

The mediators of experiential purchases: Determining the impact of psychological needs satisfaction and social comparison

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Once basic needs are satisfied, the relation between income and subjective well-being is small, and materialism leads to diminished well-being. This study attempts to determine: (1) whether experiential purchases, as opposed to materialistic purchases, are likely to increase well-being and (2) whether these increases are likely to be due to increased satisfaction of psychological needs and/or decreased social comparison. Participants indicated that experiential purchases represented money better spent, brought more happiness to themselves, and brought more happiness to others. Path models demonstrated that experiential purchases had an indirect effect on one's well-being through two independent paths: (1) increased relatedness, which then led to increased vitality, and (2) decreased social comparison. Discussion focuses on why vitality and social comparison affect well-being.

Keywords: well-being; happiness; consumption; materialism; experience

'Those who say money can't buy happiness just don't know where to shop.' Bo Derek

Introduction

For years, people have weighed the issue of the pursuit of money versus the pursuit of happiness. Does an increase in income lead to an increase in happiness, or are materialistic pursuits detrimental to an overall sense of well-being? Studies examining the link between income and happiness have identified some notable trends. While increased income has been shown to result in greater well-being, this effect is far more pronounced at lower income levels, where basic needs have not yet been met (Biswas-Diener & Diener, 2001). Additionally, income earned after satisfaction of basic needs has demonstrated a significant, but weak, correlation with increased well-being (Diener & Seligman, 2004; Howell & Howell, 2008). This curvilinear relationship between income and well-being suggests that the materialistic desires often found in contemporary society may not contribute to individuals' happiness. Indeed, a great amount of research has supported a negative relationship between materialistic desires and well-being (Belk, 1985; Kashdan & Breen, 2007; Kasser & Ryan, 1993, 1996; Richins, 1994), suggesting that centering material items in one's life may be damaging to well-being.

If increased income does not lead to corresponding increases in well-being, and if materialistic desires are

associated with decreased well-being, then are the hours spent in pursuit of monetary rewards futile, or is there a means by which discretionary income can be used to enhance well-being? While the pursuit of money for its own sake may not lead to happiness, it may be that *how* a person uses their money can have an impact on their overall level of well-being. Van Boven and Gilovich (2003) found that spending money on experiences may lead to greater well-being than the purchase of material possessions. It is therefore conceivable that money may vary in its ability to bring about happiness depending on how it is spent. The present study explores how a person's discretionary income is spent, as opposed to how much income a person has. We examine the types of purchasing behaviors that may lead to greater well-being through the satisfaction of autonomy, competence, and relatedness needs, vitality, decreased social comparison and envy. Thus, we seek to determine if spending choices are related to well-being, and whether the mediators of this relation involve increased satisfaction of psychological needs and/or decreased social comparison.

Needs satisfaction and well-being

Basic needs and SWB

Previous assessments of individual well-being have focused primarily on self-evaluative measures of mood, positive and negative affect, life satisfaction, and quality of life. Such evaluations have come to be

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known as subjective well-being (SWB; Diener, Suh, Lucas, & Smith, 1999; Ryan & Deci, 2001). The leveling off of SWB above a certain income suggests that the benefits of increased income are most prevalent at lower income levels, when basic human needs are difficult to satisfy (Diener & Diener, 1995; Diener & Oishi, 2000; Howell, Howell, & Schwabe, 2006; Howell & Howell, 2008; Schyns, 2003; Veenhoven, 1991). Biswas-Diener and Diener (2001) found a strong and significant correlation between income and well-being among impoverished residents of Calcutta, India. The correlation remained strong after self, family, and friendship satisfaction were controlled, suggesting that basic need satisfaction is of primary importance to well-being at lower levels of income. This and other studies offer strong support for basic need satisfaction as the mediator of the income-SWB relationship at the individual level as well as the national level.

Psychological need satisfaction and SWB

If a person has their basic needs fulfilled, it follows that increases in income, which might only directly affect basic need-fulfillment, will not produce significant increases in well-being *unless* the income is being used to meet higher-order psychological needs. In fact, prosperity should allow individuals to focus their attention on satisfying high-order psychological needs (Tatzel, 2003). However, the negative association between materialism and well-being has been explained by demonstrating that financial aspirations, or focusing on possession of material goods, stem primarily from extrinsic motivation, and thus lead to behaviors or goal pursuits which diminish the satisfaction of high-order psychological needs (e.g., autonomy or actualization; see Fromm (1976), Kasser and Ryan (1993). Self-Determination Theory (SDT) predicts that psychological well-being occurs when three psychological needs are met. Those needs are: autonomy, competence, and relatedness (Deci & Ryan, 1985, 1991; Ryan, 1995; Ryan & Deci, 2000).

Autonomy reflects a person's need to view his or her actions as self-determined: that is, motivated by an internal locus of causality (deCharms, 1968). A number of studies have linked satisfaction of autonomy needs to favorable outcomes such as higher well-being and greater intrinsic motivation (Deci, Koestner, & Ryan, 1999; Sheldon & Kasser, 1998). Competence needs entail the sense that one has control over desired outcomes (self-efficacy), is optimistic about such outcomes, and feels competent to deliver them (Bandura, 1977). The facility, or competence, with which a person acts in order to achieve their goals is also significantly related to well-being. Satisfaction of competence needs has been linked to

improved self-esteem, health benefits, and psychological health (Carver & Scheier, 1990; White, 1963). Relatedness refers to the need for human beings to belong, to feel connected, and to be understood by others, and has been shown to be an integral part of human motivation and crucial to the experience of both psychological and physical well-being (Baumeister & Leary, 1995; Berscheid & Reis, 1998; Patrick, Knee, Canevello, & Lonsbary, 2007).

Experiential versus material purchases

Previous work has suggested a link between money and SWB when the money is invested in life experiences rather than material goods. Van Boven and Gilovich (2003) found that reflecting on a previous experiential purchase, as compared with a material purchase, led to significantly higher evaluations of the contribution of the purchase to the participant's current well-being. Follow-up studies confirmed this relation longitudinally, across demographic categories, and from a temporally distant perspective. Higher income participants were more likely to derive happiness from experiential purchases than lower income participants, who tended to derive more happiness from material purchases. This last finding of Van Boven and Gilovich's study supports our speculation that experiential purchases at higher incomes might satisfy psychological needs, just as material purchases appear to satisfy basic physiological needs at lower levels of income. Finally, Van Boven (2005) discusses possible mediators of the relationship between experiential purchases and greater well-being, many of which can be viewed in light of psychological need satisfaction. He suggests that experiences may provide a better source of conversation (improving social interaction and increasing relatedness) and may be less subject to social comparison than material products.

Current study

In the current study, we extend the work of Van Boven and Gilovich (2003) to examine *why* experiential purchases may lead to greater experienced well-being. As Van Boven and Gilovich demonstrate, we predict that participants will report higher levels of well-being resulting from experiential purchases, as compared to material purchases. Building off Van Boven's (2005) speculation, we test several possible mediators (i.e., relatedness, competence, autonomy, vitality, social comparison, and envy) of the relation between the type of purchase and well-being. The ultimate goal of this study is to build a path model to answer the question: 'Why do experiential purchases lead to greater happiness?'

Method

Participants

A total of 154 San Francisco State University (SFSU) students were recruited from the psychology department for participation and were compensated with extra credit. Participants included 115 females and 39 males with a mean age of 24.33 years ($SD = 5.50$). The sample was ethnically diverse, with 32.5% Caucasian, 22.7% Asian American, 14.9% Hispanic, 11.0% Multi-Racial, 3.9% African American, 0.7% South Asian/Indian Subcontinent, and 14.3% reporting as 'Other.' As would be expected of a student population, 50.3% of the sample reported an average household income of \$20,000 or less, though 17.2% of the sample reported a mean household income of greater than \$80,000. Also, as would be expected of a sample of full-time students and part-time adults, household income was positively associated with age. It is possible (even likely) that some participants may have interpreted the income question as household income (including parents' income) and others may have interpreted it as personal income. Regardless, this variance in income indicates a considerable range of financial security.

Procedure and measures

Participants were informed that they would be answering questions regarding how they use their money, and how those choices affect their overall level of well-being or happiness. Random assignment was used to place participants in either the experiential or material condition, such that some participants were instructed to write about a recent experiential purchase ($N = 75$) and others wrote about a recent material purchase ($N = 79$). Both groups were asked to reflect on a time within the last 3 months when they had used their money to acquire an experience or item (based on their condition; see instructions below) and were asked to write a short paragraph describing the purchase, as well as their feelings and the environmental cues surrounding the purchase. The only difference between the two groups was the instruction regarding the type of purchase to write about.

Participants in the experiential condition were given a survey with the following introduction:

There are many ways in which people can choose to utilize their money. One such way is by acquiring a life experience—an event or series of events that you personally encounter or live through (e.g., eating out, going to a concert, traveling, etc). When using money in this way, a person does not acquire a physical, tangible object that remains in their possession, but instead obtains only a memory of the experience or event. We call this an experiential purchase. We would like you to think about a recent time when you have used your money to pay for an experience or

event—made an experiential purchase. This purchase must meet the following conditions: (a) The money was spent with the intention of advancing your happiness or enjoyment in life; that is you spent your money with the intention of increasing your happiness or enjoyment in life (b) The costs were paid in full at the time or experience was acquired, or will be paid for within a month. Long-term investments requiring extended payments should be excluded.

Participants were then instructed to write about a time they had used their money to acquire an experience.

Participants in the material purchase condition were given a questionnaire with the following introduction:

There are many ways in which people can choose to utilize their money. One such way is by acquiring material goods or products. A material good can be defined as a tangible, physical object that you obtain and keep in your possession for an unspecified period of time (i.e., jewelry, clothing, stereo equipment). We call this a monetary purchase. We would like you to think about a recent time (within the last 3 months) when you have used your money to buy a material good—made a monetary purchase.

Participants in the material condition were given the same parameters as those in the experiential condition (i.e., the money was spent with the intention of advancing their happiness and the costs were paid in full or will be paid for within a month), but were instructed to reflect on and write about a time when they had used their money to acquire a material item.

Measuring psychological need satisfaction

Next, participants answered 26 questions designed to measure the degree to which the purchase satisfied their psychological needs. Each item began with the phrase: 'Specifically, when I reflect on this purchase...' and was anchored between 1 (strongly disagree) and 7 (strongly agree). Three items were used to measure autonomy (see Table 1 for descriptive statistics and internal consistency on this measure), and an example item was: 'I feel the decision to make this purchase was my own.' Five items were used to measure competence, and an example item was: 'I feel this purchase allowed me to meet one of my goals.' Five items were used to measure relatedness, and an example item was: 'I made new friends or strengthened existing friendships because of this purchase.' Five items were used to measure vitality, and an example item was: 'I feel this purchase made me feel more alive.' Two additional constructs that we believed may mediate the relations between purchase type and well-being (social comparison and envy) were also examined. Two items were used to measure social comparison (see Table 1 for descriptive statistics and internal consistency), and an example item was: 'I am

Table 1. Descriptive statistics, reliability coefficients, and inter-correlations of scale scores.

Construct	Mean (SD)	α	1	2	3	4	5	6	7	8	9
1. I am happy with the purchase	6.10 (1.34)	–	–								
2. The money was well-spent	5.70 (1.61)	–	0.73**	–							
3. The purchase made me happier	5.62 (1.43)	–	0.74**	0.67**	–						
4. The purchase made others happier	4.47 (1.83)	–	0.15	0.33**	0.32**	–					
5. Autonomy	4.73 (1.37)	0.82	0.32**	0.23**	0.36**	0.06	–				
6. Competence	4.23 (1.24)	0.74	0.21**	0.32**	0.31**	0.09	0.43**	–			
7. Relatedness	4.45 (1.27)	0.77	0.22**	0.33**	0.37**	0.54**	0.27**	0.42**	–		
8. Vitality	5.51 (1.14)	0.89	0.44**	0.37**	0.58**	0.17*	0.52**	0.41**	0.46**	–	
9. Social comparison	2.81 (1.44)	0.61	–0.27**	–0.32**	–0.26**	–0.25**	0.06	0.03	–0.25**	–0.18*	–
10. Envy	3.75 (1.46)	0.56	0.09	0.15	0.17*	0.09	0.35**	0.40**	0.18*	0.31**	0.13

Notes: $N = 154$.

* $p < 0.05$; ** $p < 0.01$.

concerned about how others will perceive this purchase.’ Two items were used to measure envy, and an example item was: ‘I feel that others may be envious of this purchase.’

Measuring purchase-related well-being

Next, participants answered four questions designed to measure whether the purchase increased their own or others’ satisfaction or happiness. Mirroring the format for the psychological need satisfaction items, each item began with the phrase: ‘Specifically, when I reflect on this purchase...’ and was anchored between 1 (strongly disagree) and 7 (strongly agree). Specifically, participants rated their happiness with the purchase (‘I am happy with the purchase I made’), their satisfaction with the purchase (‘This money was well-spent’), if the purchase had made them happier (‘The purchase has made me happier’), and if the purchase had made others in their life happier (‘The purchase has made others happier’).

Measuring covariates

Participants in each condition self-coded their purchases into one of several categories. Participants then stated how much money they spent on the purchase, when they made the purchase, who was with them, and what they were doing just prior to the purchase.

The participants finally answered demographic questions.

Manipulation check

We suspect that people, at one time or another, make purchases with the intention of increasing their well-being and find the purchase does not make them happier; this would be a negative purchase decision. To ensure that our manipulation did not cause the participants in the experiential condition to reflect only on positive purchase decisions we counted how many participants reflected on negative or neutral purchase decisions in the two conditions. We defined a negative purchase decision as one in which the participant responded below the midpoint (3 or lower) on any of the following statements: ‘I am happy with the purchase I made,’ ‘I feel this money was well spent,’ or ‘the purchase has made me happier.’ We compared the frequency of negative purchase decisions with the number neutral responses (i.e., a 4 on at least one of the three questions) and positive purchase decisions (i.e., at least a 5 on all three purchase questions). There were 21 participants (13.6%) who reflected on a negative purchase decision (11 negative experiential purchases and 10 negative materialistic purchases). There were 24 (15.6%) participants who reflected on a neutral purchase decision (5 neutral experiential purchases and 19 neutral materialistic purchases). Finally, there were 109 (70.8%) participants who reflected on a positive

Table 2. Descriptive statistics of expense and well-being for different purchase categories controlling for and purchase cost.

		Experiential condition				
		How much did you spend on the purchase? ^a	I am happy with the purchase I made	I feel this money was well spent	The purchase has made me happier	The purchase made others happier
Test of difference within condition		$\chi^2(74) = 18.13, p = 0.001$	$F(4, 68) = 0.57, p = 0.68$	$F(4, 68) = 0.43, p = 0.79$	$F(4, 68) = 0.27, p = 0.90$	$F(4, 68) = 1.81, p = 0.14$
Purchase type	Percent					
Beauty spas	3	\$57.00	7.00	7.00	6.51	2.54
A dining experience	24	\$27.50	6.23	6.19	5.68	5.58
Fees and admissions	39	\$61.50	6.22	5.99	5.98	5.28
Travel	17	\$400.00	5.69	5.68	5.77	5.61
Other	17	\$92.00	6.13	5.76	5.96	4.87
		Material condition				
Test of difference within condition		$\chi^2(78) = 10.86, p = 0.028$	$F(4, 73) = 0.58, p = 0.67$	$F(4, 73) = 0.50, p = 0.74$	$F(4, 73) = 0.40, p = 0.81$	$F(4, 73) = 1.77, p = 0.15$
Purchase type	Percent					
Beauty products	4	\$20.00	5.55	4.87	5.21	3.57
Books and CDs	8	\$21.50	6.06	5.38	4.72	4.08
Clothing and jewelry	54	\$70.00	6.05	5.30	5.33	3.27
TV, Stereo, Computer	15	\$235.00	6.52	6.05	5.70	4.14
Other	19	\$130.00	5.55	5.43	5.43	4.42

Notes: We examined mean differences within each condition controlling for the amount of money spent on the purchase.

^aWe report the median amount spent on each purchase category and test for median differences within the conditions.

purchase decision (59 positive experiential purchases and 50 positive materialistic purchases).

Results

Correlations among measures and predicting well-being

By examining the correlations between the measures of well-being and the psychological need satisfaction experienced from these purchases (again see Table 1) it was demonstrated that relations between all three psychological needs were positively correlated with one's own well-being due to the purchase. However, only relatedness satisfaction was significantly correlated with others' well-being due to the purchase. Vitality was also strongly correlated with each well-being construct concerning one's own well-being and moderately correlated with purchases that promote others' well-being. Social comparison was negatively correlated with all four measures of well-being due to the purchase. However, envy was only correlated (positively) with one well-being outcome ('the purchase has made me happier').

Well-being differences by purchase type

The major goal of this study was to determine how monetary decisions affect SWB. We began by examining whether different purchase choices within each condition (i.e., experiential and material) affected

well-being (see Table 2). First, within both conditions, some purchase choices were more frequent. Within the experiential condition, participants were more likely to use their discretionary income on fees and admissions (39%), dining experiences (24%), or to travel (17%). Within the material condition, participants were more likely to use their discretionary income to buy clothing or jewelry (54%) or a TV, stereo, or computer (15%). Second, even though there was no significant difference in the amount spent between the two conditions ($Mdn = \$76.50$ for the experiential condition, $Mdn = \$70.00$ for the material condition; $p = 0.81$) there were significant differences in the amount spent within each condition (see Table 2). Traveling was the most expensive purchase ($Mdn = \$400.00$) within the experiential condition and buying a TV, stereo or computer was the most expensive purchase ($Mdn = \$235.00$) within the material condition. Still, the amount spent within each condition was not associated with different reports of happiness or satisfaction with the purchase or different reports of increased happiness for the self or others due to the purchase.

Well-being differences by condition

Next, we examined the mean differences between the experiential and materialistic conditions for average well-being and need satisfaction due to the purchase. To control for possible covariates, we examined mean

differences between conditions controlling for household income and the cost of the purchase: there was no significant difference between the two groups on household income ($t(149) = 0.34, p = 0.73$) or on how much they spent on their purchase ($t(152) = 0.99, p = 0.33$). Table 3 reports the adjusted means and effect sizes. When examining well-being due to different purchase decisions, participants in the experiential condition reported greater well-being, on average, due to their purchase than did participants in the material condition. Specifically, participants indicated that experiential purchases represented money better spent, $F(1, 144) = 5.56, p = 0.020$, brought more happiness to themselves $F(1, 144) = 5.22, p = 0.044$, and more happiness to others, $F(1, 144) = 30.35, p < 0.001$.

We also anticipated that experiential purchases would result in greater satisfaction of psychological needs than material purchases. To test this hypothesis, we examined the adjusted mean differences between experiential and materialistic purchases for psychological need satisfaction, vitality, social comparison, and envy (see Table 3 for adjusted means). Compared to material purchases, experiential purchases led to greater satisfaction of the need for relatedness $F(1, 144) = 47.22, p < 0.001$, produced a greater sense of vitality, $F(1, 144) = 4.81, p = 0.030$, and were less subject to social comparison, $F(1, 144) = 11.34, p = 0.001$.

Building path models to determine how experiential purchases increase well-being

The ultimate goal of this study was to answer the question: ‘Why do experiential purchases lead to greater happiness?’ To answer this question, we

specified several path models (which were tested using Amos Version 17.0). We used path analysis techniques because these procedures can determine direct and indirect (i.e., mediational) effects simultaneously with multiple predictors and outcomes. We followed the suggested guidelines and recommendations of Stage et al. for reporting results of path models (see Stage, Carter, and Nora (2004), for a detailed description of when and how social scientists use path models). We determined the fit of the path model by examining different goodness-of fit indices (see Hu and Bentler (1999), for a good review of these indices). Specifically, we examined: (1) chi-square statistic (Hooper, Coughlan, & Mullen, 2008, argue that the chi-square statistic is a reasonable measure of fit when the number of cases is between 75 and 200), which demonstrates good fit when the chi-square is not significant; (2) Normed Fit Index (NFI), which demonstrates good fit when the NFI value is above 0.95 (Hooper, Coughlan, & Mullen, 2008); (3) Tucker Lewis Index (TLI) which has similar interpretations as the NFI; and (4) the root mean square error of approximation (RMSEA) which demonstrates good fit when the RMSEA value is below 0.05, although less than 0.08 is acceptable.

Most importantly, Stage et al. (2004) argue that ‘theoretical knowledge on the part of the researcher is critical to the successful application of path analysis’ (p. 6). To follow this recommendation, we proposed a theoretical model (see Figure 1) based on Self-Determination Theory (which predicts that vitality is a direct result of relatedness needs satisfaction; Ryan and Deci (2001, 2008)) and Van Boven’s (2005) suggestion that the ‘hedonic superiority of

Table 3. Comparisons of groups for well-being and psychological need satisfaction controlling for household income and purchase cost.

Evaluation	Condition		Partial Eta Squared
	Experiential	Material	
Well-being from purchase			
Happy with the purchase I made	6.14	5.96	0.005
Feel this money was well-spent	5.99	5.35	0.037*
The purchase has made me happier	5.87	5.32	0.035*
The purchase made others happier	5.24	3.71	0.174**
Possible mediators			
Relatedness	5.11	3.83	0.247**
Autonomy	4.64	4.86	0.006
Competence	4.22	4.19	0.000
Vitality	5.78	5.36	0.032*
Social comparison	2.42	3.21	0.073**
Envy	3.76	3.82	0.000

Notes: $N = 154$. Means adjusted for covariates at the following values: Household income = \$32,267; purchase price = \$475.39. Because there was no significant difference between the two groups on household income ($t(149) = 0.34, p = 0.73$) or how much they spent on their purchase ($t(152) = 0.99, p = 0.33$), the values refer to the averages for household income and purchase price across conditions, respectively.

* $p < 0.05$; ** $p < 0.01$.

experiential over material purchases is multiply determined' (p. 137). Van Boven predicted that experiential purchases should cultivate stronger social interactions (e.g., relatedness satisfaction) while materialistic purchases should be more affected by disadvantageous social comparisons. Thus, our theoretical model includes a single exogenous variable (experiential purchases, which dummy codes purchase type as 1=experiential purchase and 0=materialistic purchase), the three significant mediating variables from Table 3 (relatedness, vitality, and social comparison), and a single outcome (well-being due to the purchase, which was 'I feel the money was well-spent' in model 1, 'the purchase has made me happier' in model 2, and 'the purchase has made others happier' in model 3).

Developing the model

Our model specification began by testing two different simple mediation models. The goal of these models was to determine the likelihood that relatedness was the mediator of the experiential purchase–vitality relation

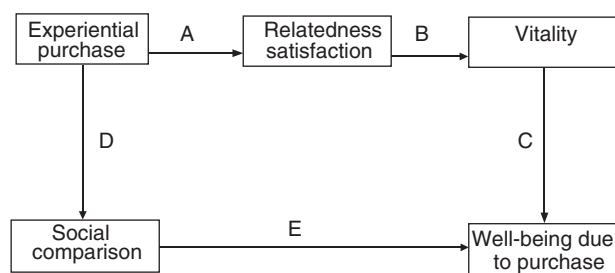


Figure 1. We propose a theoretical model based on Self-Determination Theory (see Ryan & Deci, 2001, 2008) and Van Boven's (2005) prediction that experiential purchases should cultivate stronger social interactions (path A) and materialistic purchases should be more affected by disadvantageous social comparisons (path D). It is expected that increased relatedness (path B), through increased vitality (path C), and decreased social comparison (path E) should increase well-being.

(as is predicted by Self-Determination Theory and psychological need theory) as opposed to the likelihood that vitality was the mediator of the experiential purchase–relatedness relation. We confirmed that the best fitting model was from experiential purchases through increased relatedness to increased vitality ($\chi^2_{(1)}=0.59, p=0.44$). When we tested a model with vitality as the mediator and relatedness as the outcome the model did not fit the data ($\chi^2_{(1)}=41.90, p < 0.001$). This finding suggests that the link between experiential purchases and vitality is mediated by increased relatedness (supporting Self-Determination Theory).

Our next goal was to test Van Boven's hypothesis that the effect of purchase decisions on well-being is multiply determined, specifically, that social comparison has a direct effect on well-being. First, we examined if social comparison significantly predicted vitality when controlling for relatedness. When we controlled for relatedness there was no significant association ($p=0.32$) between social comparison and vitality. We also examined the model fit when social comparison was predicted to only have an indirect effect (through relatedness or vitality) on well-being, however, the best fitting model demonstrated that social comparison had a direct effect on well-being. Based on the results of the two previous procedures, we found support for our theoretical model (again see Figure 1), which predicted that the increased well-being resulting from experiential purchases proceeds through two independent mechanisms: (1) through increased relatedness, which results in increased vitality and (2) through decreased social comparison.

Testing the model

We report the model fit statistics and the path coefficients for each model in Table 4. In the first model ('I feel the money was well-spent'), the indices of model fit demonstrated acceptable goodness-of-fit ($\chi^2_{(5)}=8.11, p=0.15$; NFI=0.94; TLI=0.95;

Table 4. Testing three path models to predict how purchase decision may affect well-being.

Well-being outcome	Goodness of Fit indices					Standardized paths					R^2
	$\chi^2_{(df)}$	p	NFI	TLI	RMSEA	Path A	Path B	Path C	Path D	Path E	Variance explained in outcome
<i>Model</i>											
I feel the money was well-spent	8.11 (5)	0.15	0.94	0.95	0.06	0.51*	0.46*	0.33*	-0.26*	-0.26*	0.19
The purchase has made me happier	6.41 (5)	0.27	0.96	0.98	0.04	0.51*	0.46*	0.56*	-0.26*	-0.16*	0.34
The purchase has made others happier	55.33 (5)	< 0.01	0.66	0.34	0.26	0.51*	0.46*	0.13	-0.26*	-0.23*	0.07

Notes: Because the models only differ in the outcome variable. Path's A, B, and D have the same coefficients in all models. Unique paths for each model in bold. The reason for the poor fit in Model 3 (others happiness) was that we could not constraint the path from relatedness to others happiness to be 0.00 and we could not constrain the path from experiential purchases to others happiness to be 0.00.

RMSEA = 0.06). Experiential purchases represented money better spent because of increased vitality and decreased social comparison. The path from vitality to 'I feel the money was well-spent' was positive and significant (path C; $\beta = 0.33$, $p < 0.001$) and the path from social comparison to 'I feel the money was well-spent' was negative and significant (path E; $\beta = -0.26$, $p < 0.001$). In the second model ('the purchase has made me happier'), the indices of model fit demonstrated excellent goodness-of-fit ($\chi^2_{(5)} = 6.41$, $p = 0.27$; NFI = 0.96; TLI = 0.98; RMSEA = 0.04). Experiential purchases again provided more happiness because of increased vitality and decreased social comparison, though increased vitality had a much stronger effect. The path from vitality to happiness due to the purchase was positive, strong, and significant (path C; $\beta = 0.56$, $p < 0.001$) and the path from social comparison to happiness due to the purchase was negative, smaller, and significant (path E; $\beta = -0.16$, $p = 0.014$). Thus, in these two models, experiential purchases have an indirect effect on one's well-being because of increased relatedness, which then leads to increased vitality, and decreased social comparison.

However, in the third model ('the purchase has made others happier'), the indices demonstrated that the model did not fit the data ($\chi^2_{(5)} = 55.33$, $p < 0.001$; NFI = 0.67; TLI = 0.37; RMSEA = 0.26). The reason for the poor fit was that we could not constrain the path from relatedness to others' happiness to be 0.00 and we could not constrain the path from experiential purchases to others' happiness to be 0.00. Thus, in this model both relatedness and the purchase type had a direct effect on others' happiness. Also, we were able to constrain the paths from vitality to others' happiness and from social comparison to others' happiness to be 0.00 without altering the fit statistics. Thus, this model is drastically different from the theoretical model. When we changed the model to add all significant paths and delete all non-significant paths, we finally obtained acceptable model fit ($\chi^2_{(5)} = 8.52$, $p = 0.13$; NFI = 0.95; TLI = 0.96; RMSEA = 0.07). In this new model, the path from relatedness to others' happiness was positive, strong, and significant ($\beta = 0.42$, $p < 0.001$) and the path from experiential purchases to others' happiness was positive and significant ($\beta = 0.22$, $p = 0.005$).

Evaluating the support for a comprehensive path model

Because the first two models ('I feel the money was well-spent' and 'the purchase has made me happier') had similar model fit statistics and standardized path coefficients, we attempted to build a final comprehensive model which included the purchase type, the three significant mediators, and both well-being outcomes.

We began with the same model that demonstrated good fit for both outcomes (see Figure 1) and added a final path from 'the purchase has made me happier' to 'I feel the money was well-spent.' In this model, we constrained the mediators (relatedness, vitality, and social comparison) such that none had direct effect on 'I feel the money was well-spent.' The indices of model fit demonstrated acceptable goodness-of-fit ($\chi^2_{(9)} = 14.82$, $p = 0.10$; NFI = 0.94; TLI = 0.96; RMSEA = 0.07), however, the results indicated that the path from social comparison to 'I feel the money was well-spent' was significant even when controlling for 'the purchase has made me happier.' The addition of this path substantially improved the model fit ($\chi^2_{(8)} = 8.42$, $p = 0.39$; NFI = 0.97; TLI = 0.99; RMSEA = 0.02). To ensure that the order of the two well-being outcomes was important, we reversed their order such that 'I feel the money was well-spent' predicted 'the purchase has made me happier'; however, this produced a model with unacceptable model fit ($\chi^2_{(8)} = 47.08$, $p < 0.001$; NFI = 0.84; TLI = 0.82; RMSEA = 0.18). Thus, we concluded that the final comprehensive model (see Figure 2) not only fit the data very well, but also provided the best possible explanation for why experiential purchases lead to greater well-being.

Discussion

For nearly 50 years, researchers have explored the correlation between income and SWB, only to find that the association remains relatively weak. However, research has shown that investing money in experiences, as opposed to material objects, may lead to increased well-being (Van Boven, 2005). Given the curvilinear relationship between income and SWB (see Howell & Howell, 2008), it may be that income earned after basic needs are satisfied can increase SWB *only when* it satisfies high-order psychological needs. The weak income-SWB relation at higher income levels may therefore be due to individuals using their discretionary income in ways that do not satisfy psychological needs. Thus, the main goal of this study was to determine if: (1) experiential purchases, as opposed to material purchases, increase well-being, and if so (2) what model provides the best explanation for this increase.

The results from this study corroborate and extend the findings by Van Boven and Gilovich (2003). Participants rated experiential purchases as more likely to: (1) be considered money well-spent, (2) make them happy, and (3) make others happy. As well, participants rated experiential purchases as more likely to: (1) increase their relatedness and vitality, and (2) decrease their social comparison concerning their purchase. Based on these results, and hypotheses based on Self-Determination Theory and Van Boven

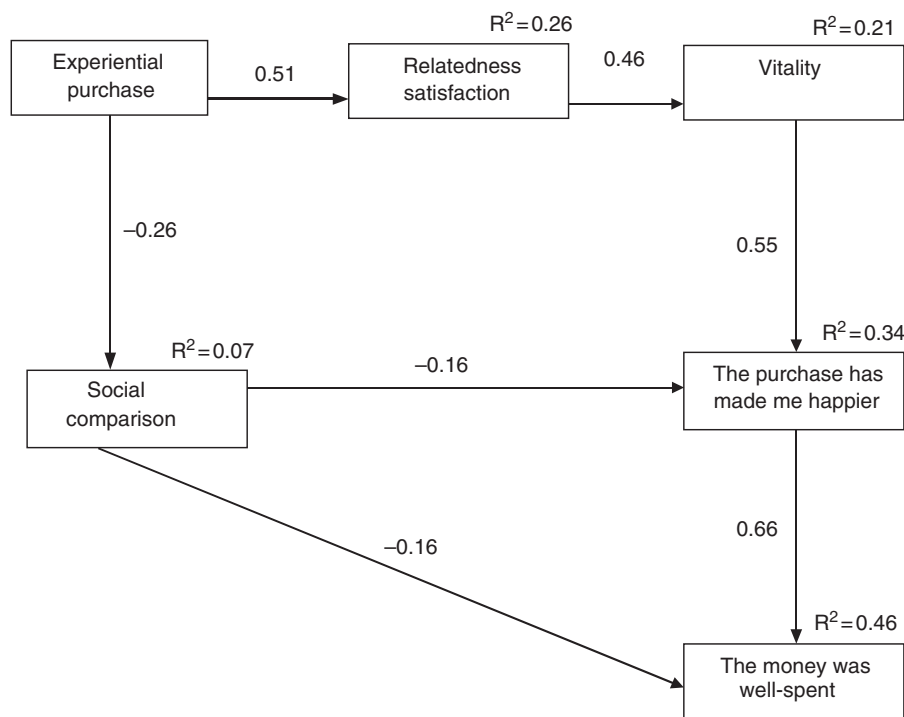


Figure 2. The final comprehensive path model which tested why experiential purchases lead to greater well-being. The indices of model fit demonstrated excellent goodness-of-fit ($\chi^2_{(8)} = 8.42, p = 0.39$; NFI = 0.97; TLI = 0.99; RMSEA = 0.02). All paths in the model are significant at $p < 0.05$.

(2005), we proposed a theoretical model that predicted experiential purchases would cultivate stronger social interactions than material purchases, and should be less affected by disadvantageous social comparisons. These models demonstrate that experiential purchases did not have a direct effect on considering the money was well-spent, nor on being happier because of the purchase. Experiential purchases, however, had an indirect effect on the purchaser's own well-being through two independent paths: (1) increased relatedness, which then lead to increased vitality (as predicted by Self-Determination Theory; see Ryan and Deci (2008)) and (2) decreased social comparison (as predicted by Van Boven (2005)). When others' happiness was the outcome, experiential purchases had a direct effect on others' well-being and an indirect effect through increased relatedness.

Do these results support an extension of basic need theory?

Basic need theory suggests that satisfaction of an individual's needs will progress in a hierarchical manner, beginning with the most basic needs such as food, clothing, and shelter, and moving sequentially on a path toward high-order psychological needs and, eventually, to self-actualization (Maslow, 1954). Howell and Howell (2008) suggested that fulfillment

of psychological needs, such as the autonomy, competence, and relatedness needs proposed by Self-Determination Theory, may be satisfied by additional income if the income is allocated properly. The current study attempts to extend basic need theory by testing the hypothesis that psychological need satisfaction is the critical link between purchasing decisions and SWB.

The results of this study provide preliminary support for this hypothesis and suggest a model by which discretionary income may be used to increase well-being. If individuals spend money in ways that satisfy current physical or psychological needs (i.e., basic needs at the poverty level or psychological needs at higher income levels), this increase in need satisfaction should lead to an increase in overall well-being. It should be noted that we operated under the assumption that the university students participating in this study were not struggling to fulfill basic physiological needs, but were operating at a higher stage of psychological need fulfillment and, thus, provided an adequate test of our extension of basic need theory. However, it is also possible that these results might generalize across income levels, even for individuals in extreme poverty (see Howell and Howell (2008), for this rationale). Thus, while we believe this study has taken a necessary first step in testing extensions of basic need theory, it raises several questions that must be addressed by future research.

Why do vitality and social comparison affect well-being?

Because experiences are likely to be shared with others and, thus, are likely to provide opportunities for strengthening relational bonds, the effect of experiential purchases increasing satisfaction of relatedness needs was not unexpected. Also, a sense of vitality (a positive state of energy and alertness that reflects organismic integration and actualization; Ryan and Frederick (1997)) is thought to be a direct result of autonomy, competence, and relatedness needs satisfaction (Ryan & Deci, 2001, 2008). Thus, increased vitality should be an indicator of increased need satisfaction. Our model supports the predictions made by Self-Determination Theory by showing that experiential purchases first lead to increased relatedness satisfaction, which results in increased vitality; this increase in vitality then predicts increased well-being. However, the strong effect of vitality on self well-being (especially self-happiness) may be explained by the age of our sample. In a meta-analysis examining personality change over the lifespan, Roberts, Walton, and Viechtbauer (2006) found that standardized mean-level changes for both social vitality and openness to experience were highest in the college years, and decreased as people aged. Thus, achieving a sense of vitality from experiences may have been of primary importance to our sample of young adults. We would expect that an older population would help determine whether vitality holds up as an important mediator across the lifespan.

Van Boven (2005) suggests that experiential purchases may be less subject to social comparison than material purchases. Our consistent finding that decreased social comparison mediated the relationship between experiential purchases and increased well-being may be due to a number of factors. Yet, we believe the most likely explanation is the effect experiential purchases may have on eudemonic well-being. Several researchers have noted a difference between hedonic well-being, which stresses pleasure or positive affect and life satisfaction, and eudemonic well-being, which refers to a self-actualizing type of happiness based on core values and holistic concerns (Ryan & Deci, 2001). It may be that experiential purchases, or using one's money to buy a life experience, result in a more virtuous, self-actualizing type of eudemonic well-being, even if sensory-oriented, shorter lived hedonic pleasures are also achieved. If so, then these models may indicate that experiences contribute more to eudemonic well-being than material purchases. This boost in eudemonic, or value based, well-being may be less subject to concerns about what others think about the purchase because, possibly, the experience comes from a 'deeper' sense of purpose and fulfillment than a material object.

Finally, experiential purchases were more likely than material purchases to lead to perceptions of increased well-being for others, both directly and via increased relatedness, not because of increased vitality or decreased social comparison. Though it is important to bear in mind that a purchase type (material vs. experiential) and spending target (self vs. other) are conceptually orthogonal, experiential purchases are, presumably, more likely than material purchases to involve other people, offering greater opportunities to form social bonds and create a sense of communal belonging. Research also suggests that spending money on others leads to greater happiness than spending money on oneself (Dunn, Aknin, & Norton, 2008). Material purchases, unless purchased as a gift, are most likely to be used and enjoyed by the person who purchased them. Thus, we conjecture that if experiential purchases involve money being spent on others as well as self, this may explain the increase in well-being experienced by self and others, especially through the recollection of shared experience with others.

Limitations

It should be noted that the methods employed in this study only allowed for retrospective accounts of the well-being attained from differing types of purchasing behaviors. While participants were instructed to recall a relatively recent purchase (within the past 3 months), it is conceivable that their recollections may have been affected by intuitive theories about the expected result of a purchase (i.e., attending a concert with a friend *must have* strengthened the friendship, whether it did in actuality or not). To alleviate this issue, future studies should randomly assign participants to spend money on either a material good or an experience (with methods similar to Dunn et al. (2008)), and to test for differences in overall psychological need satisfaction and well-being between the two groups after the purchase. Additionally, it should be noted that the specific mediators uncovered in these analyses may not be precisely replicated in future studies. For example, relatedness as a mediator between experiential purchases and resulting happiness from the purchases (through vitality) may not generalize to an older population, for reasons mentioned above. However, this study does offer preliminary support for increased psychological need satisfaction and decreased social comparison playing a crucial role in the attainment of greater well-being through prudent allocation of discretionary income.

A second limitation of the study is the relative-benefit design used in this study. For example, we find that those who reflected on an experiential purchase reported more agreement with the question 'this purchase has made me happier' ($M = 5.87$) than those

who reflected on a material purchase ($M=5.32$). However, the meaning of this difference in agreement is unclear. Future studies could clarify the nature of this difference by altering the items to be in question format (e.g., ‘compared to how you felt before this purchase, are you more or less happy because of this purchase today?’), and could provide a more meaningful scale (1 = I am much less happy today because of this purchase, 4 = I am neither more or less happy because of this purchase, 7 = I am much happier today because of this purchase).

Finally, the items used to measure the theorized mediators (i.e., psychological need satisfaction) and the absence of important constructs typically measured by models utilizing Self-Determination Theory (i.e., intrinsic vs. extrinsic motivation) limits our understanding of why specific purchase types may lead to altered levels of well-being. First, we suggest that the non-significant differences between purchase types on the satisfaction of the needs for autonomy and competence should be interpreted with some caution. It is important to emphasize that these null effects were found using relatively few items to measure autonomy and competence and the measures were developed specifically for the purpose of this study. These results should be replicated before we conclude that the increased well-being due to experiential purchases is not a function of autonomy and competence. Second, some experiences may be purchased because of extrinsic motives (e.g., beauty spas) and some material items may be purchased because of intrinsic motives (e.g., books). Thus, we suggest that future research include items to measure the motivations behind the purchase. Though we believe that experiential purchases may, on average, be purchased because of intrinsic motives (material purchases did result in higher levels of social comparison) examining the motives behind each purchase is likely to clarify why specific purchases are made, and why specific purchases lead to lower well-being.

Conclusions

People continue to believe that more money and more possessions will make them happy, even though 35 years of well-being research has shown that this is generally not the case. Perhaps this belief has held because money is making some people happy some of the time, at least when they spend it on life experiences. Thus, while absolute money may not be strongly related to SWB, the small relation may be due to other factors suppressing the relation. For example, Kahneman et al. (2006) found that wealthier individuals spent more time working and engaging in compulsory non-work activities, and spent less of their time enjoying passive leisure. They concluded that

the ‘activities that higher-income individuals spend relatively more of their time engaged in are associated with no greater happiness, on average, but with slightly higher tension and stress’ (p. 1910). Thus, time at work or time lost with others may suppress an otherwise strong income-SWB relation. Therefore, even though several studies have focused on the single correlation between income and SWB, more elaborate models (controlling for spending choices and measuring the degree of psychological need satisfaction attained from those spending choices) may demonstrate that one’s income can lead to increased well-being if the income is used in certain ways. Regardless of what the possible suppressor may be, it is imperative that well-being researchers attempt to determine if purchasing choices play a role in life satisfaction and happiness before concluding that people’s intuition (that more money will make them happier) is incorrect.

References

- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.
- Baumeister, R.F., & Leary, M.R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, *117*, 497–529.
- Belk, R.W. (1985). Materialism: Trait aspects of living in the material world. *Journal of Consumer Research*, *12*(December), 265–280.
- Berscheid, E., & Reis, H.T. (1998). Interpersonal attraction and close relationships. *Handbook of social psychology* (4th ed.). New York: Random House.
- Biswas-Diener, R., & Diener, E. (2001). Making the best of a bad situation: Satisfaction in the slums of Calcutta. *Social Indicators Research*, *55*, 329–352.
- Carver, C., & Scheier, M. (1990). Origins and function of positive and negative affect: A control-process view. *Psychological Review*, *97*, 19–35.
- deCharms, R. (1968). *Personal causation*. New York: Academic Press.
- Deci, E.L., Koestner, R., & Ryan, R.M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, *125*, 627–668.
- Deci, E., & Ryan, R. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Deci, E.L., & Ryan, R.M. (1991). A motivational approach to self: Integration in personality. In R. Dienstbier (Ed.), *Nebraska symposium on motivation: Vol. 38. Perspectives on motivation* (pp. 237–288). Lincoln: University of Nebraska Press.
- Diener, E., & Diener, C. (1995). The wealth of nations revisited: Income and quality of life. *Social Indicators Research*, *36*, 275–286.
- Diener, E., & Oishi, S. (2000). Money and happiness: Income and subjective well-being across nations. In E. Diener & E.M. Suh (Eds.), *Culture and subjective well-being* (pp. 185–218). Cambridge, MA: MIT Press.

- Diener, E., & Seligman, M.E.P. (2004). Beyond money. Toward an economy of well-being. *Psychological Science in the Public Interest*, 5(1), 1–31.
- Diener, E., Suh, E.M., Lucas, R.E., & Smith, H.L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 2, 276–302.
- Dunn, E.W., Aknin, L., & Norton, M.I. (2008). Spending money on others promotes happiness. *Science*, 319, 1687–1688.
- Fromm, E. (1976). *To have or to be?* London: Sphere Books.
- Hooper, D., Coughlan, J., & Mullen, M.R. (2008). Structural equation modelling: Guidelines for determining model fit. *Journal of Business Research Methods*, 6, 53–60.
- Howell, C.J., Howell, R.T., & Schwabe, K.A. (2006). Is income related to happiness for the materially deprived? Examining the association between wealth and life satisfaction among indigenous Malaysian farmers. *Social Indicators Research*, 76, 499–524.
- Howell, R.T., & Howell, C.J. (2008). The relation of economic status to subjective well-being in developing countries: A meta-analysis. *Psychological Bulletin*, 134(4), 536–560.
- Hu, L., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1–55.
- Kahneman, D., Krueger, A.B., Schkade, D., Schwarz, N., & Stone, A.A. (2006). Would you be happier if you were richer? A focusing illusion. *Science*, 312, 1908–1910.
- Kashdan, T.B., & Breen, W.E. (2007). Materialism and diminished well-being: Experiential avoidance as a mediating mechanism. *Journal of Social and Clinical Psychology*, 26, 521–539.
- Kasser, T., & Ryan, R.M. (1993). A dark side of the American dream: Correlates of financial success as a central life aspiration. *Journal of Personality and Social Psychology*, 65, 410–422.
- Kasser, T., & Ryan, R.M. (1996). Further examining the American dream: Differential correlates of intrinsic and extrinsic goals. *Personality and Social Psychology Bulletin*, 22, 280–287.
- Maslow, A. (1954). *Motivation and personality*. New York: Harper.
- Patrick, H., Knee, C.R., Canevello, A., & Lonsbary, C. (2007). The role of need fulfillment in relationship functioning and well-being: A self-determination theory perspective. *Journal of Personality and Social Psychology*, 92, 434–457.
- Richins, M.L. (1994). Special possessions and the expression of material values. *Journal of Consumer Research*, 21(December), 522–533.
- Roberts, B.W., Walton, K.E., & Viechtbauer, W. (2006). Patterns of mean-level change in personality traits across the life course: A meta-analysis of longitudinal studies. *Psychological Bulletin*, 132, 1–25.
- Ryan, R. (1995). Psychological needs and the facilitation of integrative processes. *Journal of Personality*, 63, 397–427.
- Ryan, R., & Deci, E.L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78.
- Ryan, R., & Deci, E.L. (2001). On happiness and human potentials: A review of research on hedonic and eudemonic well-being. *Annual Review of Psychology*, 52, 141–166.
- Ryan, R., & Deci, E.L. (2008). From ego depletion to vitality: Theory and findings concerning the facilitation of energy available to the self. *Social and Personality Psychology Compass*, 2(2), 702–717.
- Ryan, R.M., & Frederick, C.M. (1997). On energy, personality, and health: Subjective vitality as a dynamic reflection of well-being. *Journal of Personality*, 65, 529–565.
- Schyns, P. (2003). *Income and life satisfaction: A cross-national and longitudinal study*. Delft, The Netherlands: Eburon.
- Sheldon, K., & Kasser, T. (1998). Pursuing personal goals: Skills enable progress, but not all progress is beneficial. *Personality and Social Psychology Bulletin*, 24, 1319–1331.
- Stage, F.K., Carter, H.C., & Nora, A. (2004). Path analysis: An introduction and analysis of a decade of research. *The Journal of Educational Research*, 98, 5–12.
- Tatzel, M. (2003). The art of buying: Coming to terms with money and materialism. *Journal of Happiness Studies*, 4, 405–435.
- Van Boven, L. (2005). Experientialism, materialism, and the pursuit of happiness. *Review of General Psychology*, 9(2), 132–142.
- Van Boven, L., & Gilovich, T. (2003). To do or to have? That is the question. *Journal of Personality and Social Psychology*, 85(6), 1193–1202.
- Veenhoven, R. (1991). Is happiness relative? *Social Indicators Research*, 24, 1–34.
- White, R. (1963). *Ego and reality in psychoanalytic theory*. *Psychological Issues Series, Monograph No. 11*. New York: International Universities Press.