

Developing a Subjective Measure of Consumer Well-Being

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This study develops a macro measure of consumer well-being based on the notion that consumer well-being is determined by satisfaction with the acquisition, possession, consumption, maintenance, and disposition of consumer goods and services. In a survey of 298 university students, the proposed measure was found to have predictive (nomological) validity in relation to life satisfaction for three out of its five dimensions—acquisition, possession, and consumption. In sum, satisfaction in the consumer life domain was demonstrated to be an important component of life satisfaction.

The effect of marketing on consumers' quality of life has interested many scholars (see Sirgy, Meadow, and Samli 1995 for an overview). Marketing influences consumers' quality of life in large part because it affects satisfaction in the consumer life domain (Day 1978, 1987; Lee and Sirgy 1995; Leelakulthanit, Day, and Walters 1991; Samli, Sirgy, and Meadow 1987). Despite some previous efforts to measure consumer well-being at the macro level, limited attention has been given in developing a measure of consumer well-being that captures the construct's various subdomains (Sirgy, Meadow, and Samli 1995, 355).

Previous studies have estimated consumer well-being by measuring satisfaction with possessions (e.g., Nakano, MacDonald, and Douthitt 1995) and satisfaction with retail institutions (e.g., Meadow 1983). These studies conceptualized consumer well-being as a single dimension. Day and colleagues (Day 1987; Leelakulthanit, Day, and Walters 1991) conceptualized consumer well-being more expansively as having two distinct dimensions, namely, satisfaction with the acquisition and the possession of consumer goods and services—a more expansive but still insufficiently broad formulation.

We believe that these one- and two-factor conceptualizations of consumer well-being oversimplify the concept because they fail to capture the broad scope of the concept. Most contemporary textbooks and papers on consumer behavior range across a broader scope of consumption-related experiences, from acquisition through consumption to disposal (e.g., Arnould, Price, and Zinkhan 2002; Solomon

2002; Wilkie and Moore 1999, 202). Since all aspects of the consumption process are affected by the macromarketing system (Lee and Sirgy 1995; Rook 1985), we believe that the psychosocial phenomenon of consumer well-being should be measured in terms of satisfaction and dissatisfaction stemming from one's aggregate experience of consumer goods and services within a given macromarketing system. Building on this basic point, this study develops and tests a measure of consumer well-being that captures satisfaction with the entire consumption process. The measure taps five major dimensions of satisfaction with consumer goods and services: (1) acquisition, (2) possession, (3) consumption, (4) maintenance, and (5) disposition.

By capturing consumers' satisfaction across the entire consumption process, this measure should predict perceived quality of life more accurately than previous measures of consumer well-being. This multidimensional measure of consumer well-being should support future research dealing with the relationship between marketing and quality of life (e.g., Sirgy 2001; Wilkie and Moore 1999). This research can provide marketers with guidelines on how their marketing efforts might be optimally allocated across various dimensions of the consumer life domain. Research based on the new consumer well-being measure might be used by public policy makers to monitor the societal effects of marketing institutions on consumer well-being (cf. Fournier and Mick 1999).

BOTTOM-UP SPILLOVER THEORY OF LIFE SATISFACTION

Researchers have long recognized that the psychological life space is multidimensional because every person has multiple life domains (e.g., Andrews and Withey 1976; Campbell, Converse, and Rodgers 1976; Day 1978, 1987; Diener 1984). In that psychological space, memories related to specific kinds of experiences and feelings are stored. And within each life domain, the person has certain value-laden beliefs (e.g., Andrews and Withey 1976; Campbell, Converse, and

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Rodgers 1976). Thus, a person may have a psychological life domain and value-laden beliefs in relation to education, family, health, job, friends, romantic relationships, and so on. The life domain that is the focus of this study is the *consumer life domain* (e.g., Day 1978, 1987; Douglas and Isherwood 1979; Kleine and Kernan 1991; Kleine, Kleine, and Kernan 1992; Leelakulthanit, Day, and Walters 1991; McCracken 1988; Morgan 1993).

A number of quality-of-life studies have shown that life satisfaction can be explained and predicted from satisfaction one experiences within the different life domains (e.g., Campbell, Converse, and Rodgers 1976). For example, people may feel satisfied with life as a direct function of their satisfaction with their health, job, family, friends, community, material possessions, and so on. We explore in this article whether satisfaction in the consumer life domain is an important source of life satisfaction.

To fully explain the relationship between consumer well-being and life satisfaction, we need to discuss the concepts of bottom-up spillover. *Bottom-up spillover* between consumer well-being and life satisfaction can be conceptualized using a satisfaction hierarchy model (e.g., Lee and Sirgy 1995; Meadow 1988; Sirgy, Hansen, and Littlefield 1994). This model is suggested by research on consumer satisfaction (e.g., Aiello, Czepiel, and Rosenberg 1977) and life satisfaction (e.g., Andrews and Withey 1976; Campbell, Converse, and Rodgers 1976; Neugarten, Havighurst, and Tobin 1961). The basic premise is that overall life satisfaction is functionally related to satisfaction with all of life's domains and subdomains. Most multiattribute attitude models use bottom-up spillover logic in predicting and explaining attitude. A familiar example is brand attitude models that assume a consumer's attitude toward a product, such as a car, is a direct function of the consumer's evaluations of the various attributes of the car moderated by the belief strength associated with each attribute (e.g., Fishbein and Ajzen 1975). Satisfaction researchers have used this same logic to conceptualize the determinants of consumer satisfaction (e.g., Aiello, Czepiel, and Rosenberg 1977).

Figure 1 shows that life satisfaction is influenced by a hierarchy of domain and subdomain satisfactions. This view is supported by the Andrews and Withey (1976) model of life satisfaction that suggests life satisfaction occurs at various levels of specificity and is influenced by evaluations of individual life domains. Thus, the greater the satisfaction with such life domains as personal health, work, family, and leisure, the greater the satisfaction with life in general. Satisfaction with a given life domain (e.g., consumer life domain), in turn, is influenced directly by satisfaction with particular events and concerns within that domain. Thus, the affect within a life domain (or subdomain) spills over *bottom-up* to the most superordinate domain (life in general), influencing life satisfaction.



FIGURE 1 SATISFACTION HIERARCHY

In this study, we used the bottom-up spillover theory of life satisfaction because models based on the bottom-up spillover theory can help policy makers and marketers develop policies to enhance the well-being of target consumers (Sirgy 2001). Bottom-up models also help marketers develop policies by specifying concrete subdimensions that need to be improved in order to effectively enhance consumer well-being (e.g., Rahtz and Sirgy 2000). Another advantage of the bottom-up model is the fact that the relatively concrete terms that comprise its measures are likely to have clearer referents than the more abstract words used to capture high-order constructs (Lyons 1981). Bottom-up measures should, therefore, elicit less response variance. Fournier and Mick (1999) have recently called for the development of this kind of model to measure consumer satisfaction: "Future research is needed to understand the hierarchy of satisfaction responses that extends upward from concrete products to the more abstract dimensions of life, and the role of marketing in affecting that hierarchy at both individual and society levels" (p. 17).

CONCEPTUALIZING CONSUMER WELL-BEING

As we have just indicated, in this article, consumer well-being refers to consumer satisfaction within the various consumer life subdomains (e.g., Day 1987; Lee and Sirgy 1995; Leelakulthanit, Day, and Walters 1991; Meadow 1983). Thus, to measure consumer well-being, one needs to specify the subdomains of consumer life. Although there have been several conceptual models for measuring consumer well-being, no consensus has emerged on what the subdomains of consumer life may be (Sirgy, Meadow, and Samli 1995). In this section, we review various comparatively circumscribed attempts to conceptualize the consumer life subdomains and then present in more detail our own relatively expansive five-dimensional model.

The Acquisition Model of Consumer Well-Being

The acquisition model posits that consumer well-being is determined by satisfaction with acquisition of consumer goods and services. For example, Meadow (1983) generated a measure of consumer well-being called *Overall Consumer Satisfaction-Composite* (OCSC). This measure is based on the consumer's experience with retail institutions in purchasing food, housing, household operations, household furnishings, clothing and accessories, personal care, medical care, recreation, transportation, and education. To reiterate, this approach focused on measuring overall *acquisition* or shopping satisfaction. On the basis of the theoretical notion of a satisfaction hierarchy (e.g., Andrews and Withey 1976; Aiello, Czepiel, and Rosenberg 1977), Meadow (1983) used a sample of 249 elderly consumers to demonstrate that life satisfaction (or subjective quality of life) can be predicted significantly from acquisition satisfaction.

The Possession Model of Consumer Well-Being

Others have focused on material *possession* to capture consumer well-being. For example, Nakano, MacDonald, and Douthitt (1995) examined consumers' overall satisfaction with their material possessions and standard of living. As part of a larger investigation of consumer socialization, Nakano, McDonald, and Douthitt (1995) used a two-question measure to capture consumer well-being, namely, "How do you feel about your standard of living—the things you have like housing, car, furniture, recreation, and the like?" and "How do you feel about the extent to which your physical needs are met?"

The Two-Factor Model of Consumer Well-Being

Day (1978, 1987) and Leelakulthanit, Day, and Walters (1991) conceptualized the consumer life domain as having two dimensions: acquisition and possession of consumer goods and services. The acquisition domain refers to experiences related to the purchase of consumer goods and services. Examples include the assortment, quality, and price of goods available in local stores; the attractiveness of the stores; the courtesy and helpfulness of store personnel; and after-purchase service provided by local stores, for example, warranty policies. In contrast, the possession domain focuses on experiences related to material possessions (e.g., house/apartment, furniture, car/truck, clothing/accessories, savings, etc.). Leelakulthanit, Day, and Walters (1991) found a significant relationship between possession satisfaction and life satisfaction, especially for older and low-income people.

The Consumption Process Model of Consumer Well-Being

We believe that the dimensions of the consumer life domain are most appropriately conceptualized in terms of the entire consumption process—acquisition, possession,

consumption, maintenance, and disposition—because there is much evidence that consumers experience satisfaction and dissatisfaction across the entire consumption processes and that consumer satisfaction spills over onto other life domains affecting subjective well-being (e.g., Andrews and Withey 1976; Campbell, Converse, and Rodgers 1976; Day 1987; Lee and Sirgy 1995; Meadow 1983, 1988; Nakano, MacDonald, and Douthitt 1995; Sirgy, Hansen, and Littlefield 1994; Wilkie and Moore 1999). Once again, our model expands the *acquisition-possession* dichotomy, adding *consumption*, *maintenance*, and *disposition* dimensions to more fully reflect the range of consumer experiences with goods and services.

As is typical of bottom-up approaches, these consumer subdomains are measured by a set of more concrete items within each subdomain. The specific items we have used to measure each dimension are reported in the appendix. In each case, the set of specific items represent a sample, not a census of concrete elements that might contribute to the higher-order dimension of satisfaction. Our set of elements could be adjusted to reflect specific purposes of a researcher or characteristics of the participants' culture, for example, the *consumer electronics* item might be replaced by *religious heirlooms* if the latter were important and the former unimportant in a particular culture. We now review each higher-order construct and describe concrete items used to measure it.

Acquisition satisfaction. Consumers' quality of life is very much affected by the shopping experience since consumers experience a great deal of satisfaction and dissatisfaction in shopping (e.g., Day 1987; Hawes and Lumpkin 1984; Lee and Sirgy 1995; Leelakulthanit, Day, and Walters 1991; Meadow 1983). Hence, we believe that an important facet of consumer well-being is *acquisition satisfaction*, which we define with respect to shopping and other activities involved in the purchase of consumer goods and services. Specifically, we identified seven aspects of the acquisition experience that play a significant role in consumer satisfaction/dissatisfaction and well-being (e.g., Day 1987; Hawes and Lumpkin 1984; Lee and Sirgy 1995; Leelakulthanit, Day, and Walters 1991)—factors such as satisfaction with the quality, prices, hours, and services of stores in the local area. Specific items and the measure that captures this and other constructs discussed later are shown in the appendix.

Possession satisfaction. Ownership of certain consumer goods (e.g., car, house, furniture, and household appliances) may contribute significantly to quality of life (e.g., Belk 1985; Dawson and Bamossy 1991; Douglas and Isherwood 1979; Day 1987; Lee and Sirgy 1995; Leelakulthanit, Day, and Walters 1991). Thus, possession satisfaction should also be included in a comprehensive measure of consumer well-being. We define possession satisfaction as satisfaction that results from the ownership of consumer goods, and we measure this satisfaction with six single-item indicators that

tap satisfaction with major classes of possessions, for example, house or condominium, consumer electronics, and private transportation. See the six categories of acquisition satisfaction in the appendix.

Consumption satisfaction. Consumption is an important activity reflecting satisfaction of individual needs through the use of goods and services (Baudrillard 1998). Thus, consumption satisfaction is defined as consumer satisfaction resulting from the use of goods and services. It is closely related to but distinct from possession satisfaction, the difference being that possession satisfaction focuses on positive affect that flows from ownership per se, whereas consumption satisfaction focuses on satisfaction that flows from the actual use or *consumption* of the product. People sometimes own products that they do not use and sometimes use products that they do not own. And while both goods and services produce consumption satisfaction, this kind of satisfaction is more important for services. Because services cannot be possessed or inventoried, the satisfaction they produce will generally derive from use, not possession (e.g., Parasuraman, Zeithaml, and Berry 1988). In this study, satisfaction is measured for eleven major categories of consumer goods and services that may enhance quality of life, for example, health care services, banking/insurance services, and consumer electronics (Kleine, Kleine, and Kernan 1992; Lee and Sirgy 1995; Sirgy, Hansen, and Littlefield 1994). See the eleven categories of consumption satisfaction in the appendix.

Maintenance satisfaction. The maintenance and care of consumer goods plays an important role in consumers' quality of life (Lee and Sirgy 1995). We define *maintenance satisfaction* as satisfaction consumers experience when they seek to have a possession repaired or serviced. We conceptualized maintenance satisfaction as having two major subdimensions—satisfaction with maintenance and repairs provided by service vendors in the community (i.e., *repair services*) and satisfaction with services that facilitate maintenance and repair by the owners themselves (i.e., *do-it-yourself support services*). We identified nine aspects of repair services that affect quality of life, for example, availability and price of maintenance/repair services and the honesty of service providers. See the nine categories of satisfaction with repair services in the appendix. Furthermore, we identified eight aspects of do-it-yourself repairs that may affect overall subjective well-being, for example, price of replacement parts and tools and availability of necessary parts and tools in the community. See the nine categories of satisfaction with do-it-yourself repairs in the appendix.

Disposition satisfaction. Disposition satisfaction refers to the degree of satisfaction consumers feel with the disposability of their products, that is, with the convenience and ease of disposal and the environmental friendliness of the product at the time of disposal. We identified seven categories of consumer goods for which respondents could rate their

satisfaction with product disposability, for example, food, personal care, and automotive products. The seven categories that capture satisfaction with disposability are shown in the appendix.

TESTING THE PREDICTIVE (NOMOLOGICAL) VALIDITY OF THE CONSUMER WELL-BEING MEASURE

Life satisfaction is predicted by satisfaction experiences from different life domains (Campbell, Converse, and Rodgers 1976). Building on the logic implicit in the satisfaction hierarchy and bottom-up spillover theory, we infer that an individual's life satisfaction is significantly influenced by satisfaction with the life events/concerns making up the consumer life domain—that is, satisfaction with events and concerns related to acquisition, possession, consumption, maintenance, and disposition.

Many quality-of-life studies have empirically demonstrated the bottom-up spillover effect between satisfaction with specific life domains and overall life. For example, Dawson and Bamossy (1991) have indicated that life satisfaction often plummets for people whose homes are destroyed by natural disasters. And Leelakulthanit, Day, and Walters (1991) conducted a study using a consumer population in Thailand that also demonstrated this effect. Specifically, they examined the relationship between satisfaction with one's own acquisition and possession of material goods and life satisfaction. The study found a positive relationship, especially for older and low-income people.

Based on bottom-up spillover theory and empirical evidence (e.g., Diener 1984; Leelakulthanit, Day, and Walters 1991; Sirgy, Hansen, and Littlefield 1994; Veenhoven 1991), we hypothesize that consumer well-being should predict life satisfaction over and above satisfaction with other life domains (e.g., job satisfaction, family satisfaction, satisfaction with finances, satisfaction with health, satisfaction with education, and satisfaction with friendships). Consistent with these claims, we propose the following hypotheses. Satisfaction with consumer life domains has a positive predictive effect on life satisfaction independent of satisfaction from other life domains (e.g., family, job, social, financial, education, health, friendship, leisure, neighborhood, community). Specifically,

Hypothesis 1: Acquisition satisfaction has a positive influence on life satisfaction.

Hypothesis 2: Possession satisfaction has a positive influence on life satisfaction.

Hypothesis 3: Consumption satisfaction has a positive influence on life satisfaction.

Hypothesis 4: Maintenance satisfaction has a positive influence on life satisfaction.

Hypothesis 5: Disposition satisfaction has a positive influence on life satisfaction.

METHOD

We conducted a survey using a college student population from three different universities. Since this is a nomological validation study, the main focus was on internal validity. Hence, the study was carefully designed to ensure high internal, not external, validity.

Sampling

A convenience sample of university undergraduate students was used in this study. Respondents were business school students from three universities who enrolled in the Principles of Marketing courses, 157 students from the first university, 66 from the second, and 75 from the third, producing a total sample of 298 completed questionnaires. All three institutions in this study are co-ed universities located in small college towns (e.g., populations less than 100,000 people). Because student respondents in our study are similar in age, education, major, occupation, and other demographic characteristics, we pooled the sample.

The Survey Instrument

The survey instrument contained the consumer well-being measure, the life satisfaction measure, and measures of satisfaction in other life domains. The life satisfaction measure we used was a single-item Delighted-Terrible (D-T) scale. Participants were asked, "How do you feel about your life as a whole?" The D-T scale contained the following response categories: *delighted* (coded as 7), *pleased* (6), *mostly satisfied* (5), *mixed feelings* (4), *mostly dissatisfied* (3), *unhappy* (2), and *terrible* (1). The D-T measure is a well-established measure of subjective well-being (Andrews and Withey 1976).

We recognize that a single-item measure has limitations, for example, bias introduced by the wording cannot be averaged out of a single-item measure (Diener 1984); also, single-item measures tend to be skewed, less reliable, and insufficiently comprehensive (Diener 1984). Although these limitations of a single-item scale are important, they may not apply to this particular well-validated measure. This is because the reliability and validity of the D-T scale has been established in a number of previous studies. For example, Stock et al. (1982) reported that the D-T measure had a temporal reliability of .40 across a six-month interval. Andrews and Withey (1976) reported high convergent validity of the D-T measure with other self-report measures of life satisfaction and predictive validity of the D-T measure in relationships involving self-efficacy, marriage, and standard of living. Larsen, Emmons, and Diener (1983) also found strong evidence for the reliability and validity of the D-T measure. These empirical studies suggest that the D-T measure is an adequate measure of life satisfaction (Diener 1984). We decided to use the Andrews and Withey (1976) D-T scale because the measure is brief, reliable, and valid (Larsen, Emmons, and Diener 1983) and fits the main focus of this study—testing the

predictive validity of our consumer well-being measure with respect to life satisfaction.

Satisfaction with other life domains such as job, family, finances, health, education, friends, leisure, neighborhood, and community was measured using other single-item D-T measures. Participants were asked, "How do you feel about the areas of your life that are listed below? Indicate whether you feel good or bad about each area of your life." Items included (1) job situation, (2) family situation, (3) financial situation, (4) health, (5) education, (6) friends and associates, (7) leisure life, (8) neighborhood, (9) community, (10) spiritual life, (11) taxes paid, (12) environment (quality of air, water, land), (13) political/economic freedom and independence, (14) housing situation, (15) cultural life, and (16) social status. Responses to all these items were measured using the same single-item D-T scale. We include these other well-being measures to covary out their effects on the relationship between consumer well-being and life satisfaction. Following these life satisfaction and life domain satisfaction measures in the survey were our various measures of consumer satisfaction, arrayed in the following order: acquisition, possession, consumption, maintenance (two dimensions), and disposition.

The consumer well-being measures used in this study are composite indexes made up of many formative single indicators. For example, acquisition satisfaction is a composite of satisfactions with seven different aspects of the shopping environment (see appendix). Correlations and descriptive statistics of these six consumer well-being measures are reported in Table 1. All six consumer well-being measures are highly correlated with each other. In addition, we checked the correlations between satisfaction with disposition and satisfaction with the environment. The result of the correlation analysis indicates that satisfaction with disposition is not correlated with satisfaction with the environment ($r = .146, p > .10$).

To examine the possibility of multicollinearity among the predictor variables, life satisfaction was regressed against satisfaction in the sixteen life domains as well as the six consumer well-being dimensions. It is generally believed that if the variance inflation factor (VIF) for any predictor variable exceeds 10.0, there is a potential problem with multicollinearity (Myers 1990). However, as the results in Table 2 indicate, the highest VIF in the model is 4.7, indicating that multicollinearity is not a serious threat in our regression analysis.

RESULTS

We hypothesized that consumer well-being should predict life satisfaction over and above satisfaction from other life domains. We argued that data supporting this hypothesis would lend nomological validity to the consumer well-being measure. The results of the hypothesis tests are shown in Table 3. Table 3 indicates, as expected, that satisfaction in all

TABLE 1
CORRELATIONS AND DESCRIPTIVE STATISTICS OF CONSUMER WELL-BEING MEASURES (N = 297)

	OAS	OPS	OCS	OSRS	OSDIY	ODS
OAS	1.00					
OPS	.51***	1.00				
OCS	.49***	.56***	1.00			
OSRS	.13**	.19***	.39***	1.00		
OSDIY	.21***	.13**	.32***	.32***	1.00	
ODS	.25***	.21***	.46***	.24***	.84***	1.00
M	5.34	5.76	5.25	4.63	4.60	4.98
SD	0.76	0.73	0.78	0.96	1.08	1.03

NOTE: OAS = overall acquisition satisfaction; OPS = overall possession satisfaction; OCS = overall consumption satisfaction; OSRS = overall satisfaction with repair services; OSDIY = overall satisfaction with do-it-yourself repairs; ODS = overall disposition satisfaction.

p* < .05. *p* < .01.

TABLE 2
MULTICOLLINEARITY DIAGNOSTICS

	β	t-Value	p	VIF
Satisfaction with major life domains				
Job satisfaction	-.023	-0.71	.48	1.40
Family satisfaction	.040	1.29	.20	1.22
Satisfaction with finance	.006	0.17	.87	1.46
Satisfaction with health	.037	1.07	.29	1.60
Satisfaction with education	.050	1.42	.16	1.58
Satisfaction with friendships	.059	1.59	.11	1.76
Leisure satisfaction	.091***	2.70	.01	1.47
Satisfaction with neighbor	.045	1.31	.19	1.54
Satisfaction with community	.034	0.914	.36	1.78
Spiritual satisfaction	.064*	1.91	.057	1.47
Satisfaction with taxes	.017	0.51	.61	1.42
Satisfaction with environment	-.001	-0.016	.98	1.60
Satisfaction with political situation	.022	0.65	.52	1.54
Housing satisfaction	-.020	-0.58	.56	1.61
Satisfaction with cultural life	.075**	2.03	.04	1.76
Satisfaction with social life	-.006	-0.16	.86	1.73
Consumer well-being				
Satisfaction with acquisition	.125***	3.44	.001	1.70
Satisfaction with possessions	.490***	12.11	.00	2.13
Satisfaction with consumption	.216***	4.78	.00	2.65
Satisfaction with repair services	-.069**	-2.01	.04	1.41
Satisfaction with do-it-yourself repairs	-.016	-0.28	.78	4.05
Satisfaction with disposition	.065	1.08	.28	4.70
R^2	.797			
Adjusted R^2	.780			
Overall F-value	47.202***			
df	22, 265			

NOTE: Dependent variable = overall life satisfaction. VIF = Variance Inflation Factor.

p* < .10. *p* < .05. ****p* < .01.

major life domains and in the six dimensions² of the consumer life domain are significantly and positively correlated with life satisfaction (see Pearson correlations in the first column of Table 3). These results provide initial support to our hypothesis, lending a measure of nomological validity to the consumer well-being measure. However, when we regress life satisfaction scores against all satisfaction variables from all major life domains and the satisfaction variables related to

the six dimensions of the consumer life domain, we find that only three of the six consumer well-being variables (acquisition, possession, and consumption satisfaction) were significant predictors of life satisfaction ($\beta = .125, .490, \text{ and } .216$, respectively—shown in model 1 of Table 3). The two repair satisfaction measures and the disposal satisfaction measure did not account for any significant portion of the variance in life satisfaction (see column under model 1 in Table 3). These

TABLE 3
TESTING OF THE HYPOTHESIZED RELATIONSHIP BETWEEN CONSUMER WELL-BEING AND LIFE SATISFACTION

	Pearson Correlation	Beta Weights			
		Model 1	Model 2	Model 3	Model 4
Satisfaction with major life domains					
Job satisfaction	.284***	-.023	-.037	-.023	-.043
Family satisfaction	.277***	.040	.076*	.030	.033
Satisfaction with finance	.366***	.006	.047	.021	.013
Satisfaction with health	.425***	.037	.052	.028	.020
Satisfaction with education	.423***	.050	.090*	.056	.064
Satisfaction with friendships	.501***	.059	.105**	.062*	.092**
Leisure satisfaction	.509***	.091***	.145***	.093***	.091**
Satisfaction with neighbor	.240***	.045	-.079*	-.042	-.041
Satisfaction with community	.395***	.034	.074	.024	.041
Spiritual satisfaction	.275***	.064*	.090*	.064*	.070
Satisfaction with taxes	.260***	.017	.012	.011	.020
Satisfaction with environment	.409***	-.001	.083*	.002	.024
Satisfaction with political situation	.387***	.022	.026	.021	.010
Housing satisfaction	.381***	-.020	-.015	-.015	-.047
Satisfaction with cultural life	.450***	.075**	.111**	.072**	.081**
Satisfaction with social life	.432***	-.006	.085*	-.012	.010
Consumer well-being	.633***		.373***		.674***
Satisfaction with acquisition	.604***	.125***		.136***	
Satisfaction with possessions	.819***	.490***		.493***	
Satisfaction with consumption	.661***	.216***		.204***	
Satisfaction with repair services	.187**	-.069**			
Satisfaction with do-it-yourself repairs	.210**	-.016			
Satisfaction with disposition	.323***	.065			
R^2		.797	.613	.792	.759
Adjusted R^2		.780	.589	.777	.744
Overall F value		47.202***	25.169***	54.264***	50.658***
df		22, 265	17, 270	19, 271	17, 273

NOTE: Dependent variable = overall life satisfaction.

* $p < .10$. ** $p < .05$. *** $p < .01$.

regression results lend only partial support to the nomological validity of the consumer well-being measure.

Since our theory dictates that consumer well-being is made up of the *totality* of the six consumer satisfaction dimensions, we computed a consumer well-being score for each respondent by summing the satisfaction scores pertaining to the six dimensions of consumer well-being. Then, we regressed life satisfaction scores against the composite consumer well-being score while partialing out the effects of satisfaction with the other major life domains. We expected that the nomological validity of the consumer well-being measure would be established if two conditions were met:

1. *The composite consumer well-being variable would account for a significant portion of the variance in life satisfaction scores (while partialing out the effects of the other life domain variables).* The results indicate that the composite consumer well-being variable accounted for a significant portion of the variance in life satisfaction ($\beta = .373$, $p = .00$ —shown under model 2 of Table 3). Therefore, we conclude that this condition was met.
2. *There is no significant difference in the percentage of variance accounted for by the regression model in which*

consumer well-being is a composite variable (model 2 in Table 3) and the full model in which all six dimensions of consumer well-being are individually measured (see model 1 in Table 3). The R of model 1 is .797, whereas the R of model 2 is .613. An F test of the difference between these two R s indicated that model 2 accounts for a significantly lower portion of the variance in life satisfaction than model 1 ($F = 49.85$, $df = 5, 275$, $p < .01$). Therefore, we conclude that condition 2 was not met and that the consumer well-being measure was not nomologically validated based on this criterion.

The failure to meet condition 2 suggests that satisfaction with repair services, satisfaction with materials and services related to do-it-yourself repairs, and satisfaction with disposition are *nomologically problematic*. Hence, we eliminated these variables. Model 3 in Table 3 shows the regression results of all variables included in the model except the three problematic consumer well-being dimensions. Model 4 shows regression results with the composite consumer well-being variable recomputed after excluding the three variables pertaining to maintenance and disposition. The results show that the composite consumer well-being variable (with the three maintenance and disposition variables

eliminated) accounted for a significant portion of the variance in life satisfaction ($\beta = .674, p = .00$). The R^2 pertaining to model 3 is .792, whereas the R^2 pertaining to model 4 is .759. An F test of the difference between these two R^2 s indicated that models 3 and 4 explain the variance in life satisfaction almost equally well, even though the difference in the percentage of variance accounted for was significant ($F = 22.05, df = 2, 278, p < .01$). Therefore, we conclude that conditions 1 and 2 were mostly met and the *revised* consumer well-being measure is nomologically validated. These results provide support for Hypotheses 1, 2, and 3, but not for Hypotheses 4 and 5.

DISCUSSION

This validation study indicates that our consumer well-being measure is nomologically valid if we eliminate the two maintenance measures and the one disposition measure, the dimensions of consumer well-being that do not seem to make a significant contribution in predicting life satisfaction. Although this is an important finding, we believe that it is premature at this point to conclude that a composite measure of consumer well-being should be restricted to the acquisition, possession, and consumption dimensions only. We believe there are at least four explanations—three related to sampling, one to measurement—that should be ruled out through future research before accepting the truncated model of consumer well-being.

The first explanation for the lack of support for the maintenance dimension of life satisfaction relates to *involvement in maintenance activities*. Students for the most part do not engage in the many maintenance activities that are typical in a more traditional household. Most do not own a home, and many do not own a car. Being young, their history with particular products is likely to be relatively short. These factors will tend to minimize their need for, and exposure to, maintenance and repair services. Consequently, these activities may not be as important in their lives as in the lives of other more mature consumers. Salient life domains for college students include family, education, friendships, and leisure, among others. The data from this study support this observation (see Table 3). Future studies should test this hypothesis by comparing the maintenance/repair satisfaction coefficients of college students with those of adult consumers more involved in the maintenance and repair of durable goods. If maintenance satisfaction affects the life satisfaction of nonstudents more than that of students, the maintenance and repair constructs would be nomologically validated as an important part of the consumer well-being construct.

A second sampling explanation is related to *attitude toward environmental issues*. It is possible that the effect of the disposition construct is moderated by environmental awareness and concern. When concern for the environment is high, disposition satisfaction may significantly affect overall

consumer satisfaction and overall life satisfaction. If marketing students, for example, have lower levels of environmental concern than liberal arts majors and the general population, this environmental effect might not be reflected in our results. Future research could examine the effects of environmental concern by gathering data from a more diverse student and nonstudent sample and by directly measuring environmental concern so that its hypothesized moderating influence could be tested.

The third explanation is *cultural*. The sample used in this study was composed entirely of consumers in the United States, a country that has been branded “the disposable society.” Compared with other consumers, American consumers seem more inclined to discard their durable goods instead of repairing them and passing them on to others. America is a resource-abundant society in which labor costs for repair and maintenance services are very high. In many instances, American consumers find it more cost-effective to buy new products than to repair their current ones.

America is also viewed as a culture with a short-term orientation (Hofstede 1992). Consumers in cultures with a short-term orientation tend to save less and spend more on consumer goods. In contrast, consumers in cultures with a long-term orientation (e.g., Asian countries) tend to be highly thrifty and to save more and spend less. A comparative study contrasting American consumers with consumers from other developed and developing countries might reveal that the maintenance and disposition dimensions of life satisfaction have a larger effect on overall consumer satisfaction in other nations than in the United States. Like the comparison of students and nonstudents and those who are and are not environmentally aware, this comparison of Americans and others is especially likely to tap differences that would nomologically validate the maintenance and disposition constructs. Future research should test this culture hypothesis.

The fourth explanation follows from a distinction between *positive and negative affect*. We believe that the maintenance and disposition dimensions of consumer well-being are more likely to be related to consumer dissatisfaction (negative affect) than to consumer satisfaction (positive affect). Thus, the failure of maintenance and disposition satisfaction to predict life satisfaction may be attributable to the use of Andrews and Withey’s (1976) D-T measure (“How do you feel about your life as a whole?”) that is biased in favor of capturing positive rather than negative affect. Perhaps a more sensitive measure such as the Bradburn (1969) Affect Balance Scale, which is well accepted in the quality-of-life literature, would more fully reflect both positive and negative dimensions of subjective well-being. Employing measures designed to reflect both positive and negative affect, future research could test this two-factor hypothesis.

This study has several other limitations. It is largely based on the bottom-up spillover model. Future studies can shed more light on the role of consumer well-being in relation to

life satisfaction by exploring this relationship using alternative models and theories. These alternative models and theories include need satisfaction theories (e.g., Wilson 1960), pleasure and pain theories (e.g., Houston 1981), association theories (e.g., Schwartz and Clore 1983), judgment theories and top-down spillover theories (e.g., Kozma and Stones 1980), and social judgment theory, among others (see a thorough discussion of these theories in Sirgy 2001). Moreover, goods and services categories used in our measures of consumer domains are not exhaustive. Future studies could incorporate other goods and services (e.g., recreational services) appropriate to the focus of the study and the nature of sample. Furthermore, this study has focused on the main effects of consumer well-being on life satisfaction. Future studies can identify moderators of the relationship between particular consumer well-being dimensions and life satisfaction. For example, future studies can test whether disposition satisfaction has a greater influence on life satisfaction for those who care deeply about the environment than for those who are less environmentally aware.

Macromarketing Implications

Marketing practices that contribute significantly to consumer well-being are referred to as quality-of-life (QOL) marketing (Lee and Sirgy 1995; Sirgy and Lee 1996; Sirgy, Meadow, and Samli 1995). QOL marketing is a business process that plans, prices, promotes, and distributes economic goods to consumers in ways that maximize acquisition, possession, consumption, maintenance, and disposition satisfaction.

Once the consumer well-being measure is fully validated across different samples and contexts (as suggested in the preceding section), it could be used by macromarketers to monitor the societal effects of marketing practices on consumer well-being. National surveys using our consumer well-being measure might be conducted on a regular basis to monitor the effects of various marketing practices within and across nations. The data could be decomposed to assess deficits in satisfaction on one or several of the five proposed dimensions of consumer well-being. The data could be analyzed in relation to specific demographic groups such as the poor, the elders, and the disabled. Based on these results, specific macromarketing policies could be developed to encourage marketing practices that increase the consumer well-being of targeted populations.

Specifically, the performance of the retail industry could be assessed through a trend analysis focused on the acquisition part of the consumer well-being measure. The acquisition measure could be used as an overall performance index to help leaders in the retail industry monitor overall performance of the industry. The possession measure could be used in the same way to help leaders in the finance industry (particularly financial institutions that administer loans to consumers to facilitate purchase and eventual ownership of durable

goods). The consumption measure could be equally helpful to the larger consumer goods and service industry. The maintenance index could assist those industries involved in the servicing and repairing consumer durables, whereas the disposition index should aid businesses whose products produce waste by-products or who are directly involved in the waste disposal and recycling industry.

APPENDIX THE CONSUMER WELL-BEING MEASURES

Acquisition Satisfaction

“Please indicate how satisfied or dissatisfied you are with the shopping in your community. Respond to each of the following aspects of the shopping environment in your community:”

1. Quality of goods available in local stores
2. Prices charged in local stores
3. Attractiveness or ambiance of local stores
4. Courtesy or helpfulness of store personnel
5. Hours that the stores are open
6. Store refund/replacement policies for defective goods
7. Availability of goods you want in local stores

(1 = *awful*, 2 = *bad*, 3 = *unsatisfactory*, 4 = *neutral*, 5 = *satisfactory*, 6 = *good*, 7 = *wonderful*; 0 = *no opinion*, *missing value*)

Mathematical formulation of multi-attribute composite index:

$$OAS = \sum (SA_i) / 7$$

where OAS = overall acquisition satisfaction and SA_i = satisfaction with a specific aspect of the shopping environment (i) in which there are seven specific aspects of the shopping environment.

Possession Satisfaction

“If you own any of the following items, please indicate the extent to which you are satisfied/dissatisfied with possessing or owning them. Note that persons might like owning something—a classic car or a piece of property—even though they never use it. Or they might be pleased both to own and to use the thing. On these items, indicate only how you feel about *owning* the item, not how you feel about using or consuming it. Respond only to the items you own.”

1. House or condominium
2. Consumer electronics (CD player, TV, VCR, computers, etc.)
3. Furniture and/or appliances
4. Private transportation (cars, trucks, motorcycles, and bicycles)
5. Clothing, accessories, and jewelry
6. Savings and investments

(1 = *awful*, 2 = *bad*, 3 = *unsatisfactory*, 4 = *neutral*, 5 = *satisfactory*, 6 = *good*, 7 = *wonderful*; 0 = *no opinion*, *missing value*)

Mathematical formulation of multi-attribute composite index:

$$OPS = (\sum SP_i) / 6$$

where OPS = overall possession satisfaction and SP_i = satisfaction with a specific category of material possessions (i) in which there are six categories of material possessions.

Consumption Satisfaction

“If you own any of the items shown below, please indicate the extent to which you are generally satisfied/dissatisfied with using or consuming them. Since we sometimes use things we do not own or own things or service we do not use, it should be possible to separate our general satisfaction in using a thing from our satisfaction in owning it. On items shown below, indicate only how you generally feel about *using or consuming* the item, not how you feel about owning it. Respond only to the items that you use.”

1. Health care services (doctors, dentists, optometrists, etc.)
2. Banking/insurance services
3. Personal care services (barbers, hairdressers, manicurists, etc.)
4. Restaurants
5. Food and grocery items
6. Consumer electronics (CD player, TV, VCR, computers, etc.)
7. Furniture and/or appliances
8. Private transportation (cars, trucks, motorcycles, and bicycles)
9. Clothing, accessories, and jewelry
10. Utilities (electricity, telephone, etc.)
11. Savings and investments

(1 = *awful*, 2 = *bad*, 3 = *unsatisfactory*, 4 = *neutral*, 5 = *satisfactory*, 6 = *good*, 7 = *wonderful*, 0 = *no opinion*, *missing value*)

Mathematical formulation of multi-attribute composite index:

$$OCS = (\sum SC_i) / 11$$

where OCS = overall consumption satisfaction and SC_i = satisfaction with consumption of a specific category of material goods (i) in which there are eleven categories of product/service consumption.

Maintenance Satisfaction

Satisfaction with Repair Services

“Please indicate how satisfied or dissatisfied you are with the repair services available to you. Examples of repair organizations would include car garages, plumbing services, electricians, appliance and shoe repair shops, and so on. How do you feel about the following aspects of repair services available to you?”

1. Quality of the service provided by most repair organizations
2. The skill of the people who do the repairs
3. The availability of services when you need them
4. The price the repair organizations usually charge for their services
5. The speed of service or promptness of most repair organizations
6. The honesty of the people who do the repairs
7. The range of choices available when picking a repair service
8. The level of appropriateness to your questions or complaints
9. The accuracy of price estimates given before the service is provided

(1 = *awful*, 2 = *bad*, 3 = *unsatisfactory*, 4 = *neutral*, 5 = *satisfactory*, 6 = *good*, 7 = *wonderful*, 0 = *no opinion*, *missing value*)

Mathematical formulation of multi-attribute composite index:

$$OSRS = (\sum SRS_i) / 9$$

where OSRS = overall satisfaction with repair services and SRS_i = satisfaction with a specific aspect (i) of repair services in the community in which there are nine specific aspects of repair services. These are:

Satisfaction with Materials and Services for Do-It-Yourself Repairs

“People who do their own repair work often require materials and services that help them get the job done. Please indicate how you feel about the materials and services available in your community.”

1. Price of replacement parts and tools
2. Quality of advice or assistance provided by retailers, friends, or others in the community
3. The completeness and intelligibility of owners’ manuals or assembly instructions
4. Availability of necessary replacement parts and tools
5. The technical support provided by manufacturers
6. Quality of replacement parts and tools
7. Availability of “how-to-repair” workshops
8. The availability of stores specializing in parts and tools, that is, places such as auto parts, building supplies, and hardware stores

(1 = *awful*, 2 = *bad*, 3 = *unsatisfactory*, 4 = *neutral*, 5 = *satisfactory*, 6 = *good*, 7 = *wonderful*, 0 = *no opinion*, *missing value*)

Mathematical formulation of multi-attribute composite index:

$$OSDIY = (\sum SDIY_i) / 8$$

where OSDIY = overall satisfaction with do-it-yourself repairs and $SDIY_i$ = satisfaction with a specific aspect (i) of materials and services for do-it-yourself repairs in which there are eight specific aspects of do-it-yourself repairs.

Disposition Satisfaction

“For various reasons, people may be more or less happy with the disposability of a product. If you use any of the following products, please indicate the extent to which you are satisfied/dissatisfied with the product class when you dispose of the product or its package. Respond only to items that you use.”

1. Food (milk, canned foods, cookies, carbonated drinks, etc.)
2. Personal care products (toothpaste, shampoo, deodorant, etc.)
3. Cleaning and home maintenance products (detergents, window sprays, vacuum bags, air fresheners, paint, etc.)
4. Paper products
5. Baby care product (diapers, baby wipes, talcum powder, Vaseline, etc.)
6. Automotive products (oil, oil filters, antifreeze, car wax, batteries, tires, etc.)
7. Lawn and yard (leaves, grass, dead wood, etc.)

(1 = awful, 2 = bad, 3 = unsatisfactory, 4 = neutral, 5 = satisfactory, 6 = good, 7 = wonderful, 0 = no opinion, missing value)

Mathematical formulation of multi-attribute composite index:

$$\text{ODS} = (\sum \text{SD}_i) / 7$$

where ODS = overall disposition satisfaction and SD_i = satisfaction with disposition of a specific disposal service (i) in which there are seven categories of disposed products.

NOTES

1. As the study has been conducted in small campus towns (e.g., populations less than 100,000), the term *community* means the town area where the universities are located.

2. Note that although consumer well-being has five dimensions, maintenance satisfaction has two subdimensions, making a total of six dimensions.

3. $F = [(R_2^2 - R_1^2) / (k_2 - k_1)] / [(1 - R_2^2) / (N - k_2 - 1)]$, where R_2^2 = the multiple R for the expanded equation, R_1^2 = the multiple R for the original equation, k_2 = the number of predictors in the expanded equation, k_1 = the number of predictors in the original equation, and N = the total sample size.

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