

# Motivated Happiness: Self-Enhancement Inflates Self-Reported Subjective Well-Being

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Sean P. Wojcik<sup>1</sup> and Peter H. Ditto<sup>1</sup>

## Abstract

Three studies support the contention that self-enhancement motivation distorts self-reports of subjective well-being (SWB). Both individual differences in self-enhancement (Studies 1 and 2) and experimental manipulations of self-enhancement motivation (Study 2) predicted an increased likelihood of reporting SWB at unrealistically favorable levels relative to others—a “happier-than-average effect.” Study 3a and 3b showed that both trait self-enhancement and experimentally manipulated differences in self-enhancement motivation also affected self-reports on established measures of SWB. Specifically, individuals prone to self-enhancement were more affected than low self-enhancers by the desirability of happiness when reporting SWB. The current studies suggest that reports of SWB are susceptible to the same self-enhancement biases that influence self-reports of other positively valued traits. Implications and recommendations for the measurement of SWB and the use of well-being data in policy decision-making are discussed.

## Keywords

well-being, self-evaluation, self-presentation, social comparison, judgment and decision making

People frequently evaluate themselves in overly positive ways (Alicke, 1985). In one well-known study, 93% of American participants rated themselves as better-than-average drivers (Svenson, 1981). Other studies have shown that most college students rate themselves as more intelligent than average (Brown, 2012), most college professors judge themselves as above average educators (Cross, 1977), and most relationship partners view their relationships as superior to those of others (Rusbult, Van Lange, Wildschut, Yovetich, & Verette, 2000). Because these judgments defy statistical probability, the “better-than-average effect” is widely regarded as evidence that everyday thought is characterized by positive illusions (Taylor & Brown, 1988).

In their analysis of the pervasiveness of self-enhancing beliefs such as the better-than-average effect, Taylor and Brown (1988) famously contended that positive illusions foster mental health by supporting the capacity for productive work, the ability to form and sustain satisfying relationships, resilience in response to threat, and a general tendency to feel happy and contented. Supporting this view, unrealistically positive self-assessments have been found to associate positively with indicators of these specific capacities and with general measures of psychological well-being (Taylor, Lerner, Sherman, Sage, & McDowell, 2003a, 2003b).

But the nature of the relationship between positive illusions and psychological adjustment has also been controversial (e.g., Colvin, Block, & Funder, 1995). This is partly because the

nature of this relationship appears to hinge on a number of methodological factors, including the operationalization of self-enhancement (Kwan, John, Kenny, Bond, & Robins, 2004), properties of the self-assessed attributes (Paulhus & John, 1998), the evaluator of well-being (Kurt & Paulhus, 2008), and the component of adjustment being tested (Church et al., 2006). Another challenge in understanding this complex relationship is that self-reports of mental health may inadequately distinguish between genuine and illusory reports of mental health (Shedler, Mayman, & Manis, 1993), potentially inflating the relationship observed between self-enhancement and well-being. Importantly, this does not preclude the possibility that self-enhancement still genuinely contributes to well-being (Taylor et al., 2003a, 2003b), but the notion that self-reports of positive mental health might sometimes be an example of positive illusions rather than a downstream consequence of them has important implications for the literature on subjective well-being (SWB).

<sup>1</sup> Department of Psychology and Social Behavior, University of California, Irvine, CA, USA

## Corresponding Authors:

Sean P. Wojcik and Peter H. Ditto, Department of Psychology and Social Behavior, 4201 Social and Behavioral Sciences Gateway, University of California, Irvine, CA 92697, USA.  
Emails: swojcik@uci.edu; phditto@uci.edu

## SWB and Self-Enhancement

The last two decades have seen a dramatic increase in research on happiness and SWB that has spread well beyond psychology's borders. Economists increasingly value subjective accounts of well-being (Dolan, Peasgood, & White, 2008) and outside of academia, governments and policy makers have called for indices of "gross national happiness" to directly inform policy decisions (Brooks, 2008). A key assumption of this research is that self-reports provide valid measurements of well-being that researchers and policy makers can interpret at face value (Diener, Sandvik, Pavot, & Gallagher, 1991; Sandvik, Diener, & Seidlitz, 1993). However, self-report methods have well-documented limitations (e.g., Schwarz, 1999) and are most useful when combined with other nonself-report indicators (Zou, Schimmack, & Gere, 2013). Little research, however, has directly examined the potentially confounding influence of self-enhancement motivation on self-reports of SWB (Kim, Schimmack, & Oishi, 2012).

There are three primary reasons to suspect that self-enhancement may have a contaminating influence in the measurement of SWB. First, several properties of SWB may promote its susceptibility to self-enhancing distortion. People self-enhance most on trait dimensions that are personally important to them (Brown, 2012), and happiness is a desirable and subjectively important human quality with many known intra and interpersonal benefits (Diener, 2000). People also self-enhance most on traits that are amenable to idiosyncratic interpretation (Dunning, Meyerowitz, & Holzberg, 1989), and the definition of happiness is inherently subjective.

Second, related areas of research have revealed that not all expressions of positive emotionality represent genuinely positive affective experience. Psychologists have long recognized that reports of self-esteem can be distorted by self-enhancement motivation and thus that explicit self-report measures should not always be accepted as valid reflections of actual internal experience (e.g., Kernis, 2003; Schneider & Turkat, 1975). Similarly, the Duchenne smile (i.e., smiling involving the muscles orbiting the eye; Ekman, Davidson, & Friesen, 1990) has been linked to genuine feelings of happiness and enjoyment, as well as to beneficial long-term psychological and physical health outcomes, but non-Duchenne smiles have not (Harker & Keltner, 2001). Both of these literatures hint that there are meaningful differences between genuine and superficial presentations of happiness.

Finally, some research has already implied that people report happiness at unrealistically high levels. Using nationally representative data from 43 countries, Diener and Diener (1996) found that mean SWB ratings were above the neutral point in 86% of countries. More directly, studies documenting the better-than-average effect have sometimes included SWB-related items in their self-assessment measures (e.g., "enjoy life with regard to recreation, work, and family"; Brown & Kobayashi, 2002). Other studies have found that people tend to judge their contentment and life satisfaction as superior to others', but have attributed these findings to

nonmotivational factors (Klar & Giladi, 1999) and/or overlooked the potential implications of self-enhancement bias in the measurement of SWB (Vautier & Bonnefon, 2008).

## The Present Research

This article describes three studies examining the extent to which self-reports of SWB are contaminated by self-enhancing tendencies. Study 1 examined whether individual differences in self-enhancement predicted the likelihood of showing a "happier-than-average effect." Study 2 explored whether experimentally manipulating participants' motivation to self-enhance their SWB also predicted this tendency. Study 3 tested these effects using two frequently used measures of SWB.

## Study 1

Study 1 examined the tendency to report SWB at unrealistically favorable levels using the social-comparative judgment format used in better-than-average effect research (e.g., Beer, Chester, & Hughes, 2013; Dunning, et al., 1989).

## Method

Participants were 1,246 visitors (mean age = 41.4, 37.3% female) to <http://www.YourMorals.org>, a psychological research platform where visitors complete surveys in exchange for personalized feedback about their results.

Participants completed two scales. The first was a standard social-comparative judgment task in which participants indicated whether 12 traits and abilities described them less or more than the average person ( $-2 = \text{"Much less,"}$   $+2 = \text{"Much more"}$ ). Ten of the items have been used in past better-than-average effect research (*reliable, insecure, mature, polite, maladjusted, lazy, unpleasant, good sense of humor, good driving ability*), and 2 items assessed primary components of SWB (*happy and satisfied with life*).

The second scale was the Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1991), a well-validated (Lanyon & Carle, 2007) 40-item scale measuring two forms of desirable responding bias. Respondents evaluated propositions (e.g., "I am fully in control of my own fate") on 7-point scales (1 = *Not true* and 7 = *Very true*), which were scored using the continuous method described by Paulhus (1994). The BIDR's self-deceptive enhancement (SDE) subscale assesses the tendency to report honest, privately believed, but unrealistically positive self-assessments, and its impression management (IM) subscale measures deliberately distorted self-assessments related to self-presentation concerns. We were primarily interested in the SDE subscale to assess dispositional self-enhancement.

## Results

Descriptive statistics and zero-order correlations for all major variables are presented in Table 1. Participants' mean scores combined across all 12 better-than-average ratings ( $\alpha = .78$ ;

**Table 1.** Descriptive Statistics and Zero-order Correlations of All Study Variables.

Measure	Mean (SD)	95% CI	1	2	3	4
<b>Study 1</b>						
1. SDE	4.05 (.71)	[4.01, 4.09]	—			
2. IM	3.82 (.91)	[3.77, 3.87]	.32***	—		
3. Standard BAE items	0.46 (.55)	[.43, .49]	.45***	.30***	—	
4. SWB-related BAE items	0.32 (.98)	[.27, .38]	.34***	.16***	.41***	—
<b>Study 2</b>						
1. SDE	4.27 (.77)	[4.16, 4.38]	—			
2. IM	4.11 (.95)	[3.97, 4.25]	.49***	—		
3. Standard BAE items	0.57 (.57)	[.49, .66]	.63***	.40***	—	
4. Comparative happiness	-0.05 (1.01)	[-.20, .10]	.42***	.27***	.58***	—
5. Comparative life satisfaction	-0.02 (1.13)	[-.19, .14]	.44***	.34***	.51***	.75***
<b>Study 3a</b>						
1. SDE	4.40 (.89)	[4.24, 4.56]	—			
2. IM	4.07 (1.13)	[3.87, 4.27]	.47***	—		
3. Self-reported happiness	2.86 (.79)	[2.72, 3.00]	.38***	.13 ns	—	
4. SWLS	4.17 (1.55)	[3.90, 4.44]	.49***	.23**	.77***	—
<b>Study 3b</b>						
1. SDE	4.09 (.67)	[4.04, 4.15]	—			
2. IM	3.80 (.86)	[3.73, 3.87]	.26***	—		
3. Self-reported happiness	2.82 (.67)	[2.77, 2.87]	.31***	.15***	—	
4. SWLS	4.23 (1.39)	[4.12, 4.34]	.38***	.21***	.71***	—

Note. SDE = self-deceptive enhancement; IM = impression management; BAE = better than average effect; SWLS = Satisfaction With Life Scale; ns = nonsignificant. Studies 2 and 3 statistics are collapsed across experimental condition.

ns $p$  = .143, \*\* $p$  = .010, \*\*\* $p$  < .001.

negatively valenced items reverse-scored) were significantly higher than the scale's midpoint ( $M = .42$ ,  $SD = .56$ , 95% CI: [.39, .45]), revealing a pattern indicative of positive illusions,  $t(1,245) = 26.67$ ,  $p < .001$ ,  $d = 1.51$ . This pattern reached significance across 9 of the 10 standard items (see Figure 1). Importantly, we found a similar better-than-average effect on the two SWB-related items (right two bars of Figure 1) both when they were analyzed together,  $r = .81$ ;  $M = .32$ ,  $SD = .98$ ,  $t(1,245) = 11.58$ ,  $p < .001$ , 95% CI: [.27, .38],  $d = .66$ , and individually, happiness:  $M = .30$ ,  $SD = 1.01$ ;  $t(1,241) = 10.28$ ,  $p < .001$ , 95% CI: [.24, .35],  $d = .58$ ; satisfied with life:  $M = .35$ ,  $SD = 1.04$ ;  $t(1,231) = 11.82$ ,  $p < .001$ , 95% CI: [.29, .41],  $d = .67$ . As shown in Table 1, the better-than-average effect across the ten standard items ( $\alpha = .73$ ) was significantly correlated with the happier-than-average effect.

We next tested whether individual differences in self-enhancement predicted these better-than-average effects by examining correlations between the SDE subscale<sup>1</sup> ( $\alpha = .74$ ), an index combining the 10 standard items, and the index combining the 2 SWB-related items. As shown in Figure 1, higher levels of SDE predicted both significantly larger better-than-average effects and significantly larger happier-than-average effects.

## Discussion

Study 1 participants reported being happier and more satisfied with life than the average person, just as they reported being above average on traits and abilities that had no direct relation to SWB. Notably, the happier-than-average effect was similar

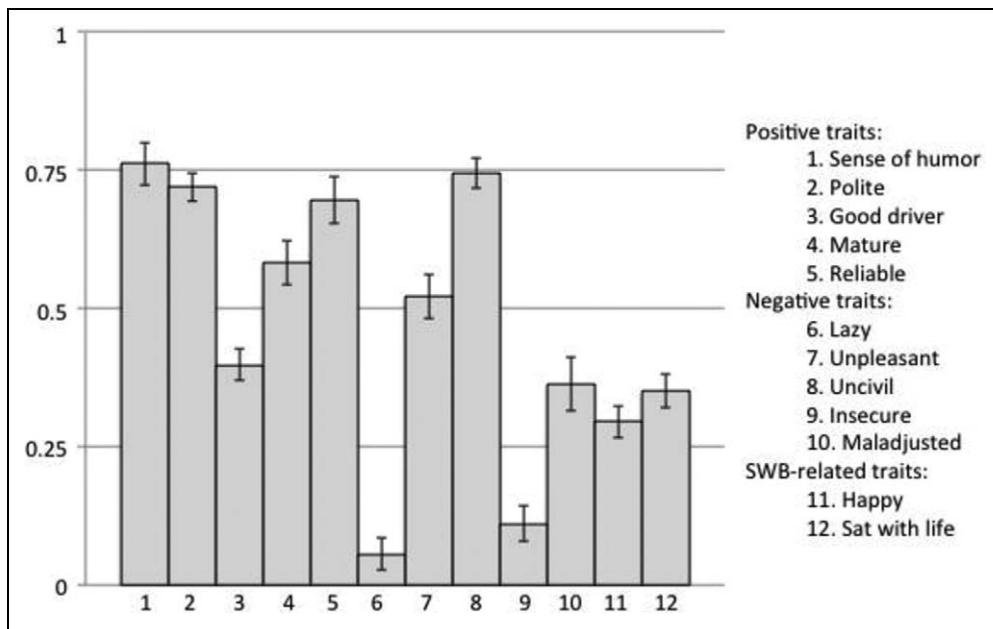
in magnitude to the better-than-average effect observed on non-SWB-related traits, and the two effects showed a significant positive correlation, both findings suggestive of a common underlying mechanism. Both effects also showed a similar tendency to be more pronounced among participants with higher levels of dispositional self-enhancement.

As is the case with all better-than-average effect research, we cannot definitively rule out the possibility that Study 1 participants were, in actuality, happier and more satisfied with life than the average other. However, if one accepts as genuine our participants' positive assessments of their psychological well-being compared to others, one must either argue that this genuineness is uniquely true of SWB-related self-assessments (despite evidence of a common mechanism), or also accept that our participants were, in actuality, funnier, more polite, less insecure, and even better drivers than others as well.

Still, despite recent research implicating self-enhancement as the primary driver of the better-than-average effect (Beer et al., 2013), nonmotivational interpretations of Study 1's results remain possible (Chambers & Windschitl, 2004). And, despite our rhetorical argument against interpreting these self-reports at face value, Study 1's results remain consistent with existing conceptualizations of self-enhancement as a genuine contributor to psychological well-being (Taylor & Brown, 1988).

## Study 2

To clarify the nature of the SWB-self-enhancement relationship, Study 2 manipulated participants' motivation to report



**Figure 1.** Mean social-comparative judgment scores on standard and SWB-related traits (Study 1). Note. Error bars represent standard errors. Negative trait items reverse scored. All means differ from zero at  $p < .001$ , except for "Lazy" ( $p = .053$ ).

high levels of SWB by presenting them with a research summary purporting either positive or negative consequences of high levels of happiness (e.g., Gruber, Mauss, & Tamir, 2011). To the extent that self-reports of SWB are contaminated by self-enhancing self-report styles, increasing or decreasing the subjective desirability and importance of happiness should increase or decrease participants' motivation to claim happiness as a personal trait, without affecting their actual levels of experienced happiness.

## Method

Participants were 179 Amazon Mechanical Turk workers from the United States (45.3% female, mean age = 35.5) who completed the study in exchange for a small fee. Participants first completed the BIDR and then read a paragraph summarizing happiness research purportedly conducted at an elite university. Participants assigned to the *desirable* condition ( $n = 91$ ) read about research demonstrating the positive correlates of happiness (e.g., improved psychological well-being, improved social interactions, marriage and career success), whereas participants assigned to the *undesirable* condition ( $n = 88$ ) read about research demonstrating the negative correlates of happiness (e.g., increased risk taking behavior, poorer performance in competitive situations, increased risk for mania). Participants were instructed to write a two- to three-sentence research summary.<sup>2</sup> We included a manipulation check in which participants rated on separate 7-point scales how important happiness was to them personally and how convincing they found the research summary (1 = *Not at all* and 7 = *Very much*). Finally, participants completed the better-than-average effect measure from Study 1.

## Results

Participants in the *desirable* condition ( $M = 5.36$ ,  $SD = 1.68$ , 95% CI: [5.00, 5.72]) found the research summary to be more convincing than did participants in the *undesirable* condition,  $M = 3.71$ ,  $SD = 1.82$ , 95% CI: [3.33, 4.09];  $t(175) = -6.24$ ,  $p < .001$ ,  $d = -.94$ . This is not surprising, given the counterintuitive nature of the *undesirable* condition's research summary. The manipulation was nevertheless effective: Participants who read the *desirable* research summary judged happiness to be significantly more personally important to them ( $M = 6.25$ ,  $SD = 1.02$ , 95% CI: [6.03, 6.57]) than did participants who read the *undesirable* research summary,  $M = 5.42$ ,  $SD = 1.20$ , 95% CI: [5.17, 5.67];  $t(177) = -4.99$ ,  $p < .001$ ,  $d = -.75$ .<sup>3</sup>

We also checked whether the experimental manipulation influenced judgments across the 10 standard, non-SWB judgments ( $\alpha = .78$ ), and as expected, it did not,  $t(177) = -1.57$ ,  $p = .119$ ,  $d = -.24$ . Also as expected, and replicating Study 1, the better-than-average effect on non-SWB items was positively related to dispositional self-enhancement (see Table 1).

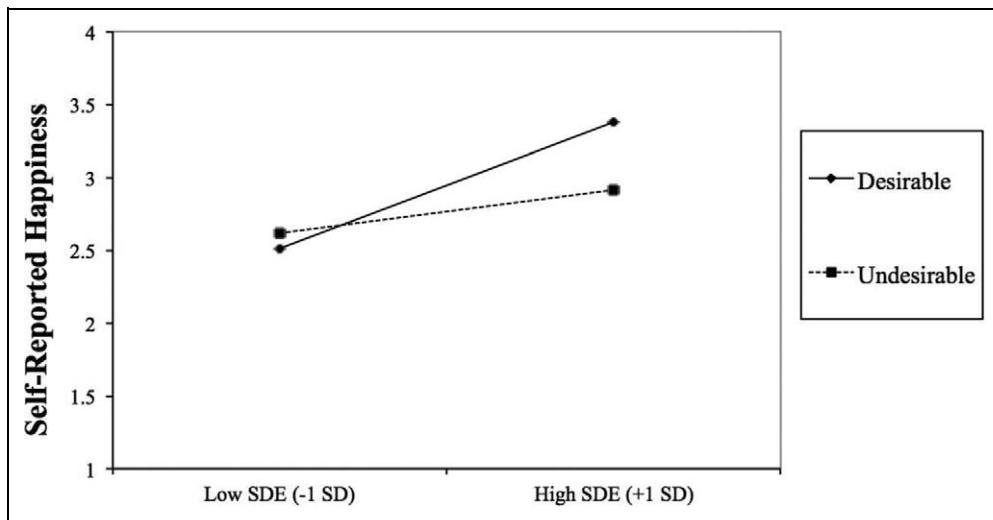
To examine how our experimental manipulation of self-enhancement motivation influenced SWB judgments, we separately regressed the happiness and life satisfaction items onto the SDE subscale score ( $\alpha = .78$ ), a dichotomous variable representing experimental condition (0 = *undesirable* and 1 = *desirable*), and their interaction term. Results are presented in Table 2. As shown, participants high in dispositional self-enhancement reported larger happier-than-average effects than did participants low in dispositional self-enhancement (replicating the results of Study 1). Importantly, participants who read that happiness had *desirable* effects also showed larger happier-than-average effects than did those who read that happiness had *undesirable* effects. We did not observe a significant

**Table 2.** Regression Results and Meta-analyzed Effect Sizes Studies 2, 3a, and 3b.

Study 2							
Social-comparative happiness							
Predictor	b	t	p	95% CI	β	F (df)	R <sup>2</sup>
SDE	0.60	4.99	<.001	[.36, .84]	0.46	14.93*** (3, 175)	.20
Condition	0.31	2.31	0.022	[.05, .58]	0.16		
Interaction	-0.09	-0.49	0.628	[-.44, .26]	-0.05		
Constant	-0.21	-2.17	0.032	[-.39, -.02]			
Social-comparative life satisfaction							
Predictor	b	t	p	95% CI	β	F (df)	R <sup>2</sup>
SDE	0.55	3.10	<.001	[.29, .82]	0.38	15.48*** (3, 175)	.21
Condition	0.24	1.60	0.111	[-.06, .54]	0.11		
Interaction	0.21	1.08	0.283	[-.18, .61]	0.10		
Constant	-0.14	-1.30	0.195	[-.35, .07]			
Study 3a							
Self-reported happiness							
Predictor	b	t	p	95% CI	β	F (df)	R <sup>2</sup>
SDE	0.17	1.58	0.117	[-.04, .38]	0.19	9.52*** (3, 123)	.19
Condition	0.18	1.39	0.168	[-.08, .43]	0.11		
Interaction	0.32	2.20	0.030	[.03, .60]	0.26		
Constant	2.77	30.31	<.001	[2.58, 2.95]			
Satisfaction With Life Scale							
Predictor	b	t	p	95% CI	β	F (df)	R <sup>2</sup>
SDE	0.56	2.90	0.004	[.18, .94]	0.25	16.83*** (3, 123)	0.29
Condition	0.54	2.31	0.023	[.08, 1.01]	0.20		
Interaction	0.53	2.00	0.048	[.01, 1.05]	0.18		
Constant	3.89	23.37	<.001	[3.56, 4.22]			
Study 3b							
Self-reported happiness							
Predictor	b	t	p	95% CI	β	F (df)	R <sup>2</sup>
SDE	0.21	3.81	<.001	[.10, .31]	0.20	25.19*** (3, 617)	0.11
Condition	0.09	1.78	0.076	[-.01, .19]	0.07		
Interaction	0.21	2.69	0.007	[.06, .36]	0.14		
Constant	2.77	78.24	<.001	[2.71, 2.84]			
Satisfaction With Life Scale							
Predictor	b	t	p	95% CI	β	F (df)	R <sup>2</sup>
SDE	0.65	5.92	<.001	[.43, .86]	0.31	35.76*** (3, 617)	0.15
Condition	0.13	1.23	0.221	[-.08, .33]	0.05		
Interaction	0.28	1.80	0.073	[-.03, .59]	0.09		
Constant	4.17	57.69	<.001	[4.02, 4.31]			
Meta-analyzed effect sizes							
Happiness	Unweighted r		Weighted r		p	95% CI	
Predictor							
SDE	0.22		0.19		<.001	[.13, .25]	
Condition	0.12		0.10		0.002	[.03, .16]	
Interaction	0.10		0.10		0.002	[.04, .16]	
Life satisfaction	Unweighted r		Weighted r		p	95% CI	
Predictor							
SDE	0.26		0.25		<.001	[.19, .31]	
Condition	0.13		0.08		0.003	[.02, .15]	
Interaction	0.11		0.09		0.005	[.02, .15]	

Note. SDE = self-deceptive enhancement. Condition: 1 = desirable, 0 = undesirable.

\*\*\*p < .001.



**Figure 2.** Self-reported happiness as a function of self-deceptive enhancement (SDE) and happiness desirability condition (Study 3).

interaction between dispositional and experimentally manipulated self-enhancement. A similar pattern of results was observed on the social-comparative life satisfaction item, although the effect of the experimental manipulation did not reach significance (Table 2).

### Discussion

Study 2 replicated and extended the results of Study 1 by showing that it was not only trait self-enhancement but also *situational* induced variation in self-enhancement motivation that strengthened participants' tendencies to judge themselves as happier than average.

As discussed earlier, individual differences in self-enhancement may predict SWB judgments either because self-enhancers overreport positive qualities or because dispositional self-enhancement genuinely promotes psychological well-being (Taylor & Brown, 1988). The latter "positive illusions view," however, has difficulty explaining the effects of our situational manipulation, which showed that portraying happiness in desirable terms motivated people to report unrealistically positive levels of SWB (but not other characteristics) relative to others.

### Study 3a

Studies 1 and 2 asked participants to rate their SWB relative to others. This raises the question of whether self-enhancement might similarly distort judgments on standard self-report measures. Although self-report scales are empirically validated (e.g., Pavot & Diener, 1993) and have been shown to correlate with meaningful outcomes (Lyubomirsky, King, & Diener, 2005), self-enhancement motivation could still account for unexplained variance in these measures. Study 3a and 3b examined the extent to which both trait and state self-enhancement motivation affected self-reports on two widely used measures of SWB.

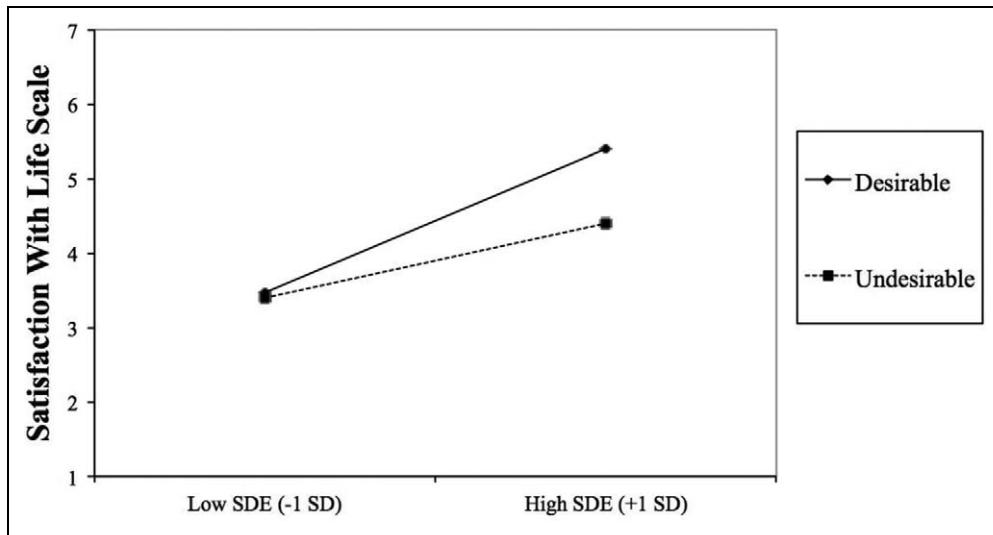
### Method

We recruited 128 American participants from Amazon's Mechanical Turk (53.9% female, mean age = 35.7). The procedure for Study 3a was identical to that of Study 2, except that instead of completing the better-than-average effect scale following the experimental manipulation, participants completed two standard self-report measures of SWB: (1) A single-item measure of happiness used in a multitude of articles utilizing the World Values Surveys (2006; *Taking all things together, would you say that you are:* 1 = Not at all happy, 2 = Not very happy, 3 = Rather happy, 4 = Very happy); and (2) the Satisfaction With Life Scale, a face-valid 5-item scale that is one of the most widely used and accepted measures of global life satisfaction (Pavot & Diener, 1993).

### Results

Participants in the *desirable* condition ( $M = 5.27$ ,  $SD = 1.74$ , 95% CI: [4.83, 5.70]) again found the research summary to be more convincing than did participants in the *undesirable* condition,  $M = 3.92$ ,  $SD = 2.09$ , 95% CI: [3.39, 4.45];  $t(125) = -3.95$ ,  $p < .001$ ,  $d = .71$ . However, the manipulation still led to the intended difference in the subjective importance of happiness—desirable:  $M = 5.94$ ,  $SD = 1.35$ , 95% CI: [5.02, 5.64]; undesirable:  $M = 5.33$ ,  $SD = 1.23$ ; 95% CI: [5.60, 6.28];  $t(124) = -2.62$ ,  $p = .010$ ,  $d = .47$ .

We next performed separate regression analyses with self-reported happiness and Satisfaction With Life Scale scores as the dependent variables. In both regressions, SDE, experimental condition (0 = *undesirable* and 1 = *desirable*), and their interaction terms were included as predictor variables. Results are presented in Table 2 and shown graphically in Figures 2 and 3. For the single-item happiness measure, the main effects of SDE and experimental condition were in the expected directions but did not reach statistical significance. However, we observed a significant interaction between these variables.



**Figure 3.** Satisfaction With Life Scale scores as a function of self-deceptive enhancement (SDE) and happiness desirability condition (Study 3).

We investigated this interaction with simple slopes analyses and found that the relationship between SDE and happiness judgments was stronger in the desirable condition ( $b = .48$ ,  $t = 4.89$ ,  $p < .001$ ) than in the undesirable condition ( $b = .17$ ,  $t = 1.58$ ,  $p = .117$ ).

On the Satisfaction With Life Scale, both dispositional self-enhancement and experimental condition significantly predicted reports of greater life satisfaction. A significant interaction between these predictors also revealed that, as was found with the happiness measure, life satisfaction judgments were more strongly related to dispositional self-enhancement in the desirable condition ( $b = 1.09$ ,  $t = 6.01$ ,  $p < .001$ ) than in the undesirable condition ( $b = .56$ ,  $t = 2.90$ ,  $p = .004$ ).

### Study 3b

The interaction effects observed in Study 3a showed that reports of SWB by individuals prone to self-enhancement were more influenced by the desirability of happiness than those by individuals not prone to self-enhancement. However, because Study 2 revealed only main effects on comparative SWB judgments, we replicated Study 3a with a different sample and improved statistical power in Study 3b.

Participants were 626 visitors to YourMorals.org (48.2% female, mean age = 35.3) who completed a study with an identical procedure to that of Study 3a. Results were generally consistent with those of Study 3a (see Table 2). Self-reported happiness showed a significant main effect of SDE and a marginal main effect of experimental condition. Replicating the interaction pattern of Study 3a, we found that the relationship between SDE and self-reported happiness was again stronger in the desirable condition ( $b = .41$ ,  $t = 7.51$ ,  $p < .001$ ) than in the undesirable condition ( $b = .21$ ,  $t = 3.81$ ,  $p < .001$ ). Similarly, self-reported life satisfaction was predicted by SDE, and although the condition main effect was not significant, a marginally significant interaction pattern revealed again that

dispositional self-enhancement more strongly predicted life satisfaction judgments when happiness was portrayed as desirable ( $b = .93$ ,  $t = 3.78$ ,  $p < .001$ ) than when it was portrayed as undesirable ( $b = .65$ ,  $t = 5.92$ ,  $p < .001$ ).

### Meta-Analysis

We meta-analyzed the results of Studies 2, 3a, and 3b to determine the robustness of the various main and interaction effects. As shown in Table 2, both meta-analyzed main effects on the happiness measure were significantly positive (SDE:  $r_{\text{weighted}} = .19$ ,  $p < .001$ ; experimental condition:  $r_{\text{weighted}} = .10$ ,  $p = .002$ ), as was the interaction term ( $r_{\text{weighted}} = .10$ ,  $p = .002$ ). Identical results were found on the Satisfaction With Life Scale (SDE:  $r_{\text{weighted}} = .25$ ,  $p < .001$ ; experimental condition:  $r_{\text{weighted}} = .08$ ,  $p = .003$ ; interaction:  $r_{\text{weighted}} = .09$ ,  $p = .005$ ).

### Discussion

The results of Studies 3a and 3b are notable for demonstrating that self-enhancement concerns influence not only comparative SWB judgments (Study 2) but also responses on two of the most relied upon self-report measures in the SWB literature. Interestingly, Study 2 showed only main effects for SDE and experimental condition, but Studies 3a and 3b showed an interaction pattern in which high self-enhancers were more sensitive to our happiness desirability manipulation than were low self-enhancers. Both of these effects represent challenges to the validity of self-reported SWB, and importantly, our meta-analysis confirmed that both were reflected in our data at similarly modest sizes (weighted  $r$ 's of .08 to .10).

### General Discussion

The current research provides evidence that, just as with driving skills, intelligence, and professorial proficiency, people's

reports of their personal well-being can be contaminated by their desire to possess traits and abilities that flatter the self. The clearest effect in our studies was that individuals high in dispositional self-enhancement reported greater SWB than individuals with weaker self-enhancing tendencies. SDE scores were the most consistent predictor of self-reported SWB (significant in all but one of the reported analyses) and had the largest effect size in the meta-analysis (see Table 2).

Still, it is possible that dispositional self-enhancement might predict higher reports of SWB not by directly affecting self-reports, but by promoting genuine happiness and life satisfaction, and there is evidence that it does (e.g., Taylor & Brown, 1988; Taylor et al., 2003a, 2003b). This “positive illusions” view alone, however, has trouble explaining the contextual influence of our experimental manipulations, in that the positive illusions view predicts that it is the habitual tendency to self-enhance over time that promotes behaviors that in turn promote genuine psychological well-being. Our success in altering SWB by experimental manipulation is important because it precludes this possibility of habitual self-enhancement over time, suggesting that the *report* of SWB itself can be affected by self-enhancing motivations.

The work of disentangling the relation between positive illusions and SWB is certainly not over. For example, a determined critic could still argue that the interaction patterns found in Studies 3a and 3b are evidence that dispositional self-enhancers maintain genuine well-being in part by taking particular advantage of situations that afford the opportunity for self-flattery (by claiming desirable traits and rejecting undesirable ones). It is important to remember, of course, that the two accounts are not mutually exclusive and that the most parsimonious explanation of the current findings is that, whether they flow from dispositional tendencies or situational affordances, self-enhancing motivations have the potential to inflate self-reports of happiness and life satisfaction.

### Implications for SWB Research

Our data have particular implications for programs of research that rely on self-reports to compare SWB differences between preexisting, nonrandomized groups like nations (Veenhoven & Ehrhardt, 1995), political groups (Brooks, 2008), and cultures (Diener & Suh, 2000). It is plausible that any two groups hypothesized to differ in happiness levels might similarly differ in self-enhancing tendencies (Kim et al., 2012), potentially complicating our understanding of group-level happiness differences. This possibility is particularly noteworthy in light of suggestions that policy decisions be directly informed by national happiness indexes (Brooks, 2008; Diener, 2000, 2006). In our studies, we found meta-analyzed effect sizes for individual differences (happiness:  $r = .19$ ; life satisfaction:  $r = .25$ ) and situational variations (ranging from  $r = .08$  to  $r = .10$ ) in self-enhancement motivation that were comparable to those of many variables of interest to gross national happiness researchers (e.g., gender:  $r = .04$ , employment status,  $r = .11$ , income:  $r = .17$ ; Okun, Stock, Haring, & Witter,

1984). Researchers and policy makers should recognize that differences in self-reported SWB of this magnitude may be explained partially, or even substantially, by state or trait differences in self-enhancing styles of self-assessment.

Although some happiness researchers have argued (following Taylor & Brown, 1988) that self-enhancing tendencies constitute a genuine component of SWB and thus should not be controlled for statistically (Diener et al., 1991; Kozma & Stones, 1988), many have also advocated that self-report should constitute only one component of any comprehensive assessment of individual or group-level SWB (Diener, 2000; Zou et al., 2013). We strongly support this recommendation and suggest that SWB researchers might look for useful approaches in the self-esteem literature, which has long used self-enhancement measures jointly with self-report scales, as well as indirect and implicit techniques (e.g., Jordan, Spencer, Zanna, Hoshina-Browne, & Correll, 2003; Walker & Schimmack, 2008) to identify and control for defensively motivated reports of self-esteem (Kernis, 2003).

### Coda

It makes perfect sense that if one wants to know how happy someone is, the most obvious thing to do is ask. Indeed, the absence of any objective validation criterion to evaluate genuine happiness leads quickly to philosophical musings about whether it is really possible to be “implicitly” or “defensively” happy, and if so, whether and how those states differ from “genuine” happiness. At the same time, however, it seems implausible that happiness and life satisfaction, given the value and importance most people invest in them, are immune from the self-aggrandizing distortions that have been shown to affect claims about myriad other personal qualities. Researchers routinely exercise caution when evaluating the meaning of various expressions of positive emotionality, with the knowledge that some are less secure (Schneider & Turkat, 1975), less predictive (Harker & Keltner, 2001), and less heartfelt than others (Ekman et al., 1990). As psychologists, economists, and policy makers become increasingly interested in measuring SWB, we advise similar caution when interpreting self-reports of happiness.

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### Notes

1. Across all studies, the basic pattern of results for the SDE subscale is similar if the impression management (IM) subscale is included as a control variable. We report results without controlling for IM to facilitate simpler interpretation of effect sizes.

2. In Studies 2 and 3a, no participants were removed for failing to follow instructions; in Study 3b, 86 participants were excluded for not following this instruction. This may result from differences in paid and volunteer samples.
3. Including convincingness ratings as a covariate did not change the patterns of results observed between SWB judgments, SDE, and experimental condition in Study 2, 3a, or 3b.

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## Author Biographies

**Sean P. Wojcik** is a doctoral candidate in the Department of Psychology and Social Behavior at the University of California, Irvine. His research investigates the influence of motivated reasoning processes on judgments about subjective well-being, politics, and morality.

**Peter H. Ditto** is a professor of Psychology and Social Behavior at the University of California, Irvine. His current research examines motivation and bias in judgment and decision making, especially in the political and moral domains.