

ROBERT A. EMMONS AND ED DIENER

FACTORS PREDICTING SATISFACTION JUDGMENTS:  
A COMPARATIVE EXAMINATION \*

(Received 1 November, 1984)

**ABSTRACT.** A number of psychological processes (e.g. social comparison, aspirations) may explain why people differ in their satisfaction with various life domains. This study compared the impact of a number of such processes on satisfaction judgments in a sample of 149 college students. Social comparison and positive affect were strong predictors of satisfaction across most domains. Objective conditions and aspirations were predictive of satisfaction in few domains. The relevance of Multiple Discrepancies Theory (Michalos, 1983) for the present findings is discussed. Limitations of the present study are noted and suggestions for future research are offered. Researchers need to focus on the reasons underlying the predictability of different domains from different processes.

In research on subjective well-being, three relatively independent factors emerge: positive affect, negative affect, and satisfaction (Andrews and Withey, 1976; Campbell, Converse, and Rodgers, 1976). One of the more replicable findings in this area has been that objective life circumstances correlate poorly with subjective judgments of well-being. For example, Wilson (1960) found very low correlations between objective measures of income, spending money, dates, grades, and satisfaction. Partly as a result of the poor predictability of objective factors, researchers have turned to psychological or 'judgmental' theories of subjective well-being (e.g. Michalos, 1983). These researchers maintain that objective circumstances usually have an indirect influence on happiness, which they suggest is directly controlled by internal psychological processes. Even when people live in favorable circumstances, they will often adapt to them or their aspirations will rise, and therefore the objective circumstances alone may not produce long-term satisfaction.

A number of psychological models or processes have been proposed to explain why people vary in their satisfaction with various life domains. These models seek to explain the processes by which life circumstances are mediated and result in subjective judgments of satisfaction. However, these models have rarely been empirically tested against one another. In this study five such models or processes were examined and compared in order to understand

their impact upon satisfaction judgments. The five models can be briefly described:

(1) Positive affect — the degree to which one experiences joy, happiness, etcetera in each life domain. Although it appears that life satisfaction and positive affect should be highly correlated, Andrews and Withey (1976) found that they loaded on different factors. However, Cameron (1975) presents evidence to show that affect is involved in the appraisal of life satisfaction. Thus, independently of other more cognitive judgmental factors, simply experiencing positive affect in a domain may raise one's evaluation of that area.

(2) Negative affect — unpleasant emotions which are associated with the domains. One may be satisfied or dissatisfied with a domain primarily on the basis of emotions experienced in reference to it. Warr, Barter, and Brownbridge (1983), Zevon and Tellegen (1982) and Diener and Emmons (1984) indicate that positive negative affect are independent. A comprehensive review of this question (Diener and Emmons, 1984) suggests strong evidence for some independence in the processes underlying positive and negative affect. Thus, we examined the separate influence of positive and negative affect as well as their joint contribution to satisfaction.

(3) Social comparison — how the person believes he or she compares to proximal others in the domain. One may be satisfied as long as one thinks he or she is doing better than others (Freedman, 1978).

(4) Aspirations — having high hopes and desires in an area. Several researchers (e.g. Fordyce, 1972) have theorized that high aspirations are impediments to satisfaction.

(5) Change — conditions have recently improved or deteriorated. Adaptation theorists (Brickman, Coates, and Janoff-Bulman, 1978) maintain that only recent changes can move satisfaction away from the neutral point. Thus, recent change could lead to happiness or unhappiness. For example, Brickman *et al.* report that lottery winners were no happier than nonwinners, and took less pleasure in mundane activities. Apparently these individuals had habituated to their windfall. However it could be that recent change most influences affect because it is more subject to adaptation, whereas social comparison is a critical component for satisfaction, because satisfaction rests more on a cognitive-judgmental process.

The purpose of the present study is to examine the relative contributions of each of the hypothesized psychological processes to judgments of satisfac-

tion with various life domains, and also to determine if objective conditions predict domain satisfaction.

#### METHOD

Subjects were 149 students enrolled in a variety of colleges at the University of Illinois. They were participating in order to partially fulfill a course requirement. They were administered a questionnaire assessing their satisfaction in 11 life domains: friends, love life, grades, courses, recreation, family, standard of living, religion, future career, housing arrangement, and physical attractiveness. They were asked to rate how satisfied they were with each of these areas on a scale ranging from zero (extremely dissatisfied) to six (extremely satisfied). In order to assess positive and negative affect in each area, they were asked to rate the extent to which their experience in each area leads to positive emotions (e.g. joy) on a six point scale ranging from 'not at all' to 'extremely'. Similarly, they were asked to rate the degree to which each domain created negative or unpleasant emotions for them. For the comparison model, subjects were asked to compare themselves to the average college student in each area on a six point scale, ranging from 'much worse off than they' to 'much better off than they'. In order to assess aspirations, subjects were asked to indicate how high their hopes or aspirations were in each area on a six point scale from 'extremely lower than average' to 'extremely higher than average'. Thus, this questions asked individuals the status of their aspirations relevant to others, as opposed to whether they believed they were better off than others. To measure recent change, subjects rated the extent of positive or negative change recently experienced (within the last semester) on a six point scale from 'much worse recently' to 'much better recently'. Objective measures of each domain were obtained as follows — friends: number of close friends plus number of confidantes; love life: presence or absence of boyfriend/girlfriend plus number of dates per month; grades: current plus expected grade point average; recreation: number of social events attended per week plus frequency of participation in sports each week; family: whether parents are married or divorced, frequency of family gatherings, and number of brothers and sisters; future career: how rewarding is career choice plus how good are chances for getting into chosen field; religion: frequency of religious service attendance. For standard of living, the following variables were summed: status of parent's occupation, annual income

of both parents, amount of available spending money, money problems, and financing of education. Physical attractiveness ratings were not obtained. The questionnaire was completed in a group setting.

### RESULTS

Table I shows the correlations between the objective measures of well-being and three measures of subjective well-being.

Several conclusions can be drawn from this table. First, objective factors sometimes account for much variance in subjective well-being. Kammann and Campbell (1982) argue that happiness is largely internally caused and is not due to external life circumstances. They suggest that this could be due to adaptation. However, our results suggest that objective factors are often significant predictors of subjective well-being, and in some cases (e.g. love life) quite substantial predictors. Rather than debate whether external circumstances can influence subjective well-being, a more profitable approach would be to determine when they do and when they do not. It is intriguing that students' objective grade point average had virtually no influence on their satisfaction with their grades. This is surprising given the quantified nature of grades, and the importance attached to them. However, whether a person had a boyfriend or girlfriend and the frequency of dating were strong predictors of satisfaction with love life. Finally, no objective factor correlated substantially with negative affect. This finding support the conjecture of Diener, Larsen, and Emmons (1984) that negative affect may be more strong-

TABLE I  
Objective predictors of subjective well-being

Domain	Domain Satisfaction	PA	NA
Friends	0.09	0.28 <sup>b</sup>	-0.06
Love Life	0.59 <sup>b</sup>	0.53 <sup>b</sup>	-0.23
Family Life	0.18 <sup>a</sup>	0.19 <sup>a</sup>	-0.09
Recreation	0.32 <sup>b</sup>	0.30 <sup>b</sup>	-0.01
Standard of Living	0.29 <sup>b</sup>	0.31 <sup>b</sup>	-0.08
Grades	0.15	0.06	-0.16

(PA = positive affect, NA = negative affect.)

<sup>a</sup>  $p < 0.05$

<sup>b</sup>  $p < 0.01$

TABLE II  
Average Pearson correlations across all domains of predictors and subjective well-being variables

	PA	NA	SAT	SC	ASP	CHG
<i>Subjective Well-Being Variables</i>						
Positive Affect						
Negative Affect	-0.29					
Satisfaction	0.64	-0.50				
<i>Predictors</i>						
Social Comparison	0.54	-0.39	0.64			
Aspirations	0.43	-0.11	0.30	0.50		
Change	0.39	-0.32	0.50	0.45	0.23	

PA = Positive Affect

NA = Negative Affect

SAT = Satisfaction

SC = Social Comparison

ASP = Aspirations

CHG = Change

N = 149

ly influenced by long-term person variables than by objective events or circumstances.

The degree of relationship between several types of subjective well-being was assessed by correlating measures of subjective satisfaction, positive affect, and negative affect within each domain. The top portion of Table II shows the mean of these correlations (using  $r$  to  $z$  transformations) averaging across all 11 domains.

Positive and negative affect show only a modest inverse correlation, supporting Bradburn's (1969) contention that positive and negative affect may be controlled by different processes. What this relatively low correlation indicates is that the amount of negative affect a person experienced in a particular domain was not usually strongly inversely related to the amount of positive affect associated with that domain. In contrast, satisfaction was more strongly related to both types of affect. This suggests that satisfaction may be a summative variable (like global happiness ratings) in which persons mentally combine the positive and negative aspects in forming this judgment.

In the lower portion of Table II are shown the average correlations between the subjective well-being criterion variables and the possible contributing factors. Negative affect cannot be predicted as well as can positive affect and

satisfaction. In support of this conclusion are the findings of a multiple regression analysis conducted on the summed scores across all domains for each variable. Social comparison, aspirations, and change predicted summed positive affect and summed satisfaction each with a squared multiple correlation of 0.54, but negative affect could not be predicted ( $R^2 = 0.02$ ). This latter finding once again dovetails with the findings of Diener, Larsen, and Emmons (1984) which show that negative affect is less due to situational factors and more due to long-term person factors. The present findings suggest that negative affect may be less related to certain conscious cognitive processes such as social comparison. The findings presented in Table I suggest that objective factors are less related to negative affect. It seems clear that negative affect is controlled by factors differing from positive affect and satisfaction. It should be pointed out that the negative affect measure had sufficient dispersion so that restriction of range could not be responsible for the lower correlation found with this variable.

The bottom portion of Table II reveals that social comparison is the strongest correlate of summed satisfaction and positive affect. Indeed, social comparison tended to correlate as high with these measures as they did with each other. A partial correlation analysis also supported the idea that social comparison contributed the most unique variance to the subjective well-being

TABLE III  
Standardized beta weights for predicting satisfaction with domains

Domain	PA	NA	SC	ASP	CHG	OBJ
Friends	0.15 <sup>a</sup>	-0.25 <sup>b</sup>	0.46 <sup>b</sup>	-0.04	0.14 <sup>a</sup>	0.09
Love Life	0.19 <sup>a</sup>	-0.14 <sup>b</sup>	0.57 <sup>b</sup>	-0.11 <sup>b</sup>	0.14 <sup>b</sup>	0.10
Family	0.43 <sup>b</sup>	-0.26 <sup>b</sup>	0.29 <sup>b</sup>	-0.12	0.08	0.01
Recreation	0.32 <sup>b</sup>	-0.19 <sup>b</sup>	0.34 <sup>b</sup>	-0.13	0.12	0.16
Housing	0.50 <sup>b</sup>	-0.35 <sup>b</sup>	0.15 <sup>a</sup>	-0.06	0.00	
Standard of Living	0.42 <sup>b</sup>	-0.26 <sup>b</sup>	0.27 <sup>b</sup>	-0.24 <sup>b</sup>	0.06	0.06
Religion	0.38 <sup>b</sup>	-0.22 <sup>b</sup>	0.25 <sup>b</sup>	0.04	0.06	-0.06
Physical Attractiveness	0.30 <sup>b</sup>	-0.25 <sup>b</sup>	0.39 <sup>b</sup>	0.00	0.03	
Courses	0.37 <sup>b</sup>	-0.12	0.07	0.00	0.24 <sup>b</sup>	
Grades	0.27 <sup>b</sup>	-0.31 <sup>b</sup>	0.25 <sup>b</sup>	-0.02	0.19 <sup>b</sup>	0.09
Future Career	0.41 <sup>b</sup>	-0.15 <sup>b</sup>	0.31 <sup>b</sup>	-0.11	0.18 <sup>b</sup>	0.10
Sum Across Domains	0.40 <sup>b</sup>	-0.21	0.49 <sup>b</sup>	-0.18	0.03	0.09

<sup>a</sup>  $p < 0.05$

<sup>b</sup>  $p < 0.01$

$N = 149$

variables. The partial correlations between summed satisfaction and each potential contributing factor (summed across domains) with the other two partialled out were as follows: social comparison = 0.47, aspirations = 0.29, change = -0.05.

The results presented in Table III also confirm the importance of social comparison as a predictor. Using multiple regression, satisfaction within each domain served as the criterion by which each of the six predictor measures were evaluated. In several cases there were only five predictors since we had no objective measure of well-being in that domain. The bottom line reveals that social comparison was the best predictor of summed satisfaction. However, in several domains social comparison had little impact upon satisfaction, whereas in others it was quite strong. One topic for future research is to uncover the direction of influence between social comparison and subjective well-being. It is plausible that in some cases a feeling of well-being leads to high social comparison estimates; in other cases the influence may occur in the other direction, and frequently the influence may be bidirectional. Table III indicates that aspirations, change, and objective factors are not good predictors of satisfaction when affect is included as a predictor.

#### DISCUSSION

Two limits to the present study can be noted. Perhaps most obvious is the narrowness of our sample. Would we have gotten the same results, say, with an elderly sample? Second, it is difficult to identify underlying theoretical processes solely on the basis of correlational statistics. Keeping these limitations in mind, the conclusions that can be drawn from this study are:

(1) Objective factors are often poor predictors of subjective well-being, but within certain domains this is not always the case (e.g. love life). It is true that objective conditions in some domains are poorly related to overall life satisfaction, as Wilson (1960) and others (Campbell *et al.*, 1976) have found. It is clear that subjective well-being can usually only be accounted for at a very weak level by the objective conditions in people's lives.

(2) There are a number of reasons to believe that negative affect measures are controlled by different processes from those that influence positive affect and satisfaction, given their independence and differential correlates found in this study. Other investigators find that negative affect correlates with neuroticism and other personality factors (c.f. Costa and McCrae, 1980). Thus, it

may be that negative affect results more from styles of thinking (e.g. attributions, evaluations, expectancies) than does positive affect.

(3) Social comparison and positive affect experienced in each domain are strong predictors of satisfaction across most domains. This is interesting because it shows the importance of cognitive-judgmental factors in the 'cooler' area of satisfaction, as well as in the 'hotter' area of positive affect.

One of the more interesting findings was that objective conditions predicted satisfaction in certain domains such as love life and recreation, but not in other domains. Most researchers generally assume that objective circumstances will have little impact on subjective well-being, since objective conditions are further removed from SWB judgments and are mediated by subjective appraisal processes. However, examination of specific domains indicates that this is not always the case. Why is it that objective conditions predict satisfaction in some domains but not in others? It could be that there are certain domains which are inherently satisfying in and of themselves for which standards of comparison are largely irrelevant. Some elements in our lives can be evaluated without comparing ourselves to others or to cultural definitions. Another possibility is that objective conditions are more important in domains in which judgmental comparisons are difficult to make. For example, it is difficult to know how satisfied others may be with their love lives, but it is readily apparent whether or not one has a love life.

Social comparison was found to be the major predictor of satisfaction across most domains. A number of questions, however, remain unanswered. For example, in considering when social comparison can and cannot predict satisfaction, the relevant comparison group needs to be specified. Exactly who people are comparing themselves to, and specific characteristics of comparison others no doubt mediate the resultant subjective sense of satisfaction. For example, are physical proximity, physical and psychological similarity, and psychological salience all used in making this judgment? Are different standards of comparison used in different domains? Proximity of others is often believed to be a major factor in determining the relevant comparison group. However, Dermer, Cohen, Jacobsen, and Anderson (1979) showed that even people who are temporally remote can be used as a standard of comparison if their salience is increased. Presumably, one could alter the standards of comparison across a range of reference frames and observe the effect on satisfaction judgments. Also, since social comparison theory pre-

dicts satisfaction in many domains, it would be profitable to explain why it fails to predict in certain domains, such as housing or courses. Freedman (1978) speculates that comparison theory holds for goals set by society, such as money, success, and social recognition. It is thus surprising that comparison theory does not predict satisfaction with standard of living more strongly than it does, whereas it predicts satisfaction with friends and love life. A alternative explanation would be that comparison theory predicts satisfaction in subjectively salient and important domains, thus accounting for our finding that comparison theory predicts satisfaction with love life, friends, and physical attractiveness, three extremely salient domains for college students. There are also domains in which communication between peers is quite common, whereas grades, family life, and standard of living tend to be more covert and private. Thus, communicability of the domain could be an important factor influencing whether or not satisfaction with it is derived from social comparison processes. Also, the direction of influence between social comparison and satisfaction judgments needs to be documented. It may be that individuals are happier than others because they perceive that they are better off than others, or that they see that are better off and it is this comparison that produces heightened SWB. It may be that aspirations best predict satisfaction for domains in which there are goals set by society. In support of this conjecture, we found that aspirations best predicted (negatively) satisfaction with standard of living.

The present findings are compatible with Multiple Discrepancies Theory (MDT; Michalos, 1983). Michalos' comprehensive theory states that satisfaction is a function of the perceived discrepancies between what one has and wants, what relevant others have, the best one has had in the past, and what one expects in the future. Thus MDT encompasses three of the psychological processes examined in this study: aspiration level, social comparison, and recent change. According to MDT, wants and comparisons to others are the two biggest influences on SWB. This is similar to the findings of this study, if one assumes that positive affect results from fulfilling wants (needs). Indeed, Emmons, Diener, and Larsen (1984) found that need fulfillment in terms of goal attainment was strongly correlated with positive affect. Thus, fulfillment of wants may be more crucial in the causal process with positive affect the result, or positive affect may be influenced by arousal and be important in its own right. While other judgmental theories of SWB (see Diener, 1984)

have focused solely on a single process, Michalos' theory takes several processes or perceived discrepancies into account, and it thus a promising new approach.

Future research could profit by employing flexible approaches to causal analysis, such as structural equation models (LISREL; Jöreskog and Sörbon, 1978). The application of LISREL may be particularly well-suited to complex SWB processes, as it is able to separate our error variance and is suited to non-recursive causal processes, such as those which might exist between SWB and judgmental processes. Also, time series analysis of data provided by a longitudinal study would be helpful in uncovering the direction of influence between SWB and psychological processes.

Other possible contributors to subjective well-being need to be considered. For example, the discrepancy between one's aspirations and where one perceives themselves to be in relation to them is a probable predictor of satisfaction (Campbell *et al.*, 1976; Michalos, 1983). Wilkening and his colleagues (Bharadwaj and Wilkening, 1980; Martinson, Wilkening, and McGranahan, 1984) have shown that personal efficacy and feelings of alienation are also predictors of overall life satisfaction. Future theory and research should be aimed at addressing how these psychological mediate the relationship between objective conditions and the psychological experience of subjective well-being.

#### ACKNOWLEDGEMENT

We acknowledge the efforts of Sharon Griffin and Laura Faynor in data collection and keypunching, and we are grateful to an anonymous reviewer for helpful comments. Address correspondence and reprint requests to Robert A. Emmons, Department of Psychology, University of Illinois, 603 E. Daniel St., Champaign, IL 61820.

#### NOTE

\* An earlier version of this paper was presented at the Annual convention of the Mid-western Psychological Association, Chicago, May 1983.

#### BIBLIOGRAPHY

- Andrews, F. M., and S. B. Withey: 1976, *Social Indicators of Well-Being: America's Perception of Life Quality* (Plenum, New York).
- Bharadwaj, L., and E. A. Wilkening: 1980, 'Life domain predictors of satisfaction with personal efficacy', *Human Relations* 33, pp. 165-181.

- Bradburn, N. M.: 1969, *The Structure of Psychological Well-Being* (Aldine, Chicago).
- Brickman, P., D. Coates, and R. Janoff-Bulman: 1978, 'Lottery winners and accident victims: Is happiness relative?', *Journal of Personality and Social Psychology* 36, pp. 917-927.
- Cameron, P.: 1975, 'Mood as an indicant of happiness: Age sex, social class, and situational differences', *Journal of Gerontology* 30, pp. 216-224.
- Campbell, A., P. E. Converse, and W. L. Rodgers: 1976, *The Quality of American Life* (McGraw Hill, New York).
- Dermer, M. S. J. Cohen and E. Jacobsen and E. A. Anderson: 1979, 'Evaluative judgments of aspects of life as a function of vicarious exposure to hedonic extremes', *Journal of Personality and Social Psychology* 37, pp. 247-260.
- Diener, E.: 1984, 'Subjective well-being', *Psychological Bulletin* 95, pp. 542-575.
- Diener, E. and R. A. Emmons: 1984, 'The independence of positive and negative affect', *Journal of Personality and Social Psychology* 47, pp. 1105-1117.
- Diener, E., and R. A. Emmons: 1984, 'The long-term independence of positive and negative affect across persons', Manuscript submitted for publication, University of Illinois.
- Diener, E., R. L. Larsen and R. A. Emmons: 1984, 'Person x situation interactions: Choice of situations and congruence response models', *Journal of Personality and Social Psychology* 47, pp. 580-592.
- Emmons, R. A., E. Diener and R. J. Larsen: 1984, 'An affect-goal analysis of situational choice behavior', Presented at the 92nd Annual convention of the American Psychological Association, Toronto.
- Freedman, J.: 1978, *Happy People: What Happiness Is, Who Has It, and Why* (Harcourt, New York).
- Fordyce, M. W.: 1972, 'Happiness, its daily variation and its relation to values', *Dissertation Abstracts International* 33, 1266B.
- Jöreskog, K. G., and D. Sörbon: 1978, *LISREL IV* (National Educational Resources, Chicago).
- Kammann, R., and K. Campbell: 1982, 'Illusory correlation in popular beliefs about the causes of happiness', *New Zealand Psychologist* 11, pp. 52-62.
- Martinson, O. B., E. A. Wilkening and D. McGranahan: 1984, 'Predicting overall life satisfaction: The role of life cycle and social psychological antecedents', *Social Indicators Research* 14, pp. 99-108.
- Michalos, A. C.: 1983, 'Job satisfaction, marital satisfaction, and the quality of life: A review and preview', paper presented at the Fourth Annual Founders Symposium Honoring Angus Campbell (Institute for Social Research, University of Michigan).
- Warr, P., J. Barter and G. Brownbridge: 1983, 'On the independence of positive and negative affect', *Journal of Personality and Social Psychology* 44, pp. 644-651.
- Wilson, W. R.: 1960, 'An attempt to determine some correlates and dimensions of hedonic tone' (Doctoral dissertation, Northwestern University), *Dissertation Abstracts* 22, 2814 (University Microfilms No. 60-6588).
- Zevon, M. A., and A. Tellegen: 1982, 'The structure of mood change: An idiographic/nomothetic analysis', *Journal of Personality and Social Psychology* 43, pp. 111-122.

*Psychology Department,  
University of Illinois,  
603 East Daniel St.,  
Champaign, IL 61820,  
U.S.A.*