictions about the

emotional valence, 2) the specific emotions that will be experienced, 3) the intensity of the emotions, 4) the duration of the emotions. Though inaccuracies may occur in all four components, researches (e.g. Gilbert & Wilson, 2003) have shown that the two categories most prone to biases are duration and intensity, usually in the form of overestimation. This sort of misprediction is named as the impact bias, which is defined by Gilbert, Driver-Linn and Wilson (2002) as "the tendency to overestimate the enduring impact that future events will have on people's emotional reactions". The following figure in Gilbert and Wilson's research paper is a demonstration of the impact bias, as it depicts participants' experienced emotional reaction to an event and their hypothetical predictions about their reaction.
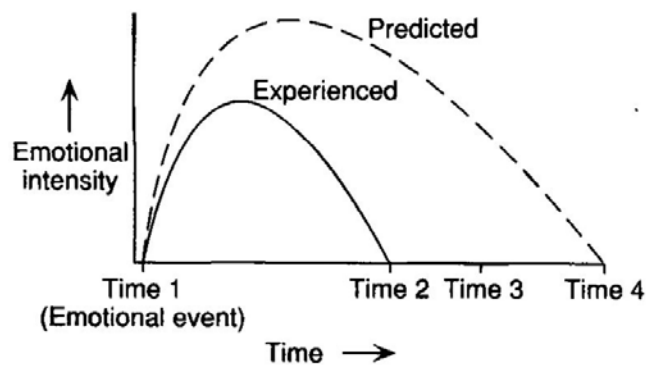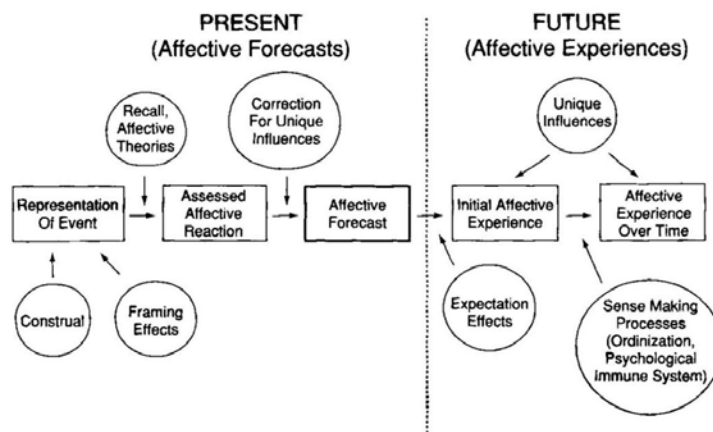


Fig. 1.  The hypothetical time course of predicted and experienced emotion.

From Affective forecasting. By Wilson, T. D., & Gilbert, D. T. (2003). In M. P. Zanna (Ed.), Advances in experimental social psychology, Vol. 35 (p. 350). Elsevier Academic Press.

As shown in the figure, participants overestimated the acceleration of their initial emotional response, the maximum point of intensity of their reaction, as well as the rate of deceleration. A research [3] conducted by Wilson, Wheatley, Meyers, Gilbert, and Axsom in 2000 found that sports fans in colleges overrated the happiness they would experience the day after their favorite football team won a game. Participants

might have falsely estimated the duration of their happiness or the initial intensity of their emotion. They might have made both mistakes as well.

Aside from the impact bias, Wilson and Gilbert's researches [1] give acknowledgements to several other types of misprediction along one's process of predicting future emotional experience. This figure in their paper [1] depicts the process of affective forecasting (demonstrated in the boxes). The left of the dotted line shows how the forecasts are made, while the right of the dotted line shows people's future emotional experiences at the predicted point in time. Demonstrated in the circles are several sources that can lead to error in one's forecasts which will each be discussed.



From Affective forecasting. By Wilson, T. D., & Gilbert, D. T. (2003). In M. P. Zanna (Ed.), Advances in experimental social psychology, Vol. 35 (p.354). Elsevier Academic Press.

The first source of error is construal. When people imagine about how they will feel when a future event happens, they have to find a representation of that event. If people have experienced the event many times before, they can find such a representation with out effort by recalling an example of it. When the event is new to a person, however, he or she needs to construct a representation of what the event is likely to entail. What may then happen then is the misconstrual problem, whereby

people "mistakenly imagine the wrong event" (Wilson & Gilbert, 354). A research of Griffin and Ross in 1991 [4] provides concrete evidence that people are inclined to appreciate their forecasts of future events as representations of objective reality rather than construal. Thus, by ignoring that a future event may not occur in exactly the way they imagine, people are prone to errors in their predictions about how they will feel. An example for the misconstrual problem is a research conducted by Woodzicka and LaFrance in 2001 [5], in which women participants were asked how they would emotionally react if they were asked sexually harassing questions during a job interview. Their predictions were then compared to the actual responses of women who were asked the sexually harassing questions during an interview. The forecasters imagined a different situation than the one faced by the experiencers, a situation in which it would be easy to confront the interviewer and where their primary emotional reaction would be anger. However, in the real interview the women participants' primary emotional reaction was intimidation, confusion and fear. Woodzicka and LaFrance also noted that women were often unfairly blamed for not being able to confront sexual harassment precisely because of this kind of misconstrual error.

The second source of error along the process is the framing effect, whereby people pay their attention on features that they think will influence their emotional states but that actually will not be important when they actually experience the event. According to Kahneman & Tversky's definition (1979), the effect takes place when people "disregard components that the alternatives share, and focus on the components that distinguish them"[6]. Wilson and Gilbert [1] also noted that "The isolation effect suggests that when comparing alternative future events people focus too much on features that differentiate the alternatives and too little on features they share, even if the shared features will influence their future happiness" (p.356).

After finding the representation of the event, as shown in the figure, the next step is to figure out how one feels about that event (Loewenstein, O'Donoghue, & Rabin, 1999; Robinson & Clore, 2002). If the event has been experienced before, one way through which people can estimate their feelings about it is simply to recall how they felt in the past. However, Robinson and Clore (2002) have acknowledged that emotional experiences are stored in memory in a form that cannot be retrieved directly later [7]. Instead of re-experiencing the precise past emotions, people often

recall the details of an experience and react to these memories. This may lead to biasedly recalled feelings and form errors in people's affective forecasts. In further details, researches (Ariely, 1998; Fredrickson & Kahneman, 1993; Kahneman, Fredrickson, Schreiber, & Redelmeier, 1993; Varey & Kahneman, 1992) have found substantial evidence that, while occurring emotional experience is sensitive to time, retrospective emotion reports are quite insensitive to it. They are heavily influenced by the maximum intensity of the affective experience and the intensity of the emotional experience when it ended.

Additionally, people's assessments of their feelings are contaminated by unique influences from their current well-known affective state. The phenomenon is referred to by Loewenstein and his colleagues as the projection bias [8], which is defined as the tendency for people to "underappreciate the effects of changes in their states, and hence falsely project their current preferences onto their future preferences" (p.1). Studies (Gilbert, Gill, & Wilson, 2002; Nisbett & Kanouse, 1969; Read & van Leeuwen, 1998) have shown, for instance, that when consumers tend to be influenced by their current state of hunger when shopping for food to be consumed later. An additional forecasting bias related to the projection bias is personality neglect. Personality neglect refers to a people's tendency to overlook their personality when making decisions about their future emotions [9].

As seen from Wilson and Gilbert's figure, between the affective forecasts and the actual emotional response, there is a phenomenon of error called the expectation effect. Expectation effects occur when people's affective forecasts have influences on their actual emotional experience. Wilson and Klaaren in 1994 [10] noted the conditions under which two types of effect in the realm of affective expectations, assimilation and contrast, is likely to be observed. According to Wilson's description (2003), assimilation occurs "when people's expectations are not too discrepant from the experience and people rapidly assimilate the experience to their expectations" (p.362). Wilson et al. (1995) conducted a research in which they showed participants a series of six cartoons, the first three of which were relatively funny and the last three of which were not. When participants watched the cartoons with no expectations about how funny they would they noticed the discrepancy and rated the first three as significantly funnier than the last three. When people were told that previous participants had found all six cartoons to be very funny, they showed clear

evidence of assimilation. They found the last three cartoons to be significantly funnier than did people with no expectations. For contrast effects, the inaccuracy in one's prediction can be amplified by expectation effects. For example, a forecaster who expects a movie to be enjoyable will, upon finding it dull, like it significantly less than a forecaster who had no expectations (see Geers & Lassiter, 1999).

## Application

As a process that influences preferences, decision-making, and behavior, affective forecasting is studied by both psychologists and professionals in various fields with broad applications. Their findings have contributed to the studies of happiness research, law, health care etc. Its effect on decision making and mental well-being is of great importance to policy-makers and analysts in these fields. Economists especially pay attention to findings in the study of affective forecasts as they are related to important concepts such as utility (e.g. Kahneman &Thaler, 2006), decision making (e.g. Della Vigna, 2009) and happiness. For example, findings in forecasting errors revised interpretations of utility maximization, which assume that to make rational decisions, people need to be able to accurately forecast future experiences or utility.[11] While early economists focus on utility in terms of the consumers 'preferences, the recognition that affective forecasts are prone to biases suggests that measuring preferences at a time of choice may not be a comprehensive concept of utility. Therefore, economists have integrated differences between affective forecasts and later outcomes into corresponding types of utility.[12] While an affective forecast reflects expected or predicted utility, the actual outcome of the event reflects experienced utility. In addition, inaccuracies in and applications of affective forecasts have implications in law. Researches in its applications reflects a wider effort to address how emotions affect the legal system. Noticeably, certain studies of affective forecasting (such as this research proposal) can be relevant to the study of anxiety disorders and other related disorders, as it investigates people's fear and anxiety towards certain negative emotions themselves.

**Aim**

The aim of this research proposal is to find out the impact of affective forecasting on emotional experience, specifically the question of that "When reacting to an event, will people experience less intense emotion if they previously forecasted emotional experience of higher intensity, and experience more intense emotion if they forecasted emotional experience of lower intensity." Two researches will be conducted investigating the problem with the affective forecasting of a positive valence and a negative valence. The researchers are designed to focus on the differences resulted from voluntary affective forecasts instead of manipulated forecasts.

**Method**

Experiment 1: A questionnaire that evaluates participants' likeliness of experiencing fear and the level of intensity of the emotion in immersive haunted houses or horror-themed escape rooms would be completed by a group of young adults in order to recruit a group of participants of a similar level of the properties described above. The questionnaire includes some closed multiple choice questions and a Likert Scale question and is designed like the following:

Q(Question): I have been to haunted houses or horror-themed escape rooms.

A(Answer): Yes/No

Q: I am likely to experience intense fear in a haunted house or horror-themed escape room.

A: (Likert Scale) Strongly Disagree, Disagree, Undecided, Agree, Strongly Agree

Q: If the level of scariness (buildup of horror ambiance by light and sound effect, horrific level of the scene and prop, machinery, interfere of NPCs etc.) of the haunted house or horror-themed escape room is categorized into mild, medium, and severe:

A: I can accept going into a facility of        Mild/Medium/Severe    level

I would experience fear in a facility of        Mild/Medium/ Severe    level

I would experience intense fear in a facility of Mild/Medium/Severe level

Around 20 participants of similar results would be recruited in the experiment. Researchers would inform them that they would go to a fear inducing haunted house and ask them to predict the intensity of fear that they would experience in the haunted house by rating the intensity on a ten-point scale with endpoints labeled 1 = no fear and 10 = intense fear. The participants whose ratings are greater than five would be assigned to group A and those whose ratings are smaller than or equal to five would be assigned to group B. Before going into the haunted house, participants' emotional state would be tested using measures that indicates valence and the level of arousal. (For the result Group A is predicted to experience higher intensity of anxiety and fear than group B do.) During the event, participants' vocal characteristics and facial expression would be recorded and analyzed as an indicator of their affective state. After coming out of the haunted house, participants would be asked to do a self-report on their emotional experience when they were in the haunted house. The report would mostly focus on the intensity of fear that participants experienced. At last the statistics results of the two groups would be compared and analyzed.

Experiment 2:

Around 20 participants would be informed that they would watch a comedic short film and be asked to predict their intensity of happiness that they would experience while watching the film by rating the intensity on a ten-point scale with endpoints labeled 1 = no happiness and 10 = happy. Participants would be divided into two groups based on their score – group A for 0-5 and group B for 6-10. Before and while watching the film, the participants' emotional state would be measured by autonomic measures, voice characteristics and facial expression. After watching the film, they would be asked to do a self-report on the intensity of happiness experienced. At last the statistics results of the two groups would be compared and analyzed.

**Predicted Result**

The predicted result is that participants in group A in both experiments who had higher expectations for their emotional reaction would experience lower intensity

fear/happiness than participants in group B do. If some participant forecasted the scariness of the haunted house to be high enough, they may even experience higher level of intensity of anxiety and fear before they get into the house. Same phenomenon would occur for the second experiment where participants who have predicted high level of intensity may experience the most intense happiness before the short film started.

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