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From wealth to well-being? Money matters, but less than people think

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While numerous studies have documented the modest (though reliable) link between household income and well-being, we examined the accuracy of laypeople's intuitions about this relationship by asking people from across the income spectrum to report their own happiness and to predict the happiness of others (Study 1) and themselves (Study 2) at different income levels. Data from two national surveys revealed that while laypeople's predictions were relatively accurate at higher levels of income, they greatly overestimated the impact of income on life satisfaction at lower income levels, expecting low household income to be coupled with very low life satisfaction. Thus, people may work hard to maintain or increase their income in part because they overestimate the hedonic costs of earning low levels of income.

Keywords: income; well-being; wealth; happiness; predictions; overestimation

Introduction

A striking inconsistency surrounds the relationship between money and happiness. Despite the fact that money has been shown to have a small (though reliable) effect on happiness in developed countries (Diener & Biswas-Diener, 2002; Frey & Stutzer, 2000), humans devote much of their time and energy to earning it, seemingly motivated by the belief that money will have a substantial impact on their overall life satisfaction (Ahuvia, 2008). For example, the amount of time the average American spends at work has grown steadily over the past several decades, despite the fact that this occupational investment comes at the cost of family and leisure time (Schor, 1991). What is the source of this apparent contradiction between researchers' conclusions about the relatively modest link between money and happiness versus laypeople's everyday choices and behavior? We suggest that laypeople engage in behaviors designed to increase or maintain their wealth because they overestimate the impact that income has on well-being.

Although hundreds of studies have examined the actual link between money and happiness (see Diener & Biswas-Diener, 2002, for a review), only one study has examined laypeople's intuitions about this relationship (Kahneman, Krueger, Schkade, Schwarz, & Stone, 2006). Kahneman et al. (2006) asked a sample of working women with an average household income of approximately US$55,000 to estimate the percentage of time they had spent in a bad mood the previous day and to predict how much time women with low incomes (less than US$20,000) and high incomes (above US$100,000) spent in a bad mood; respondents were reasonably accurate in predicting the percentage of time women with high incomes spent in a bad mood, but overestimated the amount of time that low income women spent in a bad mood. While providing an intriguing first glimpse into possible discrepancies between the predicted and actual impact of money on happiness, however, this study examined only the extreme ends of the income spectrum using one particular demographic group over the course of one day.

In an effort to more fully delineate the nature of people's understanding of the link between household income and happiness (an important component in understanding why people pursue money when it does not seem to make them much happier) we asked a national sample of respondents from across the income spectrum both to report their own happiness and to predict the happiness of others at different levels of income (Study 1).[1] Demonstrating that people think higher household income is associated with higher levels of happiness for someone else, however, does not necessarily mean that they believe that more money would substantially influence their *own* happiness; in Study 2, therefore, we also asked respondents to predict how happy they thought they would be given different levels of household income, to directly

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measure people's beliefs about the impact of money on their own happiness.

Study 1

To examine the accuracy of laypeople's intuitions about the relationship between household income and happiness, we asked a nationally representative sample of Americans to report their own happiness and to predict the happiness of others. We predicted that respondents would correctly associate higher household income with higher levels of happiness, but incorrectly believe that the two are more tightly linked than the actual data suggest.

Methods

Respondents

A total of 429 Americans (56% female; $M_{\text{age}} = 40.2$, $SD = 16.4$) were selected from an online survey company's panel of 2.5 million respondents with gender, age, and income parameters (see Table 1) approximating the most recent United States Census. Participants answered our questions as part of a larger online survey, in return for points that could be redeemed for prizes.

Procedure

Respondents reported their gender, age, and approximate annual household income. Household income information was gathered by asking respondents to select the most appropriate amount from a list of options because our previous research has revealed much higher response rates when participants are asked to select their income from a list of categories rather than provide their exact household income. Next, each respondent was asked 'How would you rate your life overall these days?' (0 = *worst possible life overall*, 10 = *best possible life overall*). Finally, respondents were asked to consider 10 different household incomes and predict the life satisfaction of someone at each income level using the same scale (see Figure 1 for income prediction levels); these household income levels were presented one at a time in one of four randomly determined orders.

Table 1. Frequency distribution of household income categories for Study 1 ($N = 429$) and Study 2 ($N = 315$).

Actual household income	Study 1 Actual *N*	Study 2 Actual *N*	Age Mean (*SD*)
US$1–US$4999	19	7	35.5 (17.2)
US$5000–US$9999	13	5	33.8 (14.1)
US$10,000–US$14,999	32	10	41.3 (15.9)
US$15,000–US$24,999	80	22	44.7 (16.4)
US$25,000–US$34,999	86	33	47.6 (16.9)
US$35,000–US$49,999	75	50	43.3 (16.5)
US$50,000–US$74,999	65	73	48.1 (16.8)
US$75,000–US$99,999	20	45	47.4 (15.5)
US$100,000–US$124,999	19	37	48.2 (14.0)
US$125,000–US$149,999	8	10	51.2 (15.7)
US$150,000–US$199,999	5	14	48.0 (16.3)
US$200,000+	7	9	45.7 (16.2)

Results and discussion

Consistent with a large body of previous research (Diener, 1984; Diener, Horwitz, & Emmons, 1985), we found that higher levels of household income were associated with somewhat greater happiness, as reflected by the moderate correlation ($r = 0.25$, $p < 0.001$) between actual household income and happiness. Respondents' predictions, however, revealed their belief in a more dramatic relationship between money and happiness[2] (Figure 1). While participants made fairly accurate predictions about the happiness of people with high levels of household income (US$90,000 and above), participants vastly underestimated the happiness of people earning lower levels of household income (US$55,000 and below). In addition, while respondents were fairly accurate in predicting that higher levels of household income are not associated with higher levels of happiness at the top end of the income distribution (e.g., at US$90,000 compared with US$125,000), their predictions demonstrated a belief that lower household incomes at the bottom end (e.g., at US$25,000 compared with

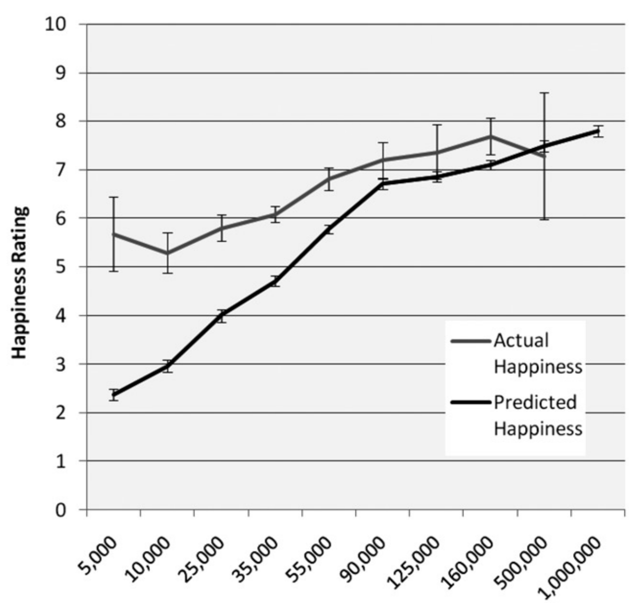

Figure 1. Actual and predicted happiness levels for the 10 household income point estimates in Study 1.

US$35,000) are associated with much lower happiness levels than justified by the actual happiness data.

Study 2

Study 1 offers evidence that people overestimate the magnitude of the relationship between money and happiness, particularly at the lower end of the income spectrum. Of course, respondents were asked to make predictions regarding how happy someone else would be on various rungs of the income ladder; therefore it is possible that their predictions reflect only their perceptions of how happy *other people* would be at different levels of income (for example, poor minorities or wealthy celebrities), rather than reflecting their beliefs about how they *themselves* would feel at these various levels of income. Indeed, Epley and Dunning (2000) have shown that distinct mental processes may underlie predictions for oneself and others. Our account, however, suggests that people overestimate the impact that making more money would have specifically on their *own* happiness. Therefore, in Study 2, we also asked respondents to predict how happy they thought they would be with different levels of household income, thereby directly assessing their predictions about the impact of money on their own lives. If our interpretation of Study 1 is correct, then respondents in Study 2 should mispredict the association between money and happiness, regardless of whether their predictions are made in regard to others or themselves.

Methods

Respondents

A total of 315 Americans (45% female; $M_{\text{age}} = 52.8$, $SD = 13.7$) drawn from the same pool as in Study 1 answered our questions as part of a larger, online survey, in return for points that could be redeemed for prizes.

Procedure

Study 2 was identical to Study 1 except we asked respondents to predict how happy *they* themselves would be at each of the 10 income values presented in Study 1, using a 0–100 scale (0 = *worst possible life overall*, 100 = *best possible life overall*), before making these same predictions for *someone else*. Finally, each respondent reported their overall life satisfaction rating on the same 0–100 scale.

Results and discussion

Similar to Study 1 and previous research, we observed a modest positive relationship between actual household income and happiness ($r = 0.11$, $p = 0.05$). Supporting our account that people's efforts to make money may be driven by erroneous beliefs about the impact of household income on their own happiness, participants envisioned that household income would have a similar impact on their own happiness as on others' happiness (Figure 2).[3] Consistent with Study 1, predictions for people with high levels of household income were fairly accurate, but predictions for lower levels of household income again reflected a belief that income had a much bigger impact on happiness than justified by the actual happiness data. Once again, participants were fairly accurate in predicting that higher levels of household income were associated with slightly higher levels of happiness at the top of the income distribution, but predicted that higher levels at the lower end were associated with larger differences in happiness than reflected in the actual happiness data.

General discussion

Across two national samples, we found that people accurately predicted the moderate emotional benefits associated with being wealthy, but vastly overestimated the emotional costs associated with being poor. That is, whereas predicted and actual happiness closely converged above the median household income, sharp divergences occurred between predicted and actual happiness at lower household income levels. While respondents accurately predicted the modest relationship between higher earnings and happiness

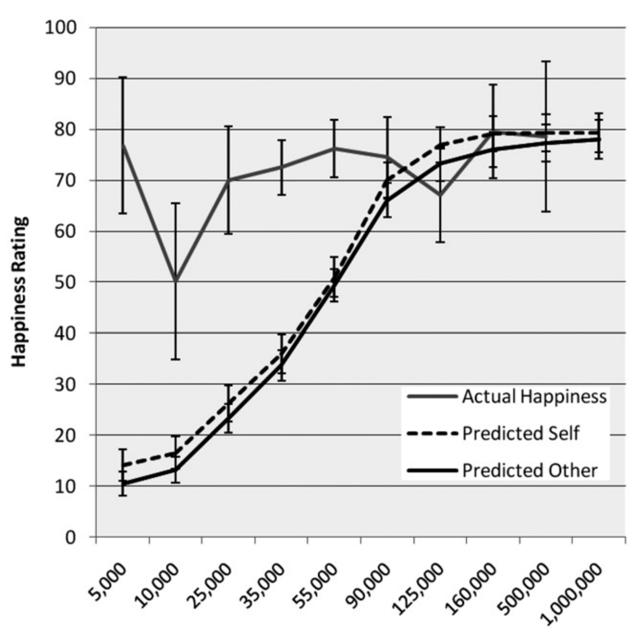

Figure 2. Actual and predicted happiness levels for both oneself and another at the 10 household income point estimates in Study 2.

at the top levels of household income, they erroneously believed that slightly higher household wages at lower income levels (such as between US$25,000 and US$55,000) would be coupled with dramatically different happiness ratings. Given that many of our participants (approximately 33%) earned incomes in this range, this failure of insight is particularly striking and may have important implications for these individuals' career decisions (e.g., whether to accept a US$10,000 pay cut in exchange for an additional day off each week).

Our data demonstrate that respondents envision a tighter association between money and happiness than the actual happiness data justify. Interestingly, this overall error may reflect two different, and not necessarily contradictory, beliefs: one interpretation of our results is that people believe that increases in income are associated with increases in happiness, while another is that people believe that decreases in income are associated with decreases in happiness. Support for the latter explanation stems from the large body of evidence demonstrating that losses are more impactful than equivalent gains (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Kahneman & Tverksy, 1979), which suggests that people might work hard not to increase their income but merely to ensure that it does not decrease. Indeed, the competitive nature of the workplace may lead people to fear what could happen if they are unable to maintain their current household income, a particularly salient concern for wealthy individuals who have more to lose.

To the extent that a fear of lost income influences people's predictions regarding the money and happiness relationship, we would expect a tighter relationship between wealth and well-being to be envisioned by wealthier people: those who have comparatively more to lose. Our data offer provisional support for this pattern: using hierarchical linear modeling, we tested whether respondents' own income levels moderated their expectations regarding the relationship between income and happiness. Although respondents' own income did not moderate their expectations in Study 1 ($\beta = 0.01$, $p = 0.32$), respondents' income did emerge as a marginally significant moderator in Study 2 ($\beta = 0.30$, $p = 0.055$), such that respondents with higher levels of income predicted a stronger association between household income and well-being. Although tentative, these findings dovetail with previous research suggesting that personal expectations and perceived financial situation may be key in understanding the association between income and well-being (e.g., Johnson & Krueger, 2006; Nickerson, Schwarz, Diener, & Kahneman, 2003; Solberg, Diener, Wirtz, Lucas, & Oishi, 2002). Finally, because people often spend relative to their current income, a loss of income may actually prevent people from maintaining their current life standards; having to file for bankruptcy because one can no longer pay the mortgage on an unnecessarily large house may in fact lead to a real decrease in happiness. Most importantly from our perspective, however, is that regardless of whether people's motivation lies in maintaining or increasing their income, the actual happiness data suggest that their expectations regarding the overall association between money and happiness may be exaggerated.

Our claim that people overestimate the influence of money on happiness below the median household income is supported by the generally high levels of happiness reported by our low income respondents. One clear concern about this conclusion is that our low household income sample may not be representative, perhaps heavily oversampling students and retirees; such individuals may have other resources which inflate their happiness, meaning that these reports may not accurately capture the happiness of individuals making less money without such resources. While this issue is not unique to our data, we note that the variance in age of the two lowest household income brackets in our sample was similar to the variance for other household income brackets, with the mean age in the mid-30s, suggesting that these groups did not consist primarily of students and retirees (Table 1).

Taken together, our studies shed light on the discrepancy between people's apparent drive for money and the real but modest relationship between money and happiness. In particular, we demonstrate that adult Americans erroneously believe that earning less than the median household income is associated with severely diminished happiness: a false belief that may lead many people to chase opportunities for increased wealth or forgo a reduction in income for increased free time. Our results are in line with Kahneman et al.'s (2006) suggestion that people focus too much on the impact of this one variable on their global life satisfaction, part of a more general tendency to overweight single inputs when estimating overall satisfaction (Hsee & Rottenstreich, 2004). This focusing illusion may lead individuals to ignore other avenues shown to impact happiness, such as building social relationships; indeed, while using money to build relationships can lead to increased happiness (Dunn, Aknin, & Norton, 2008), the mere thought of money can discourage people from pursuing this goal (Vohs, Mead, & Goode, 2006). Finally, while our aim was to isolate people's beliefs about the impact of money on happiness, future research should explore the accuracy of people's intuitions about how best to trade off among different pursuits (from making money to building friendships to finding God) on the pathway to happiness.

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Notes

1. We use the terms 'happiness' and 'life satisfaction' interchangeably as many other researchers have in the past (e.g., Diener & Diener, 1996; Easterlin, 2003; Frey & Stutzer, 2000). We are aware that these two concepts are separable (Lucas, Diener, & Suh, 1996), however life satisfaction and happiness have been shown to correlate highly in the past (Diener & Lucas, 2000).
2. Actual household income brackets are compared with the most appropriate predicted income value(s) in Figures 1 and 2 as follows: US$1–US$4999 compared to US$5000; US$5000–US$9999 and US$10,000–US$14,999 compared to US$10,000; US$15,000–US$24,999 compared to US$25,000; US$25,000–US$34,999 and US$35,000–US$49,999 compared to US$35,000; US$50,000–US$74,999 compared to US$55,000; US$75,000–US$99,999 compared to US$90,000; US$100,000–US$124,999 compared to US$125,000; US$125,000–US$149,999 and US$150,000–US$199,999 compared to US$160,000; and US$200,000+ compared to US$500,000. Happiness predictions for US$1,000,000 are not compared with actual happiness ratings because we were unable to contact a large enough sample with a comparable annual household income.
3. As Figure 2 shows, predicted happiness ratings for oneself across the income spectrum ($M = 52.2$, $SD = 23.1$) were on average slightly higher than predictions for others ($M = 49.6$, $SD = 21.2$), $t(295) = 3.02$, $p < 0.05$, $d = 0.12$, likely reflective of people's general tendency to see themselves as better than average (e.g., Alicke, 1985) especially when comparing themselves to an abstract target (Alicke, Klotz, Breitenbecher, Yurak, & Vredenburg, 1995).

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