A critique of ‘Cognitive determinants of affective forecasting errors’

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Paper Summary

This study looks at emotional affective forecasting of the US presidential election results. It tested the interference hypothesis using an individual differences approach [1].

Methodology

Fifty-seven students; 37 Kerry and 20 Bush supporters, from Michigan State University participated in a study. Half were assigned to a diary condition which acted as a distractor task. Two months pre-election they predicted how they would feel two weeks after the election (dependant on result) and reported actual happiness two weeks post-election.

Measures

This study used 4 measures; happiness ratings, working memory [2][3], retrieval interference, and subjective importance.

For happiness ratings a baseline happiness question comparing current happiness to average happiness was asked pre-election and post-election. Working memory was measured using the Operation Span Task [2] and the Reading Span Task [3]. To measure retrieval interference participants memorised 20 words then recalled them. They then memorised a new list but recalled the first list. Two rating questions were used to measure subjective importance; how important politics were to them compared to others, and importance of current election compared to past ones.

Results

Firstly the diary condition had huge impact bias effects and nearly extinguished these effects.

Bush supporters had higher baseline scores for happiness and didn’t significantly over predict their emotional reactions giving a nonsignificant effect of impact bias [1]. Kerry supporters however showed the expected bias by overestimating their emotions.

For working memory results, high scoring Kerry supporters recovered easier from a loss but didn’t predict this. Participants who considered the election as important made more extreme forecasts but had no actual effect on emotional response [1]. This in turn led to greater impact bias.

Contributions

Authors concluded that the study extends on previous research[4][5][6][7][8] by showing that impact biases are linked to perceived importance of events and that working memory is associated
with greater bias due to its ability to facilitate recovery from distress. Prior to this study it was thought that impacts of working memory were limited to predictions however this study showed its effects are restricted to actual emotions \[1\]. Kerry supporters felt distress with a Bush victory however their working memory served as protection to this.

Studies on coping resources \[9\] and impact bias \[10\] suggest that participants who don’t account for their coping resources when forecasting produce impact bias. This study has shown that greater working memory correlates with higher impact bias suggesting people should think about their coping abilities to make forecasts more accurate. Studies have also suggested that people may be unable to delay gratification because they lack cognitive abilities to think about future outcomes \[11\].

The study can build onto previous research looking at defocusing \[12\] and justifying impact bias by doing a distractor task \[13\]. This extends the generalisability of results by showing that a diary manipulation can reduce biased forecasts \[1\].

Critique

Sample

The sample has only fifty-seven students of mean age 19.5. This is too small and too limited. Studies have shown that as age increases, affective forecasts of future emotions become more accurate due to an inability to create future mental imagery which may lead to less clear mental representations \[14\]. Studies have found that asking students about future expectations can cause confusion and false reports \[15\][16].

Another key criticism is their sample criteria. Students weren’t required to have an interest in the election or be registered to vote. If they have no interest then they will not be impacted by the loss or win of their chosen candidate. If you want to generalise to people coping with a distressing event the sample need to feel strongly about the vote. Recallability of past events isn’t possible in first time voters, therefore they have nothing to base their current predictions on \[17\].

Methods for measuring happiness and subjective importance

Measuring subjective importance by asking participants to compare to others is not clear as how do they know who to compare to? How is this standardised if the participants are all comparing to different people? You may have two participants, one of which comes from a very politically aware society and one which comes from a non-politically aware society. The first person may rate
themselves as mid-range whereas the second may rate themselves very highly however in reality the first may find politics more important than the second however the statistics don’t show this as they are comparing against different standards.

Factors causing unreliable forecasts

Availability bias where you judge the probability of something on searching your memories for relevant information may also apply\(^{[18]}\). This can be problematic and distorts predictions as all memories are not equally retrievable. More recent or salient memories are easier to retrieve. This may affect the average happiness rating as their recent memories will form this and make their comparisons less accurate. It may also affect their predictions of emotions as the recent media will affect their views.

Participants may be affected by the time horizon idea\(^{[19]}\) where people are aware of the time left till an event. A person asked one week prior to the election may be more conscious of the timeframe than someone asked eight weeks prior. This may make predictions more extreme. To overcome these discrepancies you need to ask participants for their measures at the same time point prior and post-election. This will eliminate this confounding variable.

Participants may be overconfident in their own ability to be able to cope with a loss or in the ability of the candidate winning. They may think losing is an impossibility and therefore cannot comprehend emotions after a loss. This will lead to an underestimation meaning actual emotions are stronger than originally predicted\(^{[20]}\).

The participants rated the importance of the election differently however once they had chosen their candidate, belief perseverance may have played a part in strengthening their choice\(^{[21]}\).

Reasons to suggest a loss may be pushed aside and confirmation bias may also contribute as participants may misinterpret evidence as being supporting of their belief\(^{[22]}\).

Anchoring is another concept which can be related to the ratings and predictions of participants\(^{[23]}\). Studies\(^{[24]}\) report that when forecasting, people use an initial value and adjust away from it. Participants may have been anchored by their pre-election predictions when giving their post-election happiness ratings. Anchoring may also have occurred with the importance of politics ratings as they may feel that they happiness ratings should be in-line with these ratings.
**Generalisability**

Generalising to other events will depend on specific event coping strategies as this study only examined affective forecasting for US elections. A more controlled experiment is required to confirm results can be generalised to coping with other distressing events.

**Further Research**

Further study suggestions are discussed below. Firstly investigations into student elections such as psychology societies or student council representatives would use the same methodology as this study. Another related election is the student union elections however these may be more interesting to investigate as the positions are paid. This would bring in another variable to consider.

Another idea relating to affective forecasting in students could be looking at coursework or exam result predictions as well as graduation predictions. Participants would predict their mark and how happy they would be to achieve this then compare this to ratings after results. Similar methodological procedures would be used if you were studying prospective students’ emotions of their university applications being accepted. Looking at predictions post-university you could look into expected and actual first salaries of graduates or expected time to pay of student loans. This last suggestion however would be a longitudinal study and with this you may suffer attrition rates.

Lastly, I will suggest some areas of study which access ‘real’ participants. Firstly you could investigate forecasts of weight loss. You would ask for a target weight in 6 weeks, predictions of emotions after 6 weeks them compare these to actual emotions. This could also be done using patients undergoing surgery. You could have predicted emotions of successful surgery then comparisons to actual emotions. The final suggestion for accessing ‘real’ participants is to look at people in custody and look at emotion predictions of a conviction and compare this to their feelings after the trial, dependent on outcome.

**Summary**

Overall the paper justifies their conclusions with the results presented, using a diary manipulation as distraction. The sample was limiting and findings are limited in generalising to other distressing events however there are many extensions possible from their study as I have
suggested. Other limitations include overconfidence, belief perseverance, anchoring, time horizon effects and availability bias.
References


