'Oops…I did it again': Repeated focusing effects in reports of happiness

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ABSTRACT

We use an experiment (relating to a major European soccer match) to replicate previous studies that show forecasts of the impact of an event on happiness are often greatly exaggerated. In addition, by randomising respondents into one of two groups (assessing happiness before and after the event or only after), we are also able to show that previously focusing on an event can affect subsequent happiness responses. From a final sample of 309 soccer fans contacted via a social networking site, the happiness ratings of the fans of the losing team who answered before and after the soccer match is a whole point lower (on a 0–10 scale) than similar fans who rated their happiness only after the event. The potential spillover of a focusing effect from one survey to the next has important implications for how we interpret happiness responses from longitudinal surveys.

1. Introduction

It is now pretty well established that, across a range of different contexts, we are not very good at predicting the impact of an event or changed circumstances on our happiness (Wilson & Gilbert, 2003, 2005). In general, we imagine that most good and bad things (from the 'right' or 'wrong' election result to being granted or denied tenure at a university) will have much more of an effect on us than turns out to be the case. Our biased forecasts of the impact of future events – which might be called 'defective forecasting' in contrast with the term 'affective forecasting' used by Wilson and Gilbert – has often been explained in terms of a focusing effect. That is, when we think about how much an event will affect us, we focus on that event as being much more important to our lives than it turns out to be (Schkade & Kahneman, 1998; Wilson, Wheatley, Meyers, Gilbert, & Axsom, 2000). It has been shown that defective forecasting impacts on individual behaviour (Conlin, O'Donoghue, & Vogelsang, 2007; Loewenstein, O'Donoghue, & Rabin, 2003; Read & van Leeuwen, 1998), and helps to explain why behaviour is often based on incorrect beliefs (DellaVigna, 2009).

Much of the research on forecasting (e.g. as reported on in Loewenstein et al. (2003) and Wilson and Gilbert (2003) has used the same respondents over time, which allows us to control for individual heterogeneity. It also means, however, that respondents might use their first response as a reference point for their second response, either because they recall what

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they were asked to think about previously or because they simply recall their previous response. In other words, an earlier question acts as a focus of attention for a later one. To our knowledge, there have been no direct tests of the degree to which having been asked about something before an event affects assessments of happiness after the event. To do this, we need an experiment in which respondents are randomized to the standard 'before and after' condition or to an 'after only' condition, thus allowing the 'after' responses of the two groups to be compared with one another.

This paper reports on an experiment relating to a major European soccer game. Whilst the context may appear somewhat specific, the implications of the results are important and much more general. If there are differences in happiness between those who were asked 'before and after' the event and those asked 'after only', then continually asking people to state their happiness may induce focusing effects which would render happiness reports biased. If respondents remember the topic of the survey they completed last period or remember what happiness rating they gave previously, a survey this period could bias those happiness reports. This would thus have major ramifications for the interpretation of panel data from moment-to-moment measures of happiness (Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004) to global assessments of life satisfaction (Diener, Lucas, & Scollon, 2006; Lucas, Clark, Georgellis, & Diener, 2003), and from clinical trials to large-scale surveys used across nations.

2. Methods

We used the 2008 UEFA Champions League Soccer Final as our event, and supporters of the teams in the final as our respondents. The Champions League is the biggest annual football tournament in the world and the 2008 final was the first final to be contested by two English teams, Chelsea and Manchester United. The final took place in Moscow on May 21, 2008, and was won by Manchester United. To obtain a sample of Chelsea and Manchester United supporters, we conducted a randomized field experiment on the social networking site Facebook. On the Facebook website, there are various group pages that individuals can join so that they can signal to their peers that they are fans of that group. So there are dozens of Chelsea and Manchester United groups. We used the five most popular group pages for each team. Using an internet-based survey allowed us to control the presentation of the questions to respondents e.g. we could prevent them from 'flicking through' the questions and finding out what the whole survey was about, and we could also identify the respondents (through their IP address) in order to prevent multiple responses.

We randomly assigned respondents to Group A, which completed the 'before and after' survey, and Group B, which completed the 'after only' survey. We randomized from within the top five groups for each team on Facebook. This experiment could be classed as a natural field experiment since the environment in which the subject undertakes the survey is natural and the subjects do not know that they are in an experiment and do not know that there are two groups in this experiment (Harrison & List, 2004). See Fig. 1 for a graphical illustration of our methodology and time frames used. Any difference between Group A's predicted and actual happiness after the event reflects any affective forecasting errors. The difference be-
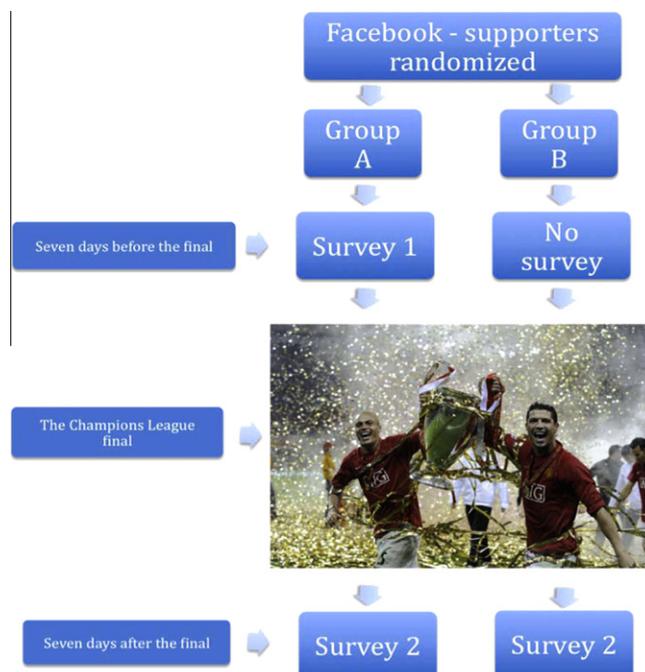

Fig. 1. Our methodology (picture courtesy of guardian.co.uk).

Table 1
Happiness ratings.

		Before event	Prediction of after event	After event
Group A	Man Utd	7.09	8.68	6.98
		(1.79)	(2.04)	(1.96)
	Chelsea	6.86	2.73	5.53
		(1.81)	(2.91)	(2.11)
Group B	Man Utd			7.46
				(1.99)
	Chelsea			6.52
				(2.17)

Notes: Standard deviation in parentheses. Group A is comprised of 51 Chelsea fans and 53 Manchester United fans (total *n* = 104). Group B contains 97 Chelsea fans and 108 Manchester fans (total *n* = 205).

tween Group A's and B's happiness after the event shows the degree to which having previously been asked about something may affect later well-being reports, which involves another focusing effect. This essentially means that people have repeated focusing effects in panel surveys.

Seven days before the event, we asked respondents: "*Overall, how happy do you feel today?*" on a scale from zero (not happy at all) to ten (very happy). We then asked them to predict their happiness seven days after the final if their team had won and if they had lost using the same scale. Given that it has been shown that the prediction can be improved to a certain extent by asking people to think carefully about the many other events that demand their attention in the future (Wilson et al., 2000), we further stated that "*It is very important to note that we are asking you how you will feel overall seven days after the final, rather than when you are specifically thinking about the result*". After the event, respondents were asked the same "*Overall, how happy to do you feel today?*" question that was asked before the event using the same scale.

We randomly selected 1400 supporters (50% from each team) and randomly assigned them to Group A and Group B. Group A were assigned 60% supporters, since we wanted to control for any attrition in this group, and consequently Group B were assigned 40% supporters. For Group A, from a possible 840 respondents, we received 344 responses (41% response rate). Of these, 240 (70%) gave us their email address so that we could contact them again seven days after the soccer game. Of these, 104 (43%) completed the survey seven days after the final and are our panel sample. We sent out 560 Facebook emails seven days after the final to Group B and obtained 205 (37%) completed responses.[1] For simplicity, we use only those in Group A that completed both surveys for the analysis, but including those who only filled out the questionnaire before the final does not affect the results.

3. Results

Table 1 presents the happiness ratings (with standard deviations) of the two sets of supporters in Group A and Group B. Focusing initially on Group A, the first 'before event' column shows the average happiness ratings for both sets of fans before the final took place. The Manchester United and Chelsea fans reported similar levels of happiness before the final (7.09 and 6.86, respectively, difference = 0.23, *t* = 0.66). The second 'prediction of after event' shows the average predicted happiness of the supporters if (as it turned out) Manchester United beat Chelsea. Manchester United supporters predicted that their happiness would rise to 8.68 and Chelsea supporters predicted that their happiness would fall to 2.73. Both happiness predictions are statistically significantly different from the happiness ratings before the final at the 1% level. Seven days after the final, we contacted these respondents again to take part in a general happiness survey, which did not mention soccer (so limiting any obvious focusing effects). The third 'after event' column shows that the average happiness of Manchester United fans was 6.98 compared to 5.53 for Chelsea fans.

Thus, we can clearly observe the affective (or defective) forecasting result that many researchers have already shown. The difference between the predicted happiness and actual happiness seven days later for both sets of supporters was large, which is suggestive of a prominent focusing effect. Manchester United fans are not as happy as they thought they would be (1.70 points less happy and no happier than before the final) and Chelsea fans are nowhere near as miserable as they thought they would be (about three points happier than predicted but still 1.33 points less happy than before the final).

The novelty and importance of this study comes from the Group B respondents in Tables 1 and 2. From the last column of Table 1, the average happiness ratings of the Manchester United fans after the final was 7.46 compared to 6.52 for Chelsea fans. The second row in Table 2 compares the happiness ratings of Group B with those from Group A before the final. For Manchester United fans, Group A gave 7.09 before the final whereas Group B gave 7.46 after the final (−0.37 difference, *t* = 1.14). For Chelsea fans, Group A gave 6.86 before the final whereas Group B gave 6.52 after the final (0.35 difference, *t* = 0.98). Both differences are not statistically different from one another. The third row of Table 2 compares the happiness

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[1] Of these 205 responses, 90% provided their email addresses for further correspondence. By including or removing the 10% who did not provide their email address does not change the results that follow.

Table 2
Differences in happiness levels.

		Difference
1. Group A before – Group A after	Man Utd	0.11
		(0.31)
	Chelsea	1.33[*]
		(3.42)
2. Group A before – Group B after	Man Utd	−0.37
		(1.14)
	Chelsea	0.35
		(0.98)
3. Group A after – Group B after	Man Utd	−0.48
		(1.45)
	Chelsea	−0.99[*]
		(2.65)

Notes: Absolute *t*-statistics are in parentheses.
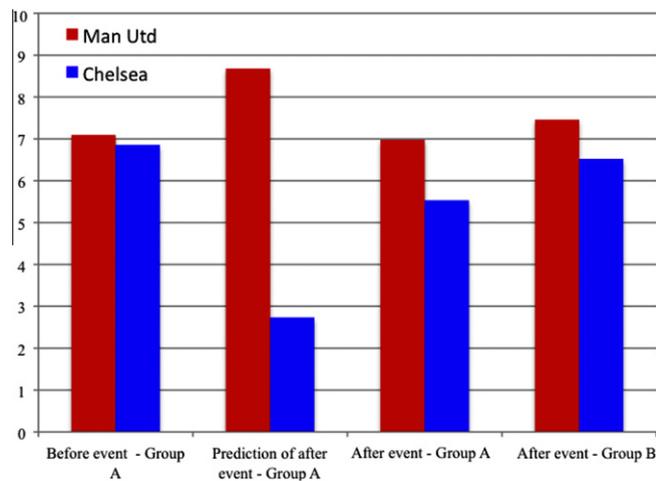[*] Represents significance at the one per cent level.

Fig. 2. Happiness (*y*-axis) across the groups.

ratings of Group A after the final with the happiness ratings of Group B after the final (both elicited on the same day). For Manchester United fans, Group A gave 6.98 compared to 7.46 for Group B (−0.48 difference, *t* = 1.45). For Chelsea fans, Group A gave 5.53 compared to 6.52 or Group B (−0.99 difference, *t* = 2.65).

These findings are summarised in Fig. 2. If previous surveys had no effect on later responses, we would not observe any difference between these two randomized groups (i.e. Group A and Group B). It seems, however, that supporters of the losing team (Chelsea) to some extent focused on the previous survey, and therefore reduced their happiness ratings accordingly.

4. Discussion

An experiment with randomisation has demonstrated that 'defective forecasting' is prevalent in soccer fans and that being exposed to an *ex ante* survey can shape and influence *ex post* happiness. Soccer supporters innately focused on and attended to the outcome of the game and did not think as much as they should about the other things which might have been important in their life one week after a major soccer final. Despite often being given clear instructions to think about other things (as was the case also in this study), focusing effects are quite hard to overcome (Ubel et al., 2001). Furthermore, we find that losing the game is predicted to have a larger impact on happiness than winning the game, which is not a pattern we observe in the experience of the result.

Focusing effects are also quite pervasive. Our results have shown for the first time that what was focused on previously can affect happiness ratings at a later date. Respondents who answered the survey twice (even though the second survey did not mention the Champions League final or even soccer) seemed to remember what the first survey was about and then base their second rating on this.

Interestingly, this happened for the supporters of the losing team and not the winning team and so we may focus on losses more than on gains. This asymmetry warrants further explanation. Kermer, Driver-Linn, Wilson, and Gilbert (2006) found that people predict that losses would have a greater hedonic impact than gains of equal magnitude. In the experience, however, they found that losses did not have such an emotional impact as they predicted. It might be that this predicted loss is also somewhat retrospective, and individuals might think more about the loss of a game rather than the win of the game.

The research in neuroscience may also be able to shed some light on the issue. It has been found that negative events are processed in different parts of the brain to positive events, and that these negative events are associated with greater intensity of neural activity (Cacioppo & Berntson, 1994; Gehring & Willoughby, 2002). There is some indication that the mid-brain dopaminergic systems are responsible for attaching salience to negative outcomes (Holroyd & Coles, 2002). It is possible that happiness surveys trigger this system, and causes individuals to focus on negative events more generally. The role of consciousness in this focussing effect warrants further investigation. Indeed, the title of this paper "Oops...I did it again" suggests that we might be somehow aware of this double focussing effect, although further research is required to shed light on this issue.

It is interesting that winning the Champions League had no impact on Manchester United supporters seven days after their victory. It could be that the initial happiness levels included a great deal of anticipatory utility that made their happiness levels higher than usual (see Loewenstein, 1987). More research should be conducted on such events to determine the magnitude of this anticipatory utility and the implications it may have for research into forecasting the happiness derived from future events.

What cannot be distinguished here, however, is whether the repeated focusing effect is the result of the actual forecast made by the respondent before the event or the happiness question before the event. This requires further investigation. Nonetheless, while attempting to minimise focussing effects at the point of surveying subjects is a worthy pursuit (see Schwarz & Clore (1983) for an early discussion on this), it might be impossible to de-bias the repeated focussing effect since it is triggered by past assessments and the researcher may not have control over what came before. This research does also provide supporting evidence for some of the problems in comparing time periods in panel datasets. For example, Frick, Goebel, Schechtman, Wagner, and Yitzhaki (2006) show that respondents in the German Socio-Economic Panel become used to happiness scales with a tendency to move away from the endpoints. Furthermore, it would be ideal to lengthen the time in which respondents take part in the first survey, to see whether the focusing effect will "wear off" if people are asked early enough before the event. Further studies should attempt to vary the time span before and after the event to see if and how predictions and experiences change and relate to one another.

An important question this research raises is the length of time a repeated focusing effect may last. Here we have specifically examined seven days after the event. Useful extensions would be to determine how long this repeated focussing effects lasts for, and its interactions with memory. Clinical trials often require patient-reported outcomes before and after the change in health status within a few weeks and this study could be extended to important clinical settings. In addition, large panel studies elicit happiness responses that are twelve months apart, so we should also test for a repeated focusing effect over longer periods. In the meantime, researchers eliciting subjective data should be alert to the potential problems for interpreting changes over time raised by the prospect of a repeated focusing effect.

Acknowledgements

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