3 Values and Goals

General Values

List of Values: LOV

(Kahle 1983)

Construct: The term *value* has been defined as an enduring prescriptive or proscriptive belief that a specific end state of existence or specific mode of conduct is preferred to an opposite end state or mode of conduct for living one's life (Kahle 1983; Rokeach 1968, 1973).

The List of Values (LOV) typology draws a distinction between external and internal values, and it notes the importance of interpersonal relations in value fulfillment, as well as personal factors (i.e., self-respect, self-fulfillment) and apersonal factors (i.e., fun, security, excitement) in value fulfillment. In essence, the LOV measures those values that are central to people in living their lives, particularly the values of life's major roles (i.e., marriage, parenting, work, leisure, and daily consumptions). The LOV is most closely tied to social adaptation theory (Kahle, Beatty, and Homer 1986), and many studies suggest that the LOV is related to and/or predictive of consumer behavior and related activities (e.g., Homer and Kahle 1988; Kahle 1983).

Description: The LOV is composed of nine values that can be scored in a number of ways. Each value can be evaluated on 9- or 10-point scales (*very unimportant to very important*), or the values can be rank ordered from most to least important. Also, some combination of the two methods can be used where each value is rated on 9- or 10-point scales and then subjects are asked to circle the one or two values that are most important to them in living their daily lives (e.g., Kahle 1983; Kahle et al. 1986; Kahle and Kennedy 1988).

Development: The LOV was developed from a theoretical base of values proposed by Feather (1975), Maslow's (1954) hierarchy of values, Rokeach's (1973) 18 terminal values, and various other contemporaries in values research. The LOV items were derived by culling the values from the above sources from a much larger pool of values to the nine LOV items. For a more detailed discussion of the scale development procedures, see Kahle (1983, 1986) and Kahle et al. (1986).

Samples: The major study on the LOV was conducted with a probability sample of *n* = 2,264 Americans. The study was conducted by the Survey Research Center of the Institute for Social Research at the University of Michigan (Kahle 1983, 1986; Kahle and Kennedy 1988).

Validity: The original study found the LOV to be significantly correlated with various measures of mental health, well-being, adaptation to society, and self (Kahle 1983). Thus, evidence for the nomological validity of the LOV exists.

Scores: Mean scores for the nine values were not directly reported by Kahle (1983); however, the percentage of respondents selecting the one value that is most important to them is available in Kahle (1983). (See also Kahle, Liu, and Watkins 1992 below.)

Source: Kahle, Lynn R. (1983), *Social Values and Social Change: Adaptation to Life in America,* New York: Praeger.

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Other evidence: The LOV was also tested with a student sample of 193 (of which 122 were foreign students) in terms of predictive ability of consumer-related trends (Kahle et al. 1986), a convenience sample of 356 in terms of comparing it to the Rokeach Value survey (Beatty et al. 1985), and, a sample of 831 food shoppers for predictive validity purposes (Homer and Kahle 1988),

Beatty et al. (1985) found that 92% and 85% of respondents who picked any given first value ranked it first or second 1 month later, offering support for the LOV's consistency over time. In one study, using 10-point scales to evaluate each of the nine LOV items, a three-factor representation of the values was found with composite reliability estimates (via LISREL) of 0.69 for a factor representing internal individual values, 0.68 for an external values factor, and 0.58 for an internal interpersonal values factor (Homer and Kahle 1988).

Most studies employing the LOV have focused on the distribution of values across the United States (e.g., Kahle 1986), the predictive validity of the LOV toward consumer behaviors, and/or the relationship of the LOV with other psychological constructs (e.g., Homer and Kahle 1988; Kahle 1983; Kahle et al. 1986). These studies also indicate that the LOV was found to be significantly correlated with various measures of mental health, well-being, adaptation to society, and self (Kahle 1983), and predictive of a number of consumer behaviors (Homer and Kahle 1988; Kahle et al. 1986). Furthermore, the hypothesized dispersion of values across areas of the United States was supported (Kahle 1986). In sum, evidence for the nomological and predictive validity of the LOV exists.

In the Homer and Kahle (1988) study, means of the LOV items by various discriminant groups are also reported. In yet another study, LOV rankings from 997 respondents in the United States were compared to LOV rankings from Kahle's (1983) original LOV study (Kahle, Poulos, and Sukhdial 1988). A Spearman rank order correlation between the ranks of the values (i.e., in terms of the percentage of people endorsing the value as the primary value) across the two studies revealed stability in importance placed on different values by the American people over a decade. The correlation for males was 0.91, for females was 0.79, and for the sample combined was 0.83. Kahle et al. (1988) offer numerous breakdowns of the LOV values by gender and age groups.

Mean scores for eight LOV values across four U.S. geographic regions are reported in Kahle et al. (1992). These means scores are based on 7-point scales (*not at all important to me to extremely important to me*) and are reproduced in Table 3.1.

Table 3.1 Mean Values Based on Region

Value	Region Order	Mean 1	Mean 2	Mean 3	Mean 4
Self-respect	w,e,m,s	6.37	6.55	6.55	6.72
Security	e,m,w,s	6.29	6.29	6.31	6.43
Warm relations with others	e,w,m,s	6.03	6.29	6.31	6.39
Sense of fulfillment	m,w,e,s	5.82	5.91	6.03	6.16
Sense of accomplishment	m,w,e,s	6.04	6.14	6.17	6.31
Being well respected	w,e,m,s	5.72	5.97	6.01	6.20
Sense of belonging	w,e,m,s	5.52	5.77	5.81	6.02
Fun and enjoyment in life	m,e,w,s	5.53	5.60	5.67	5.81

Note: e = East, m = Midwest, s = South, w = West; total n = 442.

Other sources: Beatty, Sharon E., Lynn R. Kahle, Pamela Homer, and Shekhar Misra (1985), "Alternative Measurement Approaches to Consumer Values: The List of Values and the Rokeach Value Survey," *Psychology & Marketing,* 2 (Fall), 181–200.

Kahle, Lynn, Basil Poulos, and Ajay Sukhdial (1988), "Changes in Social Values in the United States During the Past Decade," *Journal of Advertising Research,* 28, 35–41.

References: Feather, Norman T. (1975), *Values in Education and Society,* New York: Free Press.

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List of Values: LOV

(Kahle 1983)

The following is a list of things that some people look for or want out of life. Please study the list carefully and then rate each thing on how important it is in your daily life, where 1 = *very unimportant* and 9 = *very important*.

M	Very Unimportant							Very Important		%	M
I. Sense of belonging	1	2	3	4	5	6	7	8	9	8.8	7.05
2. Excitement	1	2	3	4	5	6	7	8	9	—	7.08
3. Warm relationships with others	1	2	3	4	5	6	7	8	9	16.2	8.76
4. Self-fulfillment	1	2	3	4	5	6	7	8	9	9.6	8.62
5. Being well respected	1	2	3	4	5	6	7	8	9	8.8	7.55
6. Fun and enjoyment of life	1	2	3	4	5	6	7	8	9	4.5	8.08
7. Security	1	2	3	4	5	6	7	8	9	20.6	7.75
8. Self-respect	1	2	3	4	5	6	7	8	9	21.1	8.97
9. A sense of accomplishment	1	2	3	4	5	6	7	8	9	11.4	8.59

*Now reread the items and circle the one thing that is most important you in your daily life.

Notes: The above scoring format is but one possible format. As indicated earlier, the values can be rank ordered, or respondents can be asked to indicate their top two values and/or use 10-point scales and/or a combination of scoring methods.

In the original study (*n* = 2,264), only 2% of the sample endorsed "excitement" as their top value. Subsequently, excitement was collapsed into the "fun and enjoyment in life" category. The percentages presented above reflect the percentage of respondents who ranked the value as the most important in living their daily lives. The percentage reported for "fun and enjoyment in life" reflects the 2% added to it for those respondents endorsing "excitement" as their top value (Kahle 1983).

The mean values (M) are based on 10-point items and were calculated by averaging the values reported in Table 7 of Homer and Kahle (1988). Values 2, 4, 8, and 9 represent the internal individual values factor; values 1, 5, and 7 represent the external dimension values factor; and values 3 and 6 represent the internal interpersonal values factor (Homer and Kahle 1988).

The Rokeach Value Survey: RVS

(Rokeach 1968, 1973)

Construct: A value is defined as an enduring prescriptive or proscriptive belief that a specific end state of existence or specific mode of conduct is preferred to an opposite end state or mode of conduct (Rokeach 1968, 1973). These values are considered the important principles guiding one's behavior throughout life.

The Rokeach Value Survey (RVS) is designed to measure two sets of values. One set is composed of 18 terminal values or desired end states of existence (e.g., an exciting life, national security), and the other set is composed of 18 instrumental values, or preferable modes of behavior (e.g., being ambitious, independent).

The importance of values, and specifically the Rokeach Value Survey, to marketing/consumer research cannot be overstated. Two reviews of the relevance of values to consumer behavior can be found in Kahle (1985) and Prakash and Munson (1985).

Description: The 18 values within each category (terminal and instrumental) are alphabetically listed on two separate pages (Form D). Then, subjects are asked to rank order each value as to its importance as a guiding principle in living their life. A 1 indicates the most important value and an 18 the least important. Scale responses are considered ordinal.

Development: The original development of the scale is described in Rokeach (1968, 1973). At first, 12 values were selected to represent each set of values, but due to the omission of salient values and low reliability estimates, both sets of values were expanded to 18 in each category. For the terminal values, an extensive literature review, the author's own judgment, and interviews with students (*n* = 30) and nonstudents (*n* = 100) produced an initial pool of values in the hundreds. Then, through further judgment by the author and empirical analysis examining similarity among items, 18 items were retained.

For the instrumental values, Anderson's (1968) checklist of 555 personality-trait words was used as a base. This list was trimmed to about 200, and then the 18 instrumental values were chosen according to the following criteria: (a) by retaining only one word from a group of synonyms, (b) by retaining those judged to be maximally different or minimally intercorrelated with one another, (c) by retaining those judged representative of important American values, (d) by retaining those that would maximally discriminate across demographic variables, (e) by retaining those values judged to be meaningful in all cultures, and (f) by retaining those items that respondents could admit to without appearing to be immodest or vain.

Initial estimates of predictive validity are offered by Rokeach (1968, 1973), and results and comments pertaining to other applications of the scale outside of marketing/consumer behavior can also be found in Rokeach (1973) and Robinson and Shaver (1973). In fact, the scale has undergone numerous reliability and validity checks across various samples.

Samples: Various samples were used by Rokeach throughout the derivation of the value survey instrument. Some of these samples include 50 policemen, 141 unemployed whites and 28 unemployed blacks, 298 students, and 75 Calvinest students. Other applications of the scale outside the marketing/consumer behavior literature are numerous and have employed a wide range of samples encompassing all types of demographic classifications.

Validity: Test-retest reliability (over a 7-week period) has been in the 0.70 range and above for the RVS. Other estimates of test-retest reliability for applications of the scale outside marketing/consumer behavior have been in the 0.70 to 0.79 range for Form D. In most of these applications, the values were ranked as originally prescribed by Rokeach, and

thus more traditional estimates of internal consistency (i.e., coefficient alpha) are rarely reported. As mentioned above, estimates of predictive validity can be found in Rokeach (1968, 1973). For example, the value "salvation" was found to be predictive of religious affiliation and church attendance, and the values of "equality" and "freedom" were predictive of participation in civil rights demonstrations.

Scores: Since the Rokeach survey is a rank order scale, mean scores generally have not been reported. However, a comprehensive table of the frequencies for all 36 values across select demographic characteristics is available in Rokeach (1973, pp. 363–419).

Sources: Rokeach, Milton (1968), *Beliefs, Attitudes, and Values*. San Francisco: Jossey-Bass. © 1968 by Jossey-Bass, Inc. Reprinted with permission.
Rokeach, Milton (1973), *The Nature of Human Values*. New York: Free Press. © 1973 by The Free Press. Scale items taken from Appendix A (pp. 355–61). Reprinted with permission.

Other evidence: In the marketing/consumer behavior literature, samples have comprised both student (Munson and McQuarrie 1988; Reynolds and Jolly 1980; Shrum, McCarty, and Loeffler 1990; Vinson, Munson, and Nakanishi 1977) and nonstudent groups (e.g., Beatty et al. 1985; McQuarrie and Langmeyer 1985; Munson and McQuarrie 1988). These applications of the scale have used all 18 terminal and all 18 instrumental values, as well as shortened versions of the scale where 12 instrumental and 12 terminal values are evaluated (Rokeach 1968, 1973). In addition, many of these applications have used various scoring formats including Rokeach's original ranking procedure, anchored end-point scoring, and Likert-type interval scoring. Several of these applications are briefly discussed below.

Based on the difficulty subjects have had in ranking all 18 terminal and 18 instrumental values, many marketing researchers have attempted alternative scaling formats for the Rokeach values. Vinson et al. (1977) had subjects evaluate the 36 values on an interval scaling format ranging from *important* to *not important*. They report that two distinct dimensions were found (i.e., the terminal and instrumental value dimensions as espoused by Rokeach). However, within the two dimensions, several subdimensions were found. Six factors for the terminal values were found: social harmony, personal gratification, self-actualization, security, love and affection, and personal contentedness. Four factors were found for the instrumental dimension: competence, compassion, sociality, and integrity. Estimates of internal consistency were not reported.

Munson and McIntyre (1979) compared three different scaling formats of the Rokeach values. The three formats were the original format proposed by Rokeach, Likert statements for each of the 36 values ranging from *extremely important to extremely unimportant,* and an anchored scaling format. Over a 2-week period, test-retest reliability was estimated via Spearman's rho for each format. For Rokeach's rank order format, *rho* = 0.82 and 0.76 for the terminal and instrumental values, respectively. For the Likert format, *rho* = 0.76 and 0.74 for the terminal and instrumental values, and for the anchored scaling, *rho* = 0.73 and 0.68 for the terminal and instrumental values. Munson and McIntyre concluded that the Likert format was an appropriate alternative to Rokeach's rank order format.

Reynolds and Jolly (1980) also compared three scaling formats including Rokeach's rankings, a Likert-type format, and a paired comparison format for the 18 terminal values and a 12-value subset of the terminal values. Over a 2-week period, test-retest reliability was computed across the formats via Spearman's rho and Kendall's tau. They concluded that the Likert format may not be appropriate based on the results in Table 3.2.

Table 3.2   Comparison of Scaling Formats

	Rokeach		Likert		Paired	
	18	12	18	12	18	12
Rho	.78	.76	.66	.75	.67	.77
Tau	.62	.62	.62	.69	.57	.66

Using Rokeach's ranking procedure, Kahle (1985) found the 18 terminal values to have convergent/discriminant validity when compared to corresponding values from the LOV survey (Kahle 1983).

In a special issue of *Psychology & Marketing* (1985, Vol. 2, No. 4), a number of papers examined the Rokeach Value Survey. For example, McQuarrie and Langmeyer used a 15-value subset of the Rokeach values in studying attitudes toward personal computers. The 15 items were evaluated in relation to home computers using 5-point agree–disagree Likert statements (alpha = 0.90). Evidence of discriminant validity between the 15-item value measure and related constructs was also reported. Prakash and Munson used the Rokeach ranking procedure for the 36 values but found seven factors underlying the values (i.e., fun and enjoyment, workplace ethics, sapience, autonomy, aesthetics, security, and love).

Munson and McQuarrie (1988) attempted to reduce the Rokeach Value Survey to values most relevant to consumer behavior. In one sample, subjects were asked to identify the 12 values most irrelevant to consumer behavior. In a subsequent sample, subjects evaluated the 24 remaining values on the degree to which they were related to consumer behavior on 3-point scales (i.e., *not related, weakly related, strongly related*). Coefficient alpha was 0.94. In another sample, these 24 values were again evaluated on the degree to which they were related to consumer behavior on 5-point scales (i.e., *no, weak, some, definite,* or *strong* relation), with a coefficient alpha of 0.95. Furthermore, three factors were found to underlie the 24 consumer behavior relevant values—a "values to help fulfill adult responsibilities" factor, a "values to help fulfill lifestyle goals" factor, and a "values to help relieve tension" factor.

In one study, though, all 36 values were assessed on 7-point Likert-type scales, and mean scores are reported for various subsamples (Vinson et al. 1977, p. 251). The mean scores ranged from a low of 4.5 for "social recognition" to a high of 6.6 for "honesty" and "self-respect."

Last, Crosby, Bitner, and Gill (1990) had a sample of 418 rank, then rate on 7-point scales, the 18 instrumental and 18 terminal values. Confirmatory factor analysis found three dimensions for the instrumental values: self-direction (nine items), conformity (five items), and virtuousness (four items) with composite reliability estimates of 0.81, 0.57, and 0.65, respectively. Correlations among these dimensions ranged from 0.08 to 0.59. Three dimensions were also found for the terminal values: self-actualization/hedonism (12 items), idealism (3 items), and security (3 items) with composite reliabilities of 0.62, 0.58, and 0.67, respectively. Correlations among these dimensions ranged from –0.44 to 0.77.

Other sources: Beatty, Sharon E., Lynn R. Kahle, Pamela Homer, and Shekhar Misra (1985), "Alternative Measurement Approaches to Consumer Values: The List of Values and the Rokeach Value Survey," *Psychology & Marketing*, 2, 181–200.

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Prakash, Ved and J. Michael Munson (1985), "Values, Expectations From the Marketing Systems, and Product Expectations," *Psychology & Marketing,* 2, 279–98.

Robinson, J. P. and R. P. Shaver (1973), *Measures of Social Psychological Attitudes,* Ann Arbor, MI: Survey Research Center, Institute for Social Research.

The Rokeach Value Survey: RVS

(Rokeach 1968, 1973)

Listed below are 18 values in alphabetical order. Your task is to arrange them in order of importance to YOU, as guiding principles in YOUR life. Study the list very carefully and then rank all 18 in terms of their importance to you. Place a "1" next to the value that is the most important as a guiding principle in your life, a "2" next to the second most important value as a guiding principle in your life, a "3" next to the third most important value as a guiding principle in your life, and so on. Again, it is important that you rank all values from 1 to 18.

Work slowly and think carefully. If you change your mind, feel free to change your answers. The end result should truly show how you really feel.

Value	*Rank*
1. A comfortable life (i.e., a prosperous life)	
2. An exciting life (i.e., a stimulating, active life)	
3. A sense of accomplishment (i.e., a lasting contribution)	
4. A world at peace (i.e., free of war and conflict)	
5. A world of beauty (i.e., beauty of nature and the arts)	
6. Equality (i.e., brotherhood, equal opportunity for all)	
7. Family security (i.e., taking care of loved ones)	
8. Freedom (i.e., independence, free choice)	
9. Happiness (i.e., contentedness)	
10. Inner harmony (i.e., freedom from inner conflict)	
11. Mature love (i.e., sexual and spiritual intimacy)	
12. National security (i.e., protection from attack)	
13. Pleasure (i.e., an enjoyable, leisurely life)	
14. Salvation (i.e., saved, eternal life)	
15. Self-respect (i.e., self-esteem)	
16. Social recognition (i.e., respect, admiration)	
17. True friendship (i.e., close companionship)	
18. Wisdom (i.e., a mature understanding of life)	

When you have finished, go to the next page.
Please rank these 18 values in order of importance, the same as before.

Value	Rank
19. Ambitious (i.e., hard working, aspiring)	
20. Broad-minded (i.e., open minded)	
21. Capable (i.e., competent, effective)	
22. Cheerful (i.e., lighthearted, joyful)	
23. Clean (i.e., neat, tidy)	
24. Courageous (i.e., standing up for your beliefs)	
25. Forgiving (i.e., willing to pardon others)	
26. Helpful (i.e., working for the welfare of others)	
27. Honest (i.e., sincere, truthful)	
28. Imaginative (i.e., daring, creative)	
29. Independent (i.e., self-reliant, self-sufficient)	
30. Intellectual (i.e., intelligent, reflective)	
31. Logical (i.e., consistent, rational)	
32. Loving (i.e., affectionate, tender)	
33. Obedient (i.e., dutiful, respectful)	
34. Polite (i.e., courteous, well-mannered)	
35. Responsible (i.e., dependable, reliable)	
36. Self-controlled (i.e., restrained, self-disciplined)	

Notes: Items 1 through 18 are terminal and items 19 through 36 are instrumental values. Values 4, 6, 8, 12, and 14 compose a social harmony factor; values 1, 2, 3, 13, and 16 compose a personal gratification factor; values 3, 5, 10, 15, and 18 compose a self-actualization factor; values 7 and 14 compose a security factor; values 2, 11, and 17 compose a love and affection factor; values 8 and 9 a personal contentedness factor; values 19, 21, 24, 28, 29, 30, and 31 a competence factor; values 22, 25, 26, and 32 a compassion factor; values 23, 33, and 34 a sociality factor; and values 27, 34, 35, and 36 an integrity factor (Vinson et al. 1977).

Values 6, 13, 14, 17, and 33 compose a fun and enjoyment factor; values 1, 3, 21, 19, 27, and 34 a workplace ethics factor; values 1, 2, 10, 15, 17, and 18 a sapience factor; values 25, 26, 29, and 30 an autonomy factor; values 4 and 5 an aesthetics factor; values 4, 9, and 12 a security factor; and values 11 and 32 a mature love factor. Only values with loadings ≥ ±.30 were reported (Prakash and Munson 1985).

Values 3, 6, 7, 8, 10, 13, 15, 16, and 18 represent the reduced set of terminal values, and values 19, 21, 28, 29, 30, and 36 represent a reduced set of instrumental values (McQuarrie and Langmeyer 1985).

Values 1, 2, 3, 5 through 10, 13, 15, 16, and 18 represent the reduced set of terminal values relevant to consumer behavior, and values 19 through 23, 28, 29, 30, 32, 35, and 36 represent the reduced set of instrumental values relevant to consumer behavior. Furthermore, values 6, 7, 18, 19, 21, 30, 31, 35, and 36 compose an adult responsibilities factor; values 1, 2, 3, 8, 9, 13, and 16 compose a lifestyle goals factor; and values 5, 10, 15, 20, 22, 23, and 28 compose a remove tension factor (Munson and McQuarrie 1988).

Values 3, 10, 11, 14, 15, 17, and 18 represent the self-actualization aspect, and values 1, 2, 9, 13, and 16 represent the hedonism aspect of the self-actualization/hedonism dimension of the terminal values. Values 5, 6, and 8 represent the idealism dimension, and values 4, 7, and 12 represent the security dimension of the terminal values (Crosby et al. 1990). Values 1 to 3, 5, 10 to 13, and 18 represent the self-direction dimension of the instrumental values. Values 4, 5, and 15 to 17 represent the conformity dimension, and values 7 to 9 and 14 represent the virtuousness dimension of the instrumental values identified by Crosby et al. (1990).

Appendix to General Values

Another value assessment technique has been proposed by Hofstede (2001). Through a lengthy survey of work-related values over 50 cultures (similar in form to VALS), Hofstede identified five value dimensions related to basic anthropological/societal issues (Hofstede, 2001 p. 29): power distance, uncertainty avoidance, individualism vs. collectivism, masculinity vs. femininity, and long-term versus short-term orientation.

Power distance is the extent to which less powerful members of institutions and organizations accept that power is distributed unequally. The basic anthropological/societal issue that "power distance" relates to is social inequality and the amount of authority of one person over others.

Uncertainty avoidance is the extent to which people feel threatened by ambiguous situations and have created beliefs and institutions that try to avoid these. This dimension is related to the way a society deals with conflicts and aggression, and, as the last resort, with life and death.

Individualism versus collectivism: Individualism is viewed as a situation in which people are supposed to look after themselves and their immediate family only, and collectivism is viewed as a situation in which people belong to in-groups and are supposed to look after them in exchange for loyalty. This dimension reflects a bipolar continuum and is related to the individual's dependence on the group, or his or her self-concept as "I" or "we."

Masculinity versus femininity: Masculinity is defined as a situation in which the dominant values in society are success, money, and things. Its opposite, femininity, is defined as a situation in which the dominant values in society are caring for others and the quality of life. The anthropological-societal issue to which this dimension relates is the choice of social sex roles and its effects on one's self-concept. These value dimensions show correspondence with the Rokeach values. Though not extensively used in the U.S. marketing/consumer behavior literature, the Hofstede values have seen use in the cross-cultural psychology literature. The interested reader is referred to the following source.

Long-term versus short-term orientation indicates the temporal orientation for which individuals choose to place the focus of their efforts. Specifically, individuals may choose to be more focused on the present (i.e., the short-term) or more focused on the future (i.e., the long-term).

Sources: Geert Hofstede (2001), "Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations Across Nations," 2nd edition, Thousand Oaks, CA: Sage.

Moral Identity

(Aquino and Reed 2002)

Construct: Moral Identity is described as a self-conception organized around a set of moral traits (Aquino and Reed 2002, p. 1424). Moral Identity has been characterized as a self-regulation mechanism that impacts moral actions depending on the importance of moral traits to an individual. Although somewhat complex, Aquino and Reed state that "as long as the person attempts to see the world in terms of the proscriptive implications of moral characteristics, . . . the person has adopted moral identity as part of his or her social self-schema" (p. 1424). Moral Identity consists of two dimensions of self-importance: Internalization, which is more private, and Symbolization, which is more public in nature.

Description: Moral Identity scale items are assessed in response to consider a list of traits characteristic of a moral person. The personality traits used to capture moral identity are intended as salience-induction stimuli, meaning that these traits represent other traits and will elicit a broader associative network that represents one's moral identity. The instructions to the scale include nine characteristics regarded as descriptors of a person who is moral. The final set of items consists of 10 statements scored on 5-point Likert scales where 1 = *strongly disagree* and 5 = *strongly agree*. Five items each represent the Internalization and Symbolization dimensions. Items for each subscale are averaged to form a single number indicating one's Moral Identity.

Development: Two development processes were used: one to develop a list of moral traits and another to develop a measure of an individual's perceptions of the self-importance of these traits. Pilot Study 1 was used to elicit characteristics associated with a moral person. This resulted in a list of 376 unique moral traits. Content analysis of these traits led to a reduced list of 19 distinct traits. From this list, nine traits were chosen that were mentioned by at least 30% of the sample respondents. In Pilot Study 2, three different subsamples were used to judge the nine items in terms of how necessary it was to possess the characteristics in order for a person to be considered moral. On the basis of mean responses (all significantly above the midpoint of a 5-point scale), all nine items were deemed appropriate for inducing a moral identity.

In Study 1, the focus was on developing an instrument to assess the self-importance of the nine moral traits identified. In total, 13 items were assessed, including 7 items adapted from a measure of the self-importance of ethnic identity (Larkey and Hecht 1995) and 6 additional items. Factor analysis resulted in an 11-item, two-factor model, with 6 items tapping into the degree to which one's action reflects the traits (Symbolization) and 5 items capturing the degree to which the moral traits are central to one's self-concept (Internalization). Study 2 was used to independently confirm the factor structure and items, which led to the elimination of one more item. Additional studies further examined the validity of the Moral Identity measure.

Samples: Pilot Study 1 had 228 undergraduate business students. Pilot Study 2 consisted of three subsamples, including 57 MBA students, 46 high school students, and 34 undergraduate students. Study 1 included 363 undergraduate students. Study 2 consisted of 347 responses to a mail survey of university alumni (37% response rate). Study 3 involved five different samples of undergraduate and MBA students with sample sizes ranging from 44 to 124. A sample of 148 from among the Study 3 samples was used to assess test-retest reliability.

Validity: In Pilot Study 1, the Symbolization dimension had a coefficient alpha of 0.77, while the Internalization dimension had an alpha of 0.71. Confirmatory factor analyses on Pilot

Study 2 data confirmed a two-factor model as better fitting than a one-factor model. Coefficient alpha estimates for Pilot Study 2 were 0.73 for Internalization and 0.82 for Symbolization.

In Study 2, the 10-item Moral Identity scale was tested against an implicit measure of the association between a person's self-concept and the moral traits (Implicit Association Test [IAT]; Greenwald, McGhee, and Schwartz 1998). Results revealed a correlation of 0.33 between the explicit and implicit Internalization measures but no relationship between the Symbolization measures. Coefficient alpha estimates for Study 2 were 0.83 for Internalization and 0.82 for Symbolization, and the dimensions were correlated at 0.41.

As part of the Study 3 samples, convergent and discriminant validity, as well as test-retest reliability and the potential for socially desirable responding, were assessed. Alphas were fairly consistent with previous samples at 0.77 and 0.76 for Internalization and Symbolization, respectively. Results indicate modest correlations between Moral Identity and both sympathy and negative reciprocity. Further, no relationships were found between Moral Identity and self-esteem, locus of control, or social anxiety. Modest correlations emerged between both Internalization (0.18) and Symbolization (0.26) and socially desirable responding, suggesting some potential for responses to be affected by impression management concerns. Test-retest reliabilities over a 4- to 6-week period ($n = 148$) were 0.49 for Internalization and 0.71 for Symbolization. Additional studies were used to assess predictive validity with respect to volunteer hours and donation behaviors, suggesting that respondents scoring higher in moral identity also display more related behaviors.

Scores: In Pilot Study 2, mean scores (standard deviations) were 4.6 (0.4) for Internalization and 3.1 (0.8) for Symbolization. In Study 2, mean scores (standard deviations) were reported based on gender and were as follows: Internalization, 4.49 (0.60) for males and 4.45 (0.49) for females, and for Symbolization, 3.27 (0.82) for males and 2.90 (0.68) for females. Note that there was a significant main effect of gender on Symbolization. Other mean scores were reported throughout and were fairly consistent overall with mean Internalization scores appearing to be higher than mean Symbolization scores.

Source: Aquino, Karl and Americus Reed II (2002), "The Self-Importance of Moral Identity," *Journal of Personality and Social Psychology,* 83 (December), 1423–40.

References: Greenwald, Anthony G., Debbie E. McGhee, and Jordan L. K. Schwartz (1998), "Measuring Individual Differences in Implicit Cognition: The Implicit Association Test," *Journal of Personality and Social Psychology,* 74, 1464–80.

Larkey, Linda K. and Michael L. Hecht (1995), "A Comparative Study of African American and European American Ethnic Identity," *International Journal of Intercultural Relations,* 19, 483–504.

Moral Identity

(Aquino and Reed 2002)

Instructions (Containing the Moral Traits)

Listed below are some characteristics that may describe a person:
Caring, compassionate, fair, friendly, generous, helpful, hardworking, honest, and kind.
The person with these characteristics could be you, or it could be someone else. For a moment, visualize in your mind the kind of person who has these characteristics. Imagine how that person would think, feel, and act. When you have a clear image of what this person would be like, answer the following questions.

Internalization

1. It would make me feel good to be a person who has these characteristics.

2. Being someone who has these characteristics is an important part of who I am.

3. I would be ashamed to be a person who has these characteristics. (R)

4. Having these characteristics is not really important to me. (R)

5. I strongly desire to have these characteristics.

Symbolization

1. I often wear clothes that identify me as having these characteristics.

2. The types of things I do in my spare time (e.g., hobbies) clearly identify me as having these characteristics.

3. The kinds of books and magazines that I read identify me as having these characteristics.

4. The fact that I have these characteristics is communicated to others by my membership in certain organizations.

5. I am actively involved in activities that communicate to others that I have these characteristics.

Note: Scored on 5-point Likert scales where 1 = *strongly disagree* and 5 = *strongly agree*. (R) indicates items requiring reverse scoring.

Values Related to Environmentalism and Socially Responsible Consumption

Attitudes Influencing Monetary Donations to Charitable Organizations
(Webb, Green, and Brashear 2000)

Construct: Attitudes toward helping others and attitudes toward charitable organizations are viewed as distinct but related determinants of donation behavior. Attitudes toward helping others (AHO) are defined as global and relatively enduring evaluations with regard to helping or assisting other people. Attitudes toward charitable organizations (ACO) are defined as global and relatively enduring evaluations with regard to the nonprofit organizations (NPOs) that help individuals (Webb et al. 2000, p. 300).

Description: The measures consist of nine items with four and five items intended to represent AHO and ACO, respectively. One ACO item requires reverse coding. Items are scored on a 1 to 7 Likert scale where 1 = *strongly disagree* and 7 = *strongly agree*.

Development: An initial pool of 78 items was generated from the literature and a review of other scales. The content validity of the items was evaluated in two judging procedures employing three judges each. First, the pool of items was reduced to 25 attitudinal items for the two dimensions following initial coding to categories. Second, 14 items remained (7 for each dimension) after the items were judged for representativeness regarding the construct to which it had been assigned. Next, Study 1 involved the administration of the items to 307 evening students. A series of principal components factor analyses and then confirmatory factor analyses, deleting items with low loadings or cross-loading patterns, resulted in the final set of four items for AHO and five items for ACO. Final CFA results revealed acceptable model fit. (See Table 2 in Webb et al. 2000, p. 304.) The estimates of internal consistency reliability for AHO and ACO were 0.79 and 0.81, respectively. The corresponding average variance extracted (AVE) estimates were 0.46 and 0.49.

Samples: Two sets of three judges (i.e., six faculty and doctoral students) were used to categorize and evaluate the representativeness of the items. The large sample used in Study 1 comprised 307 graduate and undergraduate evening students (average age = 27.8 years). The sample for Study 2 comprised 301 survey respondents to a mail survey of nonstudents (median age = 43 years; 54% male).

Validity: Evidence of discriminant validity using the data from Study 1 was offered from tests of a one-factor model and a resulting chi-square difference test. The correlation between the two factors was 0.47.

From the nonstudent sample employed in Study 2 (*n* = 301), the coefficient alpha estimates for AHO and ACO were 0.80 and 0.82. The corresponding AVE estimates were 0.52 and 0.53. Overall model tests using confirmatory factor analysis supported the two-dimensional correlated model. Evidence again was offered regarding discriminant validity. The correlation between factors was 0.52. In terms correlations with other constructs, 12 of 20 significant correlations were reported. As examples, breadth of giving, education, and income were positively correlated with both AHO and ACO. In addition, positive correlations between helping others and values associated with universalism were reported.

Scores: Mean scores were reported for each item. The mean score (standard deviation) for AHO was 5.55 (0.93) for Sample 1 and 5.08 (1.03) for Sample 2. For the ACO dimension, the same scores were 5.22 (1.00) and 4.97 (1.12) for Samples 1 and 2, respectively.

Source: Webb, Deborah J., Corliss L. Green, and Thomas G. Brashear (2000), "Development and Validation of Scales to Measure Attitudes Influencing Monetary Donations to Charitable Organizations," *Journal of the Academy of Marketing Science,* 28 (March), 299–309.

Attitudes Influencing Monetary Donations to Charitable Organizations

(Webb, Green, and Brashear 2000)

Attitude Toward Helping Others (AHO)

1. People should be willing to help others who are less fortunate.

2. Helping troubled people with their problems is very important to me.

3. People should be more charitable toward others in society.

4. People in need should receive support from others.

Attitude Toward Charitable Organizations (ACO)

1. The money given to charities goes for good causes.

2. Much of the money donated to charity is wasted. (reverse coded)

3. My image of charitable organizations is positive.

4. Charitable organizations have been quite successful in helping the needy.

5. Charity organizations perform a useful function for society.

Note: Items are scored on a 1 to 7 Likert scale where 1 = *strongly disagree* and 7 = *strongly agree*.

Environmentally Responsible Consumers: ECOSCALE

(Stone, Barnes, and Montgomery 1995)

Construct: Stone et al. (1995) posited five dimensions of consumer environmental responsibility: (a) consumer knowledge and awareness, (b) consumer desire and willingness to act, (c) consumer ability to act, (d) consumer opinions and attitudes concerning the environment, and (e) consumer behavior toward the environment. "Consumer Environmental Responsibility" is formally defined as "a state in which a person expresses an intention to take action directed toward remediation of environmental problems, acting not as an individual consumer with his/her own economic interests, but through a citizen consumer concept of societal-environmental well-being. Further, this action will be characterized by awareness of environmental problems, knowledge of remedial alternatives best suited for alleviation of the problem, skill in pursuing his or her own chosen action, and possession of a genuine desire to act after having weighed his/her own locus of control and determining that these actions can be meaningful in alleviation of the problem" (Stone et al. 1995, p. 601).

Description: Though five dimensions were originally hypothesized (see "Construct" above), the ECOSCALE has seven dimensions comprising 31 items. All items are scored on 5-point scales ranging from *strongly disagree to strongly agree,* or ranging from *never to always.* Item scores can be summed within each dimension to form dimension indices, or all 31 item scores can be summed to form one overall ECOSCALE composite.

Development: After a literature review and construct definition, 50 items were generated to reflect the domain of the construct. A group of university professors further examined the items for content validity. Exploratory factor analyses and item analyses were used to derive the final form of the scale, and confirmatory factor analyses were used to assess the dimensionality of each of the seven ECOSCALE dimensions. Estimates of reliability and validity were also offered.

Samples: A sample of $n = 238$ undergraduate students was used to develop the ECOSCALE, and a sample of $n = 215$ college students was used to examine dimensionality and validity.

Validity: Exploratory factor analyses extracted the seven factors (dimensions) of the ECOSCALE that accounted for 86.3% of the variance in the data. Factor loadings (within dimension) ranged from 0.54 to 0.96 across the seven dimensions. Item-to-total correlations (within dimension) ranged from 0.31 to 0.73 across the seven dimensions. One estimate of internal consistency was offered. The coefficient alpha for the entire 31-item ECOSCALE was 0.93. (All of these estimates pertain to the $n = 238$ sample.)

   With the $n = 215$ sample, seven 1-factor confirmatory models corresponding to the seven dimensions of the ECOSCALE were estimated. Each model showed adequate levels of fit, offering evidence for each dimension's unidimensionality (see Stone et al. 1995, Table 4, pp. 609–10). Zero-order correlations among the seven dimensions ranged from 0.01 to 0.46. (Except for the 0.01 correlation, all correlations between ECOSCALE dimensions were significant.) As evidence of predictive validity, the seven ECOSCALE dimensions were correlated with measures of recycling, boycotting products unfriendly to the environment, making lifestyle changes, making personal sacrifices, educating others, and changing political strategy. Thus, a total of 42 correlations were computed. These correlations ranged from 0.05 to 0.40. All these correlations were reported to be significant.

Scores: Neither mean nor percentage scores were reported.

Source: Stone, George, James H. Barnes, and Cameron Montgomery (1995), "ECOSCALE: A Scale for the Measurement of Environmentally Responsible Consumers," *Psychology & Marketing,* 12, 595–612.

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Environmentally Responsible Consumers: ECOSCALE

(Stone, Barnes, and Montgomery 1995)

Opinions and Beliefs Dimension Items

1. The burning of the oil fields in Kuwait, the meltdown in Chernobyl, and the oil spill in Alaska are examples of environmental accidents whose impact is only short term.

2. The United States is the biggest producer of fluorocarbons, a major source of air pollution.

3. The earth's population is now approaching 2 billion.

4. Excess packaging is one source of pollution that could be avoided if manufacturers were more environmentally aware.

5. Economic growth should take precedence over environmental considerations.

6. The earth's resources are infinite and should be used to the fullest to increase the human standard of living.

Awareness Dimension Items

7. The amount of energy I use does not affect the environment to any significant degree.

8. This country needs more restrictions on residential development (construction of a new mall on farmland, new subdivisions, etc.)

9. If I were a hunter or fisherman, I would kill or catch more if there were no limits.

10. In order to save energy, this university should not heat the pool during the winter.

Willing to Act Dimension Items

11. I attend environmental/conversation group meetings (GreenPeace, Ducks Unlimited, etc.)

12. I have started/joined consumer boycott programs aimed at companies that produce excess pollution.

13. Whenever no one is looking I litter.

14. Wearing exotic furs and leather is not offensive.

Attitude Dimension Items

15. One of the primary reasons for concern in destruction of the ozone layer is its ability to screen ultraviolet radiation.

16. There is nothing the average citizen can do to help stop environmental pollution.

17. My involvement in environmental activities today will help save the environment for future generations.

18. I would not car pool unless I was forced to. It is too inconvenient.

Action Taken Dimension Items

19. I turn in polluters when I see them dumping toxic liquids.

20. I have my engine tuned to help stop unwanted air pollution.

21. I have my oil changed at installations which recycle oil.

22. The earth is so large that people have little effect on the overall environment.

23. People who litter should be fined $500 and be forced to work on road crews and pick up garbage.

Ability to Act Dimension Items

24. The EPA stands for "Environmental Planning Association" and it is responsible for matters dealing with protection of the environment.

25. I do not purchase products that are known to cause pollution.

26. I vote for pro-environmental politicians.

27. I cut up plastic rings around six-packs of soft drinks.

Knowledge Dimension Items

28. Ivory is a hard white stone that when polished can be used in making piano keys.

29. Acid rain affects only Canada.

30. It is no use worrying about environmental issues: I can't do anything about them anyway.

31. I would describe myself as environmentally responsible.

Notes: According to the authors, items in the "Willingness to Act," "Action Taken," and "Ability to Act" dimensions are scored on 5-point *never* to *always* scales. All other items are scored on 5-point *strongly disagree* to *strongly agree* scales. Though not specified by the authors, it would seem that items 1, 3, 5, 6, 7, 9, 13, 14, 16, 18, 22, 24, 28, 29, and 30 require reverse scoring such that a higher score reflects a greater level of environmental responsibility. Also, item 9 is specified for "males" only, and item 14 is specified for "females" only.

GREEN Consumer Values

(Haws, Winterich, and Naylor 2010)

Construct: Green consumers are defined as those who have a tendency to consider the environmental impact of their purchase and consumption behaviors. As such, consumers with stronger GREEN values will tend to make decisions consistent with environmentally sustainable consumption.

Description: The GREEN scale consists of six items forming a single dimension. The items are assessed on a 7-point Likert-type scale, where 1 = *strongly disagree* and 7 = *strongly agree*, and are averaged to form a single number that represents one's values concerning environmentally friendly consumption, with higher scores indicating a more positive inclination toward environmentally friendly behaviors.

Development: Researchers began with 58 potential items generated based on a review of previous literature and open-ended comments from consumers. These 58 items were given to a sample of 264 students, and exploratory factor analyses coupled with content analysis of the items were used to select items that had strong factor loadings on the single factor representing GREEN. This resulted in a final scale with six items. Other samples provided additional evidence of validity and reliability of GREEN.

Samples: The first sample consisted of 264 undergraduate students. The test-retest sample contained 23 students. Another sample contained 370 adult respondents recruited by a national online panel.

Validity: The studies consistently showed support for the proposed unidimensional structure of GREEN. Reliability for the initial sample was 0.89 and 0.95 for the adult sample. Factor loadings for the final items were all 0.68 or higher on the single factor. Evidence demonstrated a strong relationship between GREEN and previous environmental measures that were much longer, such as the SRCB included in this book ($r = 0.69$; Antil 1984). Test-retest reliability over a 2 week period was reported as 0.68. Further, the GREEN measure was not highly susceptible to socially desirable responding. Also, relationships with proposed correlates of GREEN, including use innovativeness, frugality, product retention tendency, environmental claim skepticism, self-control, and others, were presented as evidence of nomological validity. Finally, GREEN attitudes were related strongly to self-reported green behaviors as well as actual green behavior.

Scores: The adult sample provided some evidence about GREEN scores. For example, GREEN did not differ based on age (males = 4.44, and females = 4.53).

Source: Haws, Kelly L., Karen P. Winterich, and Rebecca W. Naylor (2010), "Seeing the World Through GREEN-Tinted Glasses: Motivated Reasoning and Consumer Response to Environmentally Friendly Products," working paper, Texas A&M University, College Station, TX 77843.

References: Antil, John H. (1984), "Socially Responsible Consumers: Profile and Implications for Public Policy," *Journal of Macromarketing*, 5 (2), 18-39.

GREEN Consumer Values

(Haws, Winterich, and Naylor 2010)

1. It is important to me that the products I use do not harm the environment.

2. I consider the potential environmental impact of my actions when making many of my decisions.

3. My purchase habits are affected by my concern for our environment.

4. I am concerned about wasting the resources of our planet.

5. I would describe myself as environmentally responsible.

6. I am willing to be inconvenienced in order to take actions that are more environmentally friendly.

Note: Scored on a 1- to 7-point *strongly disagree* to *strongly agree* scale.

Health Consciousness Scale: HCS

(Gould 1988)

Construct: As specified by the author, the Health Consciousness Scale (HCS) seems to tap an over-all alertness, self-consciousness, involvement, and self-monitoring of one's health.

Description: The HCS is composed of nine items scored on 5-point scales ranging from 0 to 4. Though four factors relating to HCS were empirically identified (i.e., overall alertness [HA], self-consciousness [HCSC], involvement [HI], and self-monitoring [HSM] of one's health), item scores can be summed to form an overall HCS score ranging from 0 to 36.

Development: Using a sample of $n = 343$ adult respondents, the nine-item HCS was administered and checked for internal consistency and validity. Via confirmatory factor analyses, relia-bility analyses, and several correlational and mean-level difference tests, the psychome-tric properties of the HCS were examined.

Samples: One sample of $n = 343$ adult consumers from the northeastern United States responded to the HCS and other measures.

Validity: Confirmatory factor analyses revealed that a first-order 4-factor model and a higher-order model fit the data well. A decision was made to treat the nine HCS items as a sin-gle scale. A 0.93 coefficient alpha estimate of internal consistency was reported for the nine-item HCS. The total HCS score was split at the median to form two groups: high health consciousness and low health consciousness. Some evidence of validity for the HCS was found through t tests between these two groups across 40 health attitude statements. These tests revealed 17 significant differences ($p < 10$ or better).

Scores: Means (std. dev.) were reported for the four factors of the HCS. These scores were 6.44 (3.29) for HC SC, 3.78 (2.40) for HI, 5.51 (1.99) for HA, and 4.28 (2.25) for HSM.

Source: Gould, Stephen J. (1988), "Consumer Attitudes Toward Health and Health Care: A Differential Perspective," *Journal of Consumer Affairs,* 22, 96–118.

Health Consciousness Scale: HCS

(Gould 1988)

1. I reflect about my health a lot.

2. I'm very self-conscious about my health.

3. I'm generally attentive to my inner feelings about my health.

4. I'm constantly examining my health.

5. I'm alert to changes in my health.

6. I'm usually aware of my health.

7. I'm aware of the state of my health as I go through the day.

8. I notice how I feel physically as I go through the day.

9. I'm very involved with my health.

Notes: Items are scored as 0 = *statement does not describe you at all*, 1 = *statement describes you a little*, 2 = *statement describes you about fifty-fifty*, 3 = *statement describes you fairly well*, and 4 = *statement describes you very well*. As noted before, though item scores were summed to form an overall HCS composite, four factors were identified. Items 1, 2, and 3 compose the HCSC factor, items 4 and 9 compose the HI factor, items 5 and 6 compose the HA factor, and items 7 and 8 compose the HSM factor.

Leisure: Subjective Leisure Scales: SLS

(Unger and Kernan 1983)

Construct: In their research, Unger and Kernan (1983) measure leisure from a subjective perspective. Most definitional discussions of leisure from this perspective relate leisure to free time, recreation, and play. From this theoretical base, Unger and Kernan (1983) propose six determinants of leisure: intrinsic satisfaction, perceived freedom, involvement, arousal, mastery, and spontaneity.

Intrinsic satisfaction: Leisure is seen as an end unto itself rather than a means to an end.

Perceived freedom: Leisure is viewed as free, that is, perceived as voluntary, without coercion or obligation.

Involvement: True leisure means total absorption in an activity, such that it is an escape from daily life.

Arousal: Arousal (i.e., novelty seeking, exploration, and risk taking) is present in leisure pursuits.

Mastery: One has the opportunity to test oneself or to conquer the environment through leisure pursuits (i.e., mastery of the activity, mental or physical, is present).

Spontaneity: Unlike obligatory events, leisure activities are not routine, planned, or anticipated.

Description: The subjective leisure scale (SLS) is a six-factor measure designed to assess the six determinants of leisure discussed above. A total of 26 items are used to measure the six determinants, and all items are scored on 6-point formats from *strongly disagree* (1) to *strongly agree* (6). Scores on items within each dimension can be summed to form indices of each dimension.

Development: Forty-two items were generated to reflect the six determinants of leisure. The items were checked for face validity by a panel of 10 marketing professors and PhD students, resulting in 36 items retained. Various tests for reliability, validity, and factor structure were then performed on the remaining items to derive the final scales over two samples and six leisure scenarios.

Samples: Two samples were used in scale development. (Two other samples were also used to generate the leisure scenarios for validity testing but did not respond to the leisure items.) The first sample consisted of 132 students, and the second sample consisted of 160 nonstudent adults. Three other samples ($n = 10$, 200, and 123) were also used in preliminary stages (i.e., item editing and pretesting).

Validity: Using the student sample, responses to the 36 items were examined for internal consistency. Two items that decreased internal consistency (on the respective factors) were deleted. Principal components analysis was also used to trim the number of items. Items with loadings lower than 0.40 on any factor in three or more of the scenarios were deleted, resulting in the final 26-item, six-factor SLS. In the nonstudent sample, the SLS was checked for dimensionality and validity. With this sample, factor analysis revealed that the intrinsic satisfaction and perceived freedom dimensions were not distinct, and the arousal and mastery dimensions were not distinct, suggesting that the hypothesized dimensionality of the SLS requires further testing. Though reliability estimates were performed (i.e., coefficient alpha, split-halves), they were not reported in the article (Unger and Kernan 1983). Numerous concurrent, construct, and nomological validity tests,

however, did show support for the validity of the SLS. For example, using the SLS factors as predictors across six different leisure scenarios produced multiple Rs ranging from 0.05 to 0.56, with most multiple Rs in the range of 0.30 and above (see Table 1, p. 389).

Scores: Mean or percentage scores were not reported.

Source: Unger, Lynette and Jerome B. Kernan (1983), "On the Meaning of Leisure: An Investigator of Some Determinants of the Subjective Experience," *Journal of Consumer Research*, 9, 381–92.

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Leisure: Subjective Leisure Scales: SLS

(Unger and Kernan 1983)

Following are statements concerning the situation described below. For each statement, indicate whether you strongly agree, agree, somewhat agree, somewhat disagree, disagree, or strongly disagree as the statement pertains to the way you feel about the situation.

[Some leisure-related situations are described here.]

1. It is its own reward.

2. "Not because I have to but because I want to" would characterize it.

3. I feel like I'm exploring new worlds.

4. I feel I have been thoroughly tested.

5. I could get so involved that I would forget everything else.

6. I wouldn't know the day before that it was going to happen.

7. I enjoy it for its own sake, not for what it will get me.

8. I do not feel forced.

9. There is novelty in it.

10. I feel like I'm conquering the world.

11. It helps me forget about the day's problems.

12. It happens without warning or pre-thought.

13. Pure enjoyment is the only thing in it for me.

14. It is completely voluntary.

15. It satisfies my sense of curiosity.

16. I get a sense of adventure or risk.

17. It totally absorbs me.

18. It is a spontaneous occurrence.

19. I do not feel obligated.

20. It offers novel experiences.

21. I feel like a real champion.

22. It is like "getting away from it all."

23. It happens "out of the blue."

24. Others would not have to talk me into it.

25. It makes me feel like I'm in another world.

26. It is a "spur-of-the-moment" thing.

Notes: Items 1, 7, and 13 are designed to measure intrinsic satisfaction. Items 2, 8, 14, 19, and 24 are designed to measure perceived freedom. Items 3, 9, 15, and 20 are designed to measure arousal. Items 4, 10, 16, and 21 are designed to measure mastery. Items 5, 11, 17, 22, and 25 are designed to measure involvement.
Items are scored on 6-point formats from *strongly disagree* (1) to *strongly agree* (6).

Socially Responsible Consumption Behavior: SRCB

(Antil 1984; Antil and Bennett 1979)

Construct: Socially responsible consumption is defined as those consumer behaviors and purchase decisions which are related to environmental and resource-related problems and are motivated not only by a desire to satisfy personal needs but also by a concern for the welfare of society in general (Antil 1984; Antil and Bennett 1979).

Description: The Socially Responsible Consumption Behavior (SRCB) scale is composed of 40 Likert-type items (agree–disagree) scored on a 5-point basis. Scores on the items are summed to form an overall SRCB index. Thus, the scale is considered unidimensional, and the possible range of scores is 40 to 200.

Development: An initial pool of 138 items was developed from a number of relevant sources based on the definition of the construct. Using recommended scaling procedures that included item analysis, coefficient alpha, and factor analysis (across numerous samples described below), the final scale was derived.

Samples: A number of samples were used in the scale development process (Antil and Bennett 1979). An initial student sample ($n = 444$) was used for deleting ambiguous and redundant items. Item analysis based on this sample resulted in trimming the initial pool of 138 to 59 items. A second student sample ($n = 321$) was used to assess initial reliability and item-to-total correlations, resulting in 42 items being retained. A third nonstudent sample ($n = 98$) was used for reliability and item analysis, resulting in the final 40-item scale. Last, two nonstudent samples were used to examine the dimensionality, reliability, and validity of the final scale ($n = 690$ and $n = 98$ Sierra Club members) (Antil 1984).

Validity: The reliability, dimensionality, and validity of the final 40-item scale were assessed with the last two nonstudent samples as follows. Two measures of internal consistency were used to assess the scale's reliability. Guttman's Lambda 3 and Cronbach's alpha were 0.93 and 0.92, respectively.

Factor analysis indicated that a single factor underlies the dimension of the scale. The first factor accounted for 78.3% of the variance in a three-factor solution using the eigenvalue greater-than-one rule for retaining factors. Thus, evidence for the unidimensionality of the SRCB was found.

In addition, the SRCB demonstrated convergent and discriminant validity (via multitrait-multimethod analysis) when correlated with measures of traditional social responsibility and ecological concern. For example, the correlation between SRCB and social responsibility was 0.29, and the correlation between SRCB and ecological concern was 0.73. Mean score differences also offered evidence of known group validity. The mean score for the $n = 736$ sample (Antil and Bennett 1979) was 144.30, and the mean score for the Sierra Club sample (Antil 1984) was 168.50. The difference between these two means was statistically significant.

Scores: Mean scores for the final two validation samples were reported. For combined samples ($n = 690$ and $n = 98$), the overall mean of the scale was 144.50 ($SD = 24.3$). The mean score for the $n = 736$ sample was 144.30, and the mean score for the Sierra Club sample was 168.50. As stated above, the difference between these last two means was statistically significant.

Sources: Antil, John A. (1984), "Socially Responsible Consumers: Profile and Implications for Public Policy," *Journal of Macromarketing,* (Fall), 18–39.

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Antil, John A. and Peter D. Bennett (1979), "Construction and Validation of a Scale to Measure Socially Responsible Consumption Behavior," in *The Conserver Society,* eds. Karl H. Henion II and Thomas C. Kinnear, Chicago: American Marketing Association, pp. 51–68.

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Socially Responsible Consumption Behavior: SRCB

(Antil 1984; Antil and Bennett 1979)

1. People should be more concerned about reducing or limiting the noise in our society.

2. Every person should stop increasing their consumption of products so that our resources will last longer.

3. The benefits of modern consumer products are more important than the pollution which results from their production and use.*

4. Pollution is presently one of the most critical problems facing this nation.

5. I don't think we're doing enough to encourage manufacturers to use recyclable packages.

6. I think we are just not doing enough to save scarce natural resources from being used up.

7. Natural resources must be preserved even if people must do without some products.

8. All consumers should be interested in the environmental consequences of the products they purchase.

9. Pollution is not personally affecting my life.*

10. Consumers should be made to pay higher prices for products which pollute the environment.

11. It genuinely infuriates me to think that the government doesn't do more to help control pollution of the environment.

12. Nonreturnable bottles and cans for soft drinks and beer should be banned by law.

13. I would be willing to sign a petition or demonstrate for an environmental cause.

14. I have often thought that if we could just get by with a little less there would be more left for future generations.

15. The Federal government should subsidize research on technology for recycling waste products.

16. I'd be willing to ride a bicycle or take a bus to work in order to reduce air pollution.

17. I would probably never join a group or club which is concerned solely with ecological issues.*

18. I feel people worry too much about pesticides on food products.*

19. The whole pollution issue has never upset me too much since I feel it's somewhat overrated.*

20. I would donate a day's pay to a foundation to help improve the environment.

21. I would be willing to have my laundry less white or bright in order to be sure that I was using a nonpolluting laundry product.

22. Manufacturers should be forced to use recycled materials in their manufacturing and processing operations.

23. I think that a person should urge his/her friends not to use products that pollute or harm the environment.

24. Commercial advertising should be forced to mention the ecological disadvantages of products.

25. Much more fuss is being made about air and water pollution than is really justified.*

26. The government should provide each citizen with a list of agencies and organizations to which citizens could report grievances concerning pollution.

27. I would be willing to pay a 5% increase in my taxes to support greater governmental control of pollution.

28. Trying to control water pollution is more trouble than it is worth. *

29. I become incensed when I think about the harm being done to plant and animal life by pollution.

30. People should urge their friends to limit their use of products made from scarce resources.

31. I would be willing to pay one dollar more each month for electricity if it meant cleaner air.

32. It would be wise for the government to devote much more money toward supporting a strong conservation program.

33. I would be willing to accept an increase in my family's total expenses of $120 next year to promote the wise use of natural resources.

34. Products which during their manufacturing or use pollute the environment should be heavily taxed by the government.

35. People should be willing to accept smog in exchange for the convenience of automobiles. *

36. When I think of the ways industries are polluting I get frustrated and angry.

37. Our public schools should require all students to take a course dealing with environmental and conservation problems.

38. I would be willing to stop buying products from companies guilty of polluting the environment even though it might be inconvenient.

39. I'd be willing to make personal sacrifices for the sake of slowing down pollution even though the immediate results may not seem significant.

40. I rarely ever worry about the effects of smog on myself and family. *

Note: *Denotes items that are reverse coded.

Items scored on 5-point Likert-type scales from *agree* to *disagree.*

Voluntary Simplicity Scale: VSS

(Cowles and Crosby 1986; Leonard-Barton 1981)

Construct: Voluntary simplicity is defined as the degree to which an individual selects a lifestyle intended to maximize his/her control over daily activities and to minimize his/her consumption and dependency (Leonard-Barton 1981). Five basic values underlie a voluntary simplicity lifestyle: material simplicity, self-determination, ecological awareness, human scale, and personal growth.

Material simplicity is non-consumption-oriented patterns of use.

Self-determination is a desire to assume greater control over destiny.

Ecological awareness is recognition of the interdependency of people and resources.

Human scale is a desire for smaller-scale institutions and technology.

Personal growth is a desire to explore and develop the inner life.

Description: The voluntary simplicity scale (VSS) is a multidimensional scale comprising 18 statements that assess the degree to which respondents engage in voluntary simplicity behaviors. Fourteen of the items provided by Leonard-Barton are scored on a 5-point basis on the degree to which a behavior is performed. Two of the items offer six response alternatives, and two are dichotomous (yes-no). Though exact scoring procedures are not offered, scores on the VSS can range up to a high of 90 (Leonard-Barton 1981).

Several versions of the scale are tenable, including 6-, 9-, and 14-item scales (Leonard-Barton 1981), and a version proposed by Cowles and Crosby (1986).

Development: Initially, the scale consisted of nine items; it was subsequently expanded to 19 items and then reduced to an 18-item format (Leonard-Barton 1981). Via a number of scaling procedures, including factor analysis and internal consistency reliability across several studies, the 9- and 19-item versions of the scale were derived. The samples and studies used to arrive at these versions are described below.

Samples: A number of samples were used in the scale development and validation process. The original nine-item version was tested on a sample from Palo Alto, California (n not reported). The expanded 19-item version was tested on data collected by Elgin and Mitchell (1977) with a sample of 423. This 19-item version was also tested on another sample ($n = 215$) of homeowners in California. (Half of this sample were users of solar energy in their home.) Last, the 18-item version was administered to 812 California homeowners (see Leonard-Barton 1981).

Validity: Reliability estimates of the 9- and 19-item versions of the scale ranged from alpha of 0.52 to alpha of 0.70. (These were the only reliability estimates reported by Leonard-Barton 1981). It should be noted that these alpha estimates should be viewed with caution as the VSS is composed of six factors and the alphas reported above represent reliability estimates for the summed 9- and 19-item versions.

In the original article (Leonard-Barton 1981), factor analysis was used to determine the dimensionality of the scale, and across samples, a six-factor structure was found. The six factors underlying the five simplicity lifestyle values were labeled as (a) conservation through biking, (b) self-sufficiency in services, (c) recycling of resources, (d) self-sufficiency through making goods, (e) recycling of durable goods, and (f) closeness with nature. Leonard-Barton did not report direct estimates of factor internal consistency but provided factor loadings ranging from 0.31 to 0.87 across factors (Leonard-Barton 1981, p. 245).

The 18-item VSS was found to be positively related to education ($r =. 16$) and negatively related to age ($n = 812$). The VSS was positively correlated with "mechanical

ability" to do one's own repairs ($r = 0.15$ to 0.22 across the three versions), investment in energy-conserving equipment (beta $= 0.40$ in a regression equation), personal conviction to conserve energy ($r = 0.27$), and other energy-conserving practices like weather stripping and caulking doors and windows ($r = 0.21$, $n = 812$), thus providing evidence for the validity of the scale (Leonard-Barton 1981).

Scores: Mean scores on the 18-item version were reported by income level only for a sample of $n = 812$. For families with a 1978 reported household income of less then $15,000, $M = 35.9$; for families with 1978 income between $16,000 and $35,000, $M = 38.2$; and for families with income $46,000 or more, $M = 35.9$. These mean values were not statistically different from each other (Leonard-Barton 1981).

Sources: Cowles, Deborah and Lawrence A. Crosby (1986), "Measure Validation in Consumer Research: A Confirmatory Factor Analysis of the Voluntary Simplicity Lifestyle Scale," in *Advances in Consumer Research,* Vol. 13, ed. Richard Lutz, Provo, UT: Association for Consumer Research, pp. 392–297.

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Leonard-Barton, Dorothy (1981), "Voluntary Simplicity Lifestyles and Energy Conservation," *Journal of Consumer Research,* 8, 243–52.

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Other evidence: Cowles and Crosby (1986) also examined the VSS with a sample of California and Colorado household consumer panel members ($n = 412$).

Cowles and Crosby (1986) reported composite reliability estimates (via LISREL) for the six factors originally found by Leonard-Barton (1981), and for a three-factor model they proposed. These estimates are reported in Table 3.3.

Table 3.3 Composite Reliability Estimates

Factor	Leonard-Barton	Crosby and Cowles
Biking	.880	—
Self-sufficiency/services	.898	—
Recycling resources	.775	—
Recycling durable goods	.827	—
Self-sufficiency/goods	.777	—
Closeness to nature	.865	—
Material simplicity	—	.779
Self-determination	—	.938
Ecological awareness	—	.892

The three factors proposed by Cowles and Crosby are also labeled in Table 3.3. Cowles and Crosby found that the two factor structures fit the data equally well and suggested that their proposed three-factor measure of the VSS was an appropriate alternative to the 18-item, six-factor measure of Leonard-Barton.

Reference: Elgin, Duane and Arnold Mitchell (1977), "Voluntary Simplicity," *The Co-Evolution Quarterly,* 2 (Summer), 5–18.

Voluntary Simplicity Scale: VSS

(Cowles and Crosby 1986; Leonard-Barton 1981)

Please indicate the degree to which you engage in each of the following behaviors by circling the appropriate response.

1. Make gifts instead of buying
    a. never
    b. occasionally
    c. frequently
    d. usually
    e. always

2. Ride a bicycle for exercise or recreation
    a. never
    b. once or twice a year
    c. once a month
    d. once a week
    e. every day

3. Recycle newspapers used at home
    a. never recycle newspapers
    b. recycle some
    c. recycle many
    d. recycle most
    e. recycle all newspapers

4. Recycle glass jars/bottles used at home
    a. never recycle jars/bottles
    b. recycle some
    c. recycle many
    d. recycle most
    e. recycle all jars/bottles

5. Recycle cans used at home
    a. never recycle cans
    b. recycle some
    c. recycle many
    d. recycle most
    e. recycle all cans

6. Family members or friends change the oil in the family car
    a. never
    b. sometimes
    c. frequently
    d. usually
    e. always

7. Have gotten instructions in skills to increase self-reliance, for example, in carpentry, car tune-up and repair, or plumbing
    a. never
    b. occasionally (informally from friends)
    c. frequently (informally from friends)
    d. have taken a class
    e. have taken more than one class

8. Intentionally eat meatless main meals
   a. never
   b. occasionally
   c. frequently
   d. usually
   e. always

9. Buy clothing at a secondhand store
   a. none of my clothes
   b. a few items
   c. many items
   d. most of my clothes
   e. all of my clothes

10. Buy major items of furniture or clothing at a garage sale (over $15)
    a. never
    b. rarely
    c. sometimes
    d. fairly often
    e. very often

11. Make furniture or clothing for the family
    a. none
    b. a few small items
    c. some items
    d. many items
    e. most of the clothing or most of the furniture

12. Have exchanged goods or services with others in lieu of payment with money, e.g., repairing equipment in exchange for other skilled work
    a. never
    b. have once
    c. have several times
    d. have many times
    e. do so whenever possible

13. Have a compost pile
    a. yes
    b. no

14. Contribute to ecologically oriented organizations
    a. never have
    b. did contribute once; do not now
    c. occasionally contribute now
    d. contribute regularly to one organization
    e. contribute regularly to two or more organizations
    f. do not know

15. Belong to a cooperative
    a. yes
    b. no

16. Grow the vegetables the family consumes during the summer season
    a. none
    b. some

    c. many

    d. most

    e. all

17. Ride a bicycle for transportation to work

    a. never

    b. occasionally

    c. frequently

    d. usually

    e. always

    f. do not know

18. Ride a bicycle on errands within two miles of home

    a. never

    b. occasionally

    c. frequently

    d. usually

    e. always

Notes: The reduced six-item scale proposed by Leonard-Barton (1981) is composed of items 5, 6, 9, 11, 14, and 18. Leonard-Barton's proposed nine-item version is composed of items 3, 4, 5, 8, 9, 10, 12, 15, and 16. Her 14-item version includes all items *except* 8, 9, 17, and 8. The items composing the six factors found by Leonard-Barton are as follows: conservation through biking is composed of items 2, 17, and 18; self-sufficiency in services is composed of items 6, 7, and 12; recycling of resources is composed of items 3, 4, and 5; self-sufficiency through making goods is composed of items 1 and 11; recycling durable goods is composed of items 9 and 10; and closeness to nature is composed of items 4, 8, 13, 14, and 16. Item 15 did not load above 0.30 on any factor (Leonard-Barton 1981).

The three-factor structure proposed by Cowles and Crosby (1986) is as follows: Material simplicity is composed of items 2, 9, 10, 17, and 18; self-determination is composed of items 1, 6, 7, 11, 12, 13, and 16; and ecological awareness is composed of items 3, 4, 5, 13, and 14. (Items 9 and 10 were allowed to load on the self-determination factor, and the composite reliabilities previously reported reflect the cross-loadings.)

Fourteen of the items are scored on a 5-point basis on the degree to which a behavior is performed. Two of the items offer six response alternatives, and two are dichotomous (yes-no).

Values Related to Materialism and Possessions/Objects

Consumer Attitudes to Debt

(Lea, Webley, and Walker 1995)

Construct: Attitude toward debt is a psychological variable that captures how consumers feel about debt and what they believe are appropriate uses of debt. These general attitudes are said to have shifted over time toward a greater acceptance of debt as part of a consumer-driven society.

Description: The Attitude to Debt scale consists of 17 items that represent a single dimension. Items were scored on a 7-point scale with labels for each point as follows: 1 = *strongly agree*, 2 = *agree*, 3 = *slightly agree*, 4 = *no opinion*, 5 = *slightly disagree*, 6 = *disagree*, and 7 = *strongly disagree*. Items are averaged to form a single indicator for which higher numbers imply pro-debt attitudes.

Development: Items were developed based on previous research, resulting in an initial pool of 59 items. This list was trimmed to 30 items, which were sent to the development sample. Results from the development sample were used to reduce the scale to 17 items based on an analysis of reliability and other properties of the set of items (e.g., interitem correlations, equal numbers of positively and negatively worded items, and low variances).

Samples: Two samples were used. Respondents to the development questionnaire were 583 (26% response rate) adult consumers in a rural setting in England who were all customers of the local utility company (which was a monopoly). For the main questionnaire, surveys were mailed to individuals in three credit categories based on their history with their utility company: 800 each were sent to nondebtors and mild debtors and 1,600 to serious debtors. A total of 464 usable responses were received.

Validity: Coefficient alpha for the development and main questionnaire were 0.83 and 0.77, respectively. The Attitude to Debt scale has a one-factor structure. The three debt groups in the main questionnaire were used to examine the characteristics associated with consumers with varying debt histories. The study investigated several psychological variables, which have been suggested as causes or effects of debt. There were significant group differences for measures of economic socialization, social comparisons, use of credit, and other aspects of consumer behavior. Some issues existed with respect to the predictive validity between scores on the attitude to debt scale and actual debting behavior, and these analyses also called into question the unidimensionality of Attitude to Debt, suggesting that it may in fact be a multidimensional construct with up to five factors.

Scores: Means and standard deviations were reported on an item-by-item basis with means ranging from 1.8 to 4.2 and standard deviations ranging from 0.9 to 1.8.

Source: Lea, Stephen E. G., Paul Webley, and Catherine M. Walker (1995), "Psychological Factors in Consumer Debt: Money Management, Economic Socialization, and Credit Use," *Journal of Economic Psychology,* 16 (December), 681–701.

Consumer Attitudes to Debt

(Lea, Webley, and Walker 1995)

Scale Items

1. Taking out a loan is a good thing because it allows you to enjoy life.

2. It is a good idea to have something now and pay for it later.

3. Using credit is basically wrong. (R)

4. I'd rather go hungry than buy food "on tick" (substitute "on credit" for "on tick"). (R)

5. I plan ahead for larger purchases.

6. Being in debt is never a good thing. (R)

7. Credit is an essential part of today's lifestyle.

8. It is better to go into debt than to let children go without Christmas presents.

9. It is important to live within one's means. (R)

10. Even on a low income, one should save a little regularly. (R)

11. Borrowed money should be repaid as soon as possible. (R)

12. Most people run up too much debt. (R)

13. It is too easy for people to get credit cards. (R)

14. I do not like borrowing money. (R)

15. Borrowing money is sometimes a good thing.

16. I am rather adventurous with my money.

17. It is okay to borrow money to pay for children's clothes.

Notes: Items were scored on a 7-point scale with labels for each point as follows: 1 = *strongly agree*, 2 = *agree*, 3 = *slightly agree*, 4 = *no opinion*, 5 = *slightly disagree*, 6 = *disagree*, and 7 = *strongly disagree*. (R) indicates items requiring reverse coding.

Frugality Scale

(Lastovicka et al. 1999)

Construct: Based on a thorough review of the literature across numerous disciplines (e.g., economics, early American studies, religion, self-help, psychology) and a qualitative study of 84 subjects, Lastovicka et al. (1999) define frugality as "a unidimensional consumer lifestyle trait characterized by the degree to which consumers are both restrained in acquiring and in resourcefully using economic goods and services to achieve longer-term goals" (p. 88).

Description: The frugality scale is an eight-item single-factor (unidimensional) scale. All items are scored on 6-point *definitely disagree* to *definitely agree* scales. Item scores are summed to form an overall frugality score ranging from 8 to 48.

Development: Using numerous recommended scaling procedures across six studies and seven samples, the final form of the scale was derived and thoroughly tested for dimensionality, reliability, and various forms of validity. The first study generated a pool of 60 potential frugality items, and 213 nonstudent adults responded to these items and several other measures for validity assessment purposes. Factor and item analyses trimmed this pool to the final eight-item form. Studies 2 through 6 assessed discriminant, nomological, convergent, and known-groups validity and established scale norms.

Samples: As stated above, seven samples (over six studies) were used to develop and validate the scale. Study 1, $n = 213$ nonstudent adults; Study 2, $n = 57$ participants from a university secretarial staff; Study 3, $n = 90$ nonstudent adults at an airport; Study 4, $n = 101$ married couples at an airport; Study 5, $n = 39$ undergraduate students; and Study 6, $n = 164$ nonstudent adults from a probability sample and $n = 215$ subscribers from the *Tightwad Gazette*.

Validity: Studies 1, 3, and 6 strongly showed that a single unidimensional factor underlies the eight items. Coefficient alpha across all studies ranged from 0.73 to 0.88, and factor loadings ranged from 0.53 to 0.77. In Studies 2 and 3, the frugality scale showed strong evidence of discriminant and nomological validity with measures of compulsive buying ($r = -0.25$), coupon proneness ($r = 0.14$), value consciousness ($r = 0.54$), and price consciousness ($r = 0.45$). Further, the frugality scale showed no evidence of being tainted with social desirability bias or response set bias. In Studies 3, 4, and 6, the frugality scale was also shown to be predictive of "retrained use" above and beyond the effects of compulsive buying, coupon proneness, value consciousness, and price consciousness. In Study 4, the frugality scale showed a predicted pattern of correlations with materialism ($r = -0.26$) and susceptibility to interpersonal influence ($r = -0.10$). Finally, Study 6 showed evidence of known-groups validity as *Tightwad Gazette* subscribers ($M = 44.43$) showed a higher frugality mean score than did the $n = 164$ probability sample ($M = 40.43$, $t = 7.36$, $p < 0.05$). In sum, strong evidence of validity for the frugality scale was found across samples.

Scores: As noted above, scores on the frugality scale can range from 6 to 48. Mean scores were reported for Study 5 ($M = 36$) and Study 6 ($M = 40.43$, $n = 164$ probability sample; and $M = 44.43$ *Tightwad Gazette* sample).

Source: Lastovicka, John L., Lance A. Bettencourt, Renee Shaw Hughner, and Ronald J. Kuntze (1999), "Lifestyle of the Tight and Frugal: Theory and Measurement," *Journal of Consumer Research,* 26 (June), 85–98.

Frugality Scale

(Lastovicka et al. 1999)

1. If you take good care of your possessions, you will definitely save money in the long run.

2. There are many things that are normally thrown away that are still quite useful.

3. Making better use of my resources makes me feel good.

4. If you can reuse an item you already have, there's no sense in buying something new.

5. I believe in being careful in how I spend money.

6. I discipline myself to get the most out of my money.

7. I am willing to wait on a purchase I want so that I can save money.

8. There are things I resist buying today so I can save for tomorrow.

Note: All items are scored on 6-point *definitely disagree* to *definitely agree* scales.

Materialism Measure

(Richins 1987)

Construct: Richins (1987) describes materialism in terms of its role in consumer culture as "the idea that goods are a means to happiness; that satisfaction in life is not achieved by religious contemplation or social interaction, or a simple life, but by possession and interaction with goods" (p. 352). This view is consistent with extant writings on materialism (e.g., Belk 1984, 1985).

Description: The scale is a six-item, two-factor measure. The items are scored on a 7-point Likert-type format from *strongly disagree to strongly agree*. Item scores are summed within factors to form indices for each factor.

Development: Scale development procedures consisted of generating seven items that tapped the content domain of the construct. Then, based on factor analysis and coefficient alpha, the final six items were derived.

Samples: The sample consisted of a quota sample of 252 adults.

Validity: Factor analysis revealed that four items tapped a personal materialism factor (alpha = 0.73) and two items tapped a general materialism factor (alpha = 0.61). The two materialism factors were correlated with measures of perceived realism of TV ads, media exposure, and life satisfaction. The resulting correlations show modest support for the validity of the measure.

Scores: Mean and/or percentage scores were not reported.

Source: Richins, Marsha L. (1987), "Media, Materialism, and Human Happiness," in *Advances in Consumer Research,* Vol. 14, eds. Melanie Wallendorf and Paul Anderson, Provo, UT: Association for Consumer Research, pp. 352–56.

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References: Belk, Russell W. (1984), "Three Scales to Measure Constructs Related to Materialism: Reliability, Validity, and Relationships to Measures of Happiness," in *Advances in Consumer Research,* Vol. 11, ed. Thomas C. Kinnear, Provo, UT: Association for Consumer Research, pp. 291–97.

    Belk, Russell W. (1985), "Materialism: Trait Aspects of Living in the Material World," *Journal of Consumer Research,* 12, 265–80.

Materialism Measure

(Richins 1987)

1. It is important to me to have really nice things.

2. I would like to be rich enough to buy anything I want.

3. I'd be happier if I could afford to buy more things.

4. It sometimes bothers me quite a bit that I can't afford to buy all the things I want.

5. People place too much emphasis on material things.*

6. It's really true that money can buy happiness.

Notes: *Denotes reverse scoring. Items 1 through 4 compose the personal materialism factor, and items 5 and 6 the general materialism factor.

Items are scored on a 7-point Likert-type format from *strongly disagree* to *strongly agree.*

Material Values (MVS): Short Forms

(Richins 2004)

Construct: As with Richins and Dawson (1992), Richins (2004) views materialism as a consumer value that involves beliefs and attitudes so centrally held that they guide the conduct of one's life. The primary purpose of Richins (2004) was to develop shortened versions of the Richins and Dawson (1992) Material Values Scale(s) (MVS) that still reflect possessions as defining a *success* dimension, an *acquisition centrality* dimension, and an acquisitions as the pursuit of *happiness* dimension.

Description: Four short forms of the MVS scale(s) were developed: 15-item, 9-item, 6-item, and 3-item scales encompassing the three dimensions above. All items are scored on a 5-point Likert format from *strongly disagree* to *strongly agree*. Item scores can be summed within dimensions to form indices for each dimension and can be summed over all items to form an overall MVS score.

Development: The development of the short forms closely followed recommended psychometric scaling procedures. Fifteen samples, several from the original development of the MVS (Richins and Dawson 1992), were used. Via factor and item analyses and extensive validity testing over the samples, the final short forms of the MVS were derived. A cross-validation sample of $n = 402$ split into four subsamples was then gathered to further validate the short forms of the scale.

Samples: As stated above, 16 samples were used, ranging in size from $n = 110$ to $n = 639$. Eight of the samples comprised college students, and eight comprised nonstudent adults from various geographic areas in the United States. Across samples, a total of 4,736 participants were surveyed.

Validity: Through factor analyses, item analyses, reliability analysis, and validity testing, the psychometric properties of the short-form scales were assessed. For the first 15 samples, a summed 15-item version of the overall scale showed an average coefficient alpha estimate across samples of 0.86. For the success, acquisition centrality, and happiness dimension short forms of the 15-item version, alpha averaged 0.76, 0.70, and 0.78, respectively. It should be noted, though, that the 15-item version and its separate dimensions did show significant correlations with social desirability bias, and the three-dimension structure of success, acquisition centrality, and happiness did not always cleanly emerge across the 15 samples.

    The average coefficient alpha for a summed nine-item short-form version was 0.82; average coefficient alpha for a summed six-item short-form version was 0.75; and average coefficient alpha for a summed three-item short-form version was 0.63.

    Interestingly, nomological validity correlations for the 15-, 9-, 6-, and 3-item versions with Belk's (1985) materialism scales, numerous personal value measures, several "source of possession value" measures, and a windfall expenditures construct were highly similar. In general, these correlations showed strong evidence of validity for all short-form versions of the MVS.

    The cross-validation samples showed the following: The 15-item version of the overall scale had a coefficient alpha of 0.87; the 9-item version had a coefficient alpha of 0.84; the 6-item version had a coefficient alpha of 0.81; and the 3-item version had a coefficient alpha of 0.64. With the exception of the three-item scale, validity correlations with numerous related constructs were again quite strong. ***Richins (2004) cautioned against using the three-item version of the MVS.***

Scores: Mean scores were reported for the 15 samples used to derive the final short forms of the MVS. Across these samples, means and standard deviations (SD) were reported as follows for the summed-item versions only:

	15-item	*9-item*	*6-item*	*3-item*
Mean	2.86	2.91	3.00	2.86
SD	1.11	1.14	1.16	1.19

Source: Richins, Marsha L. (2004), "The Material Values Scale: Measurement Properties and Development of a Short Form," *Journal of Consumer Research*, 31 (June), 209–19.

References: Belk, Russell W. (1985), "Materialism: Trait Aspects of Living in the Material World," *Journal of Consumer Research*, 12 (December), 265–80.

Richins, Marsha L. and Scott Dawson (1992), "Materialism as a Consumer Value: Measure Development and Validation," *Journal of Consumer Research*, 19 (December), 303–16.

Material Values (MVS): Short Forms

(Richins 2004)

Success

1. I admire people who own expensive homes, cars, and clothes. (15, 9, 6, 3)

2. Some of the most important achievements in life include acquiring material possessions. (15)

3. I don't place much emphasis on the amount of material objects people own as a sign of success.* (15)

4. The things I own say a lot about how well I'm doing in life. (15, 9, 6)

5. I like to own things that impress people. (15, 9)

6. I don't pay much attention to the material objects other people own.*

Acquisition Centrality

1. I usually buy only the things I need.*

2. I try to keep my life simple, as far as possessions are concerned.* (15, 9)

3. The things I own aren't all that important to me.* (15)

4. I enjoy spending money on things that aren't practical.

5. Buying things gives me a lot of pleasure. (15, 9, 6)

6. I like a lot of luxury in my life. (15, 9, 6, 3)

7. I put less emphasis on material things than most people I know.* (15)

Happiness

1. I have all the things I really need to enjoy life.* (15)

2. My life would be better if I owned certain things I don't have. (15, 9, 6)

3. I wouldn't be any happier if I owned nicer things.* (15)

4. I'd be happier if I could afford to buy more things. (15, 9, 6, 3)

5. It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like. (15, 9)

Notes: *denotes items that are reverse scored. Numbers in parentheses denote which items compose the 15-, 9-, 6-, and 3-item versions of the MVS. Items are scored on 5-point Likert scales from *strongly disagree* to *strongly agree*.

Materialism Scales

(Belk 1984, 1985)

Construct: Materialism is defined as the importance a consumer attaches to worldly possessions. At the highest level of materialism, such possessions assume a central place in a person's life and are believed to provide the greatest sources of satisfaction and dissatisfaction (Belk 1984, 1985). Furthermore, Belk identifies three subtraits of materialism: possessiveness, nongenerosity, and envy.

Possessiveness is defined as the inclination and tendency to retain control or ownership of one's possessions.

Nongenerosity is defined as an unwillingness to give possessions or share possessions with others.

Envy is defined as the displeasure and ill will at the superiority of another person in happiness, success, reputation, or the possession of anything desirable.

Description: The Belk materialism scale is composed of 24 statements designed to measure the three subtraits alluded to above. The items are scored on 5-point Likert-type scales from *agree* to *disagree*. Item scores are summed within each subtrait to form an overall score for each subtrait, and all 24 items can be summed to form an overall index of materialism. The scales consist of nine items for possessiveness, seven items for nongenerosity, and eight items for envy.

Development: Based on the conceptual domains identified for materialism and its subtraits, initial pools of 30 to 35 items were generated for each subtrait. Through factor analysis, item-to-total correlations, and other measures of internal consistency, seven to nine items were selected for each subtrait based on a student sample of 237 (Belk 1984).

Samples: Two samples were used by Belk (1984) to initially examine the reliability and validity of the scales. For developing the scales, a student sample of 237 was used. Through a number of statistical procedures, the final measures were derived. Belk (1984) also used another larger sample composed of both students and nonstudents ($n = 338$) to validate the scale.

In another sample used to assess mean differences in materialism by generation, 99 subjects from 33 different families responded to the scales (Belk 1985).

Validity: A number of reliability and validity estimates are reported for the scales. In the Belk (1984) study, coefficient alpha estimates for the possessiveness, nongenerosity, and envy subscales were 0.68, 0.72, and 0.80, respectively, for the student sample ($n = 237$). The overall summed scale (24 items) had an alpha of 0.73. For the larger sample ($n = 338$), these estimates were 0.57 for possessiveness, 0.58 for nongenerosity, 0.64 for envy, and 0.66 for the overall summed 24-item scale. Based on a subsample of 48 students (from the 338 sample), test-retest reliability estimates were 0.87 for possessiveness, 0.64 for nongenerosity, 0.70 for envy, and 0.68 for the overall scale. By using multitrait-multimethod analysis, behavioral and photo indices of materialism were correlated with the materialism scales. In these analyses, Belk (1984) found the scales to have adequate levels of convergent and discriminant validity. Also, all three materialism measures were found to be negatively correlated with measures of happiness and satisfaction in life (i.e., –0.26 and –0.24, respectively). In sum, the original Belk study showed support for the validity of the scale.

Scores: Mean scores for the summed 24-item scale and the original three subtraits are reported for the $n = 338$ sample (Belk 1984, 1985). The mean for the overall scale was 73.4. The means for the possessiveness, nongenerosity, and envy subtraits were 32.86, 18.74, and 21.74, respectively. Mean scores are further broken down by occupation in Belk (1984, p. 294). Belk (1985, p. 271) also reports mean scores for the overall scale and the three original subtraits by family generation.

Sources: Belk, Russell W. (1984), "Three Scales to Measure Constructs Related to Materialism: Reliability, Validity, and Relationships to Measures of Happiness," in *Advances in Consumer Research,* Vol. 11, ed. Thomas C. Kinnear, Provo, UT: Association for Consumer Research, pp. 291–97.

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Belk, Russell W. (1985), "Materialism: Trait Aspects of Living in the Material World," *Journal of Consumer Research,* 12, 265–80.

© 1985 by University of Chicago Press. Scale items taken from Exhibit 1 (p. 270).

Other evidence: In a cross-cultural context, Ger and Belk (1990) looked at a sample of 405 students from several different countries (i.e., Germany, England, France, the United States, and Turkey). Ger and Belk (1990) modified and administered the scale cross-culturally and, based on factor analyses, found a fourth dimension, "tangiblization." Coefficient alpha estimates for the four subscales and total scale were reported for the combined sample and by country subsample. For the combined sample ($n = 405$), alpha estimates were 0.67 for possessiveness, 0.69 for nongenerosity, 0.52 for envy, 0.56 for tangiblization, and 0.58 for the overall scale. (See Ger and Belk 1990, p. 188, for alpha estimates by country.) Furthermore, the four subscales were correlated with an index assessing the degree to which 20 products/services were viewed as necessities versus luxury items. The pattern of correlations supported the validity of the scales. For example, correlations of the possessiveness, nongenerosity, envy, and tangiblization factors with the number of items viewed as necessities were 0.18, –0.13, 0.25, and 0.10, respectively. Ger and Belk (1990, p. 189) also report mean scores by country for the entire scale and all four subtraits.

In another study, Ellis (1992) examined the dimensionality of Belk's scale by estimating numerous competing factor structures based on a sample of 148 respondents. Ellis concluded that a three-factor structure (i.e., possessiveness, nongenerosity, and envy) appeared to offer the best specification of the materialism items. Although internal consistency estimates were not provided, individual item-to-factor loadings were (see Table 2), and the correlations among the three factors ranged from –0.032 to 0.431.

More recently, Micken (1995), using a sample of $n = 278$ adults from a Mid-Atlantic Metropolitan Statistical Area (MSA), reported coefficient alpha estimates of 0.66, 0.38, 0.64, 0.50, and 0.65 for the overall scale, the possessiveness subscale, the nongenerosity subscale, the envy subscale, and the "preservation" (i.e., "tangibility") subscale, respectively (see "Notes"). Furthermore, a factor structure based on the four subdimensions and their intended items found very limited support with Micken's data. Micken also reports few significant correlations between Belk's measures and measures of education, age, gender, and income. In sum, she questions some of the psychometric properties of the scale.

Other sources: Ellis, Seth R. (1992), "A Factor Analytic Investigation of Belk's Structure of the Materialism Construct," in *Advances in Consumer Research,* Vol. 19, eds. John F. Sherry and Brian Sternthal, Provo, UT: Association for Consumer Research, pp. 688–95.

Ger, Guliz and Russell W. Belk (1990), "Measuring and Comparing Materialism Across Countries," in *Advances in Consumer Research,* Vol. 17, eds. Marvin E. Goldberg, Gerald Gorn, and Richard W. Pollay, Provo, UT: Association for Consumer Research, pp. 186–92.

Micken, Kathleen (1995), "A New Appraisal of the Belk Materialism Scale," in *Advances in Consumer Research,* Vol. 22, eds. Frank Kardes and Mita Sujan, Provo, UT: Association for Consumer Research, pp. 398–405.

Materialism Scales

(Belk 1984, 1985)

Possessiveness

  1. Renting or leasing a car is more appealing to me than owning one.*

  2. I tend to hang on to things I should probably throw out.

  3. I get very upset if something is stolen from me, even if it has little monetary value.

  4. I don't get particularly upset when I lose things.*

  5. I am less likely than most people to lock things up.*

  6. I would rather buy something I need than *borrow* it from someone else.*

  7. I worry about people taking my possessions.

  8. When I travel, I like to take a lot of photographs.

  9. I never discard old pictures or snapshots.

Nongenerosity

10. I enjoy having guests stay in my home.*

11. I enjoy sharing what I have.*

12. I don't like to lend things, even to good friends.

13. It makes sense to buy a lawnmower with a neighbor and share it.*

14. I don't mind giving rides to those who don't have a car.*

15. I don't like to have anyone in my home when I'm not there.

16. I enjoy donating things to charity.

Envy

17. I am bothered when I see people who buy anything they want.

18. I don't know anyone whose spouse or steady date I would like to have as my own.*

19. When friends do better than me in competition, it usually makes me happy for them.*

20. People who are very wealthy often feel they are too good to talk to average people.

21. There are certain people I would like to trade places with.

22. When friends have things I cannot afford it bothers me.

23. I don't seem to get what is coming to me.

24. When Hollywood stars or prominent politicians have things stolen, I really feel sorry for them.*

Notes: *Denotes reverse scoring. Items 1, 3 through 6, 9, and 15 compose the Ger and Belk (1990) scale for possessiveness. In addition, the phrasing for Item 1 was changed from "a car" to "a place to live." Items 7, 10, 11, 12, 16, and 19 make up the Ger and Belk nongenerosity scale. In addition, the phrasing for item 10 was changed from "guests" to "people I like." Items 17, 20, 21, and 23 make up the Ger and Belk envy scale, with an additional item that reads as follows: "If I have to choose between buying something for myself versus someone I love, I would prefer buying for myself."

Ger and Belk's "Tangiblization" measure is composed of Items 2 and 8, along with the following three statements (These three items below have recently been referred to as the "Preservation" subscale):

1. I have a lot of souvenirs.

2. I would rather give someone a gift that lasts than take them to dinner.

3. I like to collect things.

Items are scored on 5-point Likert-type scales from *agree* to *disagree.*

Materialistic Attitudes: MMA

(Moschis and Churchill 1978)

Construct: Materialistic attitude (MMA) is defined as orientations emphasizing possessions and money for personal happiness and social progress (Moschis and Churchill 1978, p. 607).

Description: The MMA is composed of six Likert-type items scored on a 5-point disagree–agree basis. Item scores are summed to form an overall MMA index.

Development: The selection of items for the MMA was done by summing appropriate items, using item-to-total correlations to purify the measure and coefficient alpha to assess the resultant reliability of the measure (Moschis and Churchill 1978). These items were largely adapted from earlier research assessing racial differences in response to advertising to adolescents (Wackman, Reale, and Ward 1972).

Samples: The scale was developed and tested using a sample of 806 adolescents (ages 12 to 18).

Validity: The coefficient alpha reliability of the scale was reported to be 0.60. In addition, the MMA was significantly related to measures of social utility in regression analysis (beta = 0.16) as well as peer communication (beta = 0.12) and gender (–0.20) (i.e., males held stronger materialistic attitudes).

Scores: Mean scores or percentages were not reported.

Source: Moschis, George P. and Gilbert A. Churchill, Jr. (1978), "Consumer Socialization: A Theoretical and Empirical Analysis," *Journal of Marketing Research*, 15, 599–609.

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Reference: Wackman, Daniel B., Greg Reale, and Scot Ward (1972), "Racial Differences in Response to Advertising Among Adolescents," in *Television in Day-to-Day Life,* eds. E. P. Rubenstein, George A. Comstock, and John P. Murray, Rockville, MD: U.S. Department of Health, Education, and Welfare, pp. 543–51.

Materialistic Attitudes: MMA

(Moschis and Churchill 1978)

1. It is really true that money can buy happiness.

2. My dream in life is to be able to own expensive things.

3. People judge others by the things they own.

4. I buy some things that I secretly hope will impress other people.

5. Money is the most important thing to consider in choosing a job.

6. I think others judge me as a person by the kinds of products and brands I use.

Note: Items scored on a 5-point Likert-type scale from *disagree* to *agree*.

Material Values

(Richins and Dawson 1992)

Construct: Richins and Dawson (1992) view materialism as a consumer value in that it involves beliefs and attitudes so centrally held that they guide the conduct of one's life. Based on a review of the materialism literature in a variety of disciplines and on popular notions concerning materialism (Fournier and Richins 1991), three important themes concerning materialism were identified. These themes reflect the values consumers place on material goods and the roles these goods play in their lives:

Possessions as defining "success" is the extent to which one uses possessions as indicators of success and achievement in life, both in judging oneself and others.

Acquisition "centrality" is the extent to which one places possession acquisition at the center of one's life (i.e., this lends meaning to life and guides daily endeavors).

Acquisitions as the pursuit of "happiness" is the belief that possessions are essential to satisfaction and well-being in life.

Description: The scale consists of 18 items encompassing the three factors above (six items for "success," seven for "centrality," and five for "happiness"). The items are scored on a 5-point Likert-type format from *strongly agree to strongly disagree*. Item scores are summed within dimensions to form indices for each dimension, and they can be summed overall to form an overall materialism score.

Development: The development of the scale closely followed recommended psychometric scaling procedures. First, a convenience sample of 11 consumers was asked to describe the characteristics of materialistic people they knew in an open-ended format. Items were then generated based on these responses. Items were also generated from previously developed materialism scales and the materialism literature (Belk 1984, 1985; Richins 1987). More than 120 items were generated. These items were then screened for ambiguity and redundancy, resulting in further development samples examining either 50 or 66 potential materialism statements (Richins and Dawson 1992). From these, a pool of 48 items was retained for further analysis. This pool was trimmed to 30 items via exploratory factor analysis, reliability analysis, and social desirability testing. Through a number of other scaling procedures (i.e., factor analysis, reliability analysis, and validity checks) across several samples, a final scale consisting of 18 items was developed.

Samples: As stated above, a convenience sample of 11 consumers was used for item generation. Three samples of students ($n = 448$, 191, and 194) were used in preliminary tests of the scale (Richins and Dawson 1990). Four consumer samples were used in scale development, reliability, and validity checks. Sample sizes were 144, 250, 235, and 205. A sample of 58 students was also used to assess test-retest reliability.

Validity: Through factor analyses and reliability analysis, three factors emerged. Over the last three samples, coefficient alpha estimates for the factors ranged from 0.71 to 0.75 for centrality, from 0.74 to 0.78 for the success factor, and from 0.73 to 0.83 for the happiness factor (Richins and Dawson 1992). Alpha for the overall 18-item scale ranged between 0.80 and 0.88. Test-retest reliability over a 3-week interval ($n = 58$) was 0.82, 0.86, 0.82, and 0.87 for the centrality, happiness, success, and overall scales, respectively.

Numerous tests of validity were performed. First, the scales were examined for social desirability bias. The correlations between social desirability and the subscales

and overall materialism scale ranged from –0.03 to –0.13, indicating virtually no contamination from social desirability bias.

The materialism factors were also correlated with measures of life satisfaction, values, self-esteem, self-centeredness, and voluntary simplicity in some or all the samples to examine the validity of the scales. Across samples, the patterns of correlations showed that the materialism factors exhibited construct validity (Richins and Dawson 1992). For example, the correlation between the overall scale and an item assessing voluntary simplicity was –0.21, the correlation between the overall scale and Belk's (1985) nongenerosity scale was 0.25, and the correlation between the scale and a measure of self-esteem was –0.12. These correlations support *a priori* hypotheses about the materialistic individual. A number of other mean difference tests also add support for the scale's validity.

Scores: Mean scores were reported for three samples for each subscale and the overall scale. For the centrality component, mean scores (std. dev.) ranged from 19.3 (4.0) to 19.8 (4.2). For the happiness component, mean scores ranged from 12.8 (4.1) to 13.3 (4.2). For the success component, mean scores ranged from 13.8 (4.1) to 14.7 (3.9), and for the overall combined scale, mean scores ranged from 45.9 (9.8) to 47.9 (10.2).

Source: Richins, Marsha L. and Scott Dawson (1992), "Materialism as a Consumer Value: Measure Development and Validation," *Journal of Consumer Research,* 19, 303–16.

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Other evidence: Richins (1994) used the material values scale in a study related to the public and private meanings of possessions. Using samples of $n = 144$ and $n = 119$ adults, she reports coefficient alpha estimates for the entire 18-item scale of 0.86 and 0.84 for the two samples, respectively. After pooling the two samples and performing quartile splits on the 18-item scale, she found significant hypothesized differences between the top and bottom quartiles across numerous variables. For example, the "high" materialism group (top quartile) had valued possessions that were more socially visible, more expensive, and less likely to involve interpersonal associations than did the "low" materialism group (bottom quartile). Several other tests relating to materialism and private meanings of possessions supported the scales' validity.

Rindfleisch, Burroughs, and Denton (1997) report a coefficient alpha estimate of 0.87 for the 18-item material values scale. They report correlations of 0.21, –0.17, 0.15, and 0.36 with measures of family structure, family resources, family stressors, and compulsive buying, respectively ($p < 0.05$ or better). They also report that material values were predicted by "family-related" variables in several mediator and moderator regression analyses.

Other sources: Richins, Marsha (1994), "Special Possessions and the Expression of Material Values," *Journal of Consumer Research*, 21, 522–33.

Rindfleisch, Aric, James A. Burroughs, and Frank Denton (1997), "Family Structure, Materialism, and Compulsive Buying," *Journal of Consumer Research,* 23, 312–25.

References: Belk, Russell W. (1984), "Three Scales to Measure Constructs Related to Materialism: Reliability, Validity, and Relationships to Measures of Happiness," in *Advances in Consumer Research,* Vol. 11, ed. Thomas C. Kinnear, Provo, UT: Association for Consumer Research, pp. 291–97.

Belk, Russell W. (1985), "Materialism: Trait Aspects of Living in the Material World," *Journal of Consumer Research,* 12, 265–80.

Fournier, Susan and Marsha L. Richins (1991), "Some Theoretical and Popular Notions Concerning Materialism," *Journal of Social Behavior and Personality,* 6, 403–14.

Richins, Marsha L. (1987), "Media, Materialism, and Human Happiness," in *Advances in Consumer Research,* Vol. 14, eds. Melanie Wallendorf and Paul Anderson, Provo, UT: Association for Consumer Research, pp. 352–56.

Richins, Marsha L. and Scott Dawson (1990), "Measuring Material Values: A Preliminary Report on Scale Development," in *Advances in Consumer Research,* Vol. 17, eds. Marvin E. Goldberg, Gerald Gorn, and Richard W. Poliay, Provo, UT: Association for Consumer Research, pp. 169–75.

Material Values

(Richins and Dawson 1992)

Defining Success

1. I admire people who own expensive homes, cars, and clothes.

2. Some of the most important achievements in life include acquiring material possessions.

3. I don't place much emphasis on the amount of material objects people own as a sign of success.*

4. The things I own say a lot about how well I'm doing in life.

5. I like to own things that impress people.

6. I don't pay much attention to the material objects other people own.*

Acquisition Centrality

1. I usually buy only the things I need.*

2. I try to keep my life simple, as far as possessions are concerned.*

3. The things I own aren't all that important to me.*

4. I enjoy spending money on things that aren't practical.

5. Buying things gives me a lot of pleasure.

6. I like a lot of luxury in my life.

7. I put less emphasis on material things than most people I know.*

Pursuit of Happiness

1. I have all the things I really need to enjoy life.*

2. My life would be better if I owned certain things I don't have.

3. I wouldn't be any happier if I owned nicer things.*

4. I'd be happier if I could afford to buy more things.

5. It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like.

Note: *Denotes items that are reverse scored.

The items are scored on a 5-point Likert-type format from *strongly agree* to *strongly disagree.*

Nostalgia Scale

(Holbrook 1993)

Construct:	Nostalgia refers to a longing for the past, a yearning for yesterday, or a fondness for possessions and activities associated with days of yore. Holbrook and Schindler (1991) define nostalgia as "a preference (general liking, positive attitude, or favorable affect) toward objects (people, places, or things) *that were more common* (popular, fashionable, or widely circulated) *when one was younger* (in early adulthood, in adolescence, in childhood, or even before birth)" (p. 330). Based on these views of nostalgia, Holbrook (1993) developed an index to measure nostalgia.
Description:	The Nostalgia Scale is composed of eight items scored on 9-point Likert-type scales ranging from *strong disagreement* (1) to *strong agreement* (9). Item scores can be summed to form an overall score of nostalgia.
Development:	Twenty statements were originally generated to represent the domain of the construct. Ten of these items were reverse coded. Exploratory and confirmatory factor analyses, using two samples and "preference for movies" as the stimulus object, were performed. These procedures were used to derive the final eight-item Nostalgia Scale. Assessment of internal consistency and numerous tests of validity were offered.
Samples:	Two samples were used to develop, refine, and test the psychometric properties of the scale. The first sample ($n = 167$) was composed of graduate business students and was considered "age homogenous" (i.e., ages ranging from 21 to 34 years; 72 females and 95 males). The second sample ($n = 156$) was composed of nonstudent adults who were "age heterogeneous" (i.e., ages ranging from 21 to 85; 94 females and 62 males).
Validity:	Initial confirmatory factor analyses showed a "poor fit" to the original 20 items representing nostalgia. A stepwise procedure was used to eliminate items with low loadings and items that threatened a unidimensional factor structure ($n = 167$). The eight items retained from this procedure showed adequate evidence of unidimensionality, as well as adequate coefficient alpha and construct reliability estimates of internal consistency of 0.78 (for a summated scale). Factor loadings ranged from 0.49 to 0.76 ($p < 0.01$). For the $n = 156$ sample, the eight-item, single-factor structure was replicated with coefficient alpha and construct reliability estimates of 0.73. Factor loadings ranged from 0.34 to 0.60 ($p < 0.01$). Preference spaces (i.e., "spatial dimension" analyses) for 62 Oscar-winning movies related to nostalgia showed support for the validity of the scale. Furthermore, the two studies demonstrated that the effects of age and nostalgia may operate independently in shaping consumer preference.
Scores:	Factor scores of the Nostalgia Scale were used in the "spatial dimension" analyses. Neither mean nor percentage scores were reported.
Source:	Holbrook, Morris (1993), "Nostalgia and Consumption Preferences: Some Emerging Patterns of Consumer Tastes," *Journal of Consumer Research,* 20, 245–56.
	© 1993 by the University of Chicago. Scale items taken from Table 2 (p. 249) and Appendix (p. 255). Reprinted with permission.
Other evidence:	Holbrook and Schindler (1994) used the Nostalgia Scale as a moderator of the effect of object-specific age on time-related patterns of preference. They found support for its moderating effect in numerous regression-based analyses. They also found evidence that the eight-item Nostalgia Scale was unidimensional with a construct reliability estimate of 0.68 (via confirmatory factor analysis).

Other source: Holbrook, Morris B. and Robert M. Schindler (1994), "Age, Sex, and Attitude Toward the Past as Predictors of Consumer's Aesthetic Tastes for Cultural Products," *Journal of Marketing Research,* 57, 412–22.

Reference: Holbrook, Morris and Robert M. Schindler (1991), "Echoes of the Dear Departed Past: Some Work in Progress on Nostalgia," in *Advances in Consumer Research,* Vol. 18, eds. Rebecca Holman and Michael R. Solomon, Provo, UT: Association for Consumer Research, pp. 330–33.

Nostalgia Scale

(Holbrook 1993)

1. They don't make 'em like they used to.

2. Things used to be better in the good old days.

3. Products are getting shoddier and shoddier.

4. Technological change will insure a brighter future.

5. History involves a steady improvement in human welfare.

6. We are experiencing a decline in the quality of life.

7. Steady growth of GNP has brought increased human happiness.

8. Modern business constantly builds a better tomorrow.

Notes: Items 4, 5, 7, and 8 require reverse scoring. The original 20 items generated to reflect the construct can be found in the Appendix to Holbrook (1993, p. 255).

Items are scored on 9-point Likert-type scales ranging from *strong disagreement* (1) to *strong agreement* (9).

Possessions: Attachment to Possessions

(Ball and Tasaki 1992)

Construct: Attachment is defined as "the extent to which an object is owned, expected to be owned, or previously owned by an individual, is used by the individual to maintain his of her self-concept" (Ball and Tasaki 1992, p. 158). Attachment suggests that self-schemata is dependent on ownership of an object, and it includes both private and public facets of the self and possessions.

Description: The attachment scale is composed of nine items scored on 6-point Likert-type scales ranging from *disagree* (1) to *agree* (6). It seems that item scores could be summed to form an overall score for the scale ranging from 9 to 54. In the Ball and Tasaki (1992) article, though, a "weighted mean of attachment" was calculated across a number of product categories and stages of acquisition (p. 165).

Development: Originally, 10 items were generated to reflect the domain of the construct. One item was dropped due to low correlations with other items. The remaining nine items tapped the private and public aspects of attachment. One sample of $n = 331$ (188 college students and 143 other adults) was used for all facets of scale development and validation. Factor analyses, reliability analyses, and correlational and mean-level difference tests were used to examine scale dimensionality, reliability, and validity.

Sample: As stated above, a sample of 331 college students and other adults was used.

Validity: Factor analyses of the nine items revealed that a single factor accounted for 87% of the common variance in the data, offering some evidence for a single dimension. Coefficient alpha for the nine items was 0.93. Using the attachment scale as a dependent variable, several mean-level difference tests via ANOVA showed support for the scale's validity. Correlations of the attachment scale with measures of the emotional significance of possessions, materialism, and social desirability were 0.503, 0.159, and −0.069, respectively. The first two correlations were significant ($p < 0.01$), and the last correlation was not, offering some evidence of nomological validity for the scale with no contamination from social desirability bias.

Scores: In Table 4 (p. 166), 50 "weighted mean attachment" scores are offered across 10 products and 5 acquisition stages, as well as an overall mean score for each product across the stages combined.

Source: Ball, A. Dwayne and Lori Tasaki (1992), "The Role and Measurement of Attachment in Consumer Behavior," *Journal of Consumer Psychology,* 1 (2), 155–72.

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Possessions: Attachment to Possessions

(Ball and Tasaki 1992)

1. Imagine for a moment someone making fun of your car. How much would you agree with the statement, "If someone ridiculed my car, I would feel irritated."

2. How much do you agree with the statement, "My car reminds me of who I am."

3. Picture yourself encountering someone who would like to get to know you. How much do you think you would agree with the statement, "If I were describing myself, my car would likely be something I mentioned."

4. Suppose someone managed to destroy your car. Think about how you would feel. How much do you agree with the statement, "If someone destroyed my car, I would feel a little bit personally attacked."

5. Imagine for a moment that you lost your car. Think of your feelings after such an event. How much do you agree with the statement, "If I lost my car, I would feel like I had lost a little bit of myself."

6. How much do you agree with the statement, "I don't really have too many feelings about my car."

7. Imagine for a moment someone admiring your car. How much would you agree with the statement, "If someone praised my car, I would feel somewhat praised myself."

8. Think for a moment about whether or not people who know you might think of your car when they think of you. How much do you agree with the statement, "Probably people who know me might sometimes think of my car when they think of me."

9. Imagine for a moment that you have lost your car. Think about going through your daily activities knowing that it is gone. How much do you agree with the statement, "If I didn't have my car, I would feel a little bit less like myself."

Notes: Respondents were instructed to fill in the blanks mentally with the object being rated (e.g., a car above). Item 6 requires reverse scoring.

Items are scored on 6-point Likert-type scales ranging from *disagree* (1) to *agree* (6).

Appendix to Materialism and Possessions/Objects

A scale related to materialism is the Money Attitude Scale: MAS (Yamauchi and Templer 1982). Given its copyrighted and proprietary nature, only a summary of the MAS is offered here.

Product Retention Tendency: PRT

(Haws et al. 2010)

Construct: Product retention tendency is defined as an individual's propensity to retain physical possessions. High product retention tendency can be associated with the behavior of "pack-rats," while low product retention tendency is associated with "purgers" (Coulter and Ligas 2003). Product retention tendency is derived from literature in clinical psychology about compulsive hoarding but intended to capture less extreme keeping tendencies.

Description: The Product Retention Tendency (PRT) scale consists of four items forming a single dimension. The items are assessed on a 7-point Likert-type scale, where 1 = *strongly disagree* and 7 = *strongly agree*, and are averaged to form a single value that represents one's retention tendencies, with higher scores indicating a propensity to keep things and lower scores indicating a propensity to get rid of physical possessions.

Development: Researchers began with 54 potential items generated based on a review of previous literature and interviews with consumers. The 54 items were judged by a panel of expert judges for their applicability to the provided definition of product retention tendency, and 17 items were subsequently eliminated. Two samples were used to reduce the number of items from 37 to the final number of 4. Exploratory and confirmatory factor analyses, coupled with content analysis of the items, were used to select items that had strong factor loadings on the single factor representing PRT. Other samples provided additional evidence of validity and reliability of PRT.

Samples: Six samples of adult consumers were used to establish and validate the PRT scale. The sample sizes ranged from 156 to 305, with an average sample size of 231 and a total of 1,385 respondents. The first three samples contained adults recruited by students to participate in an online study, while the second three samples were drawn from members of an online panel.

Validity: The studies consistently showed support for the proposed unidimensional structure of PRT. Reliability was assessed through coefficient alphas, which ranged slightly from 0.86 to 0.94 across the six samples. Confirmatory factor analyses showed that loadings on the single factor ranged from 0.75 to 0.88. Construct reliability (and average variance extracted) estimates were 0.88 (0.63) and 0.87 (0.59) for the first and second samples, respectively. In addition, evidence was provided to show both convergent and discriminant validity with respect to clinical compulsive hoarding. Also, relationships with proposed correlates of PRT, including creative reuse, frugality, concern for the environment, materialism, and product attachment, were presented as evidence of nomological validity.

Scores: Mean scores were not reported.

Source: Haws, Kelly L., Rebecca W. Naylor, Robin Coulter, and William O. Bearden (2010), "It's Mine to Keep! Understanding Product Retention Tendency," working paper, Texas A&M University, College Station, TX 77843.

Reference: Coulter, Robin A. and Mark Ligas (2003), "To Retain or Relinquish: Exploring the Disposition Practices of Packrats and Purgers," in *Advances in Consumer Research,* eds. Punam Anand Keller and Dennis Rook, Provo, UT: Association for Consumer Research, pp. 38–43.

Product Retention Tendency: PRT

(Haws et al. 2010)

1. Getting rid of stuff is difficult for me.

2. I tend to hold onto my possessions.

3. I do not like to dispose of possessions.

4. Unless I have a really good reason to throw something away, I keep it.

Note: Scored on a 1- to 7-point *strongly disagree* to *strongly agree* scale.

Money Attitude Scale: MAS

(Yamauchi and Templer 1982)

Construct: The psychological aspects of money are felt to encompass three broad content areas (Yamauchi and Templer 1982): security, retention, and power-prestige.

Security concerns optimism, confidence, and comfort, and the reverse of pessimism, insecurity, and dissatisfaction associated with having or not having money.

Retention includes parsimony, hoarding, and obsessive personality traits.

Power-prestige comprises aspects of status, importance, superiority, and acquisition through money.

The MAS was designed to measure these content areas of attitude toward money.

Description: The MAS comprises 29 Likert-type statements utilizing *always* and *never* as endpoints (7-point items). Though originally designed to assess the three broad content areas described above, the MAS is considered a four-dimensional scale where scores on items within each dimension are summed to form indices of each dimension. An overall MAS score can also be derived by summing responses to all 29 items.

Development: Sixty-two items were originally generated to reflect the three content domains described above. Through factor analyses, this original pool of items was trimmed to 34 items reflecting five substantive factors. Items with loadings of 0.40 or above on a given factor were retained, and the five factors accounted for 33.6% of the variance. These five factors were (a) a power-prestige factor, (b) a retention-time factor, (c) a distrust factor, (d) a quality factor, and (e) an anxiety factor. Due to theoretical overlap with the power-prestige factor, the quality factor was deleted. Thus, the final scale consists of 29 items reflecting four factors. Coefficient alpha was used to assess the internal consistency of the MAS, and a number of validity estimates were also performed.

Samples: Two samples were used in scale development and validation. The first sample consisted of 300 adults from two California cities. With this sample, the final 29-item scale was derived from the original pool of 62 items. This sample was used to determine the factor structure, internal consistency, and test-retest reliability of the scale. A second sample of 125 students was used to further examine the reliability and test the validity of the scale.

Validity: Internal consistency estimates of the four factors composing the final scale were 0.80, 0.78, 0.73, and 0.69 for the power-prestige, retention-time, distrust, and anxiety factors, respectively. Corresponding test-retest reliability estimates for a subsample of 31 (from the original 300) were 0.88, 0.95, 0.87, and 0.88.

To examine the validity of the scale, the MAS, along with a number of other scales, was administered to a student sample of 125. The four factors of the MAS were found to be correlated with measures of Machiavellianism (0.13 to 0.44), status concern (0.23 to 0.48), time competence (−0.04 to −0.33), obsessional personality (0.04 to 0.40), and anxiety (−0.12 to 0.55), all in the predicted directions. Thus, evidence for the nomological validity of the MAS was found.

Scores: Mean scores (std. dev.) for the total scale and the four factors were reported for the first sample (*n* = 300). For the total 29-item scale, the mean was 97.69 (15.54). For the four factors, the mean scores were 21.35 (7.45) for the power-prestige factor, 28.83 (8.10)

for the retention-time factor, 24.71 (6.08) for the distrust factor, and 22.80 (5.51) for the anxiety factor.

Source: Yamauchi, Kent T. and Donald I. Templer (1982), "The Development of a Money Attitude Scale," *Journal of Personality Assessment,* 46, 522–28. Scale items taken from Tables 1–5 (pp. 523–25).

The Spendthrift-Tightwad Scale: ST-TW

(Rick, Cryder, and Loewenstein 2008)

Construct: The Spendthrift-Tightwad (ST-TW) scales assess "individual differences in the tendency to experience the pain of paying" (Rick et al. 2008, p. 769).

Description: ST-TW is a four-item scale. Two of the items are assessed using 5-point *never* to *always* scenario-based scales; one item is assessed using a 5-point scenario-based similarity scale; and one item is assessed using an 11-point "tightwad" to "spendthrift" scale. Item scores are summed to form an overall ST-TW score ranging from 4 to 26. The overall ST-TW scale score is also trichotomized to form three groups of spenders: 1) "tightwads" are consumers whose ST-TW score ranges from 4 to 11; 2) "unconflicted" are consumers whose ST-TW score ranges from 12 to 18; and 3) "spendthrifts" are consumers who's ST-TW score ranges from 19 to 26.

Development: Based on a previous survey about consumer spending habits, the authors selected four items (based on face validity) to measure the ST-TW construct. Then, based on four survey samples totaling 13,327 respondents of both students and nonstudents over a 31-month period, the psychometric properties (i.e., dimensionality, reliability, and validity) of the ST-TW scale were established. Two more experimental studies further validated the ST-TW scale.

Samples: The first four survey samples used to assess the scale's psychometric properties were: 1) a readers of the *Globe and Mail* sample, $n = 154$; 2) a readers of the *New York Times* sample, $n = 10,331$; 3) a sample of students, staff members, and parents from Carnegie Melon and Pittsburgh universities, $n = 2,469$; and 4) a sample of NBC nightly news viewers, $n = 193$. The two experimental studies used 538 Carnegie Melon students (Study 1) and 1,087 nonstudent adults from the *Globe and Mail, New York Times,* and NBC samples (Study 2).

Validity: Across the four survey samples, both exploratory and confirmatory factor analyses showed that the four items were best represented by a single-factor/unidimensional scale. Coefficient alpha for ST-TW was 0.75 with an average interitem correlation of 0.42. Test-retest reliability estimates (covering time frames between 2 to 539 days and 447 respondents) ranged from 0.70 to 0.83, indicating a stable construct over time. Numerous measures for assessing validity were also included in the four survey samples; most notably measures of frugality (Lastovicka et al. 1999), materialism, price consciousness, value consciousness, deal proneness, compulsive buying, regret, the Big-Five personality scales, and many others. The ST-TW showed discriminant validity from frugality ($r = -0.46$), price consciousness, ($r = -0.40$), and value consciousness ($r = -0.33$). The pattern of correlations with all other validity constructs showed strong evidence of nomological validity. The ST-TW showed correlations with credit card debt/payments and savings consistent with the "pain of paying" (Rick et al. 2008).

The ST-TW was also free of social desirability bias ($r = 0.04$). Further, males were shown to be two and a half times more likely than females to be classified as tightwads rather than spendthrifts. As consumers age, their propensity to be tightwads becomes greater (particularly past the age of 71), and education showed a modest positive correlation with being a tightwad.

The two experimental studies also demonstrated the validity of ST-TW. Spendthrifts were more willing to pay an overnight shipping fee than tightwads (Study 1), and tightwads were less likely to buy a massage than spendthrifts (Study 2). Taken together, these

two experimental studies showed that spending differences between spendthrifts and tightwads will be smallest when situational factors diminish the "pain of paying."

Scores: As noted above, scores on the ST-TW scale can range from 4 to 26. The mean score for ST-TW across the four survey samples was 14.38. Percentages by classification were as follows: 24% of respondents were classified as tightwads (ST-TW ranges from 4–11); 60% of respondents were classified as unconflicted (ST-TW ranges from 12–18); and 15% of respondents were classified as spendthrifts (ST-TW ranges from 19–26).

Source: Rick, Scott I., Cynthia E. Cryder, and George Loewenstein (2008), "Tightwads and Spendthrifts," *Journal of Consumer Research,* 34 (April), 767–82.

Reference: Lastovicka, John L., Lance A. Bettencourt, Renee Shaw Hughner, and Ronald J. Kuntze (1999), "Lifestyle of the Tight and Frugal: Theory and Measurement," *Journal of Consumer Research,* 26 (June), 85–98.

The Spendthrift-Tightwad Scale: ST-TW

(Rick, Cryder, and Loewenstein 2008)

1. Which of the following descriptions fits you better?

     1   2   3   4   5   6   7   8   9   10   11

   Tightwad   *About the same or neither*   *Spendthrift*

   (difficulty spending money)   (difficulty controlling spending)

2. Some people have trouble limiting their spending; they often spend money—for example on clothes, meals, vacations, phone calls—when they would do better not to.

   Other people have trouble spending money. Perhaps because spending money makes them anxious, they often don't spend money on things they should spend it on.

   a. How well does the first description fit you? That is, do you have trouble limiting your spending?

        1   2   3   4   5

      Never   *Rarely*   *Sometimes*   *Often*   *Always*

   b. How well does the second description fit you? That is, do you have trouble spending money?

        1   2   3   4   5

      Never   *Rarely*   *Sometimes*   *Often*   *Always*

3. Following is a scenario describing the behavior of two shoppers. After reading about each shopper, please answer the question that follows.

   Mr. A is accompanying a good friend who is on a shopping spree at a local mall. When they enter a large department store, Mr. A sees that the store has a "one-day-only sale" where everything is priced 10% to 60% off. He realizes he doesn't need anything and ends up spending almost $100.00 on stuff.

   Mr. B is accompanying a good friend who is on a shopping spree at a local mall. When they enter a large department store, Mr. B sees that the store has a "one-day-only sale" where everything is priced 10% to 60% off. He figures he can get great deals on many items that he needs, yet the thought of spending the money keeps him from buying the stuff.

   In terms of your own behavior, who are you more similar to, Mr. A or Mr. B?

        1   2   3   4   5

      Mr. A   *About the same or neither*   *Mr. B*

Note: Items 2b and 3 are reverse scored.

Values Related to Goal Orientations and Planning

Behavioral Inhibition and Behavioral Activation Systems: BIS/BAS Scales

(Carver and White 1994)

Construct: According to Gray (1990, among others), there are two general motivational systems impacting behavior and affect: the Behavioral Inhibition System (BIS) and the Behavioral Activation System (BAS). The BIS regulates reactions to aversive motivation and is sensitive to punishment, negative outcomes, and nonreward, and it causes inhibition from moving toward goals. On the contrary, the BAS regulates reactions to appetitive motivation and is sensitive to reward and nonpunishment and causes movement toward goals, although there is less overall consensus about the exact impact of the BAS than of the BIS. While the BIS is assumed to be related to negative affect, the BAS is related to positive affect.

Description: The final BIS/BAS scale consists of 20 items across four dimensions: one for BIS and three for BAS, including BAS reward responsiveness, drive, and fun seeking. Items are assessed on a 4-point scale with 1 indicating *strong agreement* and 4 indicating *strong disagreement*. Scores are calculated for each dimension by summing the responses to all items assessing that dimension.

Development: Items were written by the authors based on the overall conceptualization of BIS and BAS, with the BIS items capturing concern over a possible bad occurrence or sensitivity to a bad outcome when they do occur. BAS items were broader in capturing strong pursuit of appetitive goals, responsiveness to reward, seeking out or acting quickly on rewarding experiences. Items were tested through multiple iterations not reported in the paper, and the final set of BIS/BAS items was tested in Study 1. Additional samples were used to further investigate reliability and validity.

Samples: Study 1 included 732 college students who responded to all the BIS/BAS items, and a subset of 113 of these participants completed the measures 8 weeks later to assess test-retest reliability. Study 2 examined correlations between the BIS/BAS scales using mostly nonoverlapping samples ranging from 107 to 498 undergraduate students in each analysis. Studies 3 ($n = 69$) and 4 ($n = 90$) also included undergraduate students and were used to examine downstream consequences of BIS (anxiety) and BAS (happiness).

Validity: In Study 1, a confirmatory factor analysis supported the four-factor structure of the BIS/BAS measure. Coefficient alphas for the four dimensions were 0.74 for BIS, 0.73 for BAS-Reward Responsiveness, 0.76 for BAS-Drive, and 0.66 for BAS-Fun Seeking. Further analysis demonstrated that all four dimensions were distinct but that the three BAS scales strongly loaded on a second-order factor distinct from BIS. Study 2 reports the convergent and discriminant validity with regard to a variety of measures, based on the correlations of the BIS/BAS scales with other measures such as extraversion, personality, life orientation, positive and negative affect, and optimism/pessimism scales. These analyses are said to demonstrate that the BIS/BAS scales are related as expected to other measures but are discriminant from other constructs. In Study 3, the predictive validity of BIS was assessed based on the experience of anxiety. The BIS was compared to an anxiety scale and was shown to have superior predictive validity with respect to ratings of nervousness in response to punishment cues. Further, these outcomes were not predicted by any of the BAS dimensions, underscoring the lack of overlap between the BIS and BAS. Study 4 was used to examine the predictive validity of BAS by introducing a situation in which

respondents anticipated receiving a positive reward. Reactions were compared based on the BAS, the BIS, and a measure of extraversion. Drive and Reward Responsiveness were the best predictors of midsession happiness.

Scores: Study 1 means (standard deviations) for each dimension were as follows: BIS = 19.99 (3.79), BAS-Reward Responsiveness = 17.59 (2.14), BAS-Drive = 12.05 (2.36), and BAS-Fun Seeking = 12.43 (2.26). Gender differences were reported for two of the scales; specifically, both BIS and BAS-Reward Responsiveness scores were higher for women than for men (21.09 vs. 18.84 and 17.90 vs. 17.27, respectively). The mean score of the BIS in Study 3 was 20.28 (4.02), and mean scores for the BAS measures were 12.03 (2.90) for Drive, 17.97 (1.76) for Reward Responsiveness, and 12.62 (2.09) for Fun Seeking.

Source: Carver, Charles S. and Teri L. White (1994), "Behavioral Inhibition, Behavioral Activation, and Affective Responses to Impending Reward and Punishment: The BIS/BAS Scales," *Journal of Personality & Social Psychology,* 67 (August), 319–33.

Reference: Gray, Jeffrey A. (1990), "Brain Systems That Mediate Both Emotion and Cognition," *Cognition and Emotion,* 4 (3), 268–88.

Behavioral Inhibition and Behavioral Activation Systems: BIS/BAS Scales

(Carver and White 1994)

BIS

1. If I think something unpleasant is going to happen, I usually get pretty worked up.

2. I worry about making mistakes.

3. Criticism or scolding hurts me quite a bit.

4. I feel pretty worried or upset when I think or know somebody is angry at me.

5. Even if something bad is about to happen to me, I rarely experience fear or nervousness. (R)

6. I feel worried when I think I have done poorly at something.

7. I have very few fears compared to my friends. (R)

BAS Reward Responsiveness

1. When I get something I want, I feel excited and energized.

2. When I am doing well at something, I love to keep at it.

3. When good things happen to me, it affects me strongly.

4. It would excite me to win a contest.

5. When I see an opportunity for something I like, I get excited right away.

BAS Drive

1. When I want something, I usually go all-out to get it.

2. I go out of my way to get things I want.

3. If I see a chance to get something I want, I move on it right away.

4. When I go after something, I use a "no-holds-barred" approach.

BAS Fun Seeking

1. I will often do things for no other reason than that they might be fun.

2. I crave excitement and new sensations.

3. I'm always willing to try something new if I think it will be fun.

4. I often act on the spur of the moment.

Notes: Items are assessed on a 4-point scale with 1 indicating *strong agreement* and 4 indicating *strong disagreement*. (R) indicates items that are reverse scored.

Elaboration on Potential Outcomes: EPO Scale

(Nenkov, Inman, and Hulland 2008)

Construct:　Elaboration on potential outcomes (EPO) is a "generalized predisposition toward thinking about consequences, encompassing four conceptually distinct dimensions. Specifically, it captures the degree to which individuals: 1) generate potential consequences of their behaviors; 2) evaluate the likelihood and importance of these consequences; 3) encode anticipated end states with a positive focus; and 4) encode anticipated end states with a negative focus" (Nenkov et al. 2008, p. 126).

Description:　Though conceptualized as a four-dimensional construct, scale development and validation procedures provided strongest evidence for a three-dimensional (three factors) EPO scale. The generation of potential consequences of behaviors and evaluation of the likelihood and importance of these consequences dimensions were combined into one overall six-item factor (a "generation/evaluation" dimension). The encoding anticipated end states with a positive focus (a three-item "positive outcome focus" factor) and a negative focus (a four-item "negative outcome focus" factor) dimensions emerged as separate factors. Thus, the EPO is a 13-item, three-dimensional scale. All items are scored on 7-point *strongly disagree* to *strongly agree* scales, and item scores are then summed/averaged within each dimension to form individual dimension scores ranging from 1 to 7.

　　Items can also be scored to form two subscales: a six-item generation/evaluation subscale in which item scores are summed/averaged and a seven-item "relative outcome focus" subscale. The relative outcome focus subscale score is formed by dividing the difference between the positive and negative outcome focus scores by their sums (Nenkov et al. 2008, p. 130).

Development:　Closely following recommended scaling procedures, the EPO was developed and validated. Via an extensive literature review, the authors developed a pool of 76 items to tap their four conceptualized dimensions and had these items judged for representativeness to a given dimension by four expert judges. Then, 260 University of Pittsburgh students responded to the EPO items. Exploratory factor analyses (EFA) and author judgment were used to trim and then add more items to form a revised pool of 22 items total. These 22 items were administered to 367 University of Pittsburgh students, and confirmatory factor analyses (CFA) refined the scale down to its final 13-item, three-factor (three-dimension) form. Four more survey-based studies and one experimental study were then used to further test EPO dimensionality and establish its reliability and validity.

Samples:　In total, the authors used seven samples to develop and validate the EPO scale: $n = 260$ U. of Pittsburgh students; $n = 367$ U. of Pittsburgh students; $n = 383$ students (145) and nonstudent adults (283); $n = 97$ U. of Pittsburgh students; $n = 160$ students; $n = 302$ nonstudent adults; and $n = 95$ nonstudent adults (experimental study).

Validity:　Using the $n = 367$ and $n = 383$ samples, CFA confirmed a strong fit to a three-factor EPO scale comprising a six-item generation/evaluation dimension, a three-item encoding anticipated end states with a positive focus dimension, and a four-item encoding anticipated end states with a negative focus dimension. Across all samples, coefficient alpha estimates of internal consistency ranged from 0.80 to 0.94 across the three dimensions, and factor loadings ranged from 0.61 to 0.89 across the three dimensions. Test-retest reliability using the $n = 97$ sample over a 1-month interval showed test-retest estimates of $r = 0.77$ for the generation/evaluation subscale and $r = 0.81$ for the relative outcome focus subscale. Correlations among the three dimensions of the EPO ranged from 0.01 to 0.64 in absolute value across samples and showed evidence of discriminant validity (DV) from

one another. The EPO dimensions also showed evidence of DV from numerous related constructs.

Strong evidence of other forms of validity was found across samples. For example, for the $n = 367$ sample, the EPO generation/evaluation subscale showed correlations of –0.33 with impulsive buying, 0.30 with risk aversion, 0.13 with need for cognition, 0.43 with consideration of future consequences, and –0.25 with compulsive buying. The relative outcome subscale showed correlations of 0.61 with optimism, 0.25 with promotion of regulatory focus, and –0.51 with defensive pessimism. All these correlations were in the hypothesized directions, showing evidence of nomological validity. The EPO did show some small, albeit significant, correlation with measures of social desirability bias.

The $n = 160$ and $n = 302$ samples further demonstrated EPO validity. The $n = 160$ sample showed that the two EPO scales predicted the extent to which individuals think about potential consequences in a given decision-making situation (LASIK surgery). The $n = 302$ sample showed the predicted pattern of relations among the two EPO subscales and procrastination, alcohol abuse, eating a healthy diet, regular exercise, and credit card abuse. As expected, the generation/evaluation subscale was predictive of all these behaviors and the relative outcome subscale was not (with the exception of procrastination). Finally, the experimental study of $n = 95$ showed that EPO was predictive of a pattern of behaviors relating to investing money in stock, bond, and/or money market mutual funds.

Scores: Table 2 of Nenkov et al. (2008, p. 130) reports mean scores and standard deviations (SD) across samples for each dimension. Using a 7-point summed/averaged within dimension approach, mean scores ranged from 4.50 to 5.00 (SD range from 0.94 to 1.10) for the generation/evaluation dimension. Mean scores ranged from 4.70 to 5.00 (SD range from 1.10 to 1.30) for the positive outcome focus dimension, and mean scores ranged from 3.70 to 4.10 (SD range from 1.10 to 1.30) for the negative outcome focus dimension. (The experimental study used a 5-point scoring system.)

Source: Nenkov, Gergana Y., J. Jeffrey Inman, and John Hulland (2008), "Considering the Future: The Conceptualization and Measurement of Elaboration on Potential Outcomes," *Journal of Consumer Research*, 35 (June), 126–41.

Elaboration on Potential Outcomes: EPO Scale

(Nenkov, Inman, and Hulland 2008)

Generation/Evaluation Dimension

1. Before I act, I consider what I will gain or lose in the future as a result of my actions.

2. I try to anticipate as many consequences of my actions as I can.

3. Before I make a decision, I consider all possible outcomes.

4. I always try to assess how important the potential consequences of my decisions might be.

5. I try to predict how likely different consequences are.

6. Usually, I carefully estimate the risk of various outcomes occurring.

Positive Outcome Focus Dimension

1. I keep a positive attitude that things always turn out right.

2. I prefer to think about the good things that can happen rather than the bad.

3. When thinking over my decisions, I focus more on their positive end results.

Negative Outcome Focus Dimension

1. I tend to think about the negative outcomes that might occur as the result of my actions.

2. I am often afraid that things may turn out badly.

3. When thinking over my decisions, I focus more on their negative end results.

4. I often worry about what could go wrong as the result of my decisions.

Note: All items are scored on 7-point *strongly disagree* to *strongly agree* scales.

A Generalizable Scale of Propensity to Plan

(Lynch et al. 2010)

Construct: Propensity to plan reflects individual differences in: a) frequency of forming planning goals; b) frequency and depth of thinking through means of implementing subgoals; c) use of activities and props to serve as reminders and to help see the big picture and constraints; and d) personal preference to plan. In this study, the authors focus on two common contexts of planning in both the long and short term: 1) planning for time and 2) planning for money. Still, the propensity to plan scale is generalizable across numerous consumer planning domains. The scale permits situation-specific adaptation to the type of planning relevant to a researcher's particular study and permits comparison of a given consumer's propensity to plan in one domain versus another.

Description: The scale is composed of six 6-point Likert items (*strongly disagree* to *strongly agree*) tapping propensity to plan in the long and short term for time and money. Scores are summed and averaged within the scale to create an overall score that can range from 1 to 6. The scale is a one-factor unidimensional measure within short-run time, long-run time, short-run money, and long-run money scales.

Development: Using recommended scaling procedures, the authors conducted five studies plus an initial item development/screening study to develop and validate the final form of the propensity to plan scale. With the initial item development/screening study, 105 adult respondents responded to a pool of 33 planning items developed by the authors that reflected short- and long-run planning for time and money. Via factor analyses this pool was trimmed down to 19 items for the first two studies. The first two studies were used to derive and validate the final form of the scale, and the last three studies further validated the scale.

Samples: Study 1, four samples of $n = 95$, 101, 98, and 102 panel member adults; Study 2, $n = 207$ undergraduate students; Study 3, $n = 93$ university students; Study 4, $n = 126$ university students; Study 5, two samples of $n = 1,201$ and 600 panel member adults.

Validity: Numerous estimates of dimensionality, reliability, and validity were assessed. In Studies 1 and 2, confirmatory factor analyses (CFAs) were used to derive the final six-item form of the scale. These CFAs showed a unidimensional scale with coefficient alpha estimates ranging from 0.88 to 0.92 across short-run time, long-run time, short-run money, and long-run money scales; average variance extracted (AVE) estimates ranged from 0.56 to 0.65. Correlations among the short-run time, long-run time, short-run money, and long-run money scales ranged from 0.27 to 0.74. These correlations showed evidence of discriminant validity among scales. The short-run time, long-run time, short-run money, and log-run money scales showed a pattern of correlations and regression coefficients with related constructs that supported the nomological validity of the propensity to plan scales. These related constructs included impulse buying, self-control, frugality, the Tightwad scale, conscientiousness, need for closure, coupon proneness, used time as planned, and spent money as planned, among others (see Tables 2, 3, and 4 of Lynch et al. 2010).

Studies 3, 4, and 5 further validated the propensity to plan scales. Study 3 showed that the scales predict objective measures of actual plan formation and showed that propensity to plan systematically varies by one's resources and planning horizons. For example, the short-run time, long-run time, short-run money, and long-run money scale correlations with objecting planning measures ranged from 0.16 to 0.43. Study 3 also showed correlations among the propensity to plan scales ranging from 0.03 to 0.54, further

demonstrating discriminant validity. Study 4 showed that the scales differentially predicted coupon usage and use of devises to avoid procrastination, as hypothesized. This study also showed test-retest reliabilities ranging from 0.69 to 0.77 for the propensity to plan scales based on 2- to 6-week intervals. Correlations among the propensity to plan scales in Study 4 ranged from 0.29 to 0.72, again showing evidence of discriminant validity. Study 5 showed that very long propensity to plan was a significant positive predictor of FICO scores, holding the effects of income, education, gender, and ethnicity constant.

Scores: Scores typical of the scale are as follows:

Study 1	Study 2	
Mean (SD)	*Mean (SD)*	
Propensity to Plan for Money—Short Run	3.66 (1.05)	3.11 (1.06)
Propensity to Plan for Money—Long Run	3.67 (1.01)	3.23 (1.03)
Propensity to Plan for Time—Short Run	3.46 (1.06)	3.64 (0.93)
Propensity to Plan for Time—Long Run	3.25 (1.13)	3.84 (1.04)

Source: Lynch, John G., Jr., Richard G. Netemeyer, Stephen A. Spiller, and Alessandra Zammit (2010), "A Generalizable Scale of Propensity to Plan: The Long and the Short of Planning for Time and for Money," *Journal of Consumer Research,* 37 (June), 1–21.

Reference: Scott, I., Cynthia E. Cryder, and George Loewenstein (2008), "Tightwads and Spendthrifts," *Journal of Consumer Research,* 34 (April), 767–82.

A Generalizable Scale of Propensity to Plan

(Lynch et al. 2010)

Propensity to Plan for Money—Short Run

1. I set financial goals for the next few days for what I want to achieve with my money.

2. I decide beforehand how my money will be used in the next few days.

3. I actively consider the steps I need to take to stick to my budget in the next few days.

4. I consult my budget to see how much money I have left for the next few days.

5. I like to look to my budget for the next few days in order to get a better view of my spending in the future.

6. It makes me feel better to have my finances planned out in the next few days.

Propensity to Plan for Money—Long Run

1. I set financial goals for the next 1 to 2 months for what I want to achieve with my money.

2. I decide beforehand how my money will be used in the next 1 to 2 months.

3. I actively consider the steps I need to take to stick to my budget in the next 1 to 2 months.

4. I consult my budget to see how much money I have left for the next 1 to 2 months.

5. I like to look to my budget for the next 1 to 2 months in order to get a better view of my spending in the future.

6. It makes me feel better to have my finances planned out in the next 1 to 2 months.

Propensity to Plan for Time—Short Run

1. I set goals for the next few days for what I want to achieve with my time.

2. I decide beforehand how my time will be used in the next few days.

3. I actively consider the steps I need to take to stick to my time schedule for the next few days.

4. I consult my planner to see how much time I have left for the next few days.

5. I like to look to my planner for the next few days in order to get a better view of using my time in the future.

6. It makes me feel better to have my time planned out in the next few days.

Propensity to Plan for Time—Long Run

1. I set goals for the next 1 to 2 months for what I want to achieve with my time.

2. I decide beforehand how my time will be used in the next 1 to 2 months.

3. I actively consider the steps I need to take to stick to my time schedule in the next 1 to 2 months.

4. I consult my planner to see how much time I have left for the next 1 to 2 months.

5. I like to look to my planner for the next 1 to 2 months in order to get a better view of using my time in the future.

6. It makes me feel better to have my time planned out in the next 1 to 2 months.

Note: Items are scored on 6-point Likert scales (*strongly disagree* to *strongly agree*).

Polychronic Attitude Index: PAI

(Kaufman, Lane, and Lindquist 1991)

Construct: Polychrome time use is defined in terms of combining activities such that several goals can be attained at the same time. Thus, two or more activities are performed in the same time block at the same time. Conceptually, it is proposed that polychrome time use is a strategic process whereby individuals enrich their time budgets producing the output of more than 24 hours of single, monochronic time use (Kaufman et al. 1991, p. 394). The PAI was designed to measure attitudes toward polychronic time use.

Description: The PAI is composed of four items measured on 5-point *strongly agree* to *strongly disagree* Likert-type scales. The item scores are summed to form an overall PAI, and the PAI is considered unidimensional.

Development: Based on the conceptual description and a literature review, 15 statements were initially generated to tap the domain of the construct. With two student sample pretests, item-to-total correlations were used to delete 11 items, resulting in the final four-item version of the PAI. Dimensionality, reliability, and validity checks were also performed on a later sample.

Samples: As stated above, the PAI items were initially pretested on two student samples (*n* not specified). The final version of the scale was administered to a sample of 310 (42% male and 58% female) in the Philadelphia metropolitan area.

Validity: Factor analysis revealed that the PAI was unidimensional and had a coefficient alpha of 0.68. The PAI was negatively correlated with a measure of role overload (–0.15), and the pattern of correlations of the PAI with activity statements reflecting polychronic time use showed modest evidence of validity (range of 0.02 to 0.13 in absolute value). The PAI was also found to be positively correlated with education, employment, and club membership.

Scores: Neither mean nor percentage scores were reported.

Source: Kaufman, Carol Felker, Paul M. Lane, and Jay D. Lindquist (1991), "Exploring More Than 24 Hours a Day: A Preliminary Investigation of Polychronic Time Use," *Journal of Consumer Research,* 18, 392–401.

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Polychronic Attitude Index: PAI

(Kaufman, Lane, and Lindquist 1991)

1. I do not like to juggle several activities at the same time.

2. People should try not to do too many things at once.

3. When I sit down at my desk, I work on one project at a time.

4. I am comfortable doing several things at the same time.

Note: Items 1, 2, and 3 require reverse scoring. Items scored on 5-point Likert-type scales from *strongly agree* to *strongly disagree*

Regulatory Focus Composite Scale: RF-COMP

(Haws, Dholakia, and Bearden 2010)

Construct: Regulatory focus is a construct capturing goal motivations and means for self-regulation during goal pursuit. Individuals can vary in both their level of promotion focus, which emphasizes the ideal self and one's hopes and aspirations, and prevention focus, which emphasizes the ought self and one's duties and obligations. These two components are presented as orthogonal to each other and are best examined separately. They have been used to describe and predict a wide range of attitudes and behaviors within consumer research and psychology.

Description: The Regulatory Focus Composite (RF-COMP) scale consists of 10 items derived from previous measures of regulatory focus, including the Regulatory Focus Questionnaire (RFQ) developed by Higgins et al. (2001), the BIS/BAS scale developed by Carver and White (1994), and Lockwood, Jordan, and Kunda's (2002) measure of regulatory focus. The items are all measured on a 7-point Likert-type scale ranging from *strongly disagree* to *strongly agree* and were selected to capture all key components of regulatory focus theory. The RF-COMP scale is suggested for use in any circumstances under which assessment of chronic goal orientations is desired or when regulatory focus is manipulated.

Development: The RF-COMP scale was developed as part of an investigation of the various measurement approaches to capture regulatory focus. Previous measures of regulatory focus were assessed, and the measures were all analyzed using exploratory and confirmatory factor analysis to arrive at a reduced set of items that sufficiently captured the complexities of regulatory focus construct.

Samples: Qualitative data collection included 98 adult consumers. The scale purification sample (Study 1) included 266 adult respondents, while the validation sample (Study 2) included 251 adult consumers; in both cases, respondents were recruited by students.

Validity: Across samples, coefficient alpha estimates ranged from 0.69 to 0.84 for the promotion dimension and from 0.67 to 0.77 for the prevention dimension. Study 2 data assessed test-retest reliability, which was 0.67 for promotion and 0.64 for prevention over a 5-week period. Other studies provide evidence of predictive validity using a variety of measures previously demonstrated to be related to regulatory focus, including the persuasiveness of differently framed advertising messages and job preferences.

Scores: None were reported.

Source: Haws, Kelly L., Utpal M. Dholakia, and William O. Bearden (2010), "An Assessment of Chronic Regulatory Focus Measures," *Journal of Marketing Research, 47* (October), 967–982.

References: Carver, Charles S. and Teri L. White (1994), "Behavioral Inhibition, Behavioral Activation, and Affective Responses to Impending Reward and Punishment: The BIS/BAS Scales," *Journal of Personality and Social Psychology,* 67 (2), 319–33.

Higgins, E. Tory, Ronald S. Friedman, Robert E. Harlow, Lorraine C. Idson, Ozlem N. Ayduk, and Amy Taylor (2001), "Achievement Orientations from Subjective Histories of Success: Promotion Pride Versus Prevention Pride," *European Journal of Social Psychology,* 31 (1), 3–23.

Lockwood, Penelope, Christian H. Jordon, and Ziva Kunda (2002), "Motivation by Positive or Negative Role Models: Regulatory Focus Determines Who Will Best Inspire Us," *Journal of Personality and Social Psychology,* 83 (4), 854–64.

Regulatory Focus Composite Scale: RF-COMP

(Haws, Dholakia, and Bearden 2010)

Promotion Focus

1. When it comes to achieving things that are important to me, I find that I don't perform as well as I would ideally like to. (R) [A]

2. I feel like I have made progress toward being successful in my life. [A]

3. When I see an opportunity for something I like, I get excited right away. [B]

4. I frequently imagine how I will achieve my hopes and aspirations. [C]

5. I see myself as someone who is primarily striving to reach my "ideal self"—to fulfill my hopes, wishes, and aspirations. [C]

Prevention Focus

1. I usually obeyed rules and regulations that were established by my parents. [A,*]

2. Not being careful enough has gotten me into trouble at times. (R) [A]

3. I worry about making mistakes. [B]

4. I frequently think about how I can prevent failures in my life. [C]

5. I see myself as someone who is primarily striving to become the self I "ought" to be—fulfill my duties, responsibilities, and obligations. [C]

Notes: Measurement based on a 7-point Likert scale, 1 = *strongly disagree* and 7 = *strongly agree*. [A] Regulatory Focus Questionnaire Measure; [B] BIS/BAS Scale Measure; [C] Lockwood Scale Measure. (R) indicates items requiring reverse scoring.

Regulatory Focus Questionnaire: RFQ

(Higgins et al. 2001)

Construct: Regulatory Focus Questionnaire (RFQ—but labeled as the Event Reaction Questionnaire) is designed to capture differences in regulatory focus orientation. Regulatory focus theory involves understanding the means employed by individuals for self-regulation during goal pursuit and distinguishing between two regulatory orientations: a promotion focus and a prevention focus. A promotion focus emphasizes the "ideal" self, as reflected in the individual's hopes and aspirations, and favors strategic means of achievement that are eagerness-oriented. In contrast, a prevention focus emphasizes the "ought" self, as reflected in the person's duties and obligations, and supports strategic means that are vigilance-oriented. In designing the RFQ, Higgins et al. (2001) conceptualizes promotion and prevention success via promotion pride and prevention pride respectively, which are anticipatory reactions to new task goals derived from the individual's subjective history of past success in promotion and prevention goal attainment.

Description: The RFQ assesses both promotion and prevention regulatory orientations using 11 items—6 to capture promotion and 5 to capture prevention. The items are assessed on 5-point scales with varying anchors, as shown with the scale items. Although many researchers have computed difference scores to derive a single measure to imply promotion-prevention orientation, these dimensions are intended to be orthogonal. Further, based specifically on results from Haws, Dholakia, and Bearden (2010) also see related regulatory focus scale in this book), we strongly caution against combining promotion and prevention focus measures. Instead, the scores for the Promotion and Prevention items should be averaged and used separately in analysis.

Development: A pool of items was generated with a balance between promotion- and prevention-oriented items as well as a mix of items with parental and nonparental content. Full details are said to be in an unpublished manuscript by Harlow et al. (1997). Although it is not clear how many items were generated, several successive, large samples were used to narrow the items down to 11. Subsequent samples were used to test the factor structure as well as to examine convergent and discriminant validity.

Samples: Many samples were used to develop the 11-item measure, but not all were described in detail. A sample of 207 undergraduate students was used to factor analyze the 11 items. An additional sample of 268 undergraduates was used for confirmatory factor analysis. A test-retest sample of 71 undergraduates assessed reliability over a 2-month time period.

Validity: Factor analysis of Study 1 data suggested a two-factor model for the 11 items, representing the promotion and prevention dimensions, with items loading cleanly on the appropriate factor. The correlation between the promotion and prevention items was 0.21. Coefficient alpha estimates were 0.73 for Promotion and 0.80 for Prevention. The confirmatory factor analysis sample further supported the factor structure, and the test-retest reliability sample demonstrated correlations between administrations of the RFQ measure over a 2-month period at 0.79 for Promotion and 0.81 for Prevention. In terms of convergent and discriminant validity, both dimensions were found to be related to achievement motivation, as they represent different manners of achieving goals. Further, RFQ was discriminated from the Selves measures of self-discrepancy (Higgins et al. 1986). Several subsequent studies tested predictions regarding differences in decision making that would result based on differences in Promotion and Prevention focus.

Scores: No mean scores were reported.

Source: Higgins, E. Tory, Ronald S. Friedman, Robert E. Harlow, Lorraine C. Idson, Ozlem N. Ayduk, and Amy Taylor (2001), "Achievement Orientations from Subjective Histories of Success: Promotion Pride Versus Prevention Pride," *European Journal of Social Psychology,* 30, 3–23.

References: Harlow, R., Ronald S. Friedman, and E. Tory Higgins (1997), "The Regulatory Focus Questionnaire," Unpublished manuscript, Columbia University.

Haws, Kelly L., Utpal Dholakia, and William O. Bearden (2010), "As Assessment of Chronic Regulatory Focus Measures," *Journal of Marketing Research,* forthcoming.

Higgins, E. Tory, Ronald N. Bond, Ruth Klein, and Timothy Strauman (1986), "Self-Discrepancies and Emotional Vulnerability: How Magnitude, Accessibility, and Type of Discrepancy Influence Affect," *Journal of Personality and Social Psychology,* 51 (July), 5–15.

Regulatory Focus Questionnaire: RFQ

(Higgins et al. 2001)

This set of questions asks you about events in your life. Please indicate your answer to each question by circling the most appropriate number below it.

1. Compared to most people, are you typically unable to get what you want out of life? (Promotion, R)

2. Growing up, would you ever "cross the line" by doing things that your parents would not tolerate? (Prevention, R)

3. How often have you accomplished things that got you "psyched" to work even harder? (Promotion)

4. Did you get on your parents' nerves often when you were growing up? (Prevention, R)

5. How often did you obey rules and regulations that were established by your parents? (Prevention)

6. Growing up, did you ever act in ways that your parents thought were objectionable? (Prevention, R)

7. Do you often do well at different things that you try? (Promotion)

8. Not being careful enough has gotten me into trouble at times. (Prevention, R)

1	2	3	4	5
never or seldom		*sometimes*		*very often*

(Responses above used for Items 1 through 8.)

9. When it comes to achieving things that are important to me, I find that I don't perform as well as I ideally would like to do. (Promotion)

1	2	3	4	5
never true		*sometimes true*		*very often true*

(Responses above used for Item 9.)

10. I feel like I have made progress toward being successful in my life. (Promotion)

11. I have found very few hobbies or activities in my life that capture my interest or motivate me to put effort into them. (Promotion)

1	2	3	4	5
certainly false				*certainly true*

(Responses above used for Items 10 and 11.)

Notes: Items are marked as promotion or prevention focus above. "R" indicates items requiring reverse coding.

Temporal Focus Scale: TFS

(Shipp, Edwards, and Lambert 2009)

Construct: Temporal Focus captures the extent to which people devote their attention to the past, present, and future. This temporal focus impacts current attitudes and behaviors and emphasizes that people can shift their attention among these time periods. Further, thinking about one time period does not preclude thinking about the others, and the same individual can have multiple temporal foci. The Temporal Focus Scale (TFS) helps clarify responses to explicit and implicit temporal information.

Description: TFS consists of 12 items, 4 each for the past, present, and future focus. Responses are assessed on a 7-point scale (1 = *never*; 3 = *sometimes*; 5 = *frequently*; 7 = *constantly*). For each factor, scale items are averaged to provide an overall score. Differences among the three foci are emphasized, and therefore they should not be combined into an overall temporal focus.

Development: A domain sampling procedure was used to generate items that were consistent with the *a priori* definition of temporal focus as thinking about the past, present, and future. The initial pool consisted of 22 items spread across the three temporal foci. Trained coders assessed the items, and 12 final items were selected (4 past, 4 present, and 4 future). The 12 items were subjected to confirmatory factor analysis, and the 3-factor structure was supported. Modest correlations were found in some samples between the three foci.

Samples: Four samples were used to assess validity. Study 1 consisted of 181 graduate students, Study 2 had 360 responses and a mix of students and nonstudents, Study 3 had 195 student respondents, and Study 4 was administered at two different time periods to assess test-retest reliability and had 362 complete responses from members of a national online survey panel.

Validity: Coefficient alpha estimates were provided throughout and were consistently 0.74 or higher. For example, in Studies 1 (2), alpha estimates were 0.89 (0.88), 0.74 (0.78), and 0.86 (0.86) for past, current, and future, respectively. Test-retest reliability was assessed for each dimension with the 362 respondents in Study 4 and a 6-week period between assessments: past = 0.73, current = 0.66, and future = 0.72. The three-factor model provided good fit throughout the samples, and evidence suggested that individuals commonly focus on two or three of the temporal foci. TFS was distinguished from previous temporal measures, and nomological validity was assessed through relationships with constructs representing risk taking, optimism/pessimism, the Big-Five personality factors, and job characteristics.

Scores: Means and standard deviations for the three subdimensions were provided across all samples. Using Study 4 as an example, means (standard deviations) were as follows: past = 4.44 (1.23), current = 5.18 (0.95), future = 4.97 (1.18).

Source: Shipp, Abbie J., Jeffrey R. Edwards, and Lisa Schurer Lambert (2009), "Conceptualization and Measurement of Temporal Focus: The Subjective Experience of the Past, Present, and Future," *Organizational Behavior and Human Decision Processes,* 110 (September), 1–22.

Temporal Focus Scale: TFS

(Shipp, Edwards, and Lambert 2009)

Past Focus

  6. I replay memories of the past in my mind.

  9. I reflect on what has happened in my life.

  1. I think about things from my past.

11. I think back to my earlier days.

Current Focus

  4. I focus on what is currently happening in my life.

  8. My mind is on the here-and-now.

10. I think about where I am today.

  2. I live my life in the present.

Future Focus

  3. I think about what my future has in store.

12. I think about times to come.

  5. I focus on my future.

  7. I imagine what tomorrow will bring for me.

Notes: Items were assessed in the order indicated by the numbers above on a 7-point scale (1 = *never*; 3 = *sometimes*; 5 = *frequently*; 7 = *constantly*).