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# Not More than a Feeling: An Experimental Investigation into the Folk Concept of Happiness

Kevin Reuter  
*University of Zurich*

Michael Messerli  
*University of Zurich*

Luca Barlassina  
*University of Sheffield*

**Abstract:** Affect-based theorists and life satisfaction theorists disagree about the nature of happiness, but agree about this methodological principle: a philosophical theory of happiness should be in line with the folk concept HAPPINESS. In this article, we present two empirical studies indicating that it is affect-based theories that get the folk concept HAPPINESS right: competent speakers judge a person to be happy if and only if that person is described as feeling pleasure/good most of the time. Our studies also show that the judgement that a person is feeling pleasure/good most of the time reliably brings about the judgement that they are satisfied with their life, even if that person is described as not satisfied. We suggest that this direct causal relation between the concepts POSITIVE AFFECT and LIFE SATISFACTION might explain why many philosophers have been attracted to life satisfaction theories.

**Key words:** happiness, affect-based theories, life satisfaction theories, typicality hypothesis, direct causation hypothesis, hedonism, empirical studies

## 1. INTRODUCTION

What is happiness? To answer this question, philosophers typically resort to the method of cases (Machery 2017), i.e., they consider whether the folk concept HAPPINESS applies to certain actual or hypothetical scenarios (Kraut 1979, Haybron 2001, Feldman 2010, Nussbaum 2012). On the face of it, there is nothing surprising about it: we are wrong about many things, but it would be remarkable if HAPPINESS failed to track happiness.

The adoption of the method of cases, however, has led philosophers to develop two radically different families of theories. The first is that of life satisfaction theories (Benditt 1974, Nozick 1989, Suikkanen 2011):

*Life satisfaction theories:*

S is happy if and only if S is satisfied with their own life.

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Kevin Reuter, Department of Philosophy, University of Zurich; 000-0003-2404-1619; kevin.reuter@philos.uzh.ch;  
Michael Messerli, Department of Philosophy, University of Zurich; 0000-0002-2549-4559; michael.messerli4@uzh.ch;  
Luca Barlassina, Department of Philosophy, University of Sheffield; 0000-0002-7282-9729; l.barlassina@sheffield.ac.uk.

The second family—that of affect-based theories—says that happiness is a matter of being in a positive affective state. The key divide within this family is that between hedonism (Mill 1863, Sidgwick 1907, Morris 2011, Bramble 2016), which proposes that happiness reduces to pleasant experiences, and the emotional state view (Haybron 2008), which identifies happiness with more persistent, pervasive, and profound positive affective states. Given our aims, we can ignore this complication and formulate the view as follows:

*Affect-based theories:*

S is happy if and only if S feels pleasure/good rather than displeasure/bad most of the time.

The existence of these different theories raises a first-order as well as a second-order question. First-order: which of these theories, if any, gets the nature of happiness right? Second-order: since philosophers should share a common folk concept HAPPINESS, how is it possible that they have arrived at such different theories via the method of cases? In this article, we answer both questions on the basis of an experimental investigation of the respective contributions of positive affect and life satisfaction to HAPPINESS (for previous but different experimental-philosophical studies on HAPPINESS see Kneer and Haybron n.d.).

Our investigation should be of interest even to those philosophers who reject conceptual analysis. The study of HAPPINESS is in fact part of the scientific investigation of folk psychology, a project to which many naturalist philosophers are committed (Carruthers 2013, Goldman 2006). Moreover, given the importance of HAPPINESS to disciplines such as positive psychology (Diener 1984, Kahneman et. al. 2004, Huta and Waterman 2014) and well-being economics (Sen 1985, Benjamin et. al. 2012), our study should be relevant to non-philosophers too.

A final point before we present our studies. Phillips and colleagues (2011, 2017) have recently argued that the folk concept HAPPINESS is sensitive to moral considerations (but see Díaz and Reuter (2021), who propose that normative influences on emotion concepts should not be construed in moral terms). The present article is non-committal as to whether HAPPINESS includes moral features, or normative features more broadly. Our aim here is simply to study what type of descriptive information is encoded by HAPPINESS.

## **2. WHAT HAPPINESS IS ABOUT**

In our first study, to adjudicate which theory better captures the folk concept HAPPINESS, we examined how native English speakers apply this concept. By doing so, we tested a third theory as well:

*Hybrid Theory* (Sumner 1996):

S is happy if and only if (i) S feels pleasure/good rather than displeasure/bad most of the time, and (ii) S is satisfied with their own life.

It might in fact be the case that the folk concept HAPPINESS includes information about both positive affect and life satisfaction, and that affect-based theories and life satisfaction theories have respectively been built by focusing on either body of information. Moreover, even though hybrid theories have received limited attention in the philosophical literature, it is possible that they reflect how people who have no stakes in the debate think about happiness.

### **2.1. Methods**

We designed a set of vignettes in which the protagonist is in one of four situations: (A) satisfied with their life and feeling pleasure/good most of the time; (B) dissatisfied with their life but feeling pleasure/good most of the time; (C) satisfied with their life but feeling displeasure/bad most of the

time; (D) dissatisfied with their life and feeling displeasure/bad most of the time. The vignettes, predictions, and statistical models were pre-registered (<https://osf.io/jypcr>) with the Open Science Framework. Here is one exemplary vignette:

*Condition B: dissatisfied but feeling pleasure/good*

John is a theoretical physicist working at a research institute. Four years ago, he set himself the task of proving various hypotheses about space-time. During this time, he pursued several avenues but couldn't find any solutions. John felt good almost every single day, because it gave him pleasure to work on these problems. However, not being able to find any solutions, he was dissatisfied with his life.

To prevent order effects of the presentation of information on affect and life satisfaction for Conditions (B) and (C), we included vignettes in which the order of presentation was reversed, thus obtaining 6 conditions in total. 255 participants were recruited through Amazon's Mechanical Turk and randomly assigned to one of the six conditions. 14 participants had to be excluded for not having answered all the questions or for having indicated that English is not their mother tongue. Of the remaining 241 participants, 97 identified as female, 144 as male, and none as non-binary; the mean age was 35.72 (SD = 11.58).

Each participant was presented with a single vignette only and then asked the main Happiness question: 'Do you think that John was happy during the course of the four years?' Answers were measured on a 7-point Likert scale ranging from '1' labelled 'Not at all,' '4' labelled 'In between,' and '7' labelled 'Absolutely.' We also asked two control questions after the Happiness question. The first prompted participants to tell us whether the protagonist was satisfied with his life (Satisfaction question). The second asked them whether the protagonist felt good on most days (Affect question). The answer options were 'Yes,' 'No,' and 'Don't know.' These questions did not serve as exclusion criteria. However, we did carry out statistical analyses on the set of participants who answered these questions correctly.

**2.2. Results**

No significant difference was found between the order in which information about affect and life satisfaction was presented ( $p = 0.164$ ), so we collapsed the data into four conditions: (A)  $N = 41$ ; (B)  $N = 81$ ; (C)  $N = 78$ ; (D)  $N = 41$  (average ratings for all conditions are displayed in Figure 1).<sup>1</sup>

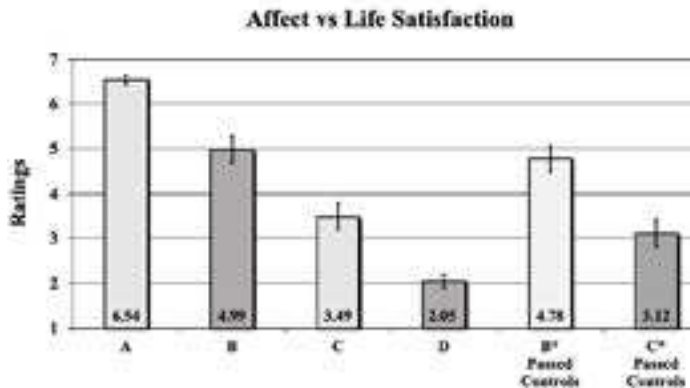


Figure 1: Mean results for conditions A–D (four columns on the left), as well as mean results for conditions B (dissatisfied but feeling pleasure/good) and C (satisfied but feeling displeasure/bad) when participants who failed at least one of the two control questions were excluded (two columns on the right). Error bars indicate standard error.

A univariate ANOVA with participants' happiness ratings as the dependent measure and the independent factor CONDITION was performed. The independent factor was significant:  $F(3, 237) = 100.09, p < 0.001, \eta^2 = 0.56$ . In accordance with our preregistered hypotheses, we conducted planned contrasts. These posthoc tests revealed that all pairwise comparisons were significant. Furthermore, planned t-tests showed that (B) was significantly above the midpoint of 4:  $t(80) = 6.74, p < 0.001$ , while (C) was significantly below the midpoint of 4:  $t(77) = -3.00, p = 0.004$ . When only participants who passed both control questions were included in the analysis (see the two columns to the right), the difference between both conditions was still significant:  $t(77) = 5.67, p < 0.001$ . t-tests showed that (B\*) was significantly above the midpoint of 4:  $t(45) = 4.60, p < 0.001$ ; and (C\*) was significantly below the midpoint of 4:  $t(32) = -3.48, p = 0.001$ .

### **2.3. Discussion**

The results for conditions (A) and (D) show that a person who feels pleasure/good most of the time and is satisfied with their life is considered to fall under the extension of HAPPINESS, whereas a person who feels displeasure/bad most of the time and is dissatisfied with their life doesn't. This is consistent with all the three theories under examination.

Life satisfaction theories, however, are not consistent with the results for conditions (B) and (C). In the former, John feels pleasure/good most of the time but is dissatisfied with his life; in the latter, he is satisfied with his life but feels displeasure/bad most of the time. While life satisfaction theories say that John is unhappy in condition (B) and happy in condition (C), people make exactly the opposite judgement.

The hybrid theory fares better than life satisfaction theories since it is consistent with the results for condition (C). The hybrid theory doesn't however comport with people's happiness rating in condition (B): since the protagonist in this condition feels pleasure/good most of the time but is dissatisfied with his life, the hybrid theory classifies him as not happy. The results clearly reveal that people think otherwise. Therefore, the results across all conditions are only consistent with affect-based theories: people think that a person is happy if and only if that person feels pleasure/good rather than displeasure/bad.<sup>2</sup> One might then conclude that if the folk concept HAPPINESS is the main guide to the nature of happiness, philosophers should endorse affect-based theories. This conclusion, however, might be too simple, since it raises three issues.

First, it doesn't contribute to explain why a number of philosophers are attracted to the life satisfaction theory. Second, even though the vignettes were simple and the control questions straightforward, 69 out of 161 participants who took part in Conditions B and C failed at least one of the control questions. This doesn't seem to be due to mere inattention, since a closer look revealed the following pattern: participants tended to fail the Satisfaction question, but not the Affect question. Even though Condition B described John as dissatisfied with his life, 32.1 percent of participants responded that he was in fact satisfied with it. In Condition C, 28.8 percent of participants made the opposite mistake. On the contrary, only 12.4 percent of participants failed the Affect question in these conditions. Finally, some participants gave ratings in line with life satisfaction theories. Admittedly, given that only 17.6 percent of the participants chose such a response, there is little evidence for arguing that both affect-based theories and life satisfaction theories receive support. Still, given that in conditions B and C, the mean ratings were significantly different from the baseline responses in Condition A and D, one might argue that information on satisfaction does influence people's ratings on happiness.<sup>3</sup>

These three issues suggest that the way in which information about life satisfaction, affect, and happiness interact with each other in the concept HAPPINESS deserves a more thorough investigation—an investigation that doesn't limit itself to a test aimed at individuating the extension of the concept. It is for these reasons that we decided to run a second empirical study.

### 3. A DIRECT CAUSAL LINK BETWEEN AFFECT AND LIFE SATISFACTION

#### 3.1. Typicality Effect or Direct Causal Connection?

A natural hypothesis, call it the ‘Typicality Hypothesis,’ is that even though life satisfaction is not criterial for HAPPINESS, it is a highly typical feature of the concept nonetheless. Therefore, if you judge a person to be (un)happy, you will then tend to think of them as satisfied/dissatisfied with their life too (see Figure 2 below). This is why people tend to fail the Satisfaction question: their life satisfaction judgement is driven by their happiness judgement. This might also explain the attraction exerted by the life satisfaction theory: philosophers have mistaken a highly typical feature of HAPPINESS for a criterial one. (Compare with this: When we think of chairs, we may wrongly infer that seats determine the extension of CHAIRS given their high typicality, even though HAVING A SEAT is neither a necessary nor a sufficient feature). Furthermore, if LIFE SATISFACTION is a typical feature, albeit not criterial, of HAPPINESS, we can account for the significant differences we recorded between Condition A vs Condition B, and between Condition C vs Condition D: although information on whether a person is (dis-)satisfied with their life does not determine whether the person is happy or not, it does determine whether that person satisfies the prototype of a happy person to a greater or lesser extent.



Figure 2: The causal relations among judgements of affect, happiness, and life satisfaction according to the Typicality Hypothesis.

But an alternative hypothesis is possible: there might be a direct causal connection between the concept POSITIVE AFFECT and the concept LIFE SATISFACTION, such that the judgement that someone is feeling (dis)pleasure/(bad)good most of the time not only reliably brings about the judgement that this person is (un)happy, but also the judgement that they are (dis)satisfied with their life. Call this the ‘Direct Causation Hypothesis’ (see Figure 3 below).

According to this hypothesis, people fail the Satisfaction question because when they judge John to feel (dis)pleasure/(bad) good most of the time, they are immediately disposed to think of him as (dis)satisfied with his life. If that were the case, then we wouldn’t be able to manipulate the variables affect and life satisfaction inside the vignette in a fully independent manner. For example, if the vignette stated that John feels pleasure/good most of the time, people would be disposed to think that he is satisfied with his life. Additional information that specified that John is in fact dissatisfied with his life might then fail to be fully acknowledged by the readers. Thus, if the direct causation hypothesis were true, it should be difficult to compare the respective contributions of life satisfaction and affective states across Conditions A-D.

As to the popularity of the life satisfaction theory, the Direct Causation Hypothesis gives the following diagnosis: the fact that LIFE SATISFACTION and HAPPINESS tend to be reliably co-activated has misled philosophers into thinking that the information encoded by the former concept is criterial for the second concept to apply. (Compare with this reasoning: Every time I think of H<sub>2</sub>O, I token both the concept DRINKABLE TRANSPARENT LIQUID and the concept WATER. It is therefore easy to mistake the information encoded by DRINKABLE TRANSPARENT LIQUID to be criterial for WATER.)

The Typicality Hypothesis and the Direct Causation Hypothesis make distinct predictions about how subjects will answer the Satisfaction question when this question is not preceded by the Happiness question: the Typicality Hypothesis, but not the Direct Causation Hypothesis, predicts

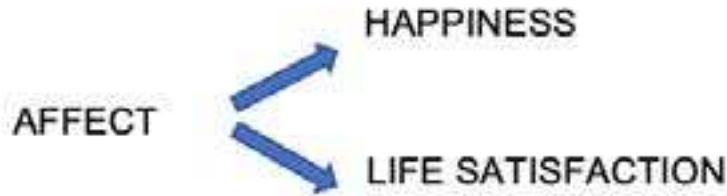


Figure 3: The causal relations among judgements of positive affect, happiness, and life satisfaction according to the Direct Causation Hypothesis.

that they should improve their success rate in such a condition, since they are not prompted to think about happiness. Study 2 tested this prediction.

### 3.2. Methods

406 participants were recruited on Prolific. Four participants were excluded for not having answered all test questions. The average age of the remaining 402 participants was 35.2 years ( $SD = 12.42$ ). These participants included 277 females, 124 males, and none identifying as non-binary. We used the same vignettes from Condition B ('John is dissatisfied with his life but feels pleasure/good most of the time') and Condition C ('John is satisfied with his life but feels displeasure/bad most of the time') of Study 1, obtaining four vignettes by randomizing the order in which information about affect and life satisfaction was presented.

All participants were first randomly assigned to one of the four vignettes, and were then asked to answer the Happiness question and the Satisfaction question. The phrasing of these questions was the same as in Study 1. This time, however, both questions were answered on a 7-point Likert scale, anchored at '1' meaning 'Not at all,' '4' meaning 'in Between,' and '7' meaning 'Absolutely.' Moreover, the order of the questions was randomised, leading to a 2 (CONDITION: B and C)  $\times$  2 (ORDER of information about pleasure/life satisfaction)  $\times$  2 (QUESTION: order in which test questions were presented) between-subject design. All hypotheses and statistical analysis were pre-registered (<https://osf.io/texhm>) with the Open Science Framework.

### 3.3. Results

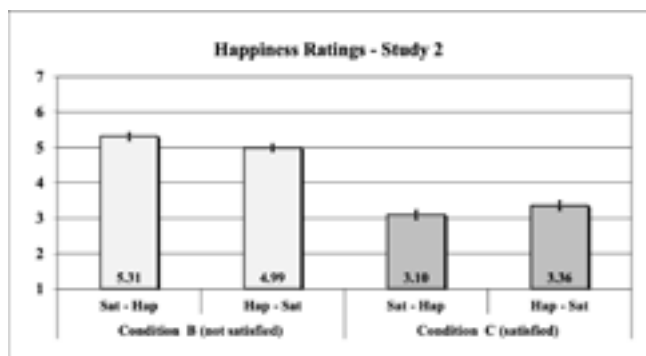


Figure 4: Mean results for happiness ratings for conditions B and C in Study 2. "Sat - Hap" and "Hap - Sat" indicate the order in which the Happiness question and Satisfaction question were asked. Error bars indicate standard error.

#### 3.3.1. Happiness Ratings

The average happiness rating was 5.14 ( $SD = 1.00$ ) in Condition B (dissatisfied but feeling pleasure/good) and 3.23 ( $SD = 1.23$ ) in Condition C (satisfied but feeling displeasure/bad). A 2  $\times$  2 ANOVA with dependent variable HAPPINESS and independent variables ORDER and QUESTION was

conducted for Condition B and Condition C. There was a small significant effect of QUESTION on happiness ratings in Condition B ( $p = 0.03$ ), such that happiness ratings were slightly higher when the Satisfaction question was asked first. There were no other significant effects in Conditions B and C.<sup>4</sup> In other words, neither the order of information nor the order of questions made a substantial difference to people's happiness ratings (see mean ratings in Figure 4 above).

### 3.3.2. Satisfaction Ratings

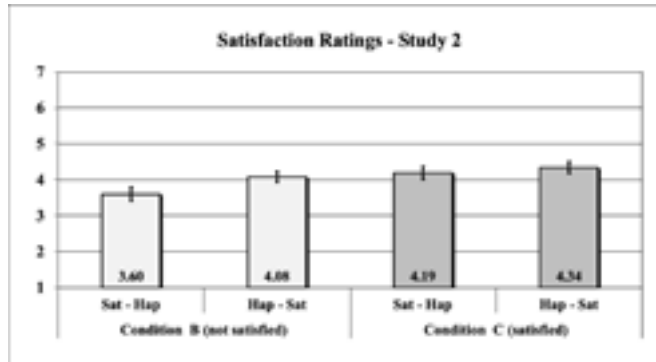


Figure 5: Mean results for satisfaction ratings for conditions B and C in Study 2. “Sat - Hap” and “Hap - Sat” indicate the order in which the happiness and satisfaction questions were asked. Error bars indicate standard error.

To investigate the Typicality and Direct Causation Hypotheses, we conducted two  $2 \times 2$  ANOVAs with dependent variable SATISFACTION and independent variable QUESTION. Figure 5 above displays average satisfaction ratings for conditions B and C. There was no significant effect of QUESTION on people's satisfaction ratings in either Condition B or Condition C ( $p = 0.072$  and  $p = 0.501$ ), and no interaction between QUESTION and ORDER. The order in which information was presented inside the vignette (ORDER) was highly significant for Condition B ( $p < 0.001$ ).<sup>5</sup>

### 3.4. Discussion

The results of Empirical Study 2 replicated the two key findings of Empirical Study 1. First, positive affect appears to be criterial for HAPPINESS: if a person is described as feeling pleasure/good most of the time but dissatisfied with their life, subjects tend to apply the concept HAPPINESS to them; on the contrary, they refrain to judge them to be happy if they are described as satisfied with their life but feeling displeasure/bad most of the time.<sup>6</sup>

Second, rather than being a quirk of Experiment 1, average satisfaction ratings were again at odds with the information participants received in the vignettes: even though John was described as satisfied with his life in Condition C and dissatisfied with it in Condition B, satisfaction ratings were only marginally different in these two conditions— 4.26 vs. 3.86. Empirical Study 2 was designed to test two hypotheses about why this happens. The Typicality Hypothesis says that this phenomenon obtains because life satisfaction is a highly typical feature of HAPPINESS. In contrast, the Direct Causation Hypothesis maintains that failure in the Satisfaction question is due to the fact that the tokening of the concept POSITIVE AFFECT tends to directly bring about the tokening of the concept LIFE SATISFACTION. This result has important consequences for the design of vignettes such as those we used, as well as the measurement of the contributions of life satisfaction to judgements of happiness. Since a description on how satisfied a person is with her life can be modulated by information about how that person feels, happiness researchers should be careful in the way they present information about life satisfaction vis-à-vis affect.<sup>7</sup>

The outcome of Empirical Study 2 clearly favours the Direct Causation Hypothesis. If the Typicality Hypothesis were true, average satisfaction ratings should be influenced by whether the



Happiness question was asked before or after the Satisfaction question. However, the order of these two questions didn't have any significant impact on satisfaction ratings (cf. Figure 5). Note also that the order in which information on satisfaction and affect was presented inside the vignette had a significant effect on satisfaction ratings (as reported in 3.3). This indicates that affect has an even stronger effect on satisfaction ratings when it is presented last. In future studies we aim to investigate this effect further.

## 4. CONCLUSION

By putting together the results of Experiments 1 and 2, it is possible to answer the two questions we started with (although our answer to the second question is more tentative).

First question: which family of theories between affect-based theories and life satisfaction theories gets the nature of happiness right? Answer: affect-based theories are the only philosophical theories of happiness in line with the extension of the folk concept HAPPINESS, since positive affect is necessary and sufficient for the application of this concept. Accordingly, if HAPPINESS is a reliable guide to the nature of happiness, philosophers should endorse some version of affect-based theories. Further work is needed to establish which version exactly.

Second question: on the natural assumption that philosopher share a common folk concept HAPPINESS, how is it possible that the method of cases resulted in the 'affect vs life satisfaction' divide? Answer: while affect-based theorists realised that positive affect is criterial for HAPPINESS, life satisfaction theorists were probably led astray by the fact that HAPPINESS and LIFE SATISFACTION are reliably co-activated. Let us explain.

Our studies indicate that when we judge someone to feel pleasure/good most of the time: (i) we tend to think of them as happy, and (ii) we tend to think of them as satisfied with their life. In other words, our studies show that the tokening of HAPPINESS and the tokening of LIFE SATISFACTION are effects of a common cause, namely, the tokening of POSITIVE AFFECT. Unfortunately, it is all too common to mistake a situation like this for one in which there is a direct causal relation between the two effects. This, we speculate, is the error that (at least some) life satisfaction theorists are likely to have made: they wrongly hypothesised that LIFE SATISFACTION brings about HAPPINESS and, on this basis, they concluded that the information encoded by the first concept (namely, being satisfied with one's own life) is criterial for the application of the second concept. Our results show this to be a mistake: it is positive affect, rather than life satisfaction, that determines the extension of HAPPINESS. Affect-based theorists should be happy about this.

## NOTES

1. The standard deviations for our two main conditions were  $SD = 1.32$  (Condition B) and  $SD = 1.51$  (Condition C). Out of 81 participants who were randomly assigned to Condition B, only 9 participants selected a rating lower than the midpoint of 4. 19 participants selected a response greater than the midpoint of 4 in Condition C.
2. This conclusion only follows if the scenarios we investigated generalize to other cases. To test the robustness of our results, we ran a structurally analogous study using a private life scenario. Here is one exemplary vignette: Sarah and John are married for six years. Since they got married, John has always wanted to travel the world with Sarah, move out of the city center into a nice countryhouse, and develop their common interests and hobbies. All of this happened. John is therefore really satisfied with his life. However, he feels bad almost every single day, because his day-to-day life with Sarah does not give him a lot of pleasure. Each participant was presented with a single vignette only and then asked the main Happiness question: 'Do you think that John is happy?' 146 participants were recruited on Amazon's Mechanical Turk. 140 participants were included in the analysis (80 male, 60 female,  $M_{age} = 35.93$ ). The average rating for dissatisfied but feeling good was 4.44 ( $SD = 1.42$ ), whereas the mean rating for satisfied but feeling bad was 3.43 ( $SD = 1.28$ ). t-tests showed that dissatisfied

but feeling good was significantly above the midpoint of 4:  $t(69) = 2.61, p = 0.011$ ; whereas satisfied but feeling bad was significantly below the midpoint of 4:  $t(69) = -3.73, p < 0.001$ . These results suggest that the findings are robust across different vignettes that depict various aspects of life.

3. An alternative hypothesis is that these differences may be accounted for by the fact that only in Condition B & Condition C conflicting information (one positive, one negative aspect) was presented, whereas in Condition A & Condition D the information given was of the same valence. In future studies, to test this hypothesis, we aim to do more pervasive manipulations of the material given to participants.
4. Condition B: Information:  $F(3, 196) = 0.50, p = 0.48, \eta^2 = 0.003$ , Question:  $F(3, 196) = 4.78, p = 0.030, \eta^2 = 0.02$ , no significant interaction,  $p = 0.290$ . Condition C: Information:  $F(3, 198) = 24.37, p < 0.001, \eta^2 = 0.11$ , Question:  $F(3, 198) = 0.45, p = 0.501, \eta^2 < 0.01$ , no significant interaction,  $p = 0.827$ .
5. Condition B: Information:  $F(3, 196) = 15.43, p < 0.001, \eta^2 = 0.07$ , Question:  $F(3, 196) = 3.28, p = 0.072, \eta^2 = 0.02$ , no significant interaction,  $p = 0.559$ . Condition C: Information:  $F(3, 198) = 0.90, p = 0.345, \eta^2 = 0.005$ , Question:  $F(3, 198) = 2.26, p = 0.134, \eta^2 = 0.01$ , no significant interaction,  $p = 0.481$ .

We conducted a planned mediation analysis with happiness ratings as possible mediator of the relationship between CONDITION and satisfaction ratings when the Happiness question was asked first. A significant indirect effect of CONDITION on satisfaction ratings through happiness ratings was found,  $b = -.47, 95\% \text{ CI } [-.74, -.22]$  only when life satisfaction information was presented first inside the vignette. Our analysis revealed no mediation effect when information about affect was presented first,  $b = -.18, 95\% \text{ CI } [-.37, +.01]$ . Thus, happiness ratings only mediated satisfaction ratings when information about life satisfaction was presented first.

6. Our results suggest that assessing life satisfaction might be of limited importance for measuring happiness. This raises some worries for those happiness reports that put considerable emphasis on life satisfaction, like the World Happiness Report (Helliwell et al. 2012).
7. Of course, this caveat also has a bearing on the interpretation of our own studies: The rather limited impact of information about life satisfaction on judgements of happiness can be (at least partly) explained by a secondary effect from information about affect on judgements of life satisfaction. However, the robustness of our results when only those participants are considered who have correctly answered the life satisfaction question, suggests that the effect is substantial but not pervasive.

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