Handbook of
Marketing Scales

THIRD EDITION

Handbook of
Marketing Scales
Multi-Item Measures for Marketing and Consumer Behavior Research

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Preface

Most of the measures summarized in this third edition were originally published in marketing journals and marketing-related conference proceedings. In addition, the social and applied psychology, management, and organizational behavior literatures, as well as several books, contributed measures to this volume. We again would like to thank **all** the publishers that granted us permission to reprint the measures summarized in this volume. We are grateful to the following publishers and their corresponding publications for scales added to this third edition:

Publisher: Association for Consumer Research

Publication: *ACR Proceedings*

Publisher: American Marketing Association

Publications: *Journal of Marketing, Journal of Marketing Research, Journal of Public Policy & Marketing, AMA Proceedings*

Publisher: American Psychological Association

Publications: *Journal of Personality and Social Psychology, Journal of Applied Psychology, Psychological Bulletin*

Publisher: Elsevier

Publications: *International Journal of Research in Marketing, Journal of Consumer Psychology, Journal of Economic Psychology, Journal of Research in Personality, Journal of Retailing, Organizational Behavior & Human Decision Processes*

Publisher: University of Chicago Press

Publication: *Journal of Consumer Research*

Publisher: SAGE

Publications: *Journal of Service Research, Journal of the Academy of Marketing Science, Personality and Social Psychology Bulletin*

Publisher: Springer

Publication: *Marketing Letters*

Publisher: Wiley

Publications: *European Journal of Personality, Journal of Personality*

Acknowledgments

1   Introduction

Measurement is at the heart of virtually all scientific endeavors. Measures and the psychometric properties used to evaluate them will vary by the type of measurement undertaken and the context and goals of the scientific endeavor. There are several strategies for developing and refining measurement/ assessment instruments, and the appropriateness of a given strategy will depend on the type of scientific phenomenon that is being assessed and its underlying measurement model.

In this third edition of our book, we focus on presenting reliable and valid paper-and-pencil measures of latent constructs that have relevance to marketing researchers. Further, the constructs focused on are perceptual, where a respondent rates him/herself or others on constructs that are subjective/opinion-based. Mental/ability testing and classification measurement for clinical diagnosis are not an emphasis of this text. Though several of the principles of mental/ability testing and measurement for clinical diagnosis, such as classical test theory and generalizability theory, are applied in developing and validating measures, other principles more akin to ability/mental testing and clinical diagnosis are not emphasized. Given their latent nature, the constructs we focus on represent abstractions that can be assessed only indirectly. The indirect assessment of these constructs is accomplished via paper-and-pencil types of measures where multiple items or indicators are used to measure the construct (i.e., "scaling" a construct). As such, the purpose of this book is to present summaries of multi-item scales of paper-and-pencil measures developed and/or frequently used in consumer behavior and marketing research.

As with the first two editions, we hope researchers will find this volume useful in many ways. First, the book should be helpful in reducing the time it takes to locate instruments for survey research in marketing and consumer behavior, and given that a number of constructs have several measures, the book should provide researchers with options to consider. Second, a number of the measures in this volume have been used in several studies. Therefore, the book should serve as a partial guide to the literature for certain topic areas and may spur further refinement of existing measures in terms of item reduction, dimensionality, reliability, and validity. This text may also help identify those areas where measures are needed, thus encouraging further development of valid measures of consumer behavior and marketing constructs. Last, we hope that the book will serve as an impetus to advance knowledge. By using the same measures across several studies, comparison and integration of results may be enhanced.

Criteria for Scale Deletions/Additions

A primary emphasis of this edition has been to update the second edition and improve on it in terms of usability. For the most part, this third edition includes measures from articles in which the major objective (or at least one of the major objectives) was scale development. As with the first two editions, we

have not compiled single-item measures or multi-item measures that lacked estimates of construct validity. Also, we do not claim that this volume contains every multi-item measure relevant to marketing and consumer behavior. We have undoubtedly omitted some relevant and psychometrically sound measures published in periodicals that we did not include in our search procedures (see the section below) or just plain missed through oversight. Our intent was to include primarily those published measures subjected to some developmental procedures.

As with the previous editions, throughout the search process for this third edition, we made judgment calls with regard to what measures to include and what measures to exclude. Also, with this third edition, we have deleted several scales that we felt no longer fit with this text. Below, we offer the criteria we used for deleting scales and the criteria we used for adding new scales.

Criteria for Deleting Scales

We considered two primary criteria for scale deletion. First, for all scales of the second edition, we looked at the number of citations for the article in which the scale originally appeared. We looked at both the *Social Science Citation Index* and *Google Scholar* and used citation count as a proxy for scale importance/usefulness to researchers. We considered the year the scale had been published, as more recent scales have not had the opportunity to be heavily cited. ***In general,*** if a scale had been in existence for at least 20 years with fewer than 50 total citations, it was considered a candidate for deletion.

Second, recent evidence strongly suggests a trend toward short scales that are both reliable and valid (De Jong, Steenkamp, and Veldkamp 2009; Netemeyer, Pullig, and Bearden 2002; Richins 2004; Stanton et al. 2002). If we felt that a scale was excessively long or cumbersome, it was considered a candidate for deletion. We then combined these two criteria and, on a scale-by-scale basis, derived our deletions. For the majority of scales deleted, the scales had a low number of citations and were excessively long. Still, we note that our own judgment came heavily into play in applying both criteria for scale deletions.

Criteria for Adding New Scales

Given that the second edition of this text was compiled in 1998 but published in 1999, the scale additions for this edition came primarily from articles published between 1998 and 2010. We also added scales published before 1998 if we felt that they were relevant to marketing researchers and we had overlooked them in the previous editions of this book. That stated, the primary criteria for scale inclusion were that

- the scale measure had a reasonable theoretical base and/or conceptual definition;
- the scale measure was composed of several (i.e., two or more) items or questions;
- the scale measure was developed within the marketing or consumer behavior literature, or was used in or relevant to the marketing or consumer behavior literature;
- at least some scaling procedures were employed in scale development; and
- estimates of reliability and validity existed.

We did not include scale measures from 1998 to 2010 that had the following characteristics:

- Single-item measures (though important in many studies, the task of compiling them was not a focus of this text)
- Multi-item measures that did not meet the above five criteria (e.g., if a multi-item measure was used based on face validity alone, it was not included, and if a multi-item measure was used in a study without being derived through some scale development procedures, it was not included either)

Search Procedures

Two key procedures were used in the search for scales included in this third edition: 1) an online computer search of publications in marketing, consumer behavior, social and applied psychology, and management and 2) a visual search of the major publications in marketing and consumer behavior. Except as noted above, our additional search for this edition was restricted to the period of 1998 to 2010. As such, we examined all (or most) issues currently in print or online. The following publications were consulted for additions to include in this third edition.

Marketing

American Marketing Association Summer Educators' Conference Proceedings

Association for Consumer Research Proceedings

Journal of the Academy of Marketing Science

Journal of Consumer Psychology

Journal of Consumer Research

Journal of Marketing

Journal of Marketing Research

Journal of Public Policy & Marketing

Journal of Retailing

Journal of Service Research

International Journal of Research in Marketing

Marketing Letters

Marketing Science

Social Psychology, Applied Psychology, Management, and Organizational Behavior

Academy of Management Journal

European Journal of Personality

Journal of Applied Psychology

Journal of Economic Psychology

Journal of Personality

Journal of Personality and Social Psychology

Journal of Research in Personality

Organizational Behavior & Human Decision Processes

Personality and Social Psychology Bulletin

Psychological Bulletin

Format of the Book and Presentation of Measures

The format of this third edition is similar to that of the first two editions. First, we have divided the scales into six general topical areas (with subtopics), and have devoted a chapter to each topical area (see Table of Contents). The six areas are

1. *Traits and Individual Difference Variables*, covered in Chapter 2;

2. *Values and Goals*, covered in Chapter 3;

3. *Involvement, Information Processing, and Affect*, covered in Chapter 4;

4. *Reactions to Marketing Stimuli*, covered in Chapter 5;

5. *Attitudes About the Performance of Business Firms, Satisfaction and Post-Purchase Behavior, Social Agencies, and the Marketplace*, covered in Chapter 6; and

6. *Sales, Sales Management, Organizational Behavior, and Interfirm-Intrafirm Issues*, covered in Chapter 7.

As in the first two editions, topic areas were chosen in terms of marketing mix and consumer behavior variables. Still, the placement of certain scales in topic areas involved some subjectivity. For example, many *values* can be considered *traits or individual difference variables* and vice versa, and several *individual difference variables* can be viewed as *variables relating to information processing* and vice versa. Thus, we made judgment calls regarding the topical categorization of several of the measures while focusing on keeping similar measures within the same section of the book to ease comparison of potential options that a researcher might have to capture a particular construct. For each topic and subtopic, scales are presented in alphabetical order. As with the second edition, this third edition contains an index of all scales listed in alphabetical order.

For each new scale added to this third edition, we have provided the following information using the outline shown below. If information from the original source (or other sources) for a particular subheading was not available or applicable, we noted this by stating "N/A."

- **Construct:** the definition and/or theoretical base of the construct as provided by the authors of the scale
- **Description:** the description of the measure, including the number of items, scale points, scoring procedures, and dimensionality
- **Development:** how the scale was developed—the general procedures used to derive the final form of the scale from the original scale development article
- **Samples:** the samples used in scale development and validation
- **Validity:** estimates of validity (i.e., reliability and convergent, discriminant, and nomological validity) from development of the scale; in many cases, actual estimates are provided, however, in articles performing numerous tests of validity, a summary of the pattern of results is offered along with some example findings that provided evidence of validity
- **Scores:** mean and/or percentage scores on the scale from the original development article
- **Source:** the source of the scale—the authors who developed the scale and the publication in which the scale first appeared
- **References**: critical references from articles pertaining to the topic area other than those of the source of the scale and other sources; these references typically involved description of the construct domain or definition
- **Scale items:** the actual items in the scale, dimensions to which the items belong, items that require reverse scoring, and where applicable, the directions and scoring procedures for using the scale

This format mirrors the format of the previous editions, with one important exception. In this third edition, for the newly added scales only, we have not included the category of "Other Evidence." In most cases, other evidence has yet to exist. In instances in which other evidence did exist, that other evidence was included in the "Validity" section, and the source of the other evidence was cited in the "References" section.

Caveats and Cautions

A number of caveats and cautions regarding the use of this text are warranted. For each measure, we have tried to provide a reasonably complete description of the scale itself, the procedures used to develop the scale, and some of the available evidence regarding the reliability and validity of each scale. However, the articles on which the scales are based vary greatly in depth, length, and detail. Consequently, the summaries themselves are dependent on the characteristics of the original source(s). And, within any one write-up or summary, the information included in the outline categories often required some creative assignment. For example, in some articles it was not always clear when scale development procedures ended and subsequent validation began. Hence, the outlines for each scale are best viewed as a means of organizing the presentation and not as a definitive guide.

Also, this volume is not intended to be a substitute for careful evaluation of available measures or the development of valid measures for use in specific studies. The inclusion of a scale in the volume does not ensure an acceptable level of quality. In fact, the detail and sophistication of the procedures underlying some of the scales vary dramatically. We encourage prospective users of these measures to refer to the original source(s) and to make their own detailed evaluation prior to use of any measure in their research (see next section, "Evaluation of Measures"). Last, we hope that the enhanced availability of the scales in this volume will not lead to the blind inclusion of additional variables on data collection instruments without sufficient theoretical justification.

Evaluation of Measures

In using, evaluating, or developing multi-item scales, we recommend a number of guidelines and procedures to help ensure that the measure is as psychometrically sound as possible. These procedures are outlined in the psychometric literature, and the discussion that follows borrows heavily from this literature. Also, the discussion that follows should not be interpreted as a definitive guide to scale development. We strongly urge the reader to consult the relevant literature when considering measurement development or evaluation (e.g., Churchill 1979; Clark and Watson 1995; Cortina 1993; DeVellis 2003; Netemeyer, Bearden, and Sharma 2003; Nunnally and Bernstein 1994; Peter 1979, 1981; Robinson, Shaver, and Wrightsman 1991).

Construct Definition and Domain

First, the scale should be based on a solid theoretical definition with the construct's domain thoroughly delineated and outlined. This definition and attendant description should entail what is included in the domain of the construct, what is excluded from the construct's domain, and the *a priori* dimensionality of the construct's domain. The theoretical definition, the domain of the construct, and its dimensionality should be derived from a thorough review of the existing literature and, ideally, expert opinion.

Content Validity

Content and face validity reflect the extent to which a construct is translated into the operationalization of the construct (Trochim 2002). Specifically, content validity represents the degree to which elements

of a measurement instrument are relevant to and representative of the target construct for a particular assessment purpose (Haynes, Richard, and Kubany 1995, p. 238). Face validity, then, represents one aspect of content validity (Nunnally and Bernstein 1994, p. 110). All scale items should exhibit content and face validity; on the surface, they should appear consistent with the theoretical domain of the construct.

Evidence of face validity can be provided by 1) post hoc evaluation that the items in a scale adequately measure the concept (Rossiter 2002) and 2) *a priori* theoretical item generation and judging efforts. In scale development then, it is generally recommended that a number of items be generated that tap the domain of the construct, that the items be screened by judges with expertise in the literature, and that several pilot tests on samples from relevant populations be conducted to trim and refine the pool of items (Churchill 1979; DeVellis 2003; Netemeyer et al. 2003). Furthermore, shorter and simpler items (ones that are easier to process and understand) are generally easier to respond to and are more reliable (Churchill 1979; Churchill and Peter 1984; Converse and Presser 1986; DeVellis 2003; Netemeyer et al. 2003; Sudman and Bradburn 1982). Thus, items should be representative of the construct they are proposed to measure and should be easy to respond to (i.e., be brief and avoid jargon, difficult or ambiguous wording, and double-barreled items).

Another issue to consider is the optimal number of items needed to tap the content domain of the construct. Clearly, constructs with a wide domain and/or those that are conceptualized as multidimensional will require more items to assess the construct. But as previously noted, and as noted below (see "Reliability" section), scale brevity is of increasing concern (e.g., Clark and Watson 1995; Netemeyer et al. 2002), and one must balance scale length with parsimony in measurement. In fact, for some constructs that are very narrowly defined, recent evidence suggests that single-item measures may suffice (Bergkvist and Rossiter 2007; Drolet and Morrison 2001; Wanous, Reichers, and Hudy 1997). Thus, in drafting and ultimately choosing the number of scale items to measure a construct, how broad or narrow the construct is defined requires careful consideration.

Scale Dimensionality

A construct's domain can be hypothesized as uni- or multidimensional. Thus, the scale (or subscales/factors) used to operationalize the construct should reflect the hypothesized dimensionality. Given that scale (factor) unidimensionality is considered prerequisite to reliability and validity, assessment of unidimensionality should be considered (Dietvorst et al. 2009; Gerbing and Anderson 1988; Hattie 1985; McDonald 1981). Thus, a scale's empirical factor structure should reflect the dimensionality theorized.

A number of procedures have been employed to check the dimensionality of a scale (e.g., item-analysis, exploratory and confirmatory factor analysis). However, one somewhat agreed on technique is confirmatory factor analysis in which several multi-item factors (and relations among the factors) can be specified and evaluated on criteria used to assess dimensionality (e.g., fit indices, presence of within/across factor correlated measurement errors, degree of cross-loading, presence of methods factors). We strongly urge the reader to consult the following literature when examining dimensionality of measures and the criteria for doing so: Anderson and Gerbing 1988; Clark and Watson 1995; Dietvorst et al. 2009; Floyd and Widaman 1995; Gerbing and Anderson 1988; Hattie 1985; Hu and Bentler 1999; Kumar and Dillon 1987a, 1987b; McDonald 1985; Nunnally and Bernstein 1994; Podsakoff et al. 2003; Schumacker and Lomax, 2004.

Reliability

There are two broad types of reliability referred to in the psychometric literature: 1) test-retest, the correlation between the same person's score on the same set of items at two points in time, and 2) internal consistency, the correlation among items or sets of items in the scale for all who answer the items.

Test-Retest

The stability of a respondent's item responses over time has not been assessed in scale use or development as frequently as internal consistency. This has been the case across disciplines (Robinson et al. 1991), and marketing and consumer behavior are no exceptions. Less than half of the scales in this text offer test-retest coefficients, but the overwhelming majority offer some estimate of internal consistency. It is unfortunate that test-retest estimates are available for so few of the scales in the marketing and consumer behavior literature. Researchers planning scale development work should give *a priori* consideration to assessing test-retest reliability in addition to other procedures of evaluating reliability and validity.

Internal Consistency

Items composing a scale (or subscale) should show high levels of internal consistency. Some commonly used criteria for assessing internal consistency are individual corrected item-to-total correlations, the interitem correlation matrix for all scale items or items proposed to measure a given scale dimension, and a number of reliability coefficients (Churchill 1979; Cortina 1993; DeVellis 2003; Netemeyer et al. 2003; Nunnally and Bernstein 1994). A rule of thumb for corrected item-to-total correlations is that they should be 0.50 or greater to retain an item (e.g., Bearden, Netemeyer, and Teel 1989). Rules of thumb for individual correlations in the interitem correlation matrix vary. For example, Robinson et al. (1991) recommend levels of 0.30 or better as exemplary, and Clark and Watson (1995) suggest 0.40 to 0.50 for narrowly defined constructs.

The most widely used internal consistency reliability coefficient is Cronbach's (1951) coefficient alpha. (Others, such as split-halves and rank-order coefficients are available, but we will limit our discussion to coefficient alpha given its widespread use.) A number of rules of thumb for what constitutes an acceptable level of coefficient alpha also exist. Some estimates go as low as 0.70 or 0.60 (Robinson et al. 1991). Regardless, scale length must be considered. As the number of items increases, *ceteris paribus,* alpha will tend to increase, and since parsimony is also a concern in measurement (Clark and Watson 1995; Cortina 1993; Netemeyer et al. 2003), an important question is "How many items does it take to measure a construct?" The answer to this question depends partially on the domain and dimensions of the construct. Naturally, a construct with a wide domain and multiple dimensions will require more items to adequately tap the domain/dimensions than a construct with a narrow domain and few dimensions. However, given that most scales are self-administered and respondent fatigue and/or noncooperation need to be considered, scale brevity is often a concern (Churchill and Peter 1984; Cortina 1993; DeVellis 2003; Nunnally and Bernstein 1994; Peterson 1994; Richins 2004; Stanton et al. 2002).

With structural equation modeling, other tests of internal consistency are available. Composite reliability, which is similar to coefficient alpha, can be calculated directly from the LISREL, EQS, or AMOS output (Fornell and Larcker 1981). A more stringent test of internal stability involves assessing the amount of variance captured by a construct's measure in relation to the amount of variance due to measurement error. A rigorous rule of thumb is that the variance extracted by the construct's measure is > 0.50 (Fornell and Larcker 1981). By using a combination of the criteria above (i.e., corrected item-to-total correlations, examining the interitem correlation matrix, coefficient alpha, composite reliability, and variance extracted estimates), scales can be developed in an efficient manner that maximizes both internal consistency and content validity.

Robinson et al. (1991) note that it is possible to derive a scale with high internal consistency by writing the same items in different ways (i.e., empirical redundancy). Though slight wording variations between items will ensure high interitem correlations and internal consistency estimates, they may detract from adequately tapping content domain. Internal consistency of a scale is highly desirable but must be balanced by sampling of item content, proper item wording, and other validity checks. Sometimes also called the attenuation paradox, adding items with highly similar wording will increase coefficient alpha, but with little incremental content validity (Clark and Watson 1995).

Last, many scale development articles and texts recommend the use of reverse-worded items. These items clearly can have content and face validity and reduce the potential for acquiescence bias in responding. Still, one must consider the potential for a methods factor (or other threats to dimensionality and validity) when using reverse-worded items. For a discussion and application of the potential issues involved in using reverse-worded items, the reader is urged to see Wong, Rindfleisch, and Burroughs (2003); Herche and Engellend (1996); and Swain, Weathers, and Niedrich (2008).

Construct Validity

Beyond content validity, dimensionality, and reliability, a number of other validity issues must be considered in scale use and development, including convergent, discriminant, nomological, and known group validity. (These types of validity have been collectively referred to as construct validity.) Again, a number of procedures and rules of thumb exist and should be considered.

Convergent, Discriminant, and Nomological Validity

Convergent validity refers to the degree to which two measures designed to measure the same construct are related. Convergence is found if the two measures are highly correlated. Discriminant validity assesses the degree to which two measures, designed to measure similar but conceptually different constructs, are related. A low to moderate correlation is often considered evidence of discriminant validity. Multitrait-multimethod matrices (MTMM) have often been used to assess convergent and discriminant validity where maximally different measurement methods (e.g., self report vs. observational) are required (Campbell and Fiske 1959; Churchill 1979; Peter 1981). An early advocated rule of thumb for convergent validity is that the correlation between two measures designed to assess the same construct should be statistically significant and "sufficiently large to encourage further examination of validity" (Campbell and Fiske 1959, p. 82). Early advocated criteria for discriminant validity were 1) entries in the validity diagonal should be higher than the correlations that occupy the same row and column in the heteromethod block, 2) convergent validity coefficients should be higher than the correlations in the heterotrait-monomethod triangles, and 3) the pattern of correlations should be the same in all the heterotrait triangles (Campbell and Fiske 1959). Though these criteria have been criticized as problematic and vague (Peter 1981), they do offer some guidance as to what constitutes convergent and discriminant validity. Also, our discussion of MTMM here has been extremely brief and over-simplified, and we strongly urge the reader to consult the original source (Campbell and Fiske 1959) and a number of critical evaluations and updates (e.g., Bagozzi, Yi, and Phillips 1991; Kenny and Kashay 1992; Kumar and Dillon 1992; Lance, Noble, and Scullen 2002; Schmitt and Stults 1986).

Nomological validity has been defined as the degree to which predictions from a formal theoretical network containing the concept under scrutiny are confirmed (Campbell 1960). It assesses the degree to which constructs that are theoretically related are actually empirically related (i.e., their measures correlate significantly in the predicted direction). As with internal consistency, structural equation packages have been used to assess the convergent, discriminant, and nomological validity of scale measures. MTMM procedures via structural equations are tenable where variance in the measures is partitioned as trait, method, and error variance (e.g., Bollen 1989; Kenny and Kashay 1992; Kumar and Dillon 1992; Lance et al. 2002; Schmitt and Stults 1986; Widaman 1985). Convergent and discriminant validity can be assessed via chi-square maximum likelihood tests and related fit statistics. Similarly, the empirical relationships among theoretically related measures (nomological validity) can also be assessed with structural equation models. Several books (e.g., Bollen 1989; Hoyle 1995; Schumacker and Lomax 2004) and classic articles (e.g., Anderson and Gerbing 1988; Bagozzi et al. 1991) illustrate modeling techniques, evaluative criteria, and rules of thumb for what constitutes an acceptable level of validity.

Known Group Validity

Known group validity asks the question "Can the measure reliably distinguish between groups of people who should score high on the trait and low on the trait?" As examples, a person who is truly conservative should score significantly higher on a conservatism scale than a person who is liberal, and salespeople in the retail car business and the large computer business should differ in their levels of customer orientation (Saxe and Weitz 1982). Thus, mean score differences between groups for a given measure can be used as evidence of known group validity. An excellent application of known group validity testing can be found in Jarvis and Petty (1996).

Other Issues to Consider

Other issues that warrant discussion regarding the development and evaluation of multi-item scales in marketing and consumer research are 1) representative sampling, 2) the need to establish the psychometric properties of scales when used cross-nationally/cross-culturally, 3) the provision of normative information, and 4) response set bias.

Representative Sampling

An often neglected issue in scale development, particularly in the marketing and consumer behavior literature, has been representative sampling. Too many scales have been developed using samples of college students only, and in general, results from student samples are difficult to generalize to other populations. (For an excellent review, see Sears 1986.) We are not advocating the discontinuation of using college student samples. However, we are recommending that scale developers go beyond student samples to those samples more representative of the population as a whole, or a given population of interest. In essence, the prime consideration in scale evaluation, use, and development is the applicability of the scale and scale norms to respondents who are likely to use them in the future (Netemeyer et al. 2003).

Psychometric Properties Cross-Nationally

As business and marketing become increasingly more global, so too does the need to assess the equivalence of measurement scales developed by researchers in the United States to those of other countries and cultures (Steenkamp 2005; Steenkamp and Baumgartner 1998; Steenkamp, de Jong, & Baumgartner 2010). All too often, measures have been applied cross-nationally without assessing the meaning of the construct or the equivalence of the construct's measure to the country/culture in which it has been applied. This can lead to erroneous inferences of a construct's meaning, applicability, and relation to other constructs and behaviors of interest in other countries or cultures (Hult et al. 2008; Steenkamp and Baumgartner 1998; Weathers and Sharma 2003). Numerous procedures for assessing measure equivalence in international and cross-cultural contexts are available and should be consulted when using measures in different cultures or countries (Durvasula et al. 2006; Hult et al. 2008; Rossiter 2002; Weathers and Sharma 2008; Steenkamp and Baumgartner 1998).

Normative Information

Another area often overlooked by those who develop scales is the reporting of mean and/or percentage scores and variances (i.e., normative information). A raw score on a measurement instrument is not particularly informative about the position of a person on the characteristic being measured because the units in which the scale is expressed are often interval and unfamiliar (Churchill 1979, p. 72). Scale means, individual item means, and standard deviations across different sample groups represent useful information as they offer a frame of reference and comparison points for the potential scale user.

Response Set Bias

Finally, increased testing for response set bias is needed in scale development and use in consumer and marketing research. Response set bias refers to a tendency on the part of individuals to respond to attitude statements for reasons other than the content of the statements (Baumgartner and Steenkamp 2001; de Jong et al. 2007; Mick 1996; Paulhus 1991; Robinson et al. 1991; Steenkamp et al. 2010). What can result is a scale score not truly reflective of how the respondent actually stands on the construct. Some common sources of response set bias include acquiescence bias, extreme response style, and social desirability bias.

Acquiescence Bias

Acquiescence bias and disacquiescence can take the form of responses that reflect an attitude change in accordance with a given situation—or "yeasaying" (acquiescence) and "naysaying" (disacquiescence), where respondents are willing to go along with anything that sounds good or are unwilling to look at the negative side of an issue. Though there are no easy answers regarding the elimination of acquiescence bias, there are recommended procedures (Paulhus 1991; Robinson et al. 1991).

Extreme Response Style

Extreme response style reflects respondent tendencies to use the extreme high end or low end of a scale disproportionately to other scale points (Weijters, Schillewaert, and Geuens 2008). Given that cross-mode survey data collection procedures (e.g., web-based, mail, phone, etc.) are becoming increasingly prevalent, the tendency for respondents to use extreme ends of scales may be more endemic to one response mode vis-à-vis another. This can lead to difficulties in attempting to validly compare responses across date collection modes, as biased raw scores, group means, variances, and covariances can result (Baumgartner and Steenkamp 2001; de Jong et al. 2007). Both de Jong et al. (2007) and Weijters et al. (2008) now offer procedures to assess the potential for various forms of response style bias, including extreme response style.

Social Desirability Bias

Trying to make a good impression is the most common form of social desirability bias. That is, respondents may purposefully score low on measures assessing undesirable social characteristics (e.g., selfishness) or purposefully score high on measures assessing desirable social characteristics (e.g., altruism). Though some research has shown that the effects of social desirability bias may be overstated (Moorman and Podsakoff 1992), others suggest that such effects still can bias the relationships among variables, particularly those that have a higher propensity for socially desirable responding (Manning, Bearden, and Tian 2009; Mick 1996; Steenkamp et al. 2010). Though difficult to detect and control, several authors do offer procedures and/or scales for examining social desirability bias (Crowne and Marlowe 1960; Manning et al. 2009; Mick 1996; Paulhus 1991, 1992; Robinson et al. 1991; Strahan and Gerbasi 1972). Recently, methods for assessing such bias have been extended to a cross-national context (Steenkamp et al. 2010). These measures and procedures should be considered in scale development and testing.

Summary

In the preceding few pages, we have tried to delineate those most frequently acknowledged concepts and procedures useful for developing, evaluating, and using self-report scale measures. These procedures include examining the theoretical base of the measure, content validity, dimensionality, reliability, construct validity, and issues relating to sample representativeness, cross-national/cross-cultural measurement equivalence, scale

norms, and response set bias. We have offered only a brief discussion of each of these procedures, and as we have stated throughout, we strongly urge the reader to consult the more thorough sources that we have cited.

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2

Traits and Individual Difference Variables

Scales Related to Interpersonal Orientation, Needs/Preferences, and Self-Concept

Ten-Item and Five-Item Personality Inventories

(Gosling, Rentfrow, and Swann 2003)

Construct: The Brief Measure of the Big-Five Personality is designed to succinctly capture the Big-Five personality dimensions, including Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness to Experience. While longer measures are associated with more sound psychometric properties, Gosling et al. (2003) argue for and demonstrate the usefulness of a much shorter personality assessment.

Description: Two versions of a brief personality measure are offered: a Ten-Item Personality Inventory (TIPI) and a Five-Item version (FIPI). Each item has two brief descriptions that are related to each other. In addition, the FIPI includes some explanation of each set of descriptors. All items in the scales are answered on a 7-point scale, where 1 = *strongly disagree* and 7 = *strongly agree*.

Development: To develop items for inclusion in both the TIPI and the FIPI measures, the focus was on optimizing content validity. This led to developing descriptors for each of the five personality dimensions and then selecting descriptors best representing each dimension. This process involved drawing from previous Big Five measures and carefully selecting items. Researchers developed two instruments that they could test. One was a five-item personality test, and the other was a ten-item personality test. Note that the FIPI is not a condensed version of the TIPI.

Samples: Study 1 had a sample of 1,704 undergraduate students, and Study 2 involved 1,813 undergraduate students. A subset of participants from Study 1 ($n = 118$) were used to assess test-retest reliability over a 2-week period. Additional samples of 60 and 83 were used in an observer-report and peer-report format, respectively. A subset from Study 2 ($n = 180$) was used to assess test-retest reliability over a 6-week period.

Validity: Validity tests were focused on comparing the FIPI and TIPI to well-known longer measures of personality. The primary instrument used for comparison was the 44 Big-Five

Inventory (BFI) developed by John and Srivastava (1999). In Study 1, the convergence between the measures of each personality dimension for the FIPI and BFI were as follows: Extraversion, 0.80; Agreeableness, 0.58; Conscientiousness, 0.65; Emotional Stability, 0.69; and Openness to Experience, 0.48. The subsample used for test-retest purposes in Study 1 indicated that although test-retest was higher for the BFI than for the FIPI, the FIPI had on average a test-retest reliability of 0.68 across the five dimensions. Further, the FIPI compared favorably with relationships between the BFI and other personality measures. While the FIPI is somewhat inferior to the standard BFI, it displayed adequate levels of convergent and discriminant validity, test-retest reliability, relationships with other constructs, and convergence between self-ratings and observer ratings. However, the shortcomings of this scale led to the creation of a second measure with 10 items.

In Study 2, the convergence between the measures of each personality dimension for the TIPI and BFI were as follows: Extraversion, 0.87; Agreeableness, 0.70; Conscientiousness, 0.75; Emotional Stability, 0.81; and Openness to Experience, 0.65. Although test-retest reliability is argued to be more important for assessing the reliability of a two-item measure than is coefficient alpha, alphas are reported for the five dimensions as follows: Extraversion, 0.68; Agreeableness, 0.40; Conscientiousness, 0.50; Emotional Stability, 0.73; and Openness to Experience, 0.45. The same set of test-retest reliabilities were 0.77, 0.71, 0.76, 0.70, 0.62, and 0.72. The TIPI compared favorably in tests for convergent and discriminant validity using other personality measures and additional correlates. Although both the FIPI and TIPI are suggested to be reasonable methods for assessing Big-Five personality dimensions, the authors recommend the TIPI for its superior psychometric properties and usefulness in latent variable modeling and other methodological tests.

Scores: Neither mean nor percentage scores were reported.

Source: Gosling, Samuel D., Peter J. Rentfrow, and William B. Swann Jr. (2003), "A Very Brief Measure of the Big-Five Personality Domains," *Journal of Research in Personality*, 37 (December), 504–28.

Reference: John, Oliver P. and Sanjay Srivastava (1999), "The Big Five Personality Trait Taxonomy: History, Measurement, and Theoretical Perspectives," in *Handbook of Personality: Theory and Research,* eds. L. A. Pervin and O. P. John, New York: Guilford, 102–38.

Ten-Item and Five-Item Personality Inventories

(Gosling, Rentfrow, and Swann 2003)

Instructions:

Here are a number of personality traits that may or may not apply to you. Please choose a response to indicate the extent to which you agree or disagree with that statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

Ten-Item Version (TIPI) (recommended by Gosling et al. 2003)

I see myself as:

1. Extraverted, enthusiastic

2. Critical, quarrelsome

3. Dependable, self-disciplined

4. Anxious, easily upset

5. Open to new experiences, complex

6. Reserved, quiet

7. Sympathetic, warm

8. Disorganized, careless

9. Calm, emotionally stable

10. Conventional, uncreative

Five-Item Version (FIPI)

I see myself as:

1. Extraverted, enthusiastic (that is, sociable, assertive, talkative, active, NOT reserved or shy)

2. Agreeable, kind (that is, trusting, generous, sympathetic, cooperative, NOT aggressive or cold)

3. Dependable, organized (that is, hard-working, responsible, self-disciplined, thorough, NOT careless or impulsive)

4. Emotionally stable, calm (that is, relaxed, self-confident, NOT anxious, moody, easily upset, or easily stressed)

5. Open to experience, imaginative (that is, curious, reflective, creative, deep, open-minded, NOT conventional)

Notes: Responses are as follows: 1 = disagree strongly, 2 = disagree moderately, 3 = disagree a little, 4 = neither agree nor disagree, 5 = agree a little, 6 = agree moderately, 7 = agree strongly. Scoring for the TIPI ("R" indicated reverse scoring): Extraversion - 1, 6R; Agreeableness - 2R, 7; Conscientiousness - 3, 8R; Emotional Stability - 4R, 9; Openness to Experiences - 5, 10R.

Consumer Self-Confidence: CSC

(Bearden, Hardesty, and Rose 2001)

Construct: Consumer self-confidence (CSC) is defined as the extent to which an individual feels capable and assured with respect to his or her marketplace decisions and behaviors. The concept reflects the subjective evaluations of one's ability to generate positive experiences as a consumer in the marketplace (Bearden et al. 2001, p. 122). The final measure consists of six dimensions: information acquisition (IA), consideration set formation (CSF), personal outcomes decision making (PO), social outcomes decision making (SO), persuasion knowledge (PK), and marketplace interfaces self-confidence (MI). The first four factors are grouped under "decision making self-confidence"; the fifth and sixth factors are grouped as "protection self-confidence."

Description: CSC consists of 31 items. All the subdimensions consist of five items except for PK, which is assessed using six items. Participants were asked to rate the extent to which each of the scale items was characteristic of them on a five-point scale labeled 1 = extremely uncharacteristic, 2 = somewhat uncharacteristic, 3 = uncertain, 4 = somewhat characteristic, and 5 = extremely characteristic. Scale responses are averaged to form scores for each of the six subdimensions.

Development: An initial pool of 145 items was generated from a convenience sample of 43 adults. After deleting redundant, leading, and ambiguous items, judgmental screening for item representativeness, as described by Bearden et al. (2001), resulted in a pool of 97 items. This set of items was subjected to a series of item purification procedures using the data from studies 1 and 2. Specifically, corrected item-to-total correlations, average factor loadings, and interitem correlations were used to reduce the pool to 39 items. Extensive confirmatory factor analyses of the data collected in Study 3 resulted in a six-factor correlated model. Construct reliability estimates from Study 3 ranged from 0.81 to 0.88. Other estimates of reliability are also presented. Intercorrelations among the six measures, as well as estimates of average variance extracted for each scale, are summarized in the study write-ups.

Samples: In addition to the item generation sample of 43 adults, seven studies were reported. Studies 1 and 2 were based on nonstudent adult samples of 221 and 204 respondents, respectively. Studies 3 and 4 comprised 252 and 59 undergraduates. Study 5 was based on the responses of 60 married couples; the data for Study 6 were collected by mail survey from 100 members of the American Council on Consumer Interests. The application Study 7 was based on information obtained from 106 university faculty and staff.

Validity: Extensive evidence of validity is summarized by Bearden et al. (2001). As part of this evidence, estimated correlations from data obtained in Studies 1 and 2 with related constructs (e.g., self-esteem, susceptibility to normative influence, product specific self-confidence, information processing confidence) are described. Tests for impression management, as well as tests of relative predictive validity, are also presented. From Study 4, test-retest correlations ranged from 0.60 to 0.84 across the six dimensions. Evidence of convergent validity was provided in Study 4 from correlations with single-item self-rating scales (Bagozzi 1993).

Additional evidence of convergent validity was obtained in Study 5. Specifically, correlations reflecting convergence of husband and wife responses using dyadic data from pairs of husbands and wives ranged from 0.24 to 0.63 across the six dimensions reported. Evidence of known group validity was provided by comparisons of mean scores from a

sample of the American Council on Consumer Interests to the adult Study 1 and Study 2 samples. The relative predictive validity, as well as the ability of the measures to moderate theoretical relationships (i.e., between price-quality schema and choice), were demonstrated in Study 7.

Scores: From Study 6, summed mean scores were reported in the known group comparisons. For the decision-making higher order factor, the mean scores for the American Council on Consumer Interests and adult Study 1 sample, the means were 83.72 and 78.32, respectively. Corresponding means for the protection higher order factor were 49.08 and 44.96.

Source: Bearden, William O., David M. Hardesty, and Randall L. Rose (2001), "Consumer Self-Confidence: Refinements in Conceptualization and Measurement," *Journal of Consumer Research*, 28 (June), 121–34.

Reference: Bagozzi, Richard P. (1993), "Assessing Construct Validity in Personality Research: Applications to Measures of Self-Esteem," *Journal of Research in Personality*, 27 (March), 49–87.

Consumer Self-Confidence: CSC

(Bearden, Hardesty, and Rose 2001)

Information Acquisition (IA)

1. I know where to find the information I need prior to making a purchase.

2. I know where to look to find the product information I need.

3. I am confident in my ability to research important purchases.

4. I know the right questions to ask when shopping.

5. I have the skills required to obtain needed information before making important purchases.

Consideration-Set Formation (CSF)

1. I am confident in my ability to recognize a brand worth considering.

2. I can tell which brands meet my expectations.

3. I trust my own judgment when deciding which brands to consider.

4. I know which stores to shop.

5. I can focus easily on a few good brands when making a decision.

Personal Outcomes Decision Making (PO)

1. I often have doubts about the purchase decisions I make.

2. I frequently agonize over what to buy.

3. I often wonder if I've made the right purchase selection.

4. I never seem to buy the right thing for me.

5. Too often, the things I buy are not satisfying.

Social Outcomes Decision Making (SO)

1. My friends are impressed with my ability to make satisfying purchases.

2. I impress people with the purchases I make.

3. My neighbors admire my decorating ability.

4. I have the ability to give good presents.

5. I get compliments from others on my purchase decisions.

Persuasion Knowledge (PK)

1. I know when an offer is "too good to be true."

2. I can tell when an offer has strings attached.

3. I have no trouble understanding the bargaining tactics used by salespersons.

4. I know when a marketer is pressuring me to buy.

5. I can see through sales gimmicks used to get consumers to buy.

6. I can separate fact from fantasy in advertising.

Marketplace Interfaces (MI)

1. I am afraid to ask "to speak to the manager."

2. I don't like to tell a salesperson something is wrong in the store.

3. I have a hard time saying no to a salesperson.

4. I am too timid when problems arise while shopping.

5. I am hesitant to complain when shopping.

Notes: Participants were asked to rate the extent to which each of the scale items was characteristic of them on a 5-point scale labeled 1 = *extremely uncharacteristic*, 2 = *somewhat uncharacteristic*, 3 = *uncertain*, 4 = *somewhat characteristic*, and 5 = *extremely characteristic*.

Interpersonal Orientation: CAD Scale

(Cohen 1967)

Construct: The CAD scale is designed to measure a person's interpersonal orientation. The instrument was derived from Horney's (1945) tripartite model. Specifically, the scale is designed to assess compliant, aggressive, and detached interpersonal orientations. Compliant oriented persons are those who desire to be a part of the activities of others (i.e., who move toward others). Aggressive persons are those who want to excel, to achieve success, prestige, and admiration. Detached individuals desire to put emotional distance between themselves and others (i.e., they move away from others) (Cohen 1967, pp. 270–71). The impetus for the scale is based on the expected effects of varying interpersonal orientations on consumer decision making.

Description: The scale consists of 35 items each operationalized using 6-point scales labeled *extremely undesirable* to *extremely desirable.* Ten items each are used to represent the compliant and detached factors. The remaining 15 items reflect the aggressive dimension. Total scores for each subscale are formed by summing item scores within each dimension.

Development: The exact procedures used to develop the initial set of items were not described in Cohen (1967). However, a number of separate analyses were conducted in evaluation of the 35-item, three-factor scale. In support of the measures, seven expert judges agreed that the items demonstrated face validity and reflected their respective dimensions. Several tests for evidence of convergent and predictive validity were performed.

Samples: A series of different undergraduate and graduate student samples was used in the initial development and validation of the CAD scales. For example, the final validation efforts involving the study of a wide range of consumer decisions were based on the responses of 157 undergraduate business students.

Validity: Evidence of convergent validity was provided by correlations of the CAD scale with measures of occupational interpersonal relations. For example, the correlation between the compliant CAD factor and the occupational interpersonal compliant factor was 0.48 ($p < 0.01$). As predicted, less aggressive and more compliant subjects exhibited greater "change" in a study of susceptibility to interpersonal influence (Cohen 1967, p. 273).

In addition to the validity evidence cited above, the CAD scale factors were further examined for differences across a number of product and brand purchase decisions. The results indicate that "some products and brands appear to express either compliant, aggressive, or detached responses to life" (Cohen 1967, p. 277). Some of the specific findings include the following: High aggressives exhibited differential brand preferences for deodorant, beer, and dress shirts. Both high and low aggressive and high and low detached students differed in their television viewing preferences.

Scores: Cohen (1967) reports a series of mean scores for each factor. However, in his Appendix, it is noted that "Studies reported in this article have used an earlier 4-point response format" (Cohen 1967, p. 277). Hence, mean scores from the original article are not reproduced here since the final version reported by Cohen (1967) recommends a wider 6-point response format.

Source: Cohen, Joel B. (1967), "An Interpersonal Orientation to the Study of Consumer Behavior," *Journal of Marketing Research,* 4, 270–78. © 1967 by the American Marketing Association. Scale items taken from p. 277. Reprinted with permission from the American Marketing Association.

Other evidence: A number of studies have either employed or reevaluated the CAD scale(s). Three of these are cited below.

Ryan and Becherer (1976) reported internal consistency reliability estimates for the three factors as follows: compliant, 0.72; aggressive, 0.68; and detached, 0.51. Though the results of a factor analysis with varimax rotation produced a four-factor solution, most of the items did load on three factors that appeared to represent aggressive, compliant, and detached orientations. In addition, these were the first three factors of the four-factor solution.

Tyagi (1983) reported coefficient alpha estimates of internal consistency of 0.72, 0.62, and 0.63 for the compliant, aggressive, and detached factors, respectively. Intercorrelations among the three factors ranged from –0.31 to 0.25. The results of an MTMM analysis using measures of nurturance, aggression, and autonomy provided mixed but generally positive support for the convergent and discriminant validity of the measures.

Noerager (1979) provided less supportive results. Specifically, the coefficient alpha estimates of internal consistency reliability for the compliant, aggressive, and detached factors were 0.60, 0.36, and 0.43, respectively. The results of a factor analysis of the 35 items did not reveal a pattern of simple structure along the lines predicted by the theoretical justification for the measures (i.e., a three-factor model).

Other sources: Noerager, Jon P. (1979), "An Assessment of CAD: A Personality Instrument Developed Specifically for Marketing Research," *Journal of Marketing Research,* 16, 53–9.

Ryan, Michael J. and Richard C. Becherer (1976), "A Multivariate Test of CAD Instrument Construct Validity," in *Advances in Consumer Research,* Vol. 3, ed. Beverly B. Anderson, Cincinnati, OH: Association for Consumer Research, pp. 149–54.

Tyagi, Pradeep K. (1983), "Validation of the CAD Instrument: A Replication," in *Advances in Consumer Research,* Vol. 10, eds. Richard P. Bagozzi and Alice M. Tybout, Ann Arbor, MI: Association for Consumer Research, pp. 112–14.

Reference: Horney, Karen (1945), *Our Inner Conflicts,* New York: W. W. Norton.

Interpersonal Orientation: CAD Scale

(Cohen 1967)

1. Being free of emotional ties with others is:

2. Giving comfort to those in need of friends is:

3. The knowledge that most people would be fond of me at all times would be:

4. To refuse to give in to others in an argument seems:

5. Enjoying a good movie by myself is:

6. For me to pay little attention to what others think of me seems:

7. For me to be able to own an item before most of my friends are able to buy it would be:

8. Knowing that others are somewhat envious of me is:

9. To feel that I like everyone I know would be:

10. To be able to work hard while others elsewhere are having fun is:

11. Using pull to get ahead would be:

12. For me to have enough money or power to impress self-styled "big-shots" would be:

13. Basing my life on duty to others is:

14. To be able to work under tension would be:

15. If I could live all alone in a cabin in the woods or mountains it would be:

16. Pushing those who insult my honor is:

17. To give aid to the poor and underprivileged is:

18. Standing in the way of people who are too sure of themselves is:

19. Being free of social obligations is:

20. To have something good to say about everybody seems:

21. Telling a waiter when you have received inferior food is:

22. Planning to get along without others is:

23. To be able to spot and exploit weaknesses in others is:

24. A strong desire to surpass others' achievements seems:

25. Sharing my personal feelings with others would be:

26. To have the ability to blame others for their mistakes is:

27. For me to avoid situations where others can influence me would be:

28. Wanting to repay others' thoughtless actions with friendship is:

29. Having to compete with others for various rewards is:

30. If I knew that others paid very little attention to my affairs it would be:

31. To defend my rights by force would be:

32. Putting myself out to be considerate to others' feelings is:

33. Correcting people who express an ignorant belief is:

34. For me to work alone would be:

35. To be fair to people who do things which I consider wrong seems:

Notes: The items belonging to the factors are arranged as follows:

Compliant: 2, 3, 9, 13, 17, 20, 25, 28, 32, 35;

Aggressive: 4, 7, 8, 11, 12, 14, 16, 18, 21, 23, 24, 26, 29, 31, 33;

Detached: 1, 5, 6, 10, 15, 19, 22, 27, 30, 34.

Items scored on 6-point Likert type scales from *(1) extremely undesirable* to *(6) extremely desirable.*

Long-Term Orientation: LTO

(Bearden, Money, and Nevins 2006)

Construct: Long-term orientation (LTO) is defined by Bearden et al. (2006, p. 457) in their research as the cultural value of viewing time holistically, valuing both the past and the future rather than deeming actions important only for their effects in the here-and-now or the short term. Individuals scoring high in LTO value planning, tradition, hard work, and perseverance (Bearden et al. 2006).

Description: The scale comprises eight items designed to assess tradition (four items) and planning (four items) dimensions of long-term orientation. Participants rated agreement with the eight statements using seven-point, bipolar, agree–disagree scales. Average item scores can be used to operationalize the tradition and planning dimensions of LTO.

Development: An initial pool of 59 items was generated from 292 responses from MBA graduates of a nationally known international business program. These statements were supplemented with items from similar measures used in prior research involving cultural values. The pool of items was edited to delete double-barrel, redundant, ambiguous, and misleading statements. Marketing faculty members in the Global Sig of the AMA were used to judge items against a general definition of national culture. This process resulted in nine remaining LTO items. Study 1 data across the four country convenience samples were subjected to a series of factor analysis procedures. The results of these analyses revealed eight items, with four items each across the planning and tradition LTO factors. The average coefficient alpha estimates of reliability across the four samples were 0.77 and 0.60 for the tradition and planning factors, respectively. The intercorrelations between the two factors ranged from 0.28 to 0.44 across the four country samples.

Samples: Four convenience samples of undergraduate business students were used in Study 1: Argentina ($n = 311$), Austria ($n = 407$), Japan ($n = 360$), and the United States ($n = 408$). Study 2 involved two convenience adult samples from Japan ($n = 253$) and the United States ($n = 339$). Studies 3 and 4 were based on the responses of 30 nonstudent adults (test-retest) and 38 student-nonstudent dyads (convergent validity), respectively. Studies 5 and 6 comprised information obtained from a convenience sample of 54 undergraduate business students (Study 5) and 73 MBA students (Study 6).

Validity: The eight items were reexamined using data from the two-country Study 2. Confirmatory factor analyses confirmed the two-factor structure, as well as offering evidence of construct validity. Coefficient alpha estimates of reliability for the United States (Japanese) samples were 0.83 (0.78) and 0.71 (0.62) for the tradition and planning factors. Evidence of measurement equivalence across countries and samples are also provided from the data for both Study 1 and Study 2. Evidence of convergent validity from comparison single-item measures, as well as known group validity (i.e., younger student groups vs. older adult samples), is also reported as part of the results for studies 1 and 2. In Study 3, test-retest correlations across 3-week administrations were 0.78 and 0.69 for the tradition and planning subscales, respectively. MTMM procedures employing dyadic data were used to generate additional evidence of convergent validity (see Table 4, Bearden et al. 2006, p. 462). In Study 5, the LTO planning measure moderated as predicted the relationship between consumer frugality and the number of credit cards owned. In Study 6, a scenario-based managerial study, the results demonstrated predictive validity through correlations with a complex decision outcome measure. Last, additional evidence of validity was provided through a series of path analyses in which the two planning factors were found to

be related as hypothesized to measures of consumer frugality (Lastovicka et al. 1999), compulsive buying (Valence, d'Astous, and Fortier 1988), and personal ethics (Vitell, Rallapalli, and Singhapakdi 1993).

Scores: Mean scores were not reported directly. However, predicted differences in means were observed in a series of known group comparisons between younger and older respondents and United States versus Japanese respondents.

Source: Bearden, William O., R. Bruce Money, and Jennifer L. Nevins (2006), "A Measure of Long-Term Orientation: Development and Validation," *Journal of the Academy of Marketing Science,* 34 (June), 456–67.

References: 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.

Valence, Giles, Alain d'Astous, and Louis Fortier (1988), "Compulsive Buying: Concept and Measurement," *Journal of Consumer Policy,* 11 (4), 419–33.

Vitell, Scott J., Kumar C. Rallapalli, and Anusorn Singhapakdi (1993), "Marketing Norms: The Influence of Personal Moral Philosophies and Organizational Ethical Culture," *Journal of the Academy of Marketing Science,* 21, 331–37.

Long-Term Orientation: LTO

(Bearden, Money, and Nevins 2006)

1. Respect for tradition is important to me.

2. I plan for the long term.

3. Family heritage is important to me.

4. I value a strong link to my past.

5. I work hard for success in the future.

6. I don't mind giving up today's fun for success in the future.

7. Traditional values are important to me.

8. Persistence is important to me.

Notes: Items 1, 3, 4, and 7 reflect tradition aspects of LTO, while items 2, 5, 6, and 8 reflect the planning dimension of LTO. Participants rated agreement with the statements using seven-point, bipolar, agree–disagree scales.

Maximization

(Schwartz et al. 2002; Nenkov et al. 2008)

Construct: While humans have been viewed as trying to maximize or optimize outcomes in any given decision scenario, the complexities of life and the limitations of information processing make maximization unattainable. Therefore, in many choice situations, consumers have the goal of satisficing rather than maximizing, which entails choosing an option that surpasses a threshold of acceptability. In other words, satisficing involves pursuing a good enough option rather than the best option. The emphasis on maximizing versus satisficing in choice situations is demonstrated to be an individual difference among people.

Description: Schwartz et al. (2002) developed the Maximization Scale and a Regret Scale, and Nenkov et al. (2008) recommend a shortened version of the Maximization Scale. Responses are based on a 7-point Likert-type scale where 1 = completely disagree and 7 = completely agree. The Maximization Scale has three dimensions, including Alternative Search, Decision Difficulty, and High Standards, and each dimension can be viewed as an average score of the relevant items.

Development: For Schwartz et al.'s (2002) original scales, 42 items were initially generated to measure maximization (33 items) and regret (9 items). Based on assessments of reliability and face validity from Sample 1 data, the item set was reduced to 22. These 22 items were assessed by a panel of 11 expert judges, and all were judged to have face validity (17 for maximization and 5 for regret). Principal component factor analysis of Samples 1 through 7 ($n = 1,747$) was used to examine the items. This process led to the elimination of more items, leaving a final set of 13 maximization and 5 regret items. These 18 items loaded on four different factors—the regret factor, choice difficulty, difficulty with a large option set, and high standards.

   More formal examination of the factor structure of maximization, as well as a shortened scale, was provided by Nenkov et al. (2008). The six-item version of the Maximization Scale was developed by reanalyzing previous data sets and choosing the items that perform best in a series of tests of reliability and validity. This set was also verified in new samples.

Samples: Seven samples were used both independently and collectively to establish the Maximization and Regret Scales (Schwartz et al. 2002). Samples 1 through 4 consisted of undergraduate students, with sample sizes of 82, 72, 100, and 401, respectively. Sample 5 ($n = 752$) contained health care professionals, Sample 6 respondents ($n = 220$) were passengers waiting at an urban bus station, and Sample 7 ($n = 120$) consisted of individuals awaiting jury duty. Nenkov et al. (2008) use the samples from Schwartz et al. as well as new samples to test the validity of the shortened form of the Maximization Scale.

Validity: Coefficient alphas across the combined Samples 1 through 7 was 0.71 for maximization and 0.67 for regret. Other analyses demonstrated the validity of the Maximization and Regret Scales. Being a maximizer was related to a tendency to experience more regret and depression, be less optimistic and happy, and be more sensitive to information about social comparison. Although three factors were suggested, no formal validation of the three-factor structure was provided. Further studies examined various outcomes of maximization, providing evidence of its validity.

   Nenkov and colleagues (2008), including some of the original authors of the 13-item Maximization Scale, demonstrate that a condensed, 6-item version of the Maximization Scale actually outperforms the original 13-item measure. Results from both existing and new data sets showed that the three-factor structure of maximization was not always

supported, although three factors typically emerged and were labeled as Alternative Search, Decision Difficulty, and High Standards. Coefficient alphas for the 13-item scale ranged from 0.54 to 0.75. Confirmatory factor analysis revealed several problematic items in terms of low factor loadings. Further analysis was used to develop and evaluate three-, six-, and nine-item versions of the scale, and confirmatory factor analysis suggested that a six-item scale provided the best fit to the data. Coefficient alphas for the six-item version ranged from 0.36 to 0.60 across the samples and varied the most of the Alternate Search dimension (0.22 to 0.58). Additional samples verified that the six-item scale maintained the three-factor structure of the longer scale while possessing superior model fit. Further, the pattern of correlations between the six-item scale and other related constructs previously tested by Schwartz et al. (2002) were as expected. As such, the six-item scale is recommended for future use.

Scores: Across the seven samples in Schwartz et al. (2002), maximization scores ranged from 1.15 to 6.62 with a mean of 3.88. Evidence was mixed regarding gender differences in maximization with Samples 1 through 3 and 5 showing no association, and Samples 4, 6, and 7 showing that males were more likely to be maximizers than females (e.g., 4.33 vs. 3.91 in Sample 7).

Sources: Schwartz, Barry, Andrew Ward, John Monterosso, Sonja Lyubomirsky, Katherine White, and Darrin R. Lehman (2002), "Maximizing Versus Satisficing: Happiness Is a Matter of Choice," *Journal of Personality and Social Psychology,* 83 (5), 1178–97.

Nenkov, Gergana Y., Maureen Morrin, Andrew Ward, Barry Schwartz, and John Hulland (2008), "A Short Form of the Maximization Scale: Factor Structure, Reliability, and Validity Studies," *Judgment and Decision Making,* 3 (5), 371–88.

Maximization

(Schwartz et al. 2002; Nenkov et al. 2008)

Maximization

Alternative Search

1. When I watch TV, I channel surf, often scanning through the available options even while attempting to watch one program.

2. When I am in the car listening to the radio, I often check other stations to see if something better is playing, even if I'm relatively satisfied with what I'm listening to.*

3. I treat relationships like clothing: I expect to try a lot on before I get the perfect fit.

4. No matter how satisfied I am with my job, it's only right for me to be on the lookout for better opportunities.*

5. I often fantasize about living in ways that are quite different from my actual life.

6. I'm a big fan of lists that attempt to rank things (the best movies, the best singers, the best athletes, the best novels, etc.)

Decision Difficulty

1. I often find it difficult to shop for a gift for a friend.*

2. When shopping, I have a hard time finding clothing that I really love.

3. Renting videos is really difficult. I'm always struggling to pick the best one.*

4. I find that writing is very difficult, even if it's just writing a letter to a friend, because it's so hard to word things just right. I often do several drafts of even simple things.

High Standards

1. No matter what I do, I have the highest standards for myself.*

2. I never settle for second best.*

3. Whenever I'm faced with a choice, I try to imagine what all the other possibilities are, even ones that aren't present at the moment.

Notes: *indicates items included in the recommended six-item, shortened Maximization Scale. Responses are based on a 7-point Likert-type scale where 1 = *completely disagree* and 7 = *completely agree*.

Regret

1. Whenever I make a choice, I'm curious about what would have happened if I had chosen differently.

2. Whenever I make a choice, I try to get information about how the other alternatives turned out.

3. If I make a choice and it turns out well, I still feel like something of a failure if I find out that another choice would have turned out better.

4. When I think about how I'm doing in life, I often assess opportunities I have passed up.

5. Once I made a decision, I don't look back. (Reverse scored)

Need for Cognition: NFC

(Cacioppo and Petty 1982)

Construct: Need for cognition (NFC) represents the tendency for individuals to engage in and enjoy thinking (Cacioppo and Petty 1982). Cohen, Stotland, and Wolfe (1955) originally described the need for cognition as a need to structure relevant situations in meaningful, integrated ways and a need to understand and make reasonable the experiential world. The scale has been frequently used in consumer research in examining the effects of persuasive arguments. Among these applications, the concept has been shown to be useful in understanding how argument strength and endorser attractiveness in advertisements may influence consumer attitudes (e.g., individuals high in need for cognition are more influenced by the quality of arguments in an advertisement) (Haugtvedt et al. 1988). In addition, it has been shown that individuals low in need for cognition react to the simple presence of a price promotion signal whether or not the price of the promoted brand is reduced (Inman, McAlister, and Hoyer 1990).

Description: The original scale is composed of 34 items each scored –4 to +4 as follows: +4, *very strong agreement;* +3, *strong agreement;* +2, *moderate agreement;* +1, *slight agreement;* 0, *neither agreement nor disagreement;* –1, *slight disagreement;* –2, *moderate disagreement;* –3, *strong disagreement;* and –4, *very strong disagreement.* An 18-item short form for assessing need for cognition has been proposed by Cacioppo, Petty, and Kao (1984). The items included in both versions are presented here. Some of the items are varied in direction to inhibit response bias. Item scores are summed for an overall index.

Development: An unspecified pool of items was edited (i.e., deleted or revised) for ambiguity. The remaining pool of 45 items was administered to the faculty of a large midwestern university (i.e., a high need for cognition group) and a group of factory line workers from the same community (Cacioppo and Petty 1982, p. 118). The initial sample (combining both groups) included a total of 96 respondents; 84 of the respondents were included in these initial analyses. A series of 2 x 2 (gender by high and low cognition; i.e., gender by faculty/factory line worker) analysis of variance tests were used to delete items that did not discriminate between the high and low groups. Tests for the overall sum for the initial 45 items and the final 34 items revealed a significant main effect for need for cognition but nonsignificant effects for gender and the interaction. Remaining items that failed to correlate significantly with the total score were also eliminated.

Samples: As explained above, 84 university professors and factory workers were used in the Study 1 development of the 34-item NFC measure. The sample was composed of approximately equal numbers of males and females. Participants in Study 2 were 419 introductory psychology students. Study 3 involved 104 (35 males and 69 females) students from the University of Iowa, and 97 student subjects participated in Study 4.

Validity: A single dominant factor from a principal components analysis was interpreted as support for a unidimensional scale composed of 34 items. The correlation between factor loadings in Studies 1 and 2 was 0.76 ($n = 34$, $p = 0.01$). Multiple sources of validity evidence are described in Cacioppo and Petty (1982). For example, evidence of discriminant validity was found in Study 2 from low correlations with measures of cognitive style and test anxiety. In Study 3, correlations with intelligence ($r = 0.39$), social desirability (r = 0.08), and dogmatism *(r = –0.27)* were provided as evidence of the scale's validity. In Study 4, a significant hypothesized interaction revealed that high NFC subjects reported enjoying a complex task more than a simple task, while low NFC subjects enjoyed a simple task more than a complex task. Also in Study 4, a modest negative

correlation with dogmatism was found ($r = -0.23$); however, a significant correlation with a measure of social desirability was revealed ($r = 0.21$).

Scores: Means and standard deviations were not provided in the cited manuscripts.

Source: Cacioppo, John T. and Richard E. Petty (1982), "The Need for Cognition," *Journal of Personality and Social Psychology,* 42 (1), 116–31.

© 1982 by the American Psychological Association. Scale items taken from Table 1 (pp. 120–21). Reprinted with permission.

Other evidence: In the development of the short form, Cacioppo et al. (1984) reported coefficient alpha estimates of internal consistency reliability of 0.90 and 0.91 for the 18-item and 34-item versions, respectively.

Substantial evidence of the validity of the construct and the measures described here has been provided by a number of studies which have successfully used the Cacioppo and Petty (1982) need for cognition scale. As recent examples, the two studies by Haugtvedt et al. (1988) showed, as predicted from the theory underlying the construct, that individuals high in need for cognition were more influenced by the quality of arguments in advertisements and that individuals low in NFC were influenced more by the peripheral cue endorser attractiveness. Similarly, Inman et al. (1990) used the NFC measure to successfully predict the effects of price signals (i.e., price messages without actual price information).

Wood and Swait (2002) offer a five-item version of NFC.

Other sources: Cacioppo, John T., Richard E. Petty, and Kao Feng Chuan (1984), "The Efficient Assessment of Need for Cognition," *Journal of Personality Assessment,* 48 (3), 306–7.

Haugtvedt, Curt, Richard E. Petty, John T. Cacioppo, and Theresa Steidley (1988), "Personality and Ad Effectiveness: Exploring the Utility of Need for Cognition," in *Advances in Consumer Research,* Vol. 15, ed. Michael J. Houston, Provo, UT: Association for Consumer Research, pp. 209–12.

Inman, J. Jeffrey, Leigh McAlister, and Wayne D. Hoyer (1990), "Promotion Signal: Proxy for a Price Cut," *Journal of Consumer Research,* 17 (June), 74–81.

Wood, Stacy L. and Joffre Swait (2002), "Psychological Indicators of Innovation Adoption: Cross-Classification Based on Need for Cognition and Need for Change," *Journal of Consumer Psychology*, 12 (January), 1–13.

References: Cohen, Arthur R., Ezra Stotland, and Donald M. Wolfe (1955), "An Experimental Investigation of Need for Cognition," *Journal of Abnormal and Social Psychology,* 51, 291–94.

Epstein, Seymour, Rosemary Pacini, Veronika Denes-Raj, and Harriet Heier (1996), "Individual Differences in Intuitive-Experiential and Analytical-Rational Thinking Styles," *Journal of Personality and Social Psychology,* 71 (2), 390–505.

Need for Cognition: NFC

(Cacioppo and Petty 1982)

1. I really enjoy a task that involves coming up with solutions to problems. (b)

2. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought. (b)

3. I tend to set goals that can be accomplished only by expending considerable mental effort.

4. I am usually tempted to put more thought into a task than the job minimally requires.

5. Learning new ways to think doesn't excite me very much. (a, b)

6. I am hesitant about making important decisions after thinking about them. (a)

7. I usually end up deliberating about issues even when they do not affect me personally. (b)

8. I prefer to let things happen rather than try to understand why they turned out that way. (a)

9. I have difficulty in thinking in new and unfamiliar situations. (a)

10. The idea of relying on thought to get my way to the top does not appeal to me. (a, b)

11. The notion of thinking abstractly is not appealing to me. (a, b)

12. I am an intellectual.

13. I only think as hard as I have to. (a, b)

14. I don't reason well under pressure. (a)

15. 1 like tasks that require little thought once I've learned them. (a, b)

16. I prefer to think about small daily projects to long-term ones. (a, b)

17. I would rather do something that requires little thought than something that is sure to challenge my thinking abilities. (b)

18. I find little satisfaction in deliberating hard and for long hours. (a, b)

19. I more often talk with other people about the reasons for and possible solutions to international problems than about gossip of tidbits of what famous people are doing.

20. These days, I see little chance for performing well, even in "intellectual" jobs, unless one knows the right people. (a)

21. More often than not, more thinking just leads to more errors. (a)

22. I don't like to have the responsibility of handling a situation that requires a lot of thinking. (a, b)

23. I appreciate opportunities to discover the strengths and weaknesses of my own reasoning.

24. I feel relief rather than satisfaction after completing a task that required a lot of mental effort. (a, b)

25. Thinking is not my idea of fun. (a, b)

26. I try to anticipate and avoid situations where there is a likely chance I'll have to think in depth about something. (a, b)

27. I prefer watching educational to entertainment programs.

28. I think best when those around me are very intelligent.

29. I prefer my life to be filled with puzzles that I must solve. (b)

30. I would prefer complex to simple problems. (b)

31. Simply knowing the answer rather than understanding the reasons or the answer to a problem is fine with me. (a)

32. It's enough for me that something gets the job done, I don't care how or why it works. (a, b)

33. Ignorance is bliss. (a)

34. I enjoy thinking about an issue even when the results of my thoughts will have no outcome on the issue.

Notes: "a" denotes items requiring reverse scoring; "b" denotes items included in the short form; "c" indicates an item in the 5-item short form offered by Wood and Swait (2002). There were slight wording variations for some items in both versions.

Items scored –4 to +4 as follows: +4, *very strong agreement*; +3, *strong agreement*; +2, *moderate agreement*; +1, *slight agreement*; 0, *neither agreement nor disagreement*; –1, *slight disagreement*; –2, *moderate disagreement*; –3, *strong disagreement*; and –4, *very strong disagreement*.

Need to Evaluate: NES

(Jarvis and Petty 1996)

Construct: Evaluation is defined as the assessment of the positive and/or negative qualities of an object. The need to evaluate is assumed to be one of the most pervasive and dominant of human responses. In accordance with this view, Jarvis and Petty (1996, p. 172) view the need to evaluate as the chronic tendency for individuals to engage in evaluative responding. Furthermore, the need to evaluate is believed to be an individual difference variable that affects, and is affected by, numerous socially based attitudes. Thus, the Need to Evaluate Scale (NES) assesses individual differences in the propensity to engage in evaluation.

Description: The NES is composed of 16 items scored on 5-point scales where 1 = *extremely uncharacteristic, 2 = somewhat characteristic,* 3 = *uncertain,* 4 = *somewhat characteristic,* and 5 = *extremely characteristic.* Item scores are summed to form an overall NES score that can range from 16 to 80. The NES is considered a single-factor, unidimensional measure.

Development: Numerous recommended scaling procedures were used to derive the final form of the scale and to test for reliability and construct validity. Five studies encompassing numerous samples were used. After generating 46 initial items to reflect the construct, the 16-item NES was derived via inspection of item-to-total correlations, intercorrelations among items, item mean (standard deviation) scores, and face validity from four pilot studies. Study 1 then examined the structure and internal consistency of the NES via principal and confirmatory factor analyses, item analyses, and coefficient alpha. Study 2 examined the validity of the NES by correlating it with related constructs. Study 3 looked at the NES's relation to social and political attitudes, and Study 4 examined the relation to "spontaneous evaluative thoughts." Finally, Study 5 examined the validity of the NES within the context of recalling "autobiographical narratives" from the previous day. All in all, consistent evidence for the dimensionality, internal consistency, and validity of the NES was found.

Samples: The "pilot" studies were composed of $n = 357$ undergraduate psychology students. Three samples of $n = 131$, $n = 160$, and $n = 266$ (all undergraduate psychology students) were used in Study 1. Study 2 used $n = 600$ students, Study 3 used $n = 52$ students; Study 4 used $n = 35$ students (females only), and Study 5 used $n = 93$ students.

Validity: By comparing four different factor structures, including two structures that included the presence of "methods" factors, it was determined that the NES could be reasonably represented by a single, unidimensional 16-item factor (although a two-factor solution offered a better "fit" to the data). (See "Notes" to actual scale items below.) For the three samples of Study 1, coefficient alphas ranged from 0.82 to 0.87 for the 16-item NES. Test-retest reliability for a subsample of $n = 70$ over a 10-week period was 0.84. For Study 2, the coefficient alpha estimate of the NES was 0.84. As evidence of discriminant validity, the NES was correlated with nine other constructs and a measure of social desirability. The correlations between the NES and affective intensity, desire for control, and need for cognition were 0.17, 0.22, and 0.35 *(p < 0.05)*, respectively. All other correlations were not significant. In support of predictive validity, regression analyses in Study 2 showed significant relations with attitudes toward social and political issues. Finally, Studies 4 and 5 showed that actual evaluative responding behavior could be predicted by NES scores.

Scores: Mean scores were consistently reported by male and female subsamples. For the most part, men scored slightly higher on the NES than did women; however, some of these differences were not significant. Some of the mean scores were 53.21 and 51.05, and 53.20 and 51.05, for males and females, respectively, from Study 1. For Study 2, the mean NES score was 52.80 for males and 50.88 for females $(p < 0.05)$.

Study 3 reported an overall mean score of 53.0, and Study 4 reported an overall mean of 53.6. Individual item means were also reported. Also, the NES was split at the median, or tertiary splits were used, to create high/low or high/medium/low NES groups for purposes of analysis.

Source: Jarvis, W. Blair G. and Richard E. Petty (1996), "The Need to Evaluate," *Journal of Personality and Social Psychology,* 70 (1), 172–94.

Need to Evaluate: NES

(Jarvis and Petty 1996)

1. I form opinions about everything.

2. I prefer to avoid taking extreme opinions.

3. It is very important to me to hold strong opinions.

4. I want to know exactly what is good and bad about everything.

5. I often prefer to remain neutral about complex issues.

6. If something does not affect me, I do not usually determine if it is good or bad.

7. I enjoy strongly liking and disliking new things.

8. There are many things for which I do not have a preference.

9. It bothers me to remain neutral.

10. I like to have strong opinions even when I am not personally involved.

11. I have many more opinions than the average person.

12. I would rather have a strong opinion than no opinion at all.

13. I pay a lot of attention to whether things are good or bad.

14. I only form strong opinions when I have to.

15. I like to decide that new things are really good or really bad.

16. I am pretty much indifferent to many important issues.

Notes: Items 2, 5, 6, 8, 9, 14, and 16 require reverse scoring and were labeled as a NEVAL(–) or "Preference for Neutrality" factor in a two-factor solution. The remaining items were labeled as a NEVAL(+) or "Need to Evaluate" factor in a two-factor solution.

Items scored on 5-point scales where 1 = *extremely uncharacteristic*, 2 = *somewhat uncharacteristic*, 3 = *uncertain*, 4 = *somewhat characteristic*, and 5 = *extremely characteristic*

Need for Touch: NFT

(Peck and Childers 2003)

Construct: Need for touch (NFT) is defined as "*a preference for the extraction and utilization of information obtained through the haptic system*" (Peck and Childers 2003, p. 431). NFT is considered a motivational-based construct, rather than an ability-based construct, and comprises two dimensions or factors: 1) an *instrumental* factor reflecting aspects of pre-purchase touch with a salient purchase goal and 2) an *autotelic* factor that views touch as an end unto itself, hedonic in nature (i.e., touching is fun, sensory stimulating, arousing, and enjoyable).

Description: As noted above, NFT is a two-factor scale. Both factors, instrumental and autotelic, comprise six items each, scored on –3 to +3 *strongly disagree* to *strongly agree* (7-point) scales. Item scores can be summed within factors to create separate instrumental and autotelic scores, or can be summed across all 12 items, creating an overall NFT score ranging from –36 to +36.

Development: Using recommended scaling procedures, the authors conducted seven studies plus an initial item development/screening study to develop and validate the final form(s) of the NFT factors. With the initial item development/screening study, 135 undergraduate students were given conceptual definitions of NFT and its factors and were then asked to develop a pool of 50 items. Twelve more students then judged the items, trimming this pool down to 22 instrumental items and 18 autotelic items. Seven more studies, both survey and experimental, were then used to derive and validate the final-form NFT scale.

Samples: Study 1, *n* = 135 undergraduate students; Study 2, *n* = 276 university staff members; Study 3, *n* = 555 university staff members; Study 4, *n* = 418 university students; Study 5, *n* = 175 undergraduate students; Study 6, *n* = 100 university students; and Study 7, *n* = 58 subjects.

Validity: Studies 1 and 2 were used to further trim NFT items and purify the NFT scale. Initial estimates from these studies generally supported the hypothesized two-factor structure of instrumental and autotelic NFT.

In Studies 3 and 4, the final 12-item scale, 6 for instrumental and 6 for autotelic, was derived. Confirmatory factor analyses (CFA) supported the two-factor structure of instrumental and autotelic NFT. Coefficient alpha estimates were 0.89 (autotelic) and 0.87 (instrumental). Average variance extracted estimates exceeded 0.70 for both factors, and the correlation among the two factors was 0.64. To assess convergent, discriminant, and nomological validity, the full 12-item NFT and its 6-item factors were modeled in a structural equations framework with the need for tactile input (NTI) scale, need for cognition (NFC), need to evaluate (NTE), experiential shopping, impulse buying, catalogue purchasing, phone purchasing, Internet purchasing, and social desirability bias. The pattern of coefficients (Table 1, p. 433) suggests a valid NFT scale. For example, the overall NFT scale, the autotelic factor, and the instrumental factor showed beta coefficients of 0.75, 0.59, and 0.88, respectively, with NTI, offering evidence of convergent validity; the overall NFT scale, the autotelic factor, and the instrumental factor showed nonsignificant beta coefficients with NFC and NTE, supporting discriminant validity; and the overall NFT scale, the autotelic factor, and the instrumental factor showed mostly significant negative beta coefficients with purchasing from catalogues, phone, or Internet, offering evidence of nomological validity. The NFT and its factors were free of social desirability bias as well.

Studies 5, 6, and 7 were experiments that further demonstrated the validity of the NFT scale. In summary, and as predicted, Studies 5 and 6 showed that individuals high in NFT are more likely to chronically access haptic (touch) information than those low in NFT. Study 7 showed the hypothesized interaction between NFT and the opportunity to obtain haptic information through direct experience. Across these three studies, coefficient alpha for the overall NFT and its factors ranged from 0.89 to 0.95. Correlations among the instrumental and autotelic factors ranged from 0.63 to 0.74.

Scores: Though scores on the overall 12-item NFT can range from –36 to +36, mean scores were not reported. In Study 5, a median score of 11.5 was reported for the overall NFT; in Study 6, median scores of 3 and 4 were reported for the autotelic and instrumental factors, respectively; and in Study 7, a median score of 1 for the overall NFT was reported based on summing and then averaging over all 12 items in the scale.

Source: Peck, Joann and Terry L. Childers (2003), "Individual Differences in Haptic Information Processing: The 'Need for Touch' Scale," *Journal of Consumer Research*, 30 (December), 430–42.

Need for Touch: NFT

(Peck and Childers 2003)

Instrumental Factor Items

1. I place more trust in products that can be touched before purchase.

2. I feel more comfortable purchasing a product after physically examining it.

3. If I can't touch a product in the store, I am reluctant to purchase the product.

4. I feel more confident making a purchase after touching a product.

5. The only way to make sure a product is worth buying is to actually touch it.

6. There are many products that I would only buy if I could handle them before purchase.

Autotelic Factor Items

1. Walking through stores, I can't help touching all kinds of products.

2. Touching products can be fun.

3. When browsing in stores, it is important for me to handle all kinds of products.

4. I like to touch products even if I have no intention of buying them.

5. When browsing in stores, I like to touch lots of products.

6. I find myself touching all kinds of products in stores.

Notes: Items are scored on –3 to +3 *strongly disagree* to *strongly agree* (7-point) scales.

Consumer's Need for Uniqueness: CNFU

(Tian, Bearden, and Hunter 2001)

Construct: Consumers' need for uniqueness (CNFU) is defined as the trait of pursuing differentness relative to others through the acquisition, utilization, and disposition of consumer goods for the purpose of developing and enhancing one's self-image and social image (Tian et al. 2001, p. 52). CNFU is conceptualized as consisting of three manifestations or dimensions: creative choice counterconformity, unpopular choice counterconformity, and avoidance of similarity. The latent structure is a higher-order factor model in which each of the three dimensions are first order factors that are collectively accounted for by a higher-order factor, CNFU (Tian et al. 2001, p. 54).

Description: The measure consists of 31 items distributed as follows: creative choice counterconformity (11), unpopular choice counterconformity (11), and avoidance of similarity (9). Responses were provided on a 5-point (*strongly agree* to *strongly disagree*) Likert-type scale. Average item scores were used to develop an overall measure of CNFU. The items are interspersed throughout the scale, as shown in Table 1 (Tian et al. 2001). All the validation studies were designed to validate the overall CNFU measure rather than the three dimensions.

Development: An initial pool of 93 items was developed from descriptions of unique individuals, exploratory qualitative data, and related measures (e.g., Snyder and Fromkin 1977). Two stages of judging for content validity were used: 1) allocations to the three categories ($n = 5$) and 2) representativeness of the items for the three factors ($n = 4$). Sixty-two items remained after the judging stages. The elimination of redundant items resulted in 15 items remaining per dimension. The student sample was used to refine the item set to the final group of 31 items. Items with corrected item-to-total correlations below 0.50 and with correlations higher with the other two factors than the item's intended factor were deleted, leaving the final set of 31 items. The estimates of internal consistency reliability were 0.94 and 0.95 in the student and consumer mail samples, respectively. Using subsamples drawn from the consumer mail surveys (1 and 2 years later) revealed test-retest correlations 0.81 ($n = 84$) and 0.73 ($n = 346$), respectively.

Samples: The first large sample comprises 273 undergraduate business students. A second large sample of 621 adult consumers was collected via mail survey after being pre-contacted by telephone. Tests of trait antecedents and situational moderators of consequential effects were based on a sample of 121 students. Tests of consequential effects were based on the responses of 235 students from two universities. A total of five known group comparison samples were also described: tattoo artists ($n = 39$), owners of low-rider autos ($n = 22$), members of a medievalist reenactment group ($n = 21$), student art majors ($n = 22$), and student purchasers of unique art ($n = 78$).

Validity: The hypothesized factor structure was verified using the two large initial samples in a series of confirmatory factor models. As part of these analyses, measurement invariance tests supported the appropriateness of the three-factor structure. The correlations among the factors ranged from 0.56 to 0.67 in the adult mail survey.

The evidence offered in support of the CNFU measure is extensive and is described in detail by Tian et al. (2001). The following examples are representative of the authors' validation efforts. Using the adult and student samples for comparison, known group differences were examined in five different samples: tattoo artists ($n = 39$), owners of low-rider autos ($n = 22$), members of a medievalist reenactment group ($n = 21$), student art majors ($n = 22$) and student purchasers of unique art ($n = 78$). CNFU was not correlated

with measures of response bias (e.g., Paulhus 1993, $r = 0.01$). Evidence of discriminant validity was offered in a series of comparisons with NFU (Snyder and Fromkin 1977), as well as in tests of correlations with CNFU, NFU, and other measures. A large number of additional construct validity test results are summarized in Table 4 (Tian et al. 2001, p. 59). Tests of trait antecedents revealed that CNFU operates in the manner posited for counterconformity motivation, while competing trait measures do not. For example, CNFU exhibited a significantly stronger correlation with desire for unique consumer products. Likewise, CNFU correlated significantly and more strongly with the outcome measure of preferences for unique exterior product designs. Lastly, CNFU moderated relationships as predicted in several experiments in which the potential popularization of a differentiating offer was manipulated, as well as in an experiment in which a differentiating offer possessed a higher versus a lower price. Again, details regarding these antecedent, outcome, and moderator studies can be found in Tian et al. (2001).

Scores: The mean score (standard deviation) for CNFU in the consumer mail survey sample ($n = 621$) was 2.60 (0.56), with a range of 1.06 to 4.55. Using the same data, CNFU was not related to education or gender but was negatively correlated with age ($r = -0.19$). Additional mean scores and standard deviations are presented for five known group comparisons in Table 3 (Tian et al. 2001, p. 58).

Source: Tian, Kelly Tepper, William O. Bearden, and Gary L. Hunter (2001), "Consumers' Need for Uniqueness: Scale Development and Validation," *Journal of Consumer Research,* 28 (June), 50–66.

References: Paulhus, Delroy L. (1993), "The Balanced Inventory of Desirable Responding: Reference Manual for the BIDR Version 6," unpublished manuscript, University of British Columbia.

Snyder, C. R. and Howard L. Fromkin (1977), "Abnormality as a Positive Characteristic: The Development and Validation of a Scale Measuring Need for Uniqueness," *Journal of Abnormal Psychology,* 86 (October), 518–27.

Consumer's Need for Uniqueness: CNFU

(Tian, Bearden, and Hunter 2001)

Creative Choice/Counterconformity

1. I collect unusual products as a way of telling people I'm different.

2. I have sometimes purchased unusual products or brands as a way to create a more distinctive personal image.

3. I often look for one-of-a-kind products or brands so that I create a style that is all my own.

4. Often when buying merchandise, an important goal is to find something that communicates my uniqueness.

5. I often combine possessions in such a way that I create a personal image for myself that can't be duplicated.

6. I often try to find a more interesting version of run-of-the-mill products because I enjoy being original.

7. I actively seek to develop my personal uniqueness by buying special products or brands.

8. Having an eye for products that are interesting and unusual assists me in establishing a distinctive image.

9. The products and brands that I like best are the ones that express my individuality.

10. I often think of the things I buy and do in terms of how I can use them to shape a more unusual personal image.

11. I'm often on the lookout for new products or brands that will add to my personal uniqueness.

Unpopular Choice/Counterconformity

1. When dressing, I have sometimes dared to be different in ways that others are likely to disapprove.

2. As far as I'm concerned, when it comes to the products I buy and the situations in which I use them, customs and rules are made to be broken.

3. I often dress unconventionally, even when it's likely to offend others.

4. I rarely act in agreement with what others think are the right things to buy.

5. Concern for being out of place doesn't prevent me from wearing what I want to wear.

6. When it comes to the products I buy and the situations in which I use them, I have often broken customs and rules.

7. I have often violated the understood rules of my social group regarding what to buy or own.

8. I have often gone against the understood rules of my social group regarding when and how certain products are properly used.

9. I enjoy challenging the prevailing taste of people I know by buying something they wouldn't seem to accept.

10. If someone hinted that I had been dressing inappropriately for a social situation, I would continue dressing in the same manner.

11. When I dress differently, I'm often aware that others think I'm peculiar, but I don't care.

Avoidance of Similarity

1. When products or brands I like become extremely popular, I lose interest in them.

2. I avoid products or brands that have already been accepted and purchased by the average consumer.

3. When a product I own becomes popular among the general population, I begin using it less.

4. I often try to avoid products or brands that I know are bought by the general population.

5. As a rule, I dislike products or brands that are customarily purchased by everyone.

6. I give up wearing fashions I've purchased once they become popular among the general public.

7. The more commonplace a product or brand is among the general population, the less interested I am in buying it.

8. Products don't seem to hold much value for me when they are purchased regularly by everyone.

9. When a style of clothing I own becomes too commonplace, I usually quit wearing it.

Notes: Responses were provided on a 5-point (*strongly agree* to *strongly disagree*) Likert-type scale. The recommended mixed order of items is depicted in Table 1 (Tian et al. 2001, pp. 55–6).

Preference for Consistency: PFC

(Cialdini, Trost, and Newsom 1995)

Construct: Preference for consistency (PFC) is viewed as "a tendency to base one's responses to incoming stimuli on the implications of existing (prior entry) variables, such as previous expectancies, commitments, and choices" (Cialdini et al. 1995, p. 318). PFC represents a dispositional preference for or against consistent responding that can be manifested in three domains: (a) the desire to be consistent with one's own responses (internal consistency), (b) the desire to appear consistent to others (public consistency), and (c) the desire that others be consistent (others' consistency).

Description: The PFC has 18 items scored on 9-point Likert-type scales ranging from *strongly disagree* (1) to *strongly agree* (9). A 9-item short form of the scale is also available. Though three domains of the construct were identified, items scores are summed and then divided by the number of items in the scale, to form average PFC scores for both the 18- and 9-item versions. (In scale development, the authors found that the three domains alluded to above were highly correlated, 0.73 to 0.87, and thus could be treated as one overall scale.)

Development: An initial pool of 72 items was generated by the authors and other faculty members at Arizona State University. Elimination of redundant items and/or those that lacked face validity trimmed this pool to 60. The 60 items were then further assessed via item-to-total correlations and other distributional properties (sample of $n = 567$) to derive the final forms of the 18- and 9-item versions of the PFC. Numerous estimates of reliability and validity were offered over three more survey-based studies and three experimental studies.

Samples: Four samples of undergraduate psychology students were used to develop and test the reliability and validity of the PFC: $n = 567$ (the initial developmental sample), $n = 230$, $n = 452$, and $n = 224$. The scale was further validated in three experimental studies encompassing samples of $n = 50$, $n = 357$, and $n = 47$ (all college students).

Validity: Estimates of internal consistency were offered in terms of an average over three samples. For the 18-item version, the average coefficient alpha estimate was 0.89; for the 9-item version, the average coefficient alpha estimate was 0.84. The average correlation between the 18- and 9-item versions was 0.95. The PFC showed adequate evidence of discriminant and nomological validity via correlations with related (or hypothesized not to be related) constructs. For example, the correlation of PFC with a measure of "rigidity," personal need for structure, self-consciousness, and the extroversion and openness factors of the Big Five personality dimensions were 0.48, 0.47, 0.25, –0.22, and –0.38 *(p < 0.05)*, respectively. The PFC was not significantly correlated with measures of social desirability, self-monitoring, locus of control, agreeableness, and neuroticism. Three experiments consistent with balance theory, the foot-in-the-door effect, and cognitive dissonance theory also showed consistent support for the validity of the PFC scale.

Scores: Means scores are reported as averages across the three survey-based studies. For the 18-item version, the mean (std. dev.) was 5.43 (1.19). Median and mode scores of 5.50 and 5.44 were also reported. For the 9-item version, the mean (std. dev.) was 5.36 (1.31). Median

and mode scores of 5.39 and 5.17 were also reported. Scores based on median splits in the experimental studies were also reported.

Source: Cialdini, Robert B., Melanie R. Trost, and Jason Newsom (1995), "Preference for Consistency: The Development of a Valid Measure and the Discovery of Surprising Behavioral Implications," *Journal of Personality and Social Psychology*, 69 (2), 318–28.

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Preference for Consistency: PFC

(Cialdini, Trost, and Newsom 1995)

1. I prefer to be around people whose reactions I can anticipate.

2. It is important to me that my actions are consistent with my beliefs.

3. Even if my attitudes and actions seemed consistent with one another to me, it would bother me if they did not seem consistent in the eyes of others.

4. It is important to me that those who know me can predict what I will do.

5. I want to be described by others as a stable, predictable person.

6. Admirable people are consistent and predictable.

7. The appearance of consistency is an important part of the image I present to the world.

8. It bothers me when someone I depend on is unpredictable.

9. I don't like to appear as if I am inconsistent.

10. I get uncomfortable when I find my behavior contradicts my beliefs.

11. An important requirement for any friend of mine is personal consistency.

12. I typically prefer to do things the same way.

13. I dislike people who are constantly changing their opinion.

14. I want my close friends to be predictable.

15. It is important to me that others view me as a stable person.

16. I make an effort to appear consistent to others.

17. I'm uncomfortable holding two beliefs that are inconsistent.

18. It doesn't bother me much if my actions are inconsistent.

Notes: Items 4, 5, 7, 11, 12, 14, 15, 16, and 18 compose the 9-item short form of the PFC scale. Item 18 requires reverse scoring. Items scored on 9-point Likert-type scales ranging from *strongly disagree* (1) to *strongly agree* (9).

Independent and Interdependent Self-Construals

(Singelis 1994)

Construct: Independent self-construal is defined as a "bounded, unitary, stable" self that is separate from social context. The constellation of elements composing an independent self-construal includes an emphasis on (a) internal abilities, thoughts, and feelings, (b) being unique and expressing the self, (c) realizing internal attributes and promoting one's own goals, and (d) being direct in communication. An interdependent self-construal is defined as a "flexible, variable" self that emphasizes (a) external, public features such as statuses, roles, and relationships, (b) belonging and fitting in, (c) occupying one's proper place and engaging in appropriate action, and (d) being indirect in communication and "reading others' minds" (Singelis 1994, p. 581). The focus then is on the degree to which individuals see themselves as separate or connected with others (Markus and Kitayama 1991). As Singelis (1994, p. 582) summarizes, collectivist cultures encourage development of cognitions that refer to groups as collective, whereas individualist cultures nurture cognitions that refer to the individual's traits and states. These constructs have been used frequently in consumer research (e.g., Escalas and Bettman 2005; Ferraro, Bettman, and Chatrand 2009; Zhang and Khare 2009).

Description: The combined factors are labeled the self-construal scale (SCS). The measures of interdependent and independent self-construals consist of 12 items for each construct. Respondents were asked to indicate their agreement with the items in a 7-point Likert scale format (1 = *strongly disagree*; 7 = *strongly agree*). Item scores are averaged to represent scores for the measures of interdependent and independent self-construals.

Development: Forty-five items designed to be appropriate for normal student experiences were developed from a review of prior related measures and by the author. Multiple factor analysis results and the interpretation of factor loadings were used to select the final scale items. Items were selected if loadings from tests of varimax and oblique two-factor solutions were below 0.35 and/or loaded equally on the two factors (Singelis 1994, p. 584). The coefficient alpha estimates of internal consistency reliability for the interdependent and independent self-construal measures were 0.73 and 0.69 for the Sample 1 set of responses, respectively. The corresponding estimates for Sample 2 were 0.74 and 0.70. The correlations between the two scales were –0.04 for Sample 1 and 0.16 for Sample 2.

Samples: Sample 1 consisted of 364 undergraduate students from the University of Hawaii (57% female). Sample 2 consisted of 160 students from the same university.

Validity: Confirmatory factor analysis was used to confirm the two-factor model structure. Evidence of acceptable fit was presented for a two-factor almost orthogonal structure. As explained briefly below, a series of mean scores between ethnic groups offered evidence of validity. That is, group mean scores were consistent with Markus and Kitayama's (1991) characterizations of Asians as interdependent and North Americans as independent (Singelis 1994, p. 587). Other group comparisons provided support for the measures. Evidence from the minimal correlations between the two factors in both studies was offered as support for minimal concerns regarding acquiescence bias. Evidence of predictive validity was provided from a series of correlations with scenario analyses in which the scales predicted better than ethnic group alone. Other supportive results regarding predictions of situational attributions were also reported. For example, Asian Americans and those with higher interdependence scores tended to attribute more influence to situational effects than Caucasian Americans and those with lower independence (Singelis 1994, p. 587).

Scores: Each dimension was said to be normally distributed in both samples. In Sample 1, the means (and standard deviations) for the independent and interdependent dimensions were 4.68 (0.73) and 4.79 (0.76), respectively. For Sample 2, the corresponding estimates were 4.83 (0.75) and 4.84 (0.80). In both samples, Asian Americans were more interdependent than Caucasian Americans. The reverse pattern of means occurred for the independence measure of self-construal. Other mean scores across ethnic groups are reported as well.

Source: Singelis, Theodore (1994), "The Measurement of Independent and Interdependent Self-Construals," *Personality and Social Psychology Bulletin,* 20 (May), 580–91.

References: Escalas, Jennifer Edson and James R. Bettman (2005), "Self Construal, Reference Groups, and Brand Meaning," *Journal of Consumer Research*, 32 (3), 378–89.

Ferraro, Rosellina, James R. Bettman, and Tanya L. Chartrand (2009), "The Power of Strangers: The Effect of Incidental Consumer Brand Encounters on Brand Choice," *Journal of Consumer Research*, 35 (5), 729–41.

Markus, H. R. and S. Kitayama (1991), "Culture and the Self: Implications for Cognition, Emotion, and Motivation," *Psychological Review,* 98, 224–53.

Zhang, Yinlong and Adwait Khare (2009), "The Impact of Accessible Identities on the Evaluation of Global Versus Local Products," *Journal of Consumer Research*, 36 (3), 524–37.

Independent and Interdependent Self-Construals

(Singelis 1994)

Interdependent

1. I have respect for the authority figures with whom I interact.

2. It is important for me to maintain harmony within my group.

3. My happiness depends on the happiness of those around me.

4. I would offer my seat in a bus to my professor.

5. I respect people who are modest about themselves.

6. I will sacrifice my self-interest for the benefit of the group I am in.

7. I often have the feeling that my relationships with others are more important than my own accomplishments.

8. I should take into consideration my parents' advice when making education/career plans.

9. It is important for me to respect decisions made by the group.

10. I will stay in a group if they need me, even when I'm not happy with the group.

11. If my brother or sister fails, I feel responsible.

12. Even when I strongly disagree with group members, I avoid an argument.

Independent

1. I'd rather say "no" directly than risk being misunderstood.

2. Speaking up during class is not a problem for me.

3. Having a lively imagination is important to me.

4. I am comfortable being singled out for praise or rewards.

5. I am the same person at home that I am at school.

6. Being able to take care of myself is a primary concern for me.

7. I act the same way no matter who I am with.

8. I feel comfortable using someone's first name soon after I meet them, even when they are much older than I am.

9. I prefer to be direct and forthright when dealing with people I've just met.

10. I enjoy being unique and different from others in many respects.

11. My personal identity, independent of others, is very important to me.

12. I value being in good health above everything.

Notes: Respondents were asked to indicate their agreement with the items in a 7-point Likert scale format (1 = *strongly disagree*; 7 = *strongly agree*).

Horizontal and Vertical Individualism and Collectivism

(Singelis et al. 1995; Triandis and Gelfand 1998)

Construct: The concepts of individualism and collectivism are extended to incorporate the premise that both individualism and collectivism can be horizontal (emphasizing equality) or vertical (emphasizing hierarchy) (Triandis and Gelfand 1998, p. 118). Four constructs are then defined: horizontal individualism (HI), vertical individualism (VI), horizontal collectivism (HC), and vertical collectivism (VC). As Triandis (1996, p. 411) notes, in all cultures, individuals are capable of using all four patterns in responding.

Description: There are various versions of the measures of individualism and collectivism, originally stemming from Singelis et al. (1995). Their measure included 32 items with 8 items each for HI, VI, HC, and VC (pp. 225–56). Triandis and Gelfand (1998, p. 120) offered a different version and also used portions of the Singelis et al. (1995) scale. Further, Sividas, Bruvold, and Nelson (2008) provide a 14-item reduced form as indicated below. (Other items are included in the references cited below.) Thirty items are used as described by Singelis et al. (1995, pp. 255–56). Twenty-seven items developed by Singelis et al. (1995) are employed in Study 4 by Triandis and Gelfand (1998). The allocation of the 27 items across the four constructs is as follows: HI, 5 items; VI, 8 items; HC, 8 items; and VC, 6 items. Items were answered on 9-point scales, where 1 = *never* or *definitely no* and 9 = *always* or *definitely yes* (Singelis et al. 1995, p. 250).

Development: Given the number of different versions of the measures, we briefly report some of the evidence from Triandis and Gelfand (1998), although some of the development work and conceptual underpinnings for these measures of horizontal and vertical individualism and collectivism are described in Singelis et al. (1995) and Triandis (1996). Triandis and Gelfand (1998) report beginning with 27 items (Singelis et al. 1995). Factor analysis of the student data in Study 1 ($n = 326$) was used to select 16 items. Singelis et al. (1995) reported reliabilities for eight-item versions of the four scales as follows: HI, 0.67; VI, 0.74; HC, 0.74; and VC, 0.68.

Samples: For Study 1, 326 South Korean students participated. In Study 2 and Study 3, 127 undergraduates participated. In Study 4, 90 undergraduates from a psychology subject pool participated.

Validity: In Study 2, the measures were combined with scenario-based versions of the four concepts in multitrait-multimethod matrices. Evidence of convergent validity was offered for HC, VI, and VC (Triandis and Gelfand 1998, p. 121). Evidence of divergent validity was offered as well. For example, and considering the individualism constructs, differentiation occurred by the horizontal and vertical aspects. In Study 3, the four constructs were related, and generally as predicted, to measures of self-reliance, interdependence and sociability, family integrity, competition, and hedonism. In Study 4, the four measures were related to measures developed by others. For the 27 items, the reliabilities were HI, 0.81; VI, 0.82; HC, 0.80; and VC, 0.73. Also, from Study 4, the items developed by Singelis et al. (1995) converged with similar measures developed by other researchers, particularly for the horizontal aspects of the constructs. VC was captured by some of the other constructs; VI, which stresses competition, is not measured by any of the scales developed by other researchers (Triandis and Gelfand 1998, p. 125).

Scores: Means and standard deviations were not reported by Triandis and Gelfand (1998). Mean scores were used by the authors, however, to categorize individuals into groups in Study 3.

Source:	Triandis, Harry C. and Michele J. Gelfand (1998), "Converging Measurement of Horizontal and Vertical Individualism and Collectivism," *Journal of Personality and Social Psychology,* 74 (1), 118–28.
References:	Singelis, Theodore M., Harry C. Triandis, Dharm P. S. Bhawuk, and Michele J. Gelfand (1995), "Horizontal and Vertical Dimensions of Individualism and Collectivism: A Theoretical and Measurement Refinement," *Cross-Cultural Research,* 29 (August), 240–75.
	Sivadas, Eugene, Norman T. Bruvold, and Michelle R. Nelson (2008), "A reduced version of the horizontal and vertical individualism and collectivism scale: A four-country assessment," *Journal of Business Research*, 61, 201–10.
	Triandis, Harry C. (1996), "The Psychological Measurement of Cultural Syndromes," *American Psychologist,* 51 (April), 407–15.

Horizontal and Vertical Individualism and Collectivism

(Singelis et al. 1995; Triandis and Gelfand 1998)

Individualism

Horizontal (HI)

1. I often do "my own thing."[a,b]

2. One should live one's life independently of others.

3. I like my privacy.

4. I prefer to be direct and forthright when discussing with people.

5. I am a unique individual.[a]

6. What happens to me is my own doing.

7. When I succeed, it is usually because of my abilities.

8. I enjoy being unique and different from others in many ways.[a]

Vertical (VI)

1. It annoys me when other people perform better than I do.

2. Competition is the law of nature.[a,b]

3. When another person does better than I do, I get tense and aroused.[b]

4. Without competition, it is not possible to have a good society.[a]

5. Winning is everything.[b]

6. It is important that I do my job better than others.[b]

7. I enjoy working in situations involving competition with others.[a]

8. Some people emphasize winning; I'm not one of them. (reverse coded)

Horizontal and Vertical Individualism and Collectivism

(Singelis et al. 1995; Triandis and Gelfand 1998)

Collectivism

Horizontal (HC)

1. The well-being of my coworkers is important to me.[a,b]

2. If a coworker gets a prize, I would feel proud.[a,b]

3. If a relative were in financial difficulty, I would help within my means.

4. It is important to maintain harmony within my group.

5. I like sharing little things with my neighbors.

6. I feel good when I cooperate with others.[a,b]

7. My happiness depends very much on the happiness of those around me.[a]

8. To me, pleasure is spending time with others.[b]

Vertical (VC)

1. I would sacrifice an activity that I enjoy very much if my family did not approve of it.[a]

2. I would do what would please my family, even if I detested that activity.[a]

3. Before taking a major trip, I consult with most members of my family and many friends.

4. I usually sacrifice my self-interest for the benefit of the group.[a]

5. Children should be taught to place duty before pleasure.

6. I hate to disagree with others in my group.

7. We should keep our aging parents with us at home.

8. Children should feel honored if their parents receive a distinguished award.[a]

Note: Items were answered on 9-point scales, where 1 = *never* or *definitely no* and 9 = *always* or *definitely yes*. [a] indicates an item that is also in the Sivadas et al. (2008) reduced version. [b] indicates that the item is in common with Triandis and Gelfand (1998).

Self-Concept Clarity: SCC

(Campbell et al. 1996)

Construct: Self-concept clarity (SCC) is defined as the "extent to which the contents of an individual's self-concept (e.g., perceived personal attributes) are clearly and confidently defined, internally consistent, and temporally stable" (Campbell et al. 1996, p. 141). SCC is considered related to, yet distinct from, aspects of self-identity (i.e., achievement, status, self-esteem). SCC is a perceptual, belief-based variable. As such, these beliefs may not necessarily be accurate relative to one's behavior.

Description: The SCC scale has 12 items scored on 5-point Likert-type scales ranging from *strongly disagree* to *strongly agree*. Item scores are summed to form an SCC scale score that ranges from 12 to 60. The scale represents a single factor and can be considered unidimensional.

Development: Three studies, encompassing four large samples and three international subsamples, were conducted to derive the final form of the SCC scale and examine dimensionality, reliability, and validity. A pool of 40 items was culled from other sources and/or generated by the authors. Twenty of these items were then selected based on initial internal consistency and item redundancy estimates. Then, 12 items that loaded most highly on a single factor were retained (using three samples in Study 1). Both principal components and maximum likelihood factor analyses were used to assess dimensionality. Numerous estimates of reliability and validity followed across two more studies.

Samples: In Study 1, three samples of undergraduate students were used: $n = 471$, $n = 608$, and $n = 465$. A subset of $n = 155$ of the first sample was used in Study 2. In Study 3, samples of $n = 80$, $n = 196$, and $n = 100$ Japanese students from the University of British Columbia or from two Japanese universities were compared to samples of $n = 112$, $n = 90$, and $n = 82$ Canadian students at the University of British Columbia.

Validity: Across the three samples of Study 1, coefficient alpha estimates of internal consistency were 0.86, 0.86, and 0.85 for the final 12-item SCC scale. Inter-item correlations ranged from 0.10 to 0.58, and item-to-total correlations ranged from 0.35 to 0.66 (on average) across the three samples. Test-retest reliability correlations over 4- and 5-month intervals for subsamples of Sample 1 and Sample 3 (i.e., $n = 155$ and $n = 61$) were 0.79 and 0.70, respectively. Factor analyses (both principal components and maximum likelihood) showed evidence of a single dimension underlying the 12 items. Numerous correlations with related variables showed evidence of discriminant and nomological validity for the SCC scale. For example, across the three samples of Study 1, the SCC scale showed correlations of 0.67, 0.62, and, 0.60 with a measure of self-esteem. The SCC showed correlations of –0.51, –0.50, and –0.49 with a measure of negative affectivity. Significant nomological correlations were also found between the SCC scale and measures of self-consciousness, extroversion, and openness. The scale did show modest correlations to social desirability (0.32–0.33). Study 2 showed a similar pattern of results in terms of the validity of the SCC scale. In Study 3, hypothesized mean-level differences between Canadian (Western Culture) and Japanese (Eastern Culture) students were found. As predicted, the mean SCC scale scores for the Canadian students were higher than the mean SCC scale scores for the Japanese students for all three samples of Study 3 ($p < 0.01$). In sum, across samples and studies, the SCC scale showed consistent evidence of reliability and validity.

Scores: Several mean scores were reported. For the overall SCC scale, Study 1 means (std. devs.) were 42.12 (8.19), 39.68 (8.16), and 38.86 (8.06). Means were also reported for males and females separately (see Table 2, p. 145 of Campbell et al. 1996). Means for the Canadian subsamples of Study 3 were 41.72, 39.30, and 38.02. Means for the Japanese subsamples of Study 3 were 34.41, 35.01, and 34.35. Individual item means (std. devs.) are offered in Table 1 of Campbell et al. (1996, p. 145).

Source: Campbell, Jennifer, Paul D. Trapnell, Steven J. Heine, Liana M. Katz, Loraine F. Lavallee, and Darrin R. Lehman (1996), "Self-Concept Clarity: Measurement, Personality Correlates, and Cultural Boundaries," *Journal of Personality and Social Psychology,* 70 (1), 141–56.

Self-Concept Clarity: SCC

(Campbell et al. 1996)

1. My beliefs about myself often conflict with one another.

2. On one day I might have one opinion of myself and on another day I might have a different opinion.

3. I spend a lot of time wondering about what kind of person I really am.

4. Sometimes I feel that I am not really the person that I appear to be.

5. When I think about the kind of person I have been in the past, I'm not sure what I was really like.

6. I seldom experience conflict between the different aspects of my personality.

7. Sometimes I think I know other people better than I know myself.

8. My beliefs about myself seem to change very frequently.

9. If I were asked to describe my personality, my description might end up being different from one day to another day.

10. Even if I wanted to, I don't think I could tell someone what I'm really like.

11. In general, I have a clear sense of who I am and what I am.

12. It is often hard for me to make up my mind about things because I don't really know what I want.

Notes: Items scored on 5-point Likert-type scales ranging from *strongly disagree* to *strongly agree.*

Items 1 through 5, 7 through 10, and 12 require reverse scoring.

Self-Concepts, Person Concepts, and Product Concepts

(Malhotra 1981)

Construct: Measures are derived for evaluating self-concepts, person concepts, and product concepts. The specific concepts chosen for study were automobiles and actors. (The objective of the research on which the measures are based was to describe the construction of the scales rather than the development of a generalized scale for measuring self-concepts, person concepts, and product concepts [Malhotra 1981, p. 456].) The measure is said to be applicable for coordinating the image of a product with the self-concept(s) of a target market and image of a spokesperson that might be used in testimonial for that product.

Description: The final scale includes 15 semantic differential items anchoring seven-place response formats. The scale is multidimensional and, hence, summed scores are not appropriate. Item scores can be summed within dimensions.

Development: A beginning pool of 70 items was developed from pretest data generated from free associations, repertory grid procedures, and the studies of Osgood, Suci, and Tannenbaum (1957). A panel of four judges was used to reduce the item pool to 27. These items included at least two semantic differential scales for eight factors: evaluative, potency, activity, stability, tautness, novelty, receptivity, and aggressiveness. Based on analysis of the two student surveys described below, the 15-item final scale was developed as follows. First, a series of factor analyses (i.e., principal factoring with iterations followed by varimax rotation) was conducted and examined for stability, loading patterns, uniqueness, and explained variance. Second, hierarchical clustering procedures supported the factor analysis results. As summarized by Malhotra (1981, p, 460), the 15 items were selected using the following criteria: high loadings on the factor they represent; high correlations with other items representing the same factor or cluster; low correlations with items representing other factors or clusters; high stability across self-concepts, auto brands, or actors; uniqueness in the cluster solutions; and high coefficients of multiple correlation with multidimensional space coordinates. Six of the factors are represented by two items each. The tautness and aggressiveness factors are not reflected in the final scale.

Samples: Two surveys were used in the development of the measures. The first survey involved 167 student subjects for three self-concepts (i.e., "ideal," "actual," and "social") and nine brands of automobiles. The second survey involved 187 students (of which 135 had participated in the first survey) for the same three self-concepts and nine actors (i.e., "persons").

Validity: Test-retest estimates were obtained from 135 subjects over a 4-week delay for the ideal, actual, and social self ratings. All correlations were significant. Evidence of stability was also provided through individual level correlations. Coefficient alpha estimates for appropriate factor sub-scales ranged from 0.50 to 0.70 (with a single exception). Evidence provided by the expert panel judgments was cited as support for face validity. Evidence of convergent and discriminant validity was provided from a multitrait-multimethod analysis in which the actors and brands served as traits and the semantic differentials and similarity ratings served as methods. For example, validity coefficients for the autos and actors were. 0.38 and 0.49, respectively (Malhotra 1981, p. 463).

Scores: Neither overall nor item mean scores were reported.

Source: Malhotra, Naresh K. (1981), "A Scale to Measure Self-Concepts, Person Concepts, and Product Concepts," *Journal of Marketing Research,* 16, 456–64.

© 1981 by the American Marketing Association. Scale items taken from Table 3 (p. 462). Reprinted with permission.

Reference: Osgood, C. E., George J. Suci, and Percy M. Tannenbaum (1957), *Measurement of Meaning,* Urbana: University of Illinois Free Press.

Self-Concepts, Person Concepts, and Product Concepts

(Malhotra 1981)

Rugged	Delicate
Excitable	Calm
Uncomfortable	Comfortable
Dominating	Submissive
Thrifty	Indulgent
Pleasant	Unpleasant
Contemporary	Noncontemporary
Organized	Unorganized
Rational	Emotional
Youthful	Mature
Formal	Informal
Orthodox	Liberal
Complex	Simple
Colorless	Colorful
Modest	Vain

Note: Items scored on a 7-point semantic differential scale. Though the scale is considered multidimensional, items belonging to specific dimensions were not explicitly given, nor was the directionality of the items (i.e., the specification of reverse coding) stated by Malhotra (1981).

Vanity: Trait Aspects of Vanity

(Netemeyer, Burton, and Lichtenstein 1995)

Construct: "Vanity," as delineated by Netemeyer et al. (1995), has four trait aspects: (a) an excessive concern for physical appearance, (b) a positive (and perhaps inflated) view of one's physical appearance, (c) an excessive concern for personal achievements, and (d) a positive (and perhaps inflated) view of one's personal achievements.

Description: The vanity scales are viewed as four distinct dimensions. The excessive concern for physical appearance dimension is composed of five items, the positive (and perhaps inflated) view of one's physical appearance is composed of six items, and the excessive concern for personal achievements and the positive (and perhaps inflated) view of one's personal achievements dimensions are composed of five items each. All items are scored on 7-point Likert-type scales from *strongly disagree* to *strongly agree*. Item scores are summed within dimensions to form composite scores for each dimension.

Development: Via a review of the literature, formal definitions of the four vanity dimensions were formulated. Numerous items were generated by the authors or culled from various sources to represent the dimensions. Items were judged for representativeness by "experts." A total of 100 items were initially retained for numerous data collection and developmental procedures. Four studies were used to develop the scales, and three more studies were used in further validation procedures. Factor-analytic techniques and reliability analyses were used to assess dimensionality and internal consistency. Correlational and mean difference testing procedures were used to check validity.

Samples: As stated above, a total of seven samples was used in the development and validation of the four vanity dimensions. The first four samples were combinations of students and nonstudents *(n = 277, n = 145, n = 186, and n = 264)*. Three other samples were taken from a *Who's Who* directory *(n = 267)*, an NCAA Division I football team *(n = 27)*, and a fashion model agency *(n = 43 females)*.

Validity: Confirmatory factor analyses was used to assess the dimensionality and discriminant validity of the four vanity dimensions. Across samples (where the sample size was large enough), evidence of four distinct vanity dimensions was found. Across the first four samples, internal consistency estimates (i.e., coefficient alpha and composite reliability via LISREL) ranged from 0.80 to 0.92 across the four vanity dimensions. For the last three samples, estimates of internal consistency ranged from 0.77 to 0.92. Numerous estimates of nomological validity were offered, including significant correlations of the vanity dimensions with narcissism, grandiosity, status concern, materialism, the List of Values (i.e., LOV), clothing concern, dieting behavior, use of cosmetics, and others. Mean-level difference tests also showed evidence of known-group validity, as fashion models scored higher on the "physical" aspects of vanity than did other samples, and the *Who's Who* sample scored higher on the "achievement" aspects of vanity than did other samples.

Scores: Means and standard deviations for the summed composites of the vanity dimensions are offered in Netemeyer et al. (1995, p. 624). Across the seven samples, the mean (and standard deviation) for the concern for physical appearance dimension ranged from 21.32 (6.16) to 25.44 (6.08), the mean (and standard deviation) for the view of physical appearance dimension ranged from 20.60 (7.08) to 26.90 (6.49), the mean (and standard deviation) for the concern for personal achievement dimension ranged from 19.26 (6.81) to 23.14 (6.37), and the mean (and standard deviation) for the view of personal achievement dimension ranged from 20.96 (6.20) to 26.25 (4.68).

Source: Netemeyer, Richard G., Scot Burton, and Donald R. Lichtenstein (1995), "Trait Aspects of Vanity: Measurement and Relevance to Consumer Behavior," *Journal of Consumer Research*, 21, 612–26.

Vanity: Trait Aspects of Vanity

(Netemeyer, Burton, and Lichtenstein 1995)

Concern for Physical Appearance Items

1. The way I look is extremely important to me.

2. I am very concerned about my appearance.

3. I would feel embarrassed if I was around people and did not look my best.

4. Looking my best is worth the effort.

5. It is important that I always look good.

View of Physical Appearance Items

1. People notice how attractive I am.

2. My looks are very appealing to others.

3. People are envious of my good looks.

4. I am a very good-looking individual.

5. My body is sexually appealing.

6. I have the type of body that people want to look at.

Concern for Achievement Items

1. Professional achievements are an obsession with me.

2. I want others to look up to me for my accomplishments.

3. I am more concerned with professional success than most people I know.

4. Achieving greater success than my peers is important to me.

5. I want my achievements to be recognized by others.

View of Achievement Items

1. In a professional sense, I am a very successful person.

2. My achievements are highly regarded by others.

3. I am an accomplished person.

4. I am a good example of professional success.

5. Others wish they were as successful as me.

Note: Items scored on 7-point Likert-type scales from *strongly disagree* to *strongly agree*.

Scales Related to Consumer Compulsiveness and Impulsiveness

Compulsive Buying Index (CBI): An Expanded Measure

(Ridgway, Kukar-Kinney, and Monroe 2008)

Construct: Ridgway et al. (2008) define compulsive buying (CB) as "a tendency to be preoccupied with buying that is revealed through repetitive buying and a lack of impulse control over buying" (p. 622). This definition conceptualizes compulsive buying as a two-dimensional construct encompassing an obsessive-compulsive buying dimension and an impulsive buying dimension.

Description: The CBI (compulsive buying index) comprises six items covering the two dimensions noted above. Three items each form the obsessive-compulsive buying and the impulsive buying dimensions. Four of the items are scored on 7-point *strongly disagree* to *strongly agree* scales, and two items are scored on 7-point *never* to *very often* scales. Though conceptualized as a two-dimensional construct, scores on all scale items can be summed to create an overall CBI score ranging from 6 to 42.

Development: Development of the CBI followed recommended scaling procedures. Based on the two dimensions noted above and a thorough literature review examining several other measures of compulsive buying, the authors generated a pool of 121 potential CB items. Item judging by three consumer behavior researchers trimmed the pool to 15 items. Then, a sample of 352 undergraduate students responded to the 15 items and other measures in Study 1. Via factor and item analyses, the final six-item version of the scale was derived. Two more studies (Studies 2 and 3) were then conducted that further validated the psychometric properties (e.g., dimensionality, reliability, and the various forms of validity) of the CBI.

Samples: The Study 1 sample was composed of $n = 352$ undergraduate students; the Study 2 sample was composed of $n = 555$ university staff members; and the Study 3 sample was composed of $n = 309$ customers of an Internet women's clothing retailer.

Validity: Across studies, a two-factor model representing a three-item obsessive-compulsive buying dimension and a three-item impulsive buying dimension fit the date well. Correlations among these two factors were 0.77, 0.62, and 0.72 in Studies 1, 2, and 3, respectively. Coefficient alpha estimates for the overall six-item CBI scale were 0.84, 0.81, and 0.84. For the three-item obsessive-compulsive buying dimension, alpha was 0.75, 0.77, and 0.78; and for the three-item impulsive buying dimension, alpha was 0.80, 0.78, and 0.84.

Numerous estimates of validity were assessed in Studies 2 and 3. Study 2 showed that CBI was correlated with gender (i.e., women more likely to be compulsive buyers than men), age ($r = -0.17$), and education ($r = -0.11$). In terms of nomological validity, the overall six-item CBI was positively correlated with materialism ($r = 0.51$), depression ($r = 0.21$), anxiety ($r = 0.31$), and stress ($r = 0.26$). The overall six-item CBI was also positively correlated with measures of positive feelings of buying ($r = 0.59$), hiding purchases ($r = 0.59$), returning purchases ($r = 0.13$), frequency of buying ($r = 0.37$), and family arguments about spending ($r = 0.44$). The CBI scale showed discriminant validity from a general measure of obsessive-compulsive disorder ($r = 0.29$) and convergent validity with Faber and O'Guinn's (1992) CB screener ($r = 0.62$). Further, the six-item CBI scale, on average, showed stronger predictive validity across an array of measures (see Table 5, p. 632) over that of Faber and O'Guinn's CB screener. The CBI scale did show some evidence of social desirability bias though ($r = -0.21$).

Study 3 showed that the six-item CBI scale was positively correlated with actual purchase data (correlations ranging from $r = 0.18$ to $r = 0.27$). Further, a CBI scale cutoff score of 25 (established in Study 2) successfully discriminated between consumers classified as potential compulsive buyers (CBI score of 25 to 42) and those not being potential compulsive buyers (CBI score of 6 to 24). Based on this cutoff, about 9% of Study 2 respondents and 16% of Study 3 respondents were classified as compulsive buyers. Note that the Study 3 sample was 98.5% female, a group with higher CBI scores in general.

Scores: For Study 2, the average six-item CBI scale score was 15.39 ($SD = 6.44$). For Study 3, the average six-item CBI scale score was 17.13 ($SD = 7.27$).

Source: Ridgway, Nancy, Monica Kukar-Kinney, and Kent B. Monroe (2008), "An Expanded Conceptualization and Measure of Compulsive Buying," *Journal of Consumer Research*, 35 (December), 622–39.

Reference: Faber, Ronald J. and Thomas C. O'Guinn (1992), "A Clinical Screener for Compulsive Buying," *Journal of Consumer Research*, 19 (December), 459–69.

Compulsive Buying Index (CBI): An Expanded Measure

(Ridgway, Kukar-Kinney, and Monroe 2008)

1. My closet has unopened shopping bags in it.

2. Others might consider me a shopaholic.

3. Much of my life centers around buying things.

4. I buy things I don't need.

5. I buy things I did not plan to buy.

6. I consider myself an impulse purchaser.

Notes: Items 1 to 3 compose the obsessive-compulsive buying dimension; items 4 to 6 compose the impulsive buying dimension. Items 1, 2, 3, and 6 are scored on *strongly disagree* to *strongly agree* scales; items 4 and 5 are scored on *never* to *very often* scales.

Compulsive Consumption: A Diagnostic Tool/Clinical Screener for Classifying Compulsive Consumers

(Faber and O'Guinn 1989, 1992)

Construct: This abnormal form of consumer behavior is typified by chronic buying episodes of a somewhat stereotyped fashion in which the consumer feels unable to stop or significantly moderate the behavior(s). Although compulsive buying may produce some short-term positive feelings for the individual, it ultimately is disruptive to normal life functioning and produces significant negative consequences (Faber and O'Guinn 1989). As such, compulsive buying shares similarities with other types of compulsive and addictive behaviors. Faber and O'Guinn (1989) and Faber and O'Guinn (1992, p. 459) formally define compulsive buying as "a chronic, repetitive purchasing that becomes a primary response to negative events or feelings."

Description: The measure represents a screening instrument designed to identify compulsive consumers. The initial instrument was composed of the unweighted sum of scores of 14 items (Faber and O'Guinn 1989). Each item was operationalized using 5-point Likert-type scales. The range of the measure is 14 to 76. Lower scores reflect greater agreement or compulsivity. The refined instrument is composed of seven items scored on 5-point scales, and a weighted algorithm-based score is derived as a "screener" to classify individuals as potential compulsive buyers (Faber and O'Guinn 1992).

Development: Development of the initial scale began with a set of 32 variables that assessed psychological, motivational, and behavioral aspects of buying. These items were developed from the literature on other compulsive behaviors, the authors' previous experiences, and a pilot test with a small group of compulsive consumers (Faber and O'Guinn 1989), Those 14 items discriminating ($p < 0.10$) between two groups (i.e., the two samples described below) were selected for inclusion in the measure. Using a general population sample, factor analysis of these 14 items revealed only one viable factor. The refined scale employed the items from the initial scale as well as other items that reflected the construct definition. A total of 29 items were selected as potential candidates for the screening instrument. These items were carefully generated from both the existing literature and judgments of therapists and trained observers. Using samples of both self-identified compulsive buyers and respondents from the general population, the final form of the screener was derived. Numerous procedures consistent with scale development as a "classification" tool were employed, including logistic regression, test-retest reliability (via a c coefficient), internal consistency, and principal component analyses. Several validity tests were also performed that assessed the degree to which the screener "correctly" classified compulsive buyers, as well as mean-level difference tests on various psychological variables between compulsive buyers and "general consumers."

Samples: The samples for the initial instrument (Faber and O'Guinn 1989) and the refined screener (Faber and O'Guinn 1992) employed many of the same respondents. As such, these samples will be described (briefly) in tandem. A sample of 388 respondents to a mail survey specifically designed to contact potential "compulsive buyers" was obtained. These individuals were in contact (but not in therapy) with a self-help group for problem consumers. A comparison sample of 292 individuals was obtained after three mailings to a sample of 800 drawn from three Illinois cities of varying sizes. From these samples, smaller samples ($n = 22$) based on classification results from the refined screener as well as randomly generated samples from the general population and self-identified compulsive buyers were compared. Samples of 53 and 54 responding either to a "compulsive buyer ad" or "control ad" (both were newspaper ads) were used to assess the classification rate of the refined screener (Faber and O'Guinn 1992).

Validity: The coefficient alpha estimate of internal consistency reliability for the 14-item initial scale (Faber and O'Guinn 1989) was 0.83. The refined seven-item version showed a coefficient alpha estimate of 0.95 (Faber and O'Guinn 1992).

In Faber and O'Guinn (1989), the distributions of the screening measure were examined for both groups. The intersections of the distributions were examined to determine a threshold score (i.e., two standard deviations below the mean for the general distribution) of 42, which also was the modal value for the compulsive sample. Approximately 6% of the general sample was identified as compulsives. Tests of mean differences were made between the 16 compulsives in the general sample and 16 individuals drawn from the compulsive group. These comparisons revealed that the screener measure is capable of identifying compulsives in the general population similar to individuals in the compulsive group but quite different from other members of the general population. Differences were examined for measures of self-esteem, payments for past purchases, general compulsivity, envy, and fantasy.

In Faber and O'Guinn (1992), mean-level difference tests showed that compulsive buyers exhibited lower levels of self-esteem, higher levels of obsessive-compulsiveness, high levels of fantasy, higher levels of remorse (guilt), and higher levels of materialism than did a "general consumer" sample. In addition, using rigorous criteria, as a clinical screening instrument, the refined scale was able to correctly classify about 88% of respondents as "compulsive buyers" or "noncompulsive buyers" in the samples used.

Scores: Mean scores are reported for both a "comparison strata" and a "compulsive strata" in Faber and O'Guinn (1989). The mean scores (and standard deviations) were 37.44 (10.74) and 57.33 (7.51) for the compulsive and comparison strata, respectively. The corresponding modal values were 42 and 58.

Sources: Faber, Ronald J. and Thomas C. O'Guinn (1989), "Classifying Compulsive Consumers: Advances in the Development of a Diagnostic Tool," in *Advances in Consumer Research,* Vol. 16, ed. Thomas K. Srull, Provo, UT: Association for Consumer Research, pp. 738–44.

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Faber, Ronald J. and Thomas C. O'Guinn (1992), "A Clinical Screener for Compulsive Buying," *Journal of Consumer Research,* 19, 459–69. Scale items taken from Appendix (p. 468).

Other evidence: In two studies, Faber et al. (1995) found evidence for a "comorbid" link between compulsive buying and binge eating as 24 compulsive buyers (as classified Faber and O'Guinn's, 1992, clinical screener) showed higher levels of binge eating, substance abuse, and impulse control disorders than did a matched noncompulsive buying sample *(n* = 24). In another study, Rindfleisch, Burroughs, and Denton (1997) report a coefficient alpha estimate for the seven-item compulsive buying clinical screener of 0.80. They report correlations of 0.25, –0.26, 0.24, and 0.36 with family structure, family resources, family stressors, and material values, respectively, with the compulsive buying screener. They also report results from moderation and mediation analyses showing that compulsive buying is affected by family resources, family structure, and family stressors.

Other sources: Faber, Ronald J., Gary Christenson, Martina De Zwaan, and James Mitchell (1995), "Two Forms of Compulsive Consumption: Comorbidity of Compulsive Buying and Binge Eating," *Journal of Consumer Research,* 22, 296–304.

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

Reference: O'Guinn, Thomas C. and Ronald R. Faber (1989), "Compulsive Buying: A Phenomenological Exploration," *Journal of Consumer Research,* 16, 147–57.

Compulsive Consumption:
A Diagnostic Tool/Clinical Screener for Classifying Compulsive Consumers

(Faber and O'Guinn 1989, 1992)

1. Bought things even though I couldn't afford them.

2. Felt others would be horrified if they knew of my spending habits.

3. If I have any money left at the end of the pay period, I just have to spend it.

4. Made only the minimum payments on my credit cards.

5. Bought myself something in order to make myself feel better.

6. Wrote a check when I knew I didn't have enough money in the bank to cover it.

7. Just wanted to buy things and didn't care what I bought.

8. I often buy things simply because they are on sale.

9. Felt anxious or nervous on days I didn't go shopping.

10. Shopping is fun.

11. Felt depressed after shopping.

12. Bought something and when I got home I wasn't sure why I had bought it.

13. Went on a buying binge and wasn't able to stop.

14. 1 really believe that having more money would solve most of my problems.

Notes: The items above are as they originally appeared in Faber and O'Guinn (1989). These 14 items composed the initial instrument. Items that compose the 1992 Faber and O'Guinn clinical screener (i.e., the refined instrument) are items 1 through 6, and 9. Items 1, 2, 4, 5, 6, and 9 are scored on *very often* to *never* scales, and item 3 is scored on a *strongly agree* to *strongly disagree* scale. These .tern scores can be summed to form an overall scale score, or they can be used to construct the Faber and O'Guinn weighted algorithm for classification purposes, which is as follows:

$$-9.69 + (Q3 \times 0.33) + (Q2 \times 0.34) + (Q1 \times 0.50) + (Q6 \times 0.47) + (Q5 \times 0.33) + (Q9 \times 0.38) + (Q4 \times 0.31)$$

If a score on the above algorithm is ≤ -1.34, a subject is classified as a compulsive buyer.

Hyperopia

(Haws and Poynor 2008)

Construct: Hyperopia refers to an overall aversion to luxury. While past research tended to refer to hyperopia as "excessive self-control" (Kivetz and Simonson 2002), Haws and Poynor demonstrate hyperopia's distinction from extreme levels of self-control. In doing so, they emphasize three key aspects in order to fully define hyperopia. First, hyperopia lowers a consumer's present likelihood of indulging. Second, hyperopic individuals acknowledge their difficulty with indulgence and therefore should be capable of reporting these tendencies. Third, the hyperopic tendency to forgo indulgence can lead to retrospective regret and a sense of missing out on life (Kivetz and Keinan 2006). Consumers expressing high levels of hyperopia have trouble allowing themselves to enjoy the pleasures that life has to offer.

Description: The scale consists of six statements that are all assessed on 7-point scales labeled *strongly disagree* to *strongly agree.* Item scores are averaged to form an overall score, and the range of the scale is 1 to 7. All items are worded such that greater agreement results in a larger total score (i.e., a greater propensity to be hyperopic).

Development: An initial pool of 11 items was generated based on the concept definition and insights from previous research (Kivetz and Keinan 2006; Kivetz and Simonson 2002). Using responses from 109 undergraduate students, six items were retained that all had a factor loading of at least 0.65 on the single factor. Exploratory and confirmatory factor analyses examined the properties of hyperopia and confirmed its unidimensional structure.

Samples: Sample 1 ($n = 109$), Sample 2a ($n = 164$; $n = 35$ for test-retest reliability check), and Sample 2b ($n = 280$) included undergraduate student participants. Sample 2c ($n = 41$) included students from a professional MBA program.

Validity: Coefficient alpha was reported in some studies, including Sample 1 (0.86) and Sample 2a (0.90). Test-retest ability was assessed with a subsample of Sample 2a participants and was 0.80 with a 2-week time period between measurements. Hyperopia was discriminated from self-control in all studies. Further discriminant validity tests distinguished hyperopia from frugality, materialism, tightwad propensity, conscientiousness, and impulsive buying, while also providing evidence of nomological validity through demonstrating proposed relationships between hyperopia and these constructs.

Scores: Sample 2c showed that neither gender nor age predicted hyperopia. No means are reported.

Source: Haws, Kelly L. and Cait Poynor (2008), "Seize the Day! Encouraging Indulgence for the Hyperopic Consumer," *Journal of Consumer Research,* 35 (December), 680–91.

References: Kivetz, Ran and Anat Keinan (2006), "Repenting Hyperopia: An Analysis of Self-Control Regrets," *Journal of Consumer Research,* 33 (September), 273–82.

Kivetz, Ran and Itamar Simonson (2002), "Self-Control for the Righteous: Toward a Theory of Precommitment to Indulgence," *Journal of Consumer Research,* 29 (September), 199–217.

Hyperopia

(Haws and Poynor 2008)

1. I often fail to enjoy attractive opportunities.

2. It's hard for me to make myself indulge.

3. I regret missed opportunities to enjoy rich experiences in the past.

4. I have difficulty pampering myself.

5. "Seizing the day" is difficult for me.

6. I rarely enjoy the luxuries life has to offer.

Note: 1 to 7 *strongly disagree* to *strongly agree* scale, no reverse coding.

Impulsiveness: Buying Impulsiveness Scale

(Rook and Fisher 1995)

Construct: Rook and Fisher (1995, p. 306) define buying impulsiveness as "a consumer's tendency to buy spontaneously, unreflectively, immediately, and kinetically." High impulse buyers are more likely to have more "open" shopping lists, are more likely to be receptive to sudden and unexpected buying ideas, and are more apt to experience spontaneous buying stimuli. They tend to be motivated by immediate gratification and are more likely to act on a whim in purchase situations. Also, the high impulse buyer is likely to be prompted by the physical proximity of a desired product and dominated by an emotional attraction to it. In extreme cases, the behavior may by totally stimulus driven—translating into and yielding to a physical response or consumer "spasm" (Rook and Fisher 1995, p. 306).

Description: The buying impulsiveness scale is composed of nine items scored on 5-point Likert-type scales from *strongly disagree to strongly agree.* Item scores are summed to form an overall index score than can range from 9 to 45.

Development: A total of 35 items were first generated to reflect the constructs definition. These items were pretested with a sample of 281 students and tested again with a sample 212 undergraduate students. Via numerous recommended scaling procedures, including exploratory and confirmatory factor analyses, reliability analyses, and other correlation-based tests, the final nine-item form of the scale was derived. Several validity checks via mean-level difference testing and correlations with the buying impulsiveness scale and other constructs were performed.

Samples: Three samples were reported on in Rook and Fisher (1995). Two samples were composed of 281 and 212 undergraduate students. A third sample was composed of 104 respondents from a field study conducted in a mall record store.

Validity: Confirmatory factor analytic fit indices showed evidence of unidimensionality for the nine-item scale with one of the undergraduate samples ($n = 212$). Factor loadings were significant and ranged from 0.60 to 0.81 across items, and the coefficient alpha estimate of internal consistency was reported to be 0.88. Hypothesized relationships between "normative evaluation" and the buying impulsiveness scale were also supported. The mall record store sample also showed evidence of a unidimensional scale via confirmatory factor analyses, as well as adequate internal consistency (alpha = 0.82). Correlations of the buying impulsiveness scale with measures of normative evaluation and actual impulse-related buying behavior were 0.10, 0.21, 0.53, and 0.21. With the exception of the 0.10 correlation, all correlations were significant. Numerous other mean-level difference tests also support the validity of the scale.

Scores: Throughout the Rook and Fisher (1995) article, various mean scores on splits of their scale or moderating variable measures were reported. In addition, overall mean scores were reported. For the $n = 212$ sample, the mean (std. dev.) was 25.1 (7.4); and for the $n = 104$ sample, the mean (std. dev.) was 21.5 (7.1).

Source: Rook, Dennis and Robert J. Fisher (1995), "Normative Influences on Impulsive Buying Behavior," *Journal of Consumer Research,* 22, 305–13.

Impulsiveness: Buying Impulsiveness Scale

(Rook and Fisher 1995)

1. I often buy things spontaneously.

2. "Just do it" describes the way I buy things.

3. I often buy things without thinking.

4. "I see it, I buy it" describes me.

5. "Buy now, think about it later" describes me.

6. Sometimes I feel like buying things on the spur of the moment.

7. I buy things according to how I feel at the moment.

8. I carefully plan most of my purchases.

9. Sometimes I am a bit reckless about what I buy.

Notes: Item 8 requires reverse scoring. Items scored on 5-point Likert-type scales from *strongly disagree* to *strongly agree*.

Impulsiveness: Consumer Impulsiveness Scale: CIS

(Puri 1996)

Construct: Puri (1996) offers the consumer impulsiveness scale (CIS) to "measure people's chronic values toward impulsiveness" (p. 89). Impulsive behavior results in the choice of an option that offers immediate hedonic benefits but serious long-term consequences. Consistent with existing literature (e.g., Rook 1987), impulsive behavior is viewed as "consumer preference for a smaller, immediate reward over a much larger, later reward, even though they would generally prefer the larger reward" (p. 88). Puri proposes a two-factor framework where the accessibility of the costs versus the benefits of impulsiveness—determined by chronic values or situational characteristics—will influence if consumers behave impulsively or in a controlled manner.

Description: The CIS is a two-factor measure composed of a "prudence" subscale and a "hedonic" subscale. The prudence subscale has seven items, and the hedonic subscale has five. All items are represented by a single adjective where respondents indicate the degree to which each adjective describes them on 7-point scales. Item scores are summed within subscales to form two independent, yet related, indices of prudence and hedonism.

Development: Twenty-five adjectives were originally judged by two doctoral students and one faculty member. Via this procedure, 13 ambiguous items were deleted. The remaining 12 items that compose the final versions of the prudence and hedonic subscales were then subjected to exploratory and confirmatory factor analyses, reliability analyses, and numerous validity checks with three samples. Three experiments were then conducted that supported Puri's two-factor framework of consumer impulsiveness, as well as the validity of the CIS subscales.

Samples: The three samples used in initial scale development were composed of $n = 93$ MBA students, $n = 90$ MBA and PhD students, and $n = 127$ respondents from India. The three experimental samples were $n = 60$ undergraduate students, $n = 134$ undergraduate students, and $n = 73$ MBA and PhD students.

Validity: Via exploratory and then confirmatory factor analyses, it was found that a two-factor model, representing the prudence and hedonic subdimensions, fit the data well. Item-to-factor loadings for these two subdimensions ranged from 0.53 to 0.82 within the respective subdimensions. Though the prudence and hedonic subdimensions are considered separate, a coefficient alpha estimate for all 12 items combined was reported to be 0.82 ($n = 93$ sample). Split-halves reliability was reported to be 0.83 for all 12 items ($n = 90$ sample). Evidence of discriminant validity was provided via correlations of the two subscales with Market Mavenism, a measure of Social Desirability, and a measure of Internal-External Locus of Control. These correlations were 0.15, 0.13, and –0.04, respectively, for the hedonic subscale; and 0.02, 0.11, and –0.08, respectively, for the prudence subscale ($p > 0.25$ for all correlations using the $n = 93$ sample). Convergent validity was assessed via a correlation of 0.50 between all 12 items of the CIS and a measure of future orientation and willpower. Numerous mean-level difference tests conducted with the three experimental samples also show support for the validity of the CIS.

Scores: Throughout the text and tables of the Puri (1996) article, mean scores are reported, primarily based on experimental results. It seems that these mean scores are the result of summing the item scores within each of the subdimensions of the CIS and then dividing by the number of scale items per dimension.

Source: Puri, Radhika (1996), "Measuring and Modifying Consumer Impulsiveness: A Cost-Benefit Accessibility Framework," *Journal of Consumer Psychology,* 5 (2), 87–113.

© 1996 by Lawrence Erlbaum Associates, Inc. Scale items taken from Appendix A (p. 112). Reprinted with permission.

Reference: Rook, Dennis W. (1987), "The Buying Impulse," *Journal of Consumer Research,* 14, 189–98.

Impulsiveness: Consumer Impulsiveness Scale: CIS

(Puri 1996)

Read each of the following adjectives carefully and indicate how well they would describe you. Circle the number on the scale next to the adjective. Numbers near 1 indicate that the adjective would usually describe you, numbers near 4 indicate that it would sometimes describe you, and numbers near 7 indicate that it would seldom describe you.

	Usually would describe me			*Sometimes would describe me*			*Seldom would describe me*
1. impulsive	1	2	3	4	5	6	7
2. careless							
3. self-controlled							
4. extravagant							
5. farsighted							
6. responsible							
7. restrained							
8. easily tempered							
9. rational							
10. methodical							
11. enjoy spending							
12. a planner							

Notes: Items 3, 5, 6, 7, 9, 10, and 12 compose the "prudence" subscale. These items also require reverse scoring. Items 1, 2, 4, 8, and 11 compose the "hedonic" subscale. According to the author, respondents scoring above (below) the median on the reverse-scored prudence subscale are classified as prudents (hedonics). All others are classified as moderates (p. 112).

General Self-Control

(Tangney, Baumeister, and Boone 2004)

Construct: The self-control scale (SCS) is designed to capture differences in general self-control as expressed through control over thoughts, impulse control, emotional control, habit breaking, and performance regulation.

Description: The SCS scale consists of 36 items, although a brief self-control scale (BSCS) with 13 items is also offered. Items are scored on a 5-point scale where 1 = *not at all* and 5 = *very much*. Items are coded such that higher scores indicated greater ability to exercise self-control, and the scale features a large number of reverse-worded items. The items for both the SCS and BSCS scale are summed to form a single measure of self-control, with possible ranges from 36 to 180 and 13 to 65, respectively. Both scales are presented as one-factor models.

Development: Based on a review of previous research, an initial pool of 93 items was generated. Using a combination of empirical analysis with Study 1 data and conceptually based review, the set of items was reduced to 36. In addition, a 13-item brief self-control scale is suggested. The correlation between the 36-item SCS and the 13-item BSCS was 0.93 and 0.92 in Studies 1 and 2, respectively.

Samples: Two samples of undergraduate students were used in the scale development process. Study 1 involved 351 students and Study 2 included 255 different students, all of whom were from a large East Coast state university. From Study 2, 233 completed the SCS scale again approximately 3 weeks later to assess test-retest reliability.

Validity: Exploratory factor analysis suggested the potential for various factors, but since these factors were correlated, the scale is treated as unidimensional throughout. Coefficient alphas in Study 1 (Study 2) were 0.89 (0.89) for the SCS and 0.83 (0.85) for the BSCS. Test-retest reliability in Study 2 was 0.89 for the SCS and 0.87 for the BSCS. Relationships between SCS and a wide range of other constructs was examined, including social desirability, eating disorders, alcoholism, impulse control, psychological adjustment, interpersonal relationships, moral emotions, and a number of personality traits. The potential for socially desirable responding was somewhat strong, therefore all analysis of relationships was conducted after partialling out these effects. Higher SCS scores are correlated with a higher grade point average, better adjustment, less binge eating and alcohol abuse, better relationships and interpersonal skills, secure attachment, and more optimal emotional responses.

Scores: Mean scores (standard deviations) for the SCS were 114.47 (18.81) and 102.66 (18.19) for Studies 1 and 2, while the same estimates for the BSCS were 39.22 (8.58) and 39.85 (8.61). As such, it appears that responses lean toward demonstrating higher self-control.

Source: Tangney, June P., Roy F. Baumeister, and Angie Luzio Boone (2004), "High Self-Control Predicts Good Adjustment, Less Pathology, Better Grades, and Interpersonal Success," *Journal of Personality,* 72 (April), 271–322.

General Self-Control

(Tangney, Baumeister, and Boone 2004)

1. I am good at resisting temptation.*
2. I have a hard time breaking bad habits.* (R)
3. I am lazy.* (R)
4. I say inappropriate things.* (R)
5. I do certain things that are bad for me, if they are fun.* (R)
6. I refuse things that are bad for me.*
7. People would say that I have iron self-discipline.*
8. Pleasure and fun sometimes keep me from getting work done.* (R)
9. I have trouble concentrating.* (R)
10. I am able to work effectively toward long-term goals.*
11. Sometimes I can't stop myself from doing something, even if I know it is wrong.* (R)
12. I often act without thinking through the alternatives.* (R)
13. I wish I had more self discipline.* (R)
14. I never allow myself to lose control.
15. People can count on me to keep on schedule.
16. Getting up in the morning is hard for me. (R)
17. I have trouble saying no. (R)
18. I change my mind fairly often. (R)
19. I blurt out whatever is on my mind. (R)
20. People would describe me as impulsive. (R)
21. I spend too much money.
22. I keep everything neat.
23. I am self-indulgent at times. (R)
24. I am reliable.
25. I get carried away by my feelings. (R)
26. I do many things on the spur of the moment. (R)
27. I don't keep secrets very well. (R)
28. I have worked or studied all night at the last minute. (R)
29. I'm not easily discouraged.
30. I'd be better off if I stopped to think before acting. (R)
31. I engage in healthy practices.
32. I eat healthy foods.
33. I lose my temper too often. (R)
34. I often interrupt people. (R)
35. I sometimes drink or use drugs to excess. (R)
36. I am always on time.

Note: Items are scored on a 5-point scale where 1 = *not at all* and 5 = *very much*. The items are presented above with the first 13 items as the short-form scale (indicated by an *), and the additional 23 items presented subsequent to that. An (R) indicates items that should be reverse scored.

Consumer Spending Self-Control: CSSC

(Haws and Bearden 2010)

Construct: Consumer Spending Self-Control (CSSC) is defined as the ability to monitor and regulate one's spending-related thoughts, emotions, and decisions in accordance with self-imposed standards. CSSC provides a more specific construct and measurement of a consumer's self-control in terms of spending decision making.

Description: The CSSC scale consists of 10 items that are assessed on a 7-point Likert-type scale, where 1 = *strongly disagree* and 7 = *strongly agree*. The items are averaged to form a single value that represents one's spending self-control, with higher scores indicating a greater control over one's spending.

Development: An initial pool of 66 items was generated by the authors based on a literature review and open-ended input from 12 adult consumers. Expert judges were used to reduce the set of items based on their content validity to 32. Responses from Sample 1 were used to reduce the set of items from 32 to 19 based on corrected item-to-total correlations of at least 0.45 or above. In Sample 2, confirmatory factor analysis was used to analyze and refine the measure, resulting in a well-fitting unidimensional model containing 10 items representing monitoring, regulation, and standards. Other samples provided additional evidence of the validity and reliability of CSSC.

Samples: Sample 1 consisted of 164 adult consumers, Sample 2 consisted of 176 adult consumers, and Sample 3 consisted of 224 adult consumers. All three of these samples were obtained through student recruiters. An additional sample of 163 student subjects was used to assess test-retest reliability. Study 1 consisted of 173 adult respondents. Study 2 was conducted in two parts separated by 4 weeks and included 204 undergraduate students. Finally, Study 3 had 110 student participants, and Study 4 had 136.

Validity: Coefficient alphas were reported as follows: Sample 3 = 0.93, Study 1 = 0.91, Study 2 = 0.93, and Study 4 = 0.90. Test-retest reliability was assessed using a separate sample of 163 and showed a reliability of 0.78 over a 4-week period. The construct reliability and average variance extracted estimates for the CSSC measure for Sample 2 (Sample 1) were 0.93 (0.91) and 0.58 (0.52). Sample 3 assessed both the convergent and discriminant validity between CSSC and general self-control ($r = 0.48$) and assessed the potential for socially desirable responding. Testing from confirmatory factor analyses provided further support for the unidimensional structure of CSSC and showed the distinction between CSSC and general self-control using the procedures described by Gerbing and Anderson (1988). Additional studies provided support for the nomological network for CSSC by demonstrating relationships with related variables including frugality, impulsive buying, compulsive buying, tightwad-spendthrift, and others. Each of these scales was demonstrated to be related to but distinct from CSSC. Predictive validity was assessed through collecting a variety of outcome variables, including use of credit, shopping decision, investment decisions, and actual purchase behaviors.

Scores: Mean scores (standard deviations) were 5.00 (1.13) and 5.06 (1.20) for Samples 1 and 2. Mean scores across all adult samples (total $n = 737$) are reported overall as 5.16 and based on gender, with mean scores for men at 5.20 and for women at 5.12, which were not statistically different. The mean score from Study 1, which used student participants, was 5.39.

Source: Haws, Kelly L. and William O. Bearden (2010), "Spending Self-Control and Consumption Behavior," working paper, Texas A&M University, College Station, TX 77843.

Reference: Gerbing, David W. and James C. Anderson (1988), "An Updated Paradigm for Scale Development Incorporating Unidimensionality and Its Assessment," *Journal of Marketing Research,* 25 (May), 186–92.

Consumer Spending Self-Control: CSSC

(Haws and Bearden 2010)

1. I closely monitor my spending behavior.

2. I am able to work effectively toward long-term financial goals.

3. I carefully consider my needs before making purchases.

4. I often delay taking action until I have carefully considered the consequences of my purchase decisions.

5. When I go out with friends, I keep track of what I am spending.

6. I am able to resist temptation in order to achieve my budget goals.

7. I know when to say when regarding how much I spend.

8. In social situations, I am generally aware of what I am spending.

9. Having objectives related to spending is important to me.

10. I am responsible when it comes to how much I spend.

Notes: Scored on a 1- to 7-point *strongly disagree* to *strongly agree* scale. No reverse coding.

Scales Related to Country Image and Affiliation

Country Image Scale

(Martin and Eroglu 1993)

Construct: Country image is defined as "the total of all descriptive, inferential, and informational beliefs about a particular country" (Martin and Eroglu 1993, p. 193). Country image is conceptualized as different from attitude toward the products from a given country. Country image can be affected by direct experience with a country, outside sources of information such as advertising or word of mouth, or inferences (correct or incorrect) from past experience with products from a given country.

Description: Although four dimensions of country image were originally conceptualized (i.e., political, economic, technological, and social desirability), the final form of the scale has three dimensions, composed of a five-item political factor, a five-item economic factor, and a four-item technological factor. (It was concluded that the social desirability aspect of the construct was adequately reflected in the three dimensions that were retained.) All items are scored on 7-point semantic differential scales. Item scores can be summed within dimension (factor) to form separate indices for the economic, political, and technological factors, or all 14 item scores can be summed to form one overall country image composite.

Development: Via a two-phase procedure, 60 items were originally generated to reflect the four originally conceptualized dimensions of the construct. In the first phase, students and faculty members were used to generate items, and in the second phase eight doctoral students with varying international backgrounds were used. This pool of 60 items was then trimmed to 29 via expert judging of the representativeness of the items to the construct. Then, with six samples, the final form of the scale was derived and validated using principal component analyses, reliability and item analyses, and other correlational techniques. With these samples, the countries of Japan, the United States, India, and West Germany were used as the focal countries of interest in responding to the scales.

Samples: A sample of 200 undergraduate and graduate students was used to derive the final form of the scale. Samples of 230, 80, 80, 79, and 79 (all students) were used for further reliability and validity checks.

Validity: For the sample $n = 200$, coefficient alpha was reported to be 0.950 for the entire 14-item country image scale. Alpha estimates for the economic, political, and technological dimensions ranged from 0.56 to 0.71. For the $n = 230$ sample, coefficient alpha for the entire 14-item scale was 0.925. A split-halves coefficient of 0.78 was also reported for the entire 14-item scale. For the first $n = 80$ sample, coefficient alpha for the entire 14-item scale was 0.895, with alphas ranging from 0.686 to 0.887 for the three country image dimensions (factors). For the second $n = 80$ sample, alpha was 0.928 for the entire 14-item scale, with alphas ranging from 0.581 to 0.761 across the three dimensions. As a test of discriminant validity, the three dimensions of country image were correlated with a measure of an image of products with foreign country of origin using the two $n = 79$ samples. Across all three dimensions, these correlations ranged from 0.18 to 0.51 ($p > 0.19$ for all).

Scores: Neither mean nor percentage scores were reported.

Source: Martin, Ingrid and Sevgin Eroglu (1993), "Measuring a Multi-Dimensional Construct: Country Image," *Journal of Business Research*, 28, 191–210.

Country Image Scale

(Martin and Eroglu 1993)

This is a survey to find out what a person thinks about a certain country. To measure this, we will ask you to rate the country that appears at the top of the page against a series of descriptors by placing a check (X) on the scale from one to seven that best reflects *your* judgment. There are no right or wrong answers. We are only interested in how YOU perceive the country.

(Country Name)		
1. Economically developed	__:__:__:__:__:__:__ 1 2 3 4 5 6 7	Economically underdeveloped
2. Democratic system		Dictatorial system
3. Mass-produced products		Handcrafted products
4. Civilian government		Military government
5. Predominantly industrialized		Predominantly non-industrialized
6. High labor costs		Low labor costs
7. High literacy rates		Low literacy rates
8. Free market system		Centrally planned system
9. Existence of welfare system		Lack of a welfare system
10. Stable economic environment		Unstable economic environment
11. Exporter of agricultural products		Importer of agricultural products
12. Production of high-quality products		Production of low-quality products
13. High standard of living		Low standard of living
14. High level of technological research		Low level of technological research

Notes: From Tables 2 through 4 in the Martin and Eroglu (1993) article, it is a bit unclear as to which items pertain to which dimensions. Specifically, table descriptor items differ slightly from Appendix C (the source of the actual scale items) descriptor items. Also, with the exception of items 6 and 9, it would seem that all items require reverse coding such that higher scores reflect higher levels of the construct.

Country-of-Origin Scale

(Parameswaran and Pisharodi 1994; Pisharodi and Parameswaran 1992)

Construct: According to Pisharodi and Parameswaran (1992), country of origin is an evolving construct which states that people attach stereotypical "made in" perceptions to products from specific countries and this influences purchase and consumption behaviors in multinational markets. Furthermore, the construct encompasses perceptions of a sourcing country's economic, political, and cultural characteristics, as well as specific product image perceptions (i.e., in the 1992 study automobiles were the focal product, and in the 1994 study Korean and German brands of automobiles and blenders were the focal products).

Description: The final version of the 1992 scale is composed of 24 items scored on 10-point scales ranging from *not at all appropriate* (1) to *most appropriate* (10). The scale has six factors; three relate to general product attitudes (GPA), two relate to general country attitudes (GCA), and one relates to specific product attributes (SPA). The first five factors are applicable across product attitudes and country attitudes (i.e., the GPA and GCA factors), and the last factor (SPA) is specific to automobiles. Item scores can be summed within factors to form factor indices. The scale is considered multidimensional, but items within the factors reflect unidimensional measurement.

The final versions of the 1994 scale are composed of 35 items scored on 10-point scales ranging from *not at all appropriate* (1) to *most appropriate* (10). Depending on the product category (autos vs. blenders) and the country of origin (Korea vs. Germany), scale content in terms of items-to-factors differ slightly. The scale has eight factors; three relate to general product attitudes (GPA), two relate to general country attitudes (GCA), and three relate to specific product attributes (SPA). Item scores can be summed within factors to form factor indices, and the scale is considered multidimensional. Items within the factors reflect unidimensional measurement.

Development: In the 1992 chapter, via an extensive review of the literature, 40 items were generated to reflect the GPA, GCA, and SPA factors. Initially, it was felt that the construct would be best represented by just a three-factor solution (i.e., one factor each for GPA, GCA, and SPA). Responses from a large sample were then used to trim the number of items and assess dimensionality and internal consistency. Using confirmatory factor analysis (via LISREL) and the ITAN package (Gerbing and Hunter 1988), an iterative process that examines inter-item correlations, item-factor loadings, and dimensionality derived the final form of the scale. The final form reflected three factors relating to GPA. Two of the GPA factors stress positive attributes (i.e., labeled GPA2 and GPA3), and one reflects negative attributes (i.e., labeled GPA1). The final form of the 1992 scale also contains one factor relating to SPA (positive attributes).

In the 1994 study, similar procedures were followed in deriving the final form of the Scale.

Samples: A total of 678 adults from a large midwestern metropolitan area responded to the numerous items in the original questionnaire for both the 1992 and 1994 studies.

Validity: For the 1992 study, the fit of the six-factor model, representing the final form of the scale, indicated unidimensionality of items in each of the six factors. Coefficient alpha estimates for the factors were 0.872, 0.849, 0.918, 0.735, 0.796, and 0.819 for GCA1, GCA2, GPA1, GPA2, GPA3, and SPA, respectively.

For the 1994 study, the fit of the eight-factor model, representing the final form of the scale, indicated adequate fit to the data in terms of items to the factors. Coefficient

alpha estimates of the factors for the German brands ranged from a low 0.609 for a three-item SPA2 factor (i.e., blender) to a high of 0.943 for an eight-item SPA1 factor (i.e., blender). Coefficient alpha estimates of the factors for the Korean brands ranged from a low 0.586 for a three-item SPA2 factor (i.e., blender) to a high of 0.924 for an eight-item SPA1 factor (i.e., blender).

Scores: Neither mean nor percentage scores were reported in the 1992 or 1994 studies.

Sources: Parameswaran, Ravi and Mohan R. Pisharodi (1994), "Facets of Country-of-Origin Image: An Empirical Assessment," *Journal of Advertising,* 23, 44–56. © 1994 by Publisher. Scale items taken from Table 1 (pp. 47–8).

Pisharodi, R. Mohan and Ravi Parameswaran. (1992), "Confirmatory Factor Analysis of a Country-of-Origin Scale: Initial Results," in *Advances in Consumer Research,* Vol. 19, eds. John Sherry and Brian Sternthal, Provo, UT: Association for Consumer Research, pp. 706–14.

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Reference: Gerbing, David W. and John E. Hunter (1988), *ITAN: A Statistical Package for Item Analysis With Correlational Data Including Multiple Groups Factor Analysis,* Portland, OR: Portland State University.

Country-of-Origin Scale

(Pisharodi and Parameswaran 1992)

General Country Attitudes: GCA1 Items

1. Well educated
2. Hard-working
3. Achieving high standards
4. Raised standards of living
5. Technical skills

General Country Attitudes: GCA2 Items

1. Similar political views
2. Economically similar
3. Culturally similar

General Product Attitudes: GPA1 Items

1. Unreasonably expensive
2. Imitations
3. Not attractive
4. Frequent repairs
5. Cheaply put together

General Product Attitudes: GPA2 Items

1. Sold in many countries
2. Intensely advertised
3. Advertising information
4. Easily available

General Product Attitudes: GPA3 Items

1. Long lasting
2. Good value
3. Prestigious products

Specific Product Attitudes: SPA Items

1. Workmanship good
2. Handles well
3. Little maintenance
4. Made to last

Country-of-Origin Scale

(Parameswaran and Pisharodi 1994)

General Country Attitudes: GCA Items

C1. Friendly & likable

C2. Artistic & creative

C3. Well educated

C4. Hard-working

C5. Technical education

C6. Achieving high standards

C7. Raised standards of living

C8. Technical skills

C9. Similar political views

C10. Economically similar

C11. Culturally similar

C12. Participates in international affairs

General Product Attitudes: GPA Items

P1. Unreasonably expensive

P2. Luxury products

P3. Meticulous workmanship

P4. Imitations

P5. Known mainly for industrial products

P6. Sold in many countries

P7. Not attractive

P8. Intensely advertised

P9. Frequent repairs

P10. Wide range of models

P11. Long lasting

P12. Advertising informative

P13. Difficult to service

P14. Cheaply put together

P15. High technology

P16. Good value

P17. Easily available

P18. Prestigious product

Specific Product Attitudes: SPA Items (Cars)

S1. Good fuel economy

S2. Exterior styling attractive

S3. Workmanship good

S4. Handles well

S5. Little maintenance

S6. Very comfortable

S7. Difficult to get parts

S8. Quality service

S9. Made to last

S10. Overall excellent

Specific Product Attitudes: SPA Items (Blenders)

S1. High quality

S2. Very good workmanship

S3. Exterior design attractive

S4. Difficult to find spares

S5. Compact

S6. Versatile

S7. Operate very quickly

S8. Not durable

S9. Not safe

S10. Good value for the money

S11. Overall excellent

Notes: For both 1992 and 1994 versions, items scored on 10-point scales ranging from *not at all appropriate* to *most appropriate*.

For this 1994 version, for *German brands* items C3, C4, and C6 through C8 compose the GCA1 factor (i.e., "people facet"); C9 to C11 compose the GCA2 factor (i.e., the "interaction facet"); items P4, P7, P9, P13, and P14 compose the GPA1 factor (i.e., "undesirable product attributes"); items P6, P7, P12, and P17 compose the GPA2 factor (i.e., "distribution-promotion-based desirable attributes"); items P11, P16, and P18 compose the GPA3 factor (i.e., "product-based general desirable attributes"); items S3, S4, S5, and S9 compose the SPA-Car factor; items S1 to S3, S5 to S7, S10, and S11 compose the SPA1-**Blender** factor; and items S4, S8, and S9 compose the SPA2-**Blender** factor.

For *Korean brands* items C1 to C3 and C6 to C8 compose the GCA1 factor (i.e., "people facet"); C9 to C11 compose the GCA2 factor (i.e., the "interaction facet"); items P4, P7, P9, P13, and P14 compose the GPA 1 factor (i.e., "undesirable product attributes"); items P6, P7, and P17 compose the GPA2 factor (i.e., "distribution-promotion-based desirable attributes"); items P11, P15, and P18 compose the GPA3 factor (i.e., "product-based general desirable attributes"); items S3, S4, S5, and S9 compose the SPA-Car factor; items S1 to S3, S5 to S7, S10, and S11 compose the SPAl-**Blender** factor; and items S4, S8, and S9 compose the SPA2-**Blender** factor.

Ethnocentrism: Consumer Ethnocentrism: CETSCALE

(Shimp and Sharma 1987)

Construct: The CETSCALE is designed to measure consumers' ethnocentric tendencies (i.e., disposition to act in a consistent fashion) related to purchasing foreign- versus American-made products. Consumer ethnocentrism represents the beliefs held by consumer about the appropriateness, indeed morality, of purchasing foreign-made products (Shimp and Sharma 1987, p. 280). The purchase of foreign-made products, in the minds of ethnocentric consumers, is wrong because it hurts the domestic economy, causes loss of jobs, and is unpatriotic.

Description: The scale consists of 17 items scored on 7-point Likert-type formats (*strongly agree* = 7, *strongly disagree* = 1). Item scores are summed to form an overall score ranging from 17 to 119. In its original form, the scale was designed for use on American subjects, as most items contain reference to America or the United States. (A shortened 10-item version using a 5-place response format was also tested in the national consumer goods study described below.) Both versions are considered unidimensional.

Development: Recommended scaling procedures were used in scale development. The CETSCALE was developed using an initial pool of 180 nonredundant items based on the common wording of responses from an open-ended elicitation study of 800 consumers. Following a judgmental screening of items by a panel of six academics, two purification studies were conducted to develop the final form of the scale. Initially, the development phase addressed seven facets of consumers' orientations toward foreign products. Common factor analysis of the data obtained in the first purification study reduced the item pool to 25 items reflecting the ethnocentrism dimension. From the second purification study, 17 items consistently demonstrated satisfactory reliability in a series of confirmatory factor analyses.

Samples The respondents were 407 households in the first study, The second study included approximately 320 households from each of three metropolitan areas (Detroit, Denver, Los Angeles) and 575 households from the Carolinas. Using some of these same data, four additional studies were conducted to assess reliability and validity of the scale: (a) four area studies, *n* = 1,535; (b) Carolinas study, *n* = 47; (c) national consumer goods study involving student subjects.

Validity: The assessment of reliability and validity of the CETSCALE in the original article was stringent and extensive. Only a brief summary is provided here. Interested readers are advised to refer to Shimp and Sharma (1987) for details. Internal consistency estimates of reliability ranged from 0.94 to 0.96; test-retest was estimated at 0.77. Evidence of convergent and discriminant validity was provided by significant and positive correlations of the CETSCALE and measures of patriotism and political-economic conservatism. Extensive tests of nomological validity (in one instance over a 2-year delay) were also presented in support of the scale. Briefly, scale scores were found, as predicted, negatively correlated with varying measures of consumers' beliefs, attitudes, and intentions toward foreign-made products. Other data revealed that origin of manufacturer was more important for high scorers and that higher scorers were biased in favor of American products and in opposition to European and Asian products. Finally, tests of mean differences revealed that scores were highest among individuals whose quality of life and economic situation (and hardships) are threatened by foreign competition (i.e., lower social classes, Detroit respondents).

Scores: Mean scores (std. dev.) for the CETSCALE for the four geographic areas followed a predicted pattern: (a) Detroit, 68.58 (25.96); (b) Carolinas, 61.28 (24.41); (c) Denver, 57.84 (26.10); (d) Los Angeles, 56.62 (26.37). The mean scores for the two-phase student sample used in the crafted-with-pride study resulted in mean scores of 51.92 (16.37) and 53.39 (16.52). Scores also were found to decline predictably across three social classes: upper-lower, 73.63; lower-middle, 64.01; and upper-middle, 51.91.

Source: Shimp, Terence A. and Subhash Sharma (1987), "Consumer Ethnocentrism: Construction and Validation of the CETSCALE." *Journal of Marketing Research*, 24, 280–89.

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Other evidence: In a validation study, Netemeyer, Durvasula, and Lichtenstein (1991) used student samples of 71, 73, 70, and 76 from colleges in the United States, Germany, France, and Japan, respectively. Netemeyer et al. (1991) reported alpha levels ranging from 0.91 to 0.95 across the four countries studied. In addition, the CETSCALE was correlated with a number of behavioral measures reflecting a consumer ethnocentric bias. Across countries, these correlations offered evidence of nomological validity for the scale. In a more recent study by Sharma, Shimp, and Shin (1995), the 17-item CETSCALE showed an internal consistency estimate of 0.91. The CETSCALE also showed significant correlations with the social-psychological constructs of openness, $r = -0.21$; patriotism/conservatism, $r = 0.53$; and collectivism, $r = 0.18$ and $r = -0.23$, and with the demographic characteristics of education, $r = -0.25$, and income, $r = -0.15$. The CETSCALE was also shown to be a significant predictor of attitude toward importing various products and perceived economic threat (in regression analyses). The Sharma et al. (1995) study used a sample of 667 Korean consumers.

Other sources: Netemeyer, Richard G., Srinivas Durvasula, and Donald R. Lichtenstein (1991), "A Cross-National Assessment of the Reliability and Validity of the CETSCALE," *Journal of Marketing Research,* 28, 320–27.

Sharma, Subhash, Terence A. Shimp, and Jeongshin Shin (1995), "Consumer Ethnocentrism: A Test of Antecedents and Moderators," *Journal of the Academy of Marketing Science,* 25 (1), 26–37.

Ethnocentrism: Consumer Ethnocentrism: CETSCALE

(Shimp and Sharma 1987)

1. American people should always buy American-made products instead of imports.

2. Only those products that are unavailable in the U.S. should be imported.

3. Buy American-made products. Keep America working.

4. American products, first, last and foremost.

5. Purchasing foreign-made products is un-American.

6. It is not right to purchase foreign products.

7. A real American should always buy American-made products.

8. We should purchase products manufactured in America instead of letting other countries get rich off us.

9. It is always best to purchase American products.

10. There should be very little trading or purchasing of goods from other countries unless out of necessity.

11. Americans should not buy foreign products, because this hurts American business and causes unemployment.

12. Curbs should be put on all imports.

13. It may cost me in the long run but I prefer to support American products.

14. Foreigners should not be allowed to put their products on our markets.

15. Foreign products should be taxed heavily to reduce their entry into the U.S.

16. We should buy from foreign countries only those products that we cannot obtain within our own country.

17. American consumers who purchase products made in other countries are responsible for putting their fellow Americans out of work.

Note: Items composing the 10-item reduced version are items 2, 4 through 8, 11, 13, 16, and 17.

Items scored on 7-point Likert-type scales from *strongly agree* to *strongly disagree*.

Scales Related to Consumer
Opinion Leadership and Opinion Seeking

Market Maven: Propensity to Provide Marketplace and Shopping Information

(Feick and Price 1987)

Construct: The "market maven" refers to individual consumers with a propensity to provide general shopping and marketplace information. Market mavens are defined formally as "individuals who have information about many kinds of products, places to shop, and other facets of markets, and initiate discussions with consumers and respond to requests from consumers for market information" (Feick and Price 1987, p. 85). The definition is comparable with the definition of opinion leaders in that influence derives from knowledge and expertise, but differs in that the expertise is not product specific (i.e., a more general knowledge of markets). Mavens obtain information because they think it will be useful to others or because it will provide a basis for conversations.

Description: The scale consists of six statements, five of which are operationalized as 7-place scales labeled *strongly disagree* to *strongly agree*. The sixth item has a 7-point response format of *the description does not fit me well at all* to *the description fits me very well*. Item scores are summed to form an overall score, and the range of the scale is from 6 to 42. All items are worded such that greater agreement results in a larger total score (i.e., a greater propensity to provide marketplace information).

Development: An initial pool of 40 items was generated based on the concept definition. This set was reduced to 19 by a panel of marketing academics and practitioners. Using the responses of a pilot sample of 265 MBAs, factor analysis, item-to-total correlations, and coefficient alpha were used to reduce the final scale to six items.

Samples: The main study for which the final instrument was administered involved nationwide telephone interviews (selected by random digit dialing) with 1,531 adult household heads. Sixty-four percent of the sample was female. Subjects were randomly assigned to subsamples; 771 were in the food subsample and 760 in the drug subsample (Feick and Price 1987, p. 87). In addition, 265 part-time MBA students participated in an earlier scale development study. A probability sample of 303 heads of households from a large northeastern city also participated in a study of the discriminant validity of the scale in relation to measures of opinion leadership.

Validity: For the pilot study, coefficient alpha was 0.84; item-to-total correlations ranged from 0.51 to 0.67. For the main study, the estimate of internal consistency reliability was 0.82, and item-to-total correlations ranged from 0.48 to 0.65.

Validity evidence regarding the concept was provided from responses to queries regarding knowledge of individuals fitting the market maven description (46%) and the importance of those persons in making purchase decisions. Discriminant validity was examined (and supported) through factor analysis of the market maven items and a series of opinion leadership items. The correlation between the maven scale and a measure of opinion leadership was 0.22. Correlations between the market maven measure and a series of innovativeness variables were positive and significant. For example, the correlations for the food sample ranged from 0.31 to 0.34. Discriminant validity evidence was also provided from confirmatory factor analysis of the main study sample.

Substantial correlational evidence of the scale's validity was provided by a series of proposition tests in which the scale was used to form low, medium, and high groups across which a series of difference tests were performed. In addition, the market maven scale was found correlated as predicted with a series of shopping and individual characteristics. These results confirm expectations regarding the construct and, hence, support the validity of the measure. For example, Feick and Price (1987, p. 94) conclude that market mavens exist, and consumers can identify them and use them in making purchase decisions. Furthermore, the concept was found related to early awareness of new products, provision of information, extensive use of information sources, and market activities such as couponing and reading advertising.

Scores: The mean score and standard deviation based on the sample of 1,531 interviews were 25.6 and 8.5, respectively.

Source: Feick, Lawrence R. and Linda L. Price (1987), "The Market Maven: A Diffuser of Marketplace Information," *Journal of Marketing,* 51, 83–97.

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Other evidence: Price, Feick, and Guskey-Federouch (1988) report a telephone interview of 213 subjects. Difference tests across groups revealed evidence for the scale's validity, as mavens were more likely to engage in smart shopping behaviors (i.e., use of coupons, designing grocery budgets) than nonmavens.

Other sources: Price, Linda L., Lawrence F. Feick, and Audrey Guskey-Federouch (1988), "Couponing Behaviors of the Market Maven: Profile of a Super Shopper," in *Advances in Consumer Research,* Vol. 15, ed. Michael J. Houston, Provo, UT: Association for Consumer Research, pp. 354–49.

Market Maven: Propensity to Provide Marketplace and Shopping Information

(Feick and Price 1987)

1. I like introducing new brands and products to my friends.

2. I like helping people by providing them with information about many kinds of products.

3. People ask me for information about products, places to shop, or sales.

4. If someone asked where to get the best buy on several types of products, I could tell him or her where to shop.

5. My friends think of me as a good source of information when it comes to new products or sales.

6. Think about a person who has information about a variety of products and likes to share this information with others. This person knows about new products, sales, stores, and so on, but does not necessarily feel he or she is an expert on one particular product. How well would you say this description fits you?

Note: Items 1 through 5 are scored on 7-place scales labeled *strongly disagree* to *strongly agree.*

Item 6 is scored from *the description does not fit me well at all* to *the description fits me very well.*

Opinion Leadership

(Childers 1986; King and Summers 1970)

Construct: The King and Summers (1970) measure of opinion leadership summarized here is actually an adaptation of an earlier measure presented by Rogers and Cartano (1962). A more recent revision of the scale by Childers (1986) is also summarized. In King and Summers's (1970) original study of opinion leadership generalization across product categories, a product- or issue-specific seven-item opinion leadership scale was offered. As originally conceptualized, opinion leadership reflects the extent to which individuals give information about a topic and the extent to which information is sought by others from those individuals. Opinion leadership is thought to be a critical determinant of word-of-mouth communication and interpersonal influences affecting the diffusion of new products, concepts, and services.

Description: The original King and Summers scale consists of seven items; five are operationalized using a dichotomous response format while the remaining items have three response possibilities. The total range of the scale is from 7 to 16. The items are worded such that alternative product categories can be inserted into each statement. For example, the first item reads as follows: "In general, do you like to talk about _____ with your friends? Yes___ −1 No___ −2."

The revised Opinion Leadership Scale (Childers 1986) also contains seven items adaptable to different product categories. However, the revised measure contains a modified set of items which are each operationalized via 5-place bipolar response formats. Item scores are summed to form a range of 7 to 35. (Both the King and Summers and the Childers versions are included below.) Childers eventually recommends that item 5 be deleted, resulting in a potential range of 6 to 30.

Development: The scale was developed by modifying an already existing self-designating measure of opinion leadership (Rogers 1961; Rogers and Cartano 1962). The modifications to the Rogers measure included (a) omitting the word "new" in each of six questions to remove bias in favor of innovators, (b) adding a question, and (c) changing the order of questions (King and Summers 1970, p. 46).

Childers (1986) reported two studies in his efforts to investigate the King and Summers measure. The first was designed to evaluate the original scale. His second study was designed to evaluate a revised version in which the response format for all items was changed to 1- to 5-place scales anchored by bipolar adjectives or adjective sets.

Samples: The data on which the King and Summers (1970) measure were evaluated reflected the responses of 1,000 housewives interviewed in 1967. Participants were residents of Marion County, Indiana. Responses were obtained for six product categories (i.e., packaged food products, women's clothing, household cleansers and detergents, cosmetics, large appliances, and small appliances). Respondents were categorized as leaders or nonleaders in a proportion designed to achieve comparability with the opinion leader categorizations of Katz and Lazarfield (1965). Childers's (1986) initial analysis of the King and Summers scale was based on the responses of 110 respondents to a mail survey. His second study, conducted to examine the revised scale, involved the responses of 176 households either adopting or refusing subscription to a cable service.

Validity: Little evidence of validity was offered in the original King and Summers (1970) article. Childers (1986), however, offers several estimates of reliability and validity. An internal consistency reliability estimate of 0.66 was reported by Childers as well as an average item-to-total correlation of 0.43. (Deletion of item 7 increased the reliability estimate to 0.68.)

The Childers version was found to correlate with measures of product ownership, product-specific risk, multiple use potential, and creativity/curiosity and to differ as expected across known groups (Childers 1986). For example, a correlation of 0.28 with a product-specific measure of perceived risk was found. Other results revealed an internal consistency estimate of 0.83 after deletion of item 5. The average item-to-total correlation improved to 0.62 (after an r to z transformation). Correlations with four of five validity measures were significant as predicted. Mean scores were found to differ across groups as expected (i.e., the means for premium cable subscribers, basic-only subscribers, and refusers were 20.0, 19.5, and 15.2, respectively).

Scores: Means and standard deviations were not reported in King and Summers (1970). The means for premium cable subscribers, basic-only subscribers, and refusers in Childers's second study were 20.0, 19.5, and 15.2, respectively.

Sources: Childers, Terry L. (1986), "Assessment of the Psychometric Properties of an Opinion Leadership Scale," *Journal of Marketing Research,* 23, 184–88.

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King, Charles W. and John O. Summers (1970), "Overlap of Opinion Leadership Across Product Categories," *Journal of Marketing Research,* 7, 43–50.

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Other evidence: A number of studies have used and/or evaluated some form of the opinion leadership scale. Three of these are briefly described here.

Darden and Reynolds's (1972) administration of a modified (five-item) instrument assessed the opinion leadership of suburban males ($n = 104$) in addition to fraternity ($n = 76$) and nonfraternity ($n = 102$) undergraduate students. They report a split-half reliability estimate of 0.79. Riecken and Yavas (1983) report KR-20 estimates of reliability ranging from 0.50 to 0.82 across five samples for the King and Summers version. Their mean scores ranged from 11.59 to 14.99.

Goldsmith and Desborde (1991) provide some recent and extensive tests for the revised scale (cf. Childers 1986) (based on the responses of 187 undergraduate business students). Record albums were the domain of study. Goldsmith and Desborde (1991) found significant correlations between the revised scale and measures of awareness ($r = 0.46$), purchase ($r = 0.32$), and innovativeness ($r = 0.22$). The overall mean reported by Goldsmith and Desborde (1991) was 19.3 ($SD = 5.66$) for Childers's version. The means for males and females were 20.8 and 17.6, respectively.

Flynn, Goldsmith, and Eastman (1994) also examined the psychometric properties of the Childers's (1986) version of the scale over several products (e.g., jeans, professional clothing, and rock music) and four samples (i.e., $n = 172, 128, 247,$ and 185). They concluded that a six-item version of the scale (i.e., deletion of item 5 below) showed adequate levels of unidimensionality (via structural equation modeling) and internal consistency. Coefficient alpha estimates for this six-item version ranged from 0.78 to 0.88 across the four samples.

Other sources: Darden, William R. and Fred D. Reynolds (1972), "Predicting Opinion Leadership for Men's Apparel Fashions," *Journal of Marketing Research,* 9, 324–28.

Flynn, Leisa Reinecke, Ronald E. Goldsmith, and Jacqueline K. Eastman (1994), "The King and Summers Opinion Leadership Scale: Revision and Refinement," *Journal of Business Research,* 31, 55–64.

Goldsmith, Ronald E. and Rene Desborde (1991), "A Validity Study of a Measure of Opinion Leadership," *Journal of Business Research,* 22, 11–19.

Riecken, Glen and Ugur Yavas (1983), "Internal Consistency of King and Summers' Opinion Leadership Scale: Further Evidence," *Journal of Marketing Research,* 20, 325–26.

References: Katz, Elihu and Paul Lazarfield (1965), *Personal Influence,* Glencoe, IL: Free Press.

Rogers, Everett (1961), *Characteristics of Agricultural Innovators and Other Adopter Categories* (Research Bulletin 882), Wooster: Ohio Experiment Station.

Rogers, Everett and David G. Cartano (1962), "Methods of Measuring Opinion Leadership," *Public Opinion Quarterly,* 26, 435–41.

Opinion Leadership

(King and Summers 1970)

1. In general, do you like to talk about _____ with your friends?

   Yes___ −1 No___ −2

2. Would you say you give very little information, an average amount of information, or a great deal of information about _____ to your friends?

   You give very little information ____ −1
   You give an average amount of information ____ −2
   You give a great deal of information ____ −3

3. During the past six months, have you told anyone about some_____?

   Yes____ −1 No____ −2

4. Compared with your circle of friends, are you less likely to be asked, about as likely to be asked, or more likely to be asked about_____?

   Less likely to be asked ____ −1

   About as likely to be asked ____ −2

   More likely to be asked ____ −3

5. If you and your friends were to discuss_____, what part would you be most likely to play? Would you mainly listen to your friends' ideas or would you try to convince them of your ideas?

   You mainly listen to your friends' ideas ____ −1

   You try to convince them of your ideas ____ −2

6. Which of these happens more often? Do you tell your friends about some_____, or do they tell you about some_____?

   You tell them about_____. ____ −1

   They tell you about some_____. ____ −2

7. Do you have the feeling that you are generally regarded by your friends and neighbors as a good source of advice about_____?

   Yes____ −1 No____ −2

Notes: Although not explicitly stated in the original article, it appears that items 1, 3, 6, and 7 require recoding.

Items 1, 3, 5, 6, and 7 are operationalized using a dichotomous response format while items 2 and 4 have three response possibilities.

Opinion Leadership

(Childers 1986)

1. In general, do you talk to your friends and neighbors about cable television:

   very often   *never*

   5   4   3   2   1

2. When you talk to your friends and neighbors about cable television do you:

   give a great deal of information   *give very little information*

   5   4   3   2   1

3. During the past six months, how many people have you told about cable television?

   told a number of people   *told no one*

   5   4   3   2   1

4. Compared with your circle of friends, how likely are you to be asked about cablevision?

   very likely to be asked   *not at all likely to be asked*

   5   4   3   2   1

5. In a discussion of cablevision, would you be most likely to:

   listen to your friends' ideas   *convince your friends of your ideas*

   5   4   3   2   1

6. In discussions of cable television, which of the following happens most often?

   you tell your friends about cable   *your friends tell you about cable*

   5   4   3   2   1

7. Overall in all of your discussions with friends and neighbors, are you:

   often used as a source of advice   *not used as a source of advice*

   5   4   3   2   1

Note: Childers (1986) and Flynn et al. (1994) recommend deletion of item 5 (which also apparently requires reverse coding). Items scored using 5-place bipolar response formats shown above.

Opinion Leadership and Information Seeking

(Reynolds and Darden 1971)

Construct:	Reynolds and Darden's (1971) view of opinion leadership is similar to that of King and Summers's (1970) conceptualization in that opinion leadership is felt to reflect the extent to which individuals give information about a topic and the extent to which information is sought by others from those individuals. In operationalizing opinion leadership, though, Reynolds and Darden measured an information seeking factor as well because it is thought to be a critical determinant of word-of-mouth communication and interpersonal influences affecting the diffusion of new products, concepts, and services. Reynolds and Darden used clothing as the focal product in their study.
Description:	Reynolds and Darden's (1971) opinion leadership scale is composed of five 5-point Likert-type items scored from *strongly disagree* to *strongly agree.* Item scores are summed to form an index of opinion leadership. Their information seeking scale is composed of three 5-point Likert-type items, and scores on these items are also summed to form an overall index of information seeking.
Development:	Items for both scales were generated from other published sources. The appropriateness of these items was then examined through factor, reliability, and validity analyses on a large sample.
Samples:	A sample of 300 housewives was used in the study.
Validity:	Split-halves reliabilities were 0.79 and 0.73 for the opinion leadership and information seeking scales, respectively. Factor analysis revealed that the hypothesized two-factor structure (opinion leadership and information seeking) was confirmed. A number of chi-square tests showed support for the validity of both scales.
Source:	Reynolds, Fred D. and William R. Darden (1971), "Mutually Adaptive Effects of Interpersonal Communication," *Journal of Marketing Research,* 8, 449–54.
	© 1971 by the American Marketing Association. Scale items taken from Appendix (p. 453). Reprinted with permission.
Reference:	King, Charles W. and John O. Summers (1970), "Overlap of Opinion Leadership Across Product Categories," *Journal of Marketing Research,* 7, 43–50.

Opinion Leadership and Information Seeking

(Reynolds and Darden 1971)

Opinion leadership

1. My friends and neighbors often ask my advice about clothing fashions.

2. I sometimes influence the types of clothes my friends buy.

3. My friends come to me more often than I go to them for information about clothes.

4. I feel that I am generally regarded by my friends and neighbors as a good source of advice about clothing fashions.

5. I can think of at least two people whom I have told about some clothing fashion in the last six months.

Information seeking

1. I often seek out the advice of my friends regarding which clothes I buy.

2. I spend a lot of time talking with my friends about clothing fashions.

3. My friends or neighbors usually give me good advice on what brands of clothes to buy.

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

Opinion Leaders and Opinion Seekers: OL and OS

(Flynn, Goldsmith, and Eastman 1996)

Construct: The opinion leader and opinion seeker constructs of Flynn, Goldsmith, and Eastman (1996) are considered domain specific, and not global, patterns of behavior. Opinion leadership occurs when individuals try to influence the purchase behavior of other consumers in specific product fields. Opinion seeking happens when individuals search out advice from others when making a purchase decision. As such, opinion leaders give advice and opinion seekers ask for it (Flynn et al. 1996, p. 138).

Description: The opinion leadership scale is composed of six items, and the opinion seeker scale is composed of six items. All items are scored on 7-point scales ranging from *strongly disagree* to *strongly agree*. Item scores are summed with the each scale to form indices of opinion leadership (OL) and opinion seeking (OS). Thus, total scores on the scales can range from 6 to 42.

Development: Across five studies, using recommended scaling procedures, the two scales were developed and validated. Twenty-one items were originally generated to tap the definitions of the constructs. Six Ph.D. students judged the items for representativeness, trimming the pool to 19 items. Then, over five studies employing 1,128 respondents, the scales were developed and validated using several product categories (e.g., rock music, fashionable clothing, "green" purchases). Procedures used included exploratory and confirmatory factor analyses, item and reliability analyses, and correlations with various related constructs to establish validity.

Samples: The first sample was composed of $n = 224$ undergraduate students, the second sample was composed of $n = 263$ students, the third sample was composed of $n = 391$ students, the fourth sample was composed of $n = 99$ women attending a chamber of commerce professional women's luncheon, and the fifth sample was composed of $n = 162$ students.

Validity: With the first sample, the final forms of the six-item scales were derived via item analyses. Coefficient alpha estimates of internal consistency were reported to be 0.86 for OL and 0.87 for OS. With the second sample, scale dimensionality was assessed via confirmatory factor analyses (EQS). Various indices of fit indicted that both OS and OL were unidimensional measures. Alphas for the two scales were 0.78 and 0.88 for OL and OS, respectively. The third study also found support for scale unidimensionality (via EQS confirmatory factor analysis), and the internal consistency estimates were 0.87 for OL and 0.88 for OS. The fourth and fifth studies used similar procedures and again found evidence for unidimensional and reliable scales (coefficient alphas of 0.80 and 0.86 for OL, and 0.81 and 0.93 for OS). Test-retest reliability for a large subsample of Study 5 ($n = 127$) showed test-retest correlations of 0.82 for OL and 0.75 for OS. Numerous correlational-based validity checks were done (see Tables 4, 5, and 6 of Flynn et al. 1996). For example, significant, or where hypothesized nonsignificant, correlations were found in the predicted direction between OL and OS and perceived knowledge, innovativeness, enduring involvement with the product category of interest, fashion shopping, status consumption, and "green behavior." Correlations between OS and OL ranged from 0.15 to 0.35 across the studies. Furthermore, a convergent validity correlation of 0.72 was reported between OL and King and Summers's modified opinion leadership scale (Flynn et al. 1994).

Scores: Means (std. dev.) were reported for four of the five studies. These scores were 22.1 (7.1) and 23.8 (8.8) for OL and OS in Study 2, 24.8 (7.2) and 24.0 (8.0) for OL and OS in Study 3, 21.6 (6.6) and 19.9 (7.1) for OL and OS in Study 4, and 20.3 (7.5) and 20.5 (9.6) for OL and OS in Study 5.

Source: Flynn, Leisa Reinecke, Ronald E. Goldsmith, and Jacqueline K. Eastman (1996), "Opinion Leaders and Opinion Seekers: Two New Measurement Scales," *Journal of the Academy of Marketing Science*, 24 (2), 137–47.

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Reference: Flynn, Leisa Reinecke, Ronald E. Goldsmith, and Jacqueline K. Eastman (1994), "The King and Summers Opinion Leadership Scale: Revision and Refinement," *Journal of Business Research*, 31, 55–64.

Opinion Leaders and Opinion Seekers: OL and OS

(Flynn, Goldsmith, and Eastman 1996)

Opinion Leadership (OL) Items:

1. My opinion on (PRODUCT CATEGORY) seems not to count with other people.

2. When they choose a (PRODUCT CATEGORY), other people do not turn to me for advice.

3. Other people [rarely] come to me for advice about choosing (PRODUCT CATEGORY).

4. People that I know pick (PRODUCT CATEGORY) based on what I have told them.

5. I often persuade others to buy the (PRODUCT CATEGORY) that I like.

6. I often influence people's opinions about (PRODUCT CATEGORY).

Opinion Seeking (OS) Items:

1. When I consider buying a (PRODUCT CATEGORY), I ask other people for advice.

2. I don't like to talk to others before I buy (PRODUCT CATEGORY).

3. I rarely ask other people what (PRODUCT CATEGORY) to buy.

4. I like to get others' opinions before I buy a (PRODUCT CATEGORY).

5. I feel more comfortable buying a (PRODUCT CATEGORY) when I have gotten other people's opinions on it.

6. When choosing (PRODUCT CATEGORY), other people's opinions are not important to me.

Notes: Items 1 through 3 of OL require reverse scoring, and items 2, 3, and 6 of OS require reverse scoring.

Items scored on 7-point scales ranging from *strongly disagree* to *strongly agree.*

Scales Related to Innovativeness

Cognitive and Sensory Innovativeness

(Venkatraman and Price 1990)

Construct: Cognitive (sensory) innovativeness is the preference for engaging in new experiences with the objective of stimulating the mind (senses). Venkatraman and Price (1990) assume that consumer innovativeness is not an undifferentiated construct and that cognitive and sensory innovativeness are differentiated by unique demographic and personality profiles and are related differently to adoption behaviors. Cognitive innovators enjoy thinking for its own sake and have a propensity to devote a great deal of mental energy to solving problems they encounter. Sensory innovators enjoy fantasy and daydreaming and adventurous activities such as skydiving.

Description: The final form of the measure(s) includes eight items for both the cognitive and sensory innovativeness scales. Each scale also includes four internal and four external items. The scores are computed by averaging the scores across the internal and external items within each scale.

Development: The scales included here represent refinement of the 80-item Novelty Experiencing Scale (NES) (Pearson 1970). Details regarding the specifics of item deletion and selection were not presented. The developmental procedures included tests of alternative factor structures (for the final sets of two eight-item scales) using confirmatory factor analysis. (In the second validity study involving nonstudent subjects, a higher-order factor model provided the best fit to the data.) Prior to these LISREL analyses, item correlations with measures of sensation seeking and cognition seeking apparently were used to select items for the final scale versions (Venkatraman and Price 1990). Several other estimates of reliability and validity were gathered.

Samples: The NES items were first examined using a sample of 200 undergraduate students. Participating in the first validation study were 326 undergraduate students; 240 respondents to a mail survey (from an initial sample of 450) participated in the product innovation and demographic characteristic validation study. Of this sample, 59% was male; the average age was 37.2 years.

Validity: Coefficient alpha estimates of reliability (based on the initial sample of 200) were 0.73 and 0.69 for the cognitive and sensory scales, respectively. Two follow-up studies were conducted to evaluate the validity of the measures. In the first study ($n = 326$), the two scales were correlated with a series of related measures. Evidence for support of the hypothesized relationships was found. For example, a significant positive correlation ($r = 0.26$, $p < 0.01$) was found between the cognitive innovativeness measure and need for cognition (Cacioppo and Petty 1982). Other correlations in support of the measures include $r = 0.41$ ($p < 0.01$) between sensory innovativeness and arousal-seeking tendency (Mehrabian and Russell 1974) and $r = 0.22$ ($p < 0.01$) between a measure of impulsivity and sensory innovativeness.

A second validity study ($n = 245$) was conducted to demonstrate that cognitive and sensory innovators differ in their responses to innovations and demographically. The alpha coefficients of reliability for this study were 0.64 and 0.70 for the cognitive and sensory scales, respectively. Hypothesized differences with product purchase behavior across products selected to vary in hedonic value were not found. However, partial support for the demographic predictions were observed: Men scored higher on sensory

innovativeness, younger respondents scored higher on sensory innovativeness, and higher education was associated with higher cognitive scores.

Scores: Some scale mean scores were presented in Table 6 across demographic groups (Venkatraman and Price 1990, p. 309).

Source: Venkatraman, Meera P. and Linda L. Price (1990), "Differentiating Between Cognitive and Sensory Innovativeness: Concepts, Measurement, and Implications," *Journal of Business Research,* 20, 293–315.

© 1990 by Elsevier Science. Scale items taken from Table 1 (p. 297). Reprinted with permission from Elsevier Science.

References: Cacioppo, John T. and Richard E. Petty (1982), "The Need for Cognition," *Journal of Personality and Social Psychology,* 42, 116–31.

Mehrabian, Albert and James A. Russell (1974), *An Approach to Environmental Psychology,* Cambridge: MIT Press.

Pearson, Pamela H. (1970), "Relationships Between Global and Specific Measures of Novelty Seeking," *Journal of Consulting and Clinical Psychology,* 34, 199–204.

Cognitive and Sensory Innovativeness

(Venkatraman and Price 1990)

Cognitive Innovativeness

1. Finding out the meaning of words I don't know.

2. Trying to figure out the meaning of unusual statements.

3. Thinking about different ways to explain the same thing.

4. Figuring out the shortest distance from one city to another.

5. Analyzing my own feelings and reactions.

6. Discussing unusual ideas.

7. Thinking about why the world is in the shape it is in.

8. Figuring out how many bricks it would take to build a fireplace.

Sensory Innovativeness

1. Being on a raft in the middle of the Colorado River.

2. Having a vivid dream with strange colors and sounds.

3. Riding the rapids in a swift moving stream.

4. Having a strange new feeling as I awake in the morning.

5. Steering a sled down a steep hill covered with trees.

6. Dreaming that I was lying on the beach with the waves running all over me.

7. Walking across a swinging bridge over a deep canyon.

8. Having vivid and unusual daydreams as I was riding along.

Notes: Each scale includes four internal and four external items. Scores are computed by averaging the scores across the internal and external items within each scale.

Domain-Specific Innovativeness: DSI

(Goldsmith and Hofacker 1991)

Construct: Domain- or product category-specific innovativeness (DSI) reflects the tendency to learn about and adopt innovations (new products) within a specific domain of interest (Goldsmith and Hofacker 1991, p. 211). This definition is consistent with the contention that innovativeness must be identified and characterized on a product category or domain basis (Gatignon and Robertson 1985).

Description: The DSI is a six-item scale where the items are scored on 5-point disagree–agree formats. Item scores are summed to form an overall DSI score, and the DSI is considered unidimensional. There are two versions of the DSI. Each version has three positively worded items and three negatively worded items. Therefore, versions can be used interchangeably and are considered applicable to a wide number of product domains.

Development: Six studies were used in the development and validation of the DSI. In Study 1, an initial pool of 11 items was generated based on the construct's definition and a literature review. (Rock music records/tapes was used as the product of interest.) After a pretest of the items on a small sample, a larger sample responded to the items. Via item analysis, coefficient alpha, and preliminary criterion validity checks, the final six items representing the two versions of the DSI were derived. Study 2 further examined the reliability, validity, and factor structure of the two versions of the DSI (again with rock music as the domain). Studies 3 and 4 used fashion and household entertainment equipment as domains and again looked at the psychometric properties of the scales. Study 5 examined the scale's test-retest reliability, predictive validity, and possible confounds (again with rock music). Finally, Study 6 assessed convergent and discriminant validity using rock music recordings, fashions, and cosmetics as the product categories.

Samples: The samples from each of the above six studies were composed of the following. The pretest sample of Study 1 was 27 students, and the large sample of Study 1 was composed of 309 students. Study 2 was composed of 274 students, and Study 3 used 97 female students. Study 4 used 462 nonstudent adults. A sample of 70 students was used in Study 5, and a sample of 306 (students and nonstudents) was used in Study 6.

Validity: In Study 1, the correlations of the six items with four measures of criterion validity ranged from 0.26 to 0.40 across items. Coefficient alpha for Study 2 was 0.86, and confirmatory factor analysis (via EQS) supported the scales' unidimensionality. Correlations of the DSI with seven criterion validity measures ranged from 0.07 to 0.78. In Study 3, alpha for the scale was 0.82, and the positive and negative halves of the scale had a correlation of –0.71. Unidimensionality again was confirmed, and the correlations between the DSI and seven criterion measures ranged from 0.11 to 0.80. Study 4 reported an alpha of 0.81, a unidimensional factor structure, and predictive validity correlations of 0.41 and 0.46. Test-retest reliability in Study 5 was 0.86 (over 15 weeks), and the internal consistency, dimensionality, and predictive validity of the scale were supported. The scale also exhibited low correlations with a measure of social desirability bias (i.e., –0.13 to 0.12). Finally, multitrait-multimethod analysis supported the convergent and discriminant validity of the DSI, and alpha was reported to be 0.85, 0.83, and 0.83 across three different product categories.

Scores: Mean scores were reported for several of the studies. In Study 2, the overall mean was 15.8 *(SD –5.20)*. In Study 3, the mean score was 19.4 *(SD = 4.64)*. In Study 4, means of 16.5 *(SD = 4.80)* and 17.3 *(SD = 4.80)* were reported for two product categories.

Source: Goldsmith, Ronald E. and Charles Hofacker (1991), "Measuring Consumer Innovativeness," *Journal of the Academy of Marketing Science,* 19, 209–21.

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Other evidence: Using a sample of *n* = 135 adult women, Goldsmith and Flynn (1992) report a coefficient alpha estimate for the innovativeness scale of 0.73. Numerous mean-level difference tests and correlations with related constructs show further evidence for the scales' validity. For example, those respondents scoring 21 or greater on the DSI (i.e., the top 14% of the sample) showed higher mean scores on measures of fashion interest, fashion media habits, fashion shopping, and other fashion-related constructs than did those respondents scoring 20 or less on the DSI. ("Fashionable clothing" was the focal product of the study.) The DSI was also significantly correlated, in the predicted direction, with 15 different fashion-related attitudinal and behavioral statements. These correlations ranged from 0.24 to 0.59 *(p < 0.01)*. The overall mean score (std. dev.) for the DSI was 16.6 (4.3).

Other source: Goldsmith, Ronald and Leisa Reinecke Flynn (1992), "Identifying Innovators in Consumer Product Markets," *European Journal of Marketing,* 26 (12), 42–55.

Reference: Gatignon, Hubert and Thomas R. Robertson (1985), "A Propositional Inventory for New Diffusion Research," *Journal of Consumer Research*, 11, 849–67.

Domain-Specific Innovativeness: DSI

(Goldsmith and Hofacker 1991)

1. In general, I am among the first (last) in my circle of friends to buy a new_____when it appears.

2. If I heard that a new_____was available in the store, I would (not) be interested enough to buy it.

3. Compared to my friends I own a few of (a lot of)_____.

4. In general, I am the last (first) in my circle of friends to know the titles/brands of the latest_____.

5. I will not buy a new_____if I haven't heard/tried it yet. (I will buy a new_____if I haven't heard/tried it yet.)

6. _____I (do/do not) like to buy before other people do.

Notes: Items 1, 3, and 4 constitute the negative items in Version 1, and items 2, 5, and 6 constitute the positive items in Version 1. Conversely, items 1, 3, and 4 constitute the positive items in Version 2, and items 2, 5, and 6 constitute the negative items in Version 2. Words/sentences in parentheses denote the positive and negative wording for individual items.

Items are scored on 5-point *disagree–agree* formats.

High in Emergent Nature Consumers

(Hoffman, Kopalle, and Novak 2010)

Construct: The focus of this research is on the right consumers to use when developing new product concepts. These consumers are said to possess an emergent nature, defined as the unique capability to imagine or envision how concepts might be further developed so that they will be successful in the mainstream marketplace (Hoffman et al. 2010). This ability is argued to arise from a unique set of personality traits and processing abilities. For example, emergent consumers exhibit openness to new experiences and ideas, are able to experientially explore and rationally investigate unique alternatives in new product development contexts, and possess the ability to process information both experientially and rationally (Hoffman et al. 2010).

Description: The scale consists of eight items, which compose a single unidimensional measure. All items were measured on a 7-point *strongly disagree–strongly agree* scale response format. Summed versions of the scale were apparently used in the analyses. (As shown below, similar procedures were also used to develop a domain-specific lead user scale as a competing or comparative measure.)

Development: Item analyses reduced an initial set of items to 17. The first estimate of reliability for the eight-item scale was 0.93. The same estimate of reliability is reported for the combined sample of 1,124. Confirmatory factor analyses revealed that the measure is distinct but correlated with dispositional innovativeness ($r = 0.37$) (Steenkamp and Gielens 2003) and the domain-specific lead user measure ($r = 0.39$). Additional details regarding the scale's development are provided in a series of web appendices. Overall, the scale was based heavily on psychological theories of information processing and trait-based personality.

Samples: Study 1 is based on the responses of 1,124 English-speaking adults and members of a global online panel. The sample was split into a calibration sample ($n = 754$) and validation sample ($n = 370$). Study 2a participants were drawn from the Study 1 sample. In Study 2b, 631 English-speaking adults were selected from an online global panel. Study 2c was composed of 97 and 95 individuals from a global online panel. Study 3a and 3b involved the responses of 185 adults and 207 adults purchased from a commercial research panel.

Validity: Evidence of scale validation was extensive. To begin, the coefficient alpha estimate was 0.94 in the validation sample. Moderate correlations were again observed with the related constructs. Regression analyses demonstrated that the emergent nature measure added predictive value beyond innovativeness and lead user status regarding a series of personality and information processing scales (Hoffman et al. 2010). As summarized by the authors, multiple studies in both group and individual settings and across the home delivery and oral care product categories demonstrated that emergent consumers are able to develop product concepts that mainstream consumers will find significantly more appealing than concepts developed by typical, lead user, or innovative consumers.

Example results include the following. The emergent nature scale was found positively related as predicted with openness to experience, verbal and visual processing, experiential and rational thinking style, creativity, and optimism (Hoffman et al. 2010). Moreover, lead status did not enhance prediction beyond emergent nature in any of these validation scales. Based on a sample of 631 adult consumers from a global online panel (Study 2), results reveal that a new product concept developed in a group setting by emergent consumers was rated significantly higher than similar concepts developed by lead users, innovative consumers, and control participants. In a follow-up study, the high

emergent concept as found rated higher than the lead user concept on 11 product attributes. Similar results were found for an oral care category product (Study 3) developed in individual settings. Overall, the concepts were found more appealing and associated with higher purchase intent when developed by high emergent nature consumers. Interestingly, the emergent nature consumers tended to emphasize utilitarian attributes relative to the lead user study participants.

Scores: From the article web appendix, the range of the scale was reported as 8 to 56 with a mean of 36.88 and a standard deviation of 9.78 for the combined sample of 1,124.

Source: Hoffman, Donna L., Praveen K. Kopalle, and Thomas P. Novak (2010), "The 'Right' Consumers for Better Concepts: Identifying and Using Consumers High in Emergent Nature to Further Develop New Product Concepts," *Journal of Marketing Research,* forthcoming.

Reference: Steenkamp, Jan-Benedict E.M. and Katrijn Gielens (2003), "Consumer and Market Drivers of the Trial Rate of New Consumer Products," *Journal of Consumer Research*, 30 (December), 368–84.

High in Emergent Nature Consumers

(Hoffman, Kopalle, and Novak 2010)

Emergent Nature

1. When I hear about a new product or service idea, it is easy to imagine how it might be developed into an actual product or service.

2. Even if I don't see an immediate use for a new product or service, I like to think about how I might use it in the future.

3. When I see a new product or service idea, it is easy to visualize how it might fit into the life of an average person in the future.

4. If someone gave me a new product or service idea with no clear application, I could "fill in the blanks" so someone else would know what to do with it.

5. Even if I don't see an immediate use for a new product or service, I like to imagine how people in general might use it in the future.

6. I like to experiment with new ideas for how to use products and services.

7. I like to find patterns in complexity.

8. I can picture how products and services of today could be improved to make them more appealing to the average person.

Domain-Specific Lead User

1. Other people consider me as "leading edge" with respect to home delivery of goods.

2. I have pioneered some new and different ways for home delivery of goods.

3. I have suggested to stores and delivery services some new and different ways to deliver goods at home.

4. I have participated in offers by stores to deliver goods to my home in new and different ways.

5. I have come up with some new and different solutions to meet my needs for the home delivery of goods.

Note: All items were measured on a 7-point Likert scale with *strongly disagree* and *strongly agree* as endpoints.

Innovativeness: Consumer Innovativeness

(Manning, Bearden, and Madden 1995)

Construct: Consistent with the work of Midgley and Dowling (1978) and Hirschman (1980), Manning, Bearden, and Madden (1995) define and measure two aspects of consumer innovativeness: (a) *consumer independent judgment-making* (CIJM), which is defined as the degree to which an individual makes innovation decisions independently of the communicated experience of others; and (b) *consumer novelty seeking* (CNS), which is defined as the desire to seek out new product information.

Description: The CIJM scale is composed of six items, and the CNS scale is composed of eight items. All items are 7-point scales ranging from *strongly disagree* to *strongly agree*. Item scores are summed within each scale to form overall index scores that can range from 6 to 42 for CIJM, and from 8 to 56 for CNS.

Development: Numerous recommended scaling procedures were used to develop and validate the CIJM and CNS scales. After construct definition, 74 items and 60 items were generated by the authors or culled from other sources to reflect CIJM and CNS, respectively. Items were further judged (by the authors) for content validity, retaining 31 items for CIJM and 30 for CNS. Five doctoral students then judged these items for representativeness, trimming the pool of items to 16 each for CIJM and CNS. Three studies, using factor analysis, reliability and item analyses, and numerous validity-related tests, were then conducted to refine and validate the scales.

Samples: The first sample was composed of $n = 141$ adults, the second sample was composed of a combination of university staff members and MBA students ($n = 117$), and the third sample was composed of $n = 71$ adult consumers.

Validity: Using the $n = 141$ sample, via exploratory and then confirmatory factor analyses, the final eight- and six-item forms of the scales were derived. Confirmatory factor fit indices offered evidence of unidimensional scales for both the CIJM and the CNS. Coefficient alpha estimates of internal consistency were 0.86 and 0.92, construct reliability estimates (via LISREL) were 0.85 and 0.88, and variance extracted estimates (also via LISREL) were 0.52 and 0.59 for CIJM and CNS, respectively. Factor loadings ranged from 0.58 to 0.89 across the two measures. A hypothesized two-factor solution of CIJM and CNS as separate factors was estimated and fit the data well. The correlation between CIJM and CNS was -0.11 *(p > 0.10)*.

The $n = 117$ sample also showed evidence of unidimensionality and internal consistency for the scales. Coefficient alpha estimates of internal consistency were 0.87 and 0.92, construct reliability estimates (via LISREL) were 0.87 and 0.91, and variance extracted estimates (also via LISREL) were 0.53 and 0.59 for CIJM and CNS, respectively. Factor loading items to constructs ranged from 0.47 to 0.88 for the two scales. Numerous alternative models of the CIJM and CNS scales were estimated, but none fit the data as well as the hypothesized two-factor CIJM-CNS solution. (The correlation between CIJM and CNS was -0.07, $p > 0.10$).

The $n = 71$ sample also showed unidimensionality and strong evidence of internal consistency for the CIJM and CNS scales (alphas = 0.84 for both scales, and the correlation between CIJM and CNS was 0.15, $p < 0.01$). As evidence of validity, CNS was found to be correlated with age ($r = -0.24$, $p < 0.05$). Also, CNS showed a standardized path estimate of 0.40 *(p < 0.01)* to "actualized novelty seeking," and CIJM showed a path estimate of 0.19 *(p < 0.05)* to "new product trial."

Scores: Mean scores (std. dev.) are offered for the first two samples. For the $n = 141$ sample, these scores were 22.44 (8.02) and 32.54 (11.22) for CIJM and CNS, respectively. For the $n = 117$ sample, the scores were 16.94 (6.94) and 32.97 (9.68) for CIJM and CNS, respectively.

Source: Manning, Kenneth C., William O. Bearden, and Thomas J. Madden (1995), "Consumer Innovativeness and the Adoption Process," *Journal of Consumer Psychology*, 4 (4), 329–45.

© 1995 by Lawrence Erlbaum Associates, Inc. Scale items taken from Table 1 (p. 334). Reprinted with permission.

References: Hirschman, Elizabeth C. (1980), "Innovativeness, Novelty Seeking, and Consumer Creativity," *Journal of Consumer Research*, 7, 283–95.

Midgley, D. F. and G. R. Dowling (1978), "Innovativeness: The Concept and Its Measurement," *Journal of Consumer Research*, 4, 229–42.

Innovativeness: Consumer Innovativeness

(Manning, Bearden, and Madden 1995)

CIJM Items

1. Prior to purchasing a new brand, I prefer to consult a friend that has experience with the new brand.

2. When it comes to deciding whether to purchase a new service, I do not rely on experienced friends or family members for advice.

3. I seldom ask a friend about his or her experiences with a new product before I buy the new product.

4. I decide to buy new products and services without relying on the opinions of friends who have already tried them.

5. When I am interested in purchasing a new service, I do not rely on my friends or close acquaintances that have already used the new service to give me information as to whether I should try it.

6. I do not rely on experienced friends for information about new products prior to making up my mind about whether or not to purchase.

CNS Items

1. I often seek out information about new products and brands.

2. I like to go to places where I will be exposed to information about new products and brands.

3. I like magazines that introduce new brands.

4. I frequently look for new products and services.

5. I seek out situations in which I will be exposed to new and different sources of product information.

6. I am continually seeking new product experiences.

7. When I go shopping, I find myself spending very little time checking out new products and brands.

8. I take advantage of the first available opportunity to find out about new and different products

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Notes: Item 1 of CIJM and item 5 of CNS require reverse scoring.

Items scored on 7-point scales ranging from *strongly disagree* to *strongly agree.*

Innovativeness: Use Innovativeness

(Price and Ridgway 1983)

Construct: Use innovativeness (or variety seeking in product use) involves the use of previously adopted products in novel ways (Price and Ridgway 1983, p. 679). The concept was initially introduced by Hirschman (1980). As conceptualized by Price and Ridgway, use innovativeness encompasses five factors: creativity/curiosity, risk preferences, voluntary simplicity, creative reuse, and multiple use potential.

Description: The scale consists of 44 items designed to reflect the five factors. Each item was operationalized using a 7-place, Likert-type format. The factor labels and corresponding number of items are as follows: (a) creativity/curiosity, 13; (b) risk preferences, 9; (c) voluntary simplicity, 5; (d) creative reuse, 10; and (e) multiple use potential, 7. Item scores can be summed within factors for factor indices and can be summed overall for an overall use innovativeness measure.

Development: An initial set of 70 items was generated to reflect the five factors assumed to underlie use innovativeness. This set also included five voluntary simplicity items from Leonard-Barton (1981). The set of 70 items was reduced to 60 "based on the judgment of several experts." These 60 items were administered to 358 student subjects along with six questions about calculator usage. The final 44 items were selected using the following criteria: high loadings on the anticipated factor, high item-to-total correlations for each subscale or factor, and high item-to-total correlations for the combined scale. These analyses resulted in 4 items being reassigned to another factor and 16 items (predominantly risk-taking and multiple use measures) being eliminated.

Samples: The developmental and validation analyses were performed on a sample of 358 undergraduate student subjects.

Validity: Factor analysis was performed to verify the structure of the scale. A four-factor solution was said to be superior; however, five factors are reported. The inclusion of the five items as a voluntary simplicity factor may have accounted for the inconsistency between the reported results and the final scale depicted in Table 1 (Price and Ridgway 1983, pp. 681–82). Estimates of internal consistency for the subscales were 0.86 for creativity/curiosity, 0.70 for risk preferences, 0.64 for voluntary simplicity, 0.82 for creative reuse, and 0.56 for multiple use potential. Again, intercorrelations among the factors range from 0.14 to 0.65. Using scores for the total scale, the sample was partitioned into upper, middle, and lower thirds. Analysis of variance tests of mean differences across groups revealed that the calculator usage scores behaved in a predictable pattern. That is, subjects scoring higher on the scale exhibited greater variety in their use of calculators.

Scores: The mean use innovativeness score for the entire scale summed as a whole was 199, varying from a low of 112 to a high of 299 (Price and Ridgway 1983, p. 681).

Source: Price, Linda L. and Nancy M. Ridgway (1983), "Development of a Scale to Measure Use Innovativeness," in *Advances in Consumer Research*, Vol. 10, eds. Richard P. Bagozzi and Alice M. Tybout, Ann Arbor, MI: Association for Consumer Research, pp. 679–84.

© 1983 by the Association for Consumer Research. Scale items taken from Table 1 (pp. 681–82). Reprinted with permission.

References: Hirschman, Elizabeth C. (1980), "Innovativeness, Novelty Seeking, and Consumer Creativity," *Journal of Consumer Research,* 7, 283–95.

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

Innovativeness: Use Innovativeness

(Price and Ridgway 1983)

Creativity/Curiosity

1. Knowing how a product works offers almost as much pleasure as knowing that the product works well.

2. I am very creative when using products.

3. I am less interested in the appearance of an item than in what makes it tick.

4. As a child, I really enjoyed taking things apart and putting them back together again.

5. As long as a product works well, I don't really care how it works.

6. Curiosity is one of the permanent and certain characteristics of a vigorous intellect.

7. I am very curious about how things work.

8. I like to build things for my home.

9. If I can't figure out how something works, I would rather tinker with it than ask for help.

10. I never take anything apart because I know I'll never be able to put it back together again.

11. I like to fix things around the house.

12. I have gotten instruction in self-reliance skills (e.g., carpentry, car tune-up, etc.).

13. I would rather fix something myself than take it to someone to fix.

Risk Preferences

1. When I try to do projects on my own, I'm afraid I will make a worse mess of them than if I had just left them alone.

2. I always follow manufacturer's warnings against removing the backplates on products.

3. When I try to do projects on my own, without exact directions, they usually work out really well.

4. I find very little instruction is needed to use a product similar to one I'm already familiar with.

5. I'm afraid to buy a product I don't know how to use.

6. I'm uncomfortable working on projects different from types I'm accustomed to.

7. I always follow manufacturer's warnings regarding how to use a product.

8. If a product comes in an assembled and an unassembled form, I always buy the assembled form, even though it costs a little more.

9. I like to improvise when I cook.

Voluntary Simplicity

1. I like to make clothing or furniture for myself and my family.

2. I often buy clothing at second hand stores.

3. I often make gifts instead of buying them.

4. When building something, it is better to use things already around the house than to buy materials.

5. I often buy items such as furniture at garage sales.

Creative Reuse

1. I save broken appliances because I might fix them someday.

2. I save broken appliances because I might be able to use the parts from them.

3. I enjoy thinking of new ways to use old things around the house.

4. I find myself saving packaging on products to use in other ways (e.g., egg cartons, L'eggs panty-hose eggs, plastic shopping bags, etc.).

5. When I build something, I can often make do with things I've already got around the house.

6. Even if I don't have the right tool for the job, I can usually improvise.

7. I never throw something away that I might use later.

8. I take great pleasure in adapting products to new uses that the manufacturer never intended.

9. In general, I would rather alter an old product to work in a new situation than purchase a new product specifically for that purpose.

10. After the useful life of a product, I can often think of ways to use the parts of it for other purposes.

Multiple Use Potential

1. I do not enjoy a product unless I can use it to its fullest capacity.

2. I use products in more ways than most people.

3. I often buy a food item for a particular recipe but end up using it for something else.

4. A product's value is directly related to the ways that it can be used.

5. It's always impossible to improve on a project by adding new features.

6. After purchase of a product such as a stereo or camera, I try to keep track of new accessories that come out into the market.

7. I enjoy expanding and adding onto projects that I'm involved in on a continuing basis.

Notes: Although not explicitly stated by the authors, it would seem that items 5 and 10 of the "creativity/curiosity" factor would require recoding to reflect a higher level of this factor. It would also seem that items 3, 4, and 9 of the "risk preference" factor require recoding to reflect a risk aversion preference, and item 5 of the "multiple use potential" factor requires recoding to reflect a higher level of multiple use potential.
Each item was operationalized using a 7-place, Likert-type format.

The Technology Readiness Index (or Techqual™)

(Parasuraman 2000)

Construct: Technology readiness refers to people's propensity to embrace and use technologies for accomplishing goals in home life and at work. The construct is viewed as an overall state of mind resulting from a gestalt of mental enablers and inhibitors that collectively determine a person's predisposition to use technologies (Parasuraman 2000, p. 308).

Description: The technology readiness index (labeled TRI in the article by Parasuraman) is copyrighted by Rockbridge Associates and Parasuraman; its use requires written permission. To request permission, contact Charles Colby (president of Rockbridge Associates) at ccolby@rock research.com or Parasuraman at parsu@miami.edu. The final TRI has 36 items grouped into four dimensions: Optimism, Innovativeness, Discomfort, and Insecurity. These items are the ones that have statement labels on the left-hand side of Table 1 (Parasuraman 2000, p. 312)—specifically, OPT1-OPT10 (10 items), INN1-INN7 (7 items), DIS1-DIS10 (10 items), and INS1-INS9 (9 items). See also technoreadymarketing.com. Questions were answered on a 5-point scale, where 1 = *strongly disagree*, 2 = *somewhat disagree*, 3 = *neutral*, 4 = *somewhat agree*, and 5 = *strongly agree*.

Development: The scale development was a joint effort by the author and Rockbridge Associates of Virginia. The process was an iterative, multiyear, multiphase process in which items were added after an initial scale draft deemed too focused on online issues. The extensive details regarding scale development are described by Parasuraman (2000). Briefly, and as an example, a series of focus groups and review of the literature resulted in an initial pool of 44 items. This set of items was reduced to 28 using a review of coefficient alpha estimates, corrected item-to-total correlations, and exploratory factor analyses. Subsequently, 38 items were added to the preliminary 28-item reduced set. Subsequent analyses on new data resulted in the final 36-item scale composed of four factors. The reliability estimates for the four factors following determination of the final set of items were as follows: optimism, 0.81; innovativeness, 0.80; discomfort, 0.75; and insecurity, 0.74. Confirmatory factor analysis was used to verify the factor structure.

Samples: Mail and online responses were obtained from 1,200 college students and young professionals in the Sallie Mae study. In the NTRS study, 1,000 telephone surveys were completed.

Validity: Data collected as part of the NTRS study were used to provide additional evidence of validity. The evidence of validity largely involved tests of mean differences across various categories, including the following: ownership of various services, questions about the use of specific technology-based services, and questions about the perceived desirability of engaging in a variety of technology-based services (Parasuraman 2000, p. 315). Examination of the means across categories (e.g., *used in past 12 months*, *plan to use in next 12 months*, and *no plan to use*) revealed that the TRI scores varied as predicted.

Scores: Mean scores for the overall TRI scale are reported in Table 4 of Parasuraman (2000, p. 316) for eight different technology services distributed across three ownership categories. For example, TRI means (and sample sizes used to estimate the category means) using a 1 to 5 scale for Internet service at home were reported as follows: *currently have*, 3.12 (*n* = 454); *plan to get*, 2.84 (*n* = 184); and *no plan to get*, 2.57 (*n* = 284). Additional means scores are summarized in Table 5 regarding the relationship between technology readiness and use of technology-based services (Parasuraman 2000, p. 317).

Source: Parasuraman, A. (2000), "Technology Readiness Index (TRI): A Multiple-Item Scale to Measure Readiness to Embrace New Technologies," *Journal of Service Research,* 2 (May), 307–20.

The Technology Readiness Index (or Techqual™)

(Parasuraman 2000)

Optimism (OPT)

1. Technology gives people more control over their daily lives.

2. Products and services that use the newest technologies are much more convenient to use.

3. You like the idea of doing business via computers because you are not limited to regular business hours.

4. You prefer to use the most advanced technology available.

5. You like computer programs that allow you to tailor things to fit your own needs.

6. Technology makes you more efficient in your occupation.

7. You find new technologies to be mentally stimulating.

8. Technology gives you more freedom of mobility.

9. Learning about technology can be as rewarding as the technology itself.

10. You feel confident that machines will follow through with what you instructed them to do.

Innovativeness (INN)

1. Other people come to you for advice on new technologies.

2. It seems your friends are learning more about the newest technologies than you are. (reverse coded)

3. In general, you are among the first in your circle of friends to acquire new technology when it appears.

4. You can usually figure out new high-tech products and services without help from others.

5. You keep up with the latest technological developments in your areas of interest.

6. You enjoy the challenge of figuring out high-tech gadgets.

7. You find you have fewer problems than other people in making technology work for you.

Discomfort (DIS)

1. Technical support lines are not helpful because they don't explain things in terms you understand.

2. Sometimes, you think that technology systems are not designed for use by ordinary people.

3. There is no such thing as a manual for a high-tech product or service that's written in plain language.

4. When you get technical support from a provider of a high-tech product or service, you sometimes feel as if you are being taken advantage of by someone who knows more than you do.

5. If you buy a high-tech product or service, you prefer to have the basic model over one with a lot of extra features.

6. It is embarrassing when you have trouble with a high-tech gadget while people are watching.

7. There should be caution in replacing important people-tasks with technology because new technology can break down or get disconnected.

8. Many new technologies have health or safety risks that are not discovered until after people have used them.

9. New technology makes it too easy for governments and companies to spy on people.

10. Technology always seems to fail at the worst possible time.

Insecurity (INS)

1. You do not consider it safe giving out a credit card number over a computer.

2. You do not consider it safe to do any kind of financial business online.

3. You worry that information you send over the Internet will be seen by other people.

4. You do not feel confident doing business with a place that can only be reached online.

5. Any business transaction you do electronically should be confirmed later with something in writing.

6. Whenever something gets automated, you need to check carefully that the machine or computer is not making mistakes.

7. The human touch is very important when doing business with a company.

8. When you call a business, you prefer to talk to a person rather than a machine.

9. If you provide information to a machine or over the Internet, you can never be sure it really gets to the right place.

Notes: Questions were answered on a 5-point scale, where 1 = *strongly disagree*, 2 = *somewhat disagree*, 3 = *neutral*, 4 = *somewhat agree*, and 5 = *strongly agree*. The TRI is copyrighted by Rockbridge Associates and Parasuraman; its use requires written permission. To request permission, contact Charles Colby (president of Rockbridge Associates) at ccolby@rockresearch.com or Parasuraman at parsu@miami.edu. For more information, please see the website technoreadymarketing.com.

Uniqueness: Desire for Unique Consumer Products: DUCP

(Lynn and Harris 1997)

Construct: The Desire for Unique Consumer Products (DUCP) measures the extent to which consumers hold as a personal goal the acquisition and possession of consumer goods, services, and experiences that few others possess (Lynn and Harris 1997). Antecedents of differences in DUCP include individual differences in the need for uniqueness (Snyder and Fromkin 1980) as well as status aspiration and materialism. Specific consequences of a high DUCP include an increased tendency to acquire and use products that are scarce, innovative, customized, and/or outmoded, as well as a desire to shop at small, unique retail outlets.

Description: The scale consists of eight items designed to load on a single factor. Each item was operationalized using a 5-place bipolar scale ranging from *strongly disagree* to *strongly agree*. Item scores are summed to create the DUCP score.

Development: An initial set of 33 nonredundant items that prima facie appeared to tap a broad array of behaviors and dispositions related to DUCP was generated. The items were administered to 240 business students. A principal components factor analysis was performed, and the eight items that loaded most highly on the first unrotated factor were retained. These items were selected because they had high factor loadings (above 0.50) and represented several different manifestations of the desire for unique consumer products. A maximum likelihood confirmatory analysis on these eight items indicated that a single factor model fit the data well. The consistency and generalizability of the scale were assessed by administering it to 106 working adults. A maximum likelihood confirmatory analysis indicated that a single factor model fit the data well.

Samples: The developmental analyses were conducted on convenience samples of (a) 240 business students and (b) 106 working adults. Test-retest reliability was assessed with a sample of 50 business students, correlation with theoretically relevant constructs was assessed using a sample of 337 business and psychology students, and the relationship between DUCP and a behavioral correlate was assessed using a sample of 119 theater patrons.

Validity: Coefficient alpha estimates for both the student and nonstudent samples were 0.78. The test-retest reliability (assessed by administering the scale to a new sample of 50 business students, 2 weeks apart) was 0.85. The validity of the measure was first assessed by measuring its relationship with theoretically related personality scales. Based on a sample of 337 students, the scale is significantly correlated with status aspiration, need for uniqueness, acquisitiveness, power-prestige, competitiveness, informational influence, normative influence, and possessiveness. In addition, the validity of the scale was assessed using an actual consumer behavior and a nonstudent sample of consumers. In one study, the scale was administered to 60 patrons of an "artistic" theater showing unusual movies and 59 patrons of a "second-run" theater showing popular movies. DUCP scores of patrons at the artistic theater were significantly higher than scores of patrons at the second-run theater.

Scores: Mean scores of DUCP for the student samples were 24.8 and 26.2. Mean scores for the nonstudent samples were 26.2 and 25.25. The authors found no correlation with DUCP scores and sex but did find a correlation with age in some studies, such that younger subjects tended to have higher scores.

Source: Lynn, Michael and Judy Harris (1997), "The Desire for Unique Consumer Products: A New Individual Differences Scale," *Psychology & Marketing,* 14, 601–16.

                © 1997 by John Wiley & Sons, Inc. Scale items taken from Table 1 (p. 608). Adapted by permission of John Wiley & Sons, Inc.

Reference: Snyder, C. R. and H. L. Fromkin (1980), *Uniqueness: The Human Pursuit of Difference,* New York: Plenum.

Uniqueness: Desire for Unique Consumer Products: DUCP

(Lynn and Harris 1997)

1. I am very attracted to rare objects.

2. I tend to be a fashion leader rather than a fashion follower.

3. I am more likely to buy a product if it is scarce.

4. I would prefer to have things custom-made than to have them ready-made.

5. I enjoy having things that others do not.

6. I rarely pass up the opportunity to order custom features on the products I buy.

7. I like to try new products and services before others do.

8. I enjoy shopping at stores that carry merchandise that is different and unusual.

Note: Items scored using 5-place bipolar scales ranging from *strongly disagree* to *strongly agree*.

Scales Related to Consumer Social Influence

Attention to Social Comparison Information: ATSCI

(Lennox and Wolfe 1984)

Construct: Attention to social comparison information (ATSCI) assesses the extent to which one is aware of the reactions of others to one's behavior and is concerned about or sensitive to the nature of those reactions. These individuals care what other people think about them and look for clues as to the nature of others' reactions toward them (Lennox and Wolfe 1984).

Description: The ATSCI is a 13-item scale where the items are scored from 0 *(always false)* to 5 *(always true)*. Item scores are summed to form an index.

Development: Three studies were performed to arrive at the final 13-item ATSCI. Each study contained Snyder's (1974) self-monitoring scale, from which the ATSCI is derived. (The items were adjusted to 6-point formats, as Snyder's scale was originally scored in a dichotomous format.) Also included in the studies were several other items and measures hypothesized to be related to various aspects of ATSCI and self-monitoring. Via factor analysis, reliability, and validity checks, the final form of the ATSCI was derived.

Samples: Three student samples ($n = 128$, 224, and 201) were used to develop the ATSCI across the three studies.

Validity: For the third study reported by Lennox and Wolfe *(n = 224)*, the ATSCI had an alpha of 0.83 and was correlated with other measures reflecting concern for the opinions of others: ability to modify self-presentation *(r = 0.40)*, fear of negative evaluation ($r = 0.64$), and cross-situational variability ($r = 0.42$).

Scores: Mean scores per item are reported by Lennox and Wolfe (1984, p. 1362) for their $n = 224$ sample.

Source: Lennox, Richard D. and Raymond N. Wolfe (1984), "Revision of the Self-Monitoring Scale," *Journal of Personality and Social Psychology*, 46, 1349–64.

© 1984 by the American Psychological Association. Scale items taken from Table 10 (p. 1362). Reprinted with permission.

Other evidence: In a consumer behavior context, the ATSCI was examined using student samples of 62, 99, 63, and 85 (Bearden and Rose 1990). Bearden and Rose report alpha estimates for the ATSCI of 0.85, 0.83, 0.88, and 0.89 across their four studies. Furthermore, correlations of the ATSCI with a number of variables reflecting concern for the opinion of others (e.g., public self-consciousness, $r = 0.60$, 0.40, and 0.46; fear of negative evaluation, $r = 0.50$; and consumer behavior measures) show strong support for the validity of the ATSCI.

Other source: Bearden, William O. and Randall L. Rose (1990), "Attention to Social Comparison Information: An Individual Difference Factor Affecting Consumer Conformity," *Journal of Consumer Research*, 76, 461–71.

Reference: Snyder, Mark (1974), "The Self-Monitoring of Expressive Behavior," *Journal of Personality and Social Psychology,* 30, 526–37.

Attention to Social Comparison Information: ATSCI

(Lennox and Wolfe 1984)

1. It is my feeling that if everyone else in a group is behaving in a certain manner, this must be the proper way to behave.

2. I actively avoid wearing clothes that are not in style.

3. At parties I usually try to behave in a manner that makes me fit in.

4. When I am uncertain how to act in a social situation, I look to the behavior of others for clues.

5. I try to pay attention to the reactions of others to my behavior in order to avoid being out of place.

6. I find that I tend to pick up slang expressions from others and use them as a part of my own vocabulary.

7. I tend to pay attention to what others are wearing.

8. The slightest look of disapproval in the eyes of a person with whom I am interacting is enough to make me change my approach.

9. It's important to me to fit into the group I'm with.

10. My behavior often depends on how I feel others wish me to behave.

11. If I am the least bit uncertain as to how to act in a social situation, I look to the behavior of others for cues.

12. I usually keep up with clothing style changes by watching what others wear.

13. When in a social situation, I tend not to follow the crowd, but instead to behave in a manner that suits my particular mood at the time.*

Notes: * Denotes item that is reverse scored.

Items are scored from 0 *(always false)* to 5 *(always true)*.

Item scores are summed to form an index.

Balanced Inventory of Desirable Responding: BIDR

(Paulhus 1993)

Construct: The balanced inventory of desirable responding (BIDR) scale captures the tendency to respond to questions in a manner that makes oneself look good. Two constructs included in the BIDR are self-deceptive enhancement and impression management. Self-deceptive enhancement (SDE) focuses on exaggerated claims of positive attributes that one might possess, while impression management (IM) captures the tendency to overreport good behaviors and underreport less desirable behaviors. As such, SDE is the "tendency to give self-reports that are honest but positively biased," and IM is "deliberate self-presentation to an audience" (Paulhus 1991, p. 37). Such measures of socially desirable responding are often used when the subject area of one's research is likely to be one for which subjects may not provide truthful answers.

Description: The BIDR consists of 40 items, 20 of which represent SDE and 20 of which represent IM. All items are assessed on a 7-point scale where 1 = *Not true*, 4 = *Somewhat true*, and 7 = *Very true*. Separate scores are created for the two components by assigning one point for each extreme response by the respondent. As such, scale scores range from 0 to 20 for each dimension. Although generally viewed separately and suggested to be separate by Paulhus (1991), the scores from SDE and IM may be combined to represent an overall socially desirable responding tendency. Also, note that a 5-point scale can be used, in which case extreme responses (after reverse coding) are 5 for SDE and 4 or 5 for IM.

Note that there are various versions of this scale, some of which are proprietary. We present the BIDR 6. The full normed version is available only from Multi-Health Systems, and users need to purchase it directly from them (see mhs.com).

Development: The BIDR 6 was developed to overcome shortcomings of the previous versions, including high correlations between SDE and IM and issues with reverse-coded items. The items are developed as propositions, and the set of items has transitioned over time to reflect updates in the theories distinguishing SDE from IM.

Samples: Study 1 included 180 undergraduate respondents. Additional samples are presented (in Table 2), including a sample of 568 undergraduate students and 844 religious adults, among others. A group of 83 undergraduate students was used in a test-retest reliability study. Some of these samples came from other sources.

Validity: First, we note that the evidence related to the BIDR is extensive and only a portion is summarized here. Study 1 demonstrated that a two-factor, uncorrelated model fit the data best, indicating the relative independence of SDE and IM. This factor structure was confirmed on a number of additional samples reported by Paulhus (1993). Coefficient alphas from all samples ranged from 0.70 to 0.82 for the SDE and 0.80 to 0.86 for the IM scale. Alphas when the 40 items are considered together ranged from 0.83 to 0.85. Test-retest reliability results from a sample of 83 students showed reliabilities of 0.69 and 0.65 for SDE and IM, respectively, over a 5-week period.

The BIDR Version 6 was also compared to other measures of socially desirable responding, including Crowne and Marlowe (1960), which it was highly correlated with at 0.71. The BIDR was also assessed relative to the Big-Five personality dimensions, which demonstrated some of the unique differences between SDE and IM. For example, Extraversion was positively related to SDE but not IM, and Neuroticism was negatively correlated with SDE but not IM. IM was more strongly correlated with Agreeableness than was SDE.

Scores: Mean scores are provided for each sample based on gender. Students told to "respond honestly" had the following means (standard deviations): Males, SDE 7.5 (3.2), IM 4.3 (3.1); Females, SDE 6.8 (3.1), IM 4.9 (3.2). In a sample of religious adults, the means were Males, SDE 7.6 (3.1), IM 7.3 (3.1); Females, SDE 7.3 (3.1), IM 8.9 (3.2). These mean scores were calculated using the procedures described under "Notes" following the scale items presented next.

Sources: Paulhus, Delroy L. (1991), "Measurement and Control of Response Bias," *Measures of Personality and Social Psychological Attitudes,* Academic Press, 17–59.

Paulhus, Delroy L. (1993), "The Balanced Inventory of Desirable Responding," *Reference Manual for BIDR Version 6,* University of British Columbia, also published by Multi-Health Systems.

Reference: Crowne, D. P. and Marlowe, D. A. (1960), "A New Scale of Social Desirability Independent of Psychopathology," *Journal of Consulting Psychology,* 24, 349–54.

Balanced Inventory of Desirable Responding: BIDR

(Paulhus 1993)

Self-Deceptive Enhancement (SDE)

1. My first impressions of people usually turn out to be right.

2. It would be hard for me to break any of my bad habits. (R)

3. I don't care to know what other people really think of me.

4. I have not always been honest with myself. (R)

5. I always know why I like things.

6. When my emotions are aroused, it biases my thinking. (R)

7. Once I've made up my mind, other people can seldom change my opinion.

8. I am not a safe driver when I exceed the speed limit. (R)

9. I am fully in control of my own fate.

10. It's hard for me to shut off a disturbing thought. (R)

11. I never regret my decisions.

12. I sometimes lose out on things because I can't make up my mind soon enough. (R)

13. The reason I vote is because my vote can make a difference.

14. My parents were not always fair when they punished me. (R)

15. I am a completely rational person.

16. I rarely appreciate criticism. (R)

17. I am very confident of my judgments.

18. I have sometimes doubted my ability as a lover. (R)

19. It's all right with me if some people happen to dislike me.

20. I don't always know the reasons why I do the things I do. (R)

Impression Management (IM)

1. I sometimes tell lies if I have to. (R)

2. I never cover up my mistakes.

3. There have been occasions when I have taken advantage of someone. (R)

4. I never swear.

5. I sometimes try to get even rather than forgive and forget. (R)

6. I always obey laws, even if I'm unlikely to get caught.

7. I have said something bad about a friend behind his or her back. (R)

8. When I hear people talking privately, I avoid listening.

9. I have received too much change from a salesperson without telling him or her. (R)

10. I always declare everything at customs.

11. When I was young, I sometime stole things. (R)

12. I have never dropped litter on the street.

13. I sometimes drive faster than the speed limit. (R)

14. I never read sexy books or magazines.

15. I have done things that I don't tell other people about. (R)

16. I never take things that don't belong to me.

17. I have taken sick-leave from work or school even though I wasn't really sick. (R)

18. I have never damaged a library book or store merchandise without reporting it.

19. I have some pretty awful habits. (R)

20. I don't gossip about other people's business.

Notes: Uses a 7-point scale where 1 = *Not true*, 4 = *Somewhat true*, and 7 = *Very true*. (R) indicates items requiring reverse coding. Once reverse coding is complete, 1 point is assigned for each question that was rated as a 6 or 7 by the respondent. Points are then added separately across the 20 SDE and the 20 IM statements to compute the overall SDE or IM of each respondent. The two scores may also be combined for an overall measure of socially desirable responding.

Intergenerational Communication and Influence on Consumption: IGEN Scales

(Viswanathan, Childers, and Moore 2000)

Construct: The authors posit three dimensions of intergenerational *communication* and *influence* on consumption: *consumer skills*—cognitions held with respect to the basic, rational aspects of consumption, such as budgeting, product evaluation, and selection of purchase criteria; *consumption-related preferences*—perceptions of parent's preferences at the brand, store, or firm level; and *consumer attitude*—cognitive and affective orientations toward marketplace stimuli, such as advertising, salespeople, and pricing information (Viswanathan et al. 2000, pp. 408–9). As noted by the authors, each dimension focuses on information conveyed from parents to their children relevant to consumption. Each dimension is also represented separately within two domains of the construct: *communication* and *influence.*

Description: The IGEN scale(s) has multiple dimensions within each of the construct's two domains, *communication* and *influence,* resulting in six separate scales or dimensions: *consumer skills, consumption-related preferences,* and *consumer attitude* scales within the *influence* domain; and *consumer skills, consumption-related preferences,* and *consumer attitude* scales within the *communication* domain. There are four items within each dimension. All items within the *influence* domain are scored on 7-point scales ranging from 1 = *not at all* to 7 = *to a large extent.* All items within the *communication* domain are scored on 7-point scales ranging from 1 = *never* to 7 = *very often.* Item scores are summed and averaged within dimension to form IGEN dimension scores ranging from 1 to 7. In addition, all *consumer skills, consumption-related preferences,* and *consumer attitude* items within the *influence* domain can be summed and averaged to form one overall *influence* score ranging from 1 to 7; and all *consumer skills, consumption-related preferences,* and *consumer attitude* items within the *communication* domain can be summed and averaged to form one overall *communication* score ranging from 1 to 7.

Development: Using recommended scaling procedures, the authors conducted three studies, plus initial item development/screening procedures and a pretest to develop and validate the final form of the IGEN scales. Based on a thorough review of the literature, the authors generated a pool of 37 items to tap the IGEN domains/dimensions. A pretest using 100 undergraduate marketing students was then conducted. Via exploratory factor analyses (EFA), reliability analyses, and author judgment, this pool was reduced to the final 12 items encompassing the three IGEN dimensions per construct domain. Three studies were then conducted to assess IGEN factor structure, reliability, and validity.

Samples: Study 1, a U.S. sample of $n = 196$ MBI alumni; Study 2, Thailand sample of $n = 149$ MBI alumni; Study 3, $n = 150$ undergraduate students and $n = 75$ parents of those undergraduate students.

Validity: Numerous estimates of dimensionality, reliability, and validity were assessed. In Studies 1 and 2, confirmatory factor analyses (CFA) indicated that a three-factor model consistent with the three IGEN dimensions within the *influence* and *communication* domains fit the data well. Correlations among the IGEN dimensions across both *influence* and *communication* domains ranged from 0.44 to 0.88 across Studies 1 and 2 (U.S. and Thai samples). Coefficient alpha estimates ranged from 0.65 to 0.85 for the IGEN dimensions and ranged from 0.87 to 0.92 for the overall IGEN scale within the *influence* and *communication* domains (see Table 2, p. 413). As evidence of validity, the authors examined the relations between parent-child similarity in purchase behavior and family closeness. For both studies, the pattern of correlations showed strong evidence for validity of the

IGEN dimensions, with all correlations being positive and 59 of 64 correlations being significant, as hypothesized. Further, the Thai sample (Study 2) showed a pattern of correlations different from the U.S. sample (Study 1) for some of the IGEN dimensions, as anticipated.

In Study 3, the IGEN dimensions were further validated. CFA again indicated that a three-factor model within the *influence* and *communication* domains fit the data well. Correlations among the IGEN dimensions across both *influence* and *communication* mirrored those of Studies 1 and 2. Coefficient alpha estimates ranged from 0.64 to 0.80 for the IGEN dimensions and ranged from 0.84 to 0.90 for the overall IGEN scale within the *influence* and *communication* domains. The IGEN dimensions were shown to have discriminant validity from related constructs (e.g., materialism, value consciousness, coupon proneness, choice rules, consumer sentiment toward marketing), and nomological validity was demonstrated by positive correlations with susceptibility to interpersonal influence and parent-child affection (among others). Dyadic analyses (Table 7, p. 420) between matched pairs of students and their parents in Study 3 also showed evidence for the validity of the IGEN dimensions.

Scores: Table 2 (p. 413) offers mean scores (SDs) for all dimensions and for the total IGEN scale. The overall 12-item IGEN *communication* scale had a mean of 4.28 (SD = 0.66), and the overall 12-item IGEN *influence* scale had a mean of 3.74 (SD = 0.76 in Study 1 [U.S. sample]). In Study 2 (Thai sample), the overall 12-item IGEN *communication* scale had a mean of 3.66 (SD = 0.47), and the overall 12-item IGEN *influence* scale had a mean of 3.19 (SD = 0.52). Likewise, the overall 12-item IGEN *communication* scale had a mean of 4.71 (SD = 0.82), and the overall 12-item IGEN *influence* scale had a mean of 4.29 (SD = 0.79 in Study 3—young adult sample). Study 3 also showed a parent sample 12-item IGEN *communication* scale mean of 5.09 (SD = 0.64), and the overall 12-item IGEN *influence* scale had a mean of 4.50 (SD = 0.57).

Source: Viswanathan, Madhubalan, Terry L. Childers, and Elizabeth S. Moore (2000), "The Measurement of Intergenerational Communication and Influence on Consumption: Development, Validation, and Cross-Cultural Comparison of the IGEN Scale," *Journal of the Academy of Marketing Science,* 28 (3), 406–24.

Intergenerational Communication and Influence on Consumption: IGEN Scales

(Viswanathan, Childers, and Moore 2000)

Consumer Skills

1. It is advantageous to be good at money saving, planning future finances, budgeting regularly, paying bills on time, and keeping periodic track of accounts.

2. Their views on "how to choose between products and brands" while shopping.

3. Their views on "how to evaluate information related to a product, its price, its advertisements, and the stores where it is sold."

4. The best way to shop is to compare two or more brands carefully on several features such as price, quality, and expected life and buy the one that gives the best value overall.

Consumption-Related Preferences

1. Why they buy the brands or products they purchase.

2. Their preferences for shopping at different types of stores.

3. Their preferences for different styles of products.

4. Their preferences for different companies and the products/brands made by these different companies.

Consumer Attitudes

1. Their views about product information provided by different types of advertising.

2. The role that advertising plays in purchasing decisions (i.e., whether it helps or hinders purchase decisions).

3. Their view on whether price should be used as an indicator of product quality.

4. Whether to rely on salespeople to educate you when making a purchase decision.

Notes: For the *influence* content domain, all items above are followed by the phrase "How much were you influenced by their [your parents] opinions on this issue?" (7-point scales ranging from 1 = *not at all* to 7 = *a large extent*). For the *communications* content domain, all items above are followed by the phrase "Have your parents communicated this to you?" (7-point scales ranging from 1 = *never* to 7 = *very often*).

Interpersonal Influence: Consumer Susceptibility to Interpersonal Influence

(Bearden, Netemeyer, and Teel 1989)

Construct: Consumer susceptibility to interpersonal influence is assumed to be a general trait that varies across individuals and is related to other individual traits and characteristics. The construct is defined as the need to identify with or enhance one's image in the opinion of significant others through the acquisition and use of products and brands, the willingness to conform to the expectations of others regarding purchase decisions, and/or the tendency to learn about products and services by observing others or seeking information from others (Bearden et al. 1989, p. 474), That is, the construct is multidimensional in that both normative influences (e.g., value expressive and utilitarian) and informational influences are considered (e.g., Burnkrant and Cousineau 1975; Deutsch and Gerard 1955).

Description: The scale consists of 12 items each operationalized as a Likert, 7-place rating scale ranging from *strongly agree* to *strongly disagree*. All items are positively worded. The 12 items reflect two correlated dimensions of susceptibility to interpersonal influence. Item scores are summed within each dimension to form normative and informational indices, and they can be summed overall for an overall susceptibility to interpersonal influence score ranging from 12 to 84.

Development: An original pool of 166 items was developed from a review of prior research. The number was reduced to 135 after deletion of ambiguous items and items with essentially identical meaning. Five judges were then used to assign items to categories based on definitions provided for the three factors. Items that did not receive consistent classification by four of the five judges were eliminated. This process reduced the number of items to 86. The pool of items was further reduced to 62 using a second judgmental procedure. That is, those items not classified as clearly representative of each of the three factors by four marketing faculty judges were eliminated.

The remaining 62 items were interspersed across the three factors and then administered to a convenience sample of 220 adults. Corrected item-to-total correlations for each factor and oblique factor analysis (restricting the solution to three factors) were used to reduce the set of items to 18. Those items with item-to-total correlations below 0.50 were first deleted. Items not exhibiting simple structure were then eliminated.

The remaining 18 items were examined using confirmatory factor analysis which revealed three items with low reliabilities. For the five items remaining as indicators of informational, utilitarian, and value expressiveness influences, the respective construct reliabilities were 0.86, 0.87, and 0.83. Subsequent tests of convergent and discriminant validity revealed, however, that the value expressiveness and utilitarian factors were not discrete. This finding resulted in a 10-item normative factor. Estimates of construct reliability and shared variance for this factor were 0.91 and 0.52.

These 15 items were subsequently examined on a student sample of 141 subjects. Confirmatory factor analysis then supported (after the deletion of three additional items) a 12-item scale reflecting informational (four items) and normative influences (eight items).

Samples: The first administration obtained responses from a convenience sample of 220 adult (nonstudent) subjects. The second administration involved a survey of 141 student subjects. The validity of the scale was then evaluated on separate samples of 47 students in a correlational study involving measures of self-esteem and attention to social comparison information, 35 and 43 students in a two-phase behavioral index study, 72 fraternity and sorority subjects in the external judges study, and a group of 143 students in a study of motivations to comply.

Validity: Coefficient alpha estimates for the informational and normative factors were 0.82 and 0.88 ($n = 220$). A small sample of 35 subjects resulted in corresponding test-retest estimates of 0.75 and 0.79. Confirmatory factor analysis tests of invariant structure across the two samples also supported the stability of the measures.

The validity of the measures was further examined in five separate studies (see Bearden et al. 1989, pp. 477–79 for details). First, correlations between the two factors and measures of self-esteem and attention to social comparison information provided some evidence of construct validity in that the correlations were in the direction and pattern as expected. The evidence here was strongest for the normative factor. Second, the correlations between the informational factor and the normative factor and a series of self-reported behavioral indices were 0.37 $(p < 0.05)$ and 0.15, respectively. Third and fourth, two external judgmental rating procedures also supported the ability of the scale to explain susceptibility to interpersonal influences. Lastly, the normative and informational factor measures were correlated with measures of motivations to comply as predicted. These estimates were 0.39 and 0.59 for the informational and normative scales, respectively.

Scores: Mean scores were not reported in the studies cited below. The authors did find that students scored significantly higher than nonstudents.

Source: Bearden, William O., Richard G. Netemeyer, and Jesse E. Teel (1989), "Measurement of Consumer Susceptibility to Interpersonal Influence," *Journal of Consumer Research,* 15, 473–81.

© 1989 by University of Chicago Press. Scale items taken from Table 2 (p. 477). Reprinted with permission.

Other evidence: The dimensionality and validity of the scales were further examined by the same authors (Bearden, Netemeyer, and Teel 1990) in a series of follow-up tests on new data and reanalyses of the data presented above. The results of correlating the susceptibility to interpersonal influence measures with a number of personality traits were reported. For the normative factor, example measures and significant correlations include the following: consumer confidence, $r = -0.53$; interpersonal orientation, $r = 0.38$; inner-other directedness, $r = 0.37$; and extroversion, $r = 0.16$. In addition, the SUSCEP measures were shown to be more highly correlated with ATSCI and self-esteem than comparable measures developed from Park and Lessig (1977). Confirmatory factor analyses revealed that the two-factor solution was superior to both null and single-factor model solutions in terms of model fit and that the construct reliabilities were similar to those reported by Bearden et al. (1989).

In another study, Wooten and Reed (2004) used the eight-item susceptibility to normative social influence scale ($\alpha = 0.90$) and found that those who scored higher on this scale ($M = 31.34$) responded more favorably to protective messages pertaining to conspicuous product benefits (e.g., mouthwash prevents bad breath and soap prevents acne) than did those scoring low on the scale ($M = 15.62$). Wooten and Reed (2004) also examined the relationship between susceptibility to normative social influence and two dimensions of self presentation. Self-presentation reflects the individual's tendency to make unrealistic favorable self-portrayals by attributing positive, but unlikely attributes to themselves (the attributive dimension), or denying negative traits that probably do apply to them (the repudiative dimension). As hypothesized, susceptibility to normative social influence was negatively related to the attributive dimension ($r = -.35$) and negatively related to the repudiative dimension ($r = -.53$). These results collectively suggest further evidence of validity for the eight-item susceptibility to normative social influence scale of Bearden et al. (1989).

Other sources: Bearden, William O., Richard G. Netemeyer, and Jesse E. Teel (1990), "Further Validation of the Consumer Susceptibility to Interpersonal Influence Scale," in *Advances in Consumer Research,* Vol. 17, eds. Marvin E. Goldberg, Gerald Gorn, and Richard W. Pollay, Provo, UT: Association for Consumer Research, pp. 770–76.

Wooten, David B. and Americus Reed II (2004), "Playing It Safe: Susceptibility to Normative Social Influence and Protective Self-Presentation," *Journal of Consumer Research,* 31 (December), 551–56.

References: Burnkrant, Robert E. and Alain Cousineau (1975), "Informational and Normative Influence in Buyer Behavior," *Journal of Consumer Research,* 2, 206–15.

Deutsch, Morton and Harold B. Gerard (1955), "A Study of Normative and Informational Influence Upon Individual Judgment," *Journal of Abnormal and Social Psychology,* 7 (November), 1–15.

Park, C. Whan and Parker V. Lessig (1977), "Students and Housewives: Differences in Susceptibility to Reference Group Influence," *Journal of Consumer Research,* 4, 102–10.

Interpersonal Influence: Consumer Susceptibility to Interpersonal Influence

(Bearden, Netemeyer, and Teel 1989)

1. I often consult other people to help choose the best alternative available from a product class.

2. If I want to be like someone, I often try to buy the same brands that they buy.

3. It is important that others like the products and brands I buy.

4. To make sure I buy the right product or brand, I often observe what others are buying and using.

5. I rarely purchase the latest fashion styles until I am sure my friends approve of them.

6. I often identify with other people by purchasing the same products and brands they purchase.

7. If I have little experience with a product, I often ask my friends about the product.

8. When buying products, I generally purchase those brands that I think others will approve of.

9. I like to know what brands and products make good impressions on others.

10. I frequently gather information from friends or family about a product before I buy.

11. If other people can see me using a product, I often purchase the brand they expect me to buy.

12. I achieve a sense of belonging by purchasing the same products and brands that others purchase.

Notes: Normative factor items are 2, 3, 5, 6, 8, 9, 11, and 12; informational factor items are 1, 4, 7, and 10. Items are scored using a Likert, 7-place rating scale ranging from *strongly agree* to *strongly disagree*.

Reference Group Influence: Consumer Susceptibility to Reference Group Influence

(Park and Lessig 1977)

Construct: Reference group influence is defined as the influence from an actual or imaginary individual or group conceived of having significant relevance on an individual's evaluations, aspirations, or behavior. Furthermore, reference group influence has three motivational components (Park and Lessig 1977, p. 102): informational, utilitarian, and value expressive.

Informational influence is accepted from others for its informational content because it enhances the individual's knowledge of his/her environment or his/her ability to cope with some aspect of the environment (e.g., a product purchase).

Utilitarian influence is based on compliance with others. An individual complies because he/she perceives that significant others can mediate rewards or punishments, because the individual's behavior is known or visible to others, or because the individual is motivated to realize a reward or avoid punishment.

Value expressive influence relates to the individual's desire to enhance his/her self-concept in the eyes of others (i.e., the individual identifies with positive referents and dissociates him/herself from negative referents).

Description: The reference group scale is composed of 14 statements each measured along 4-point scales in regard to one's consumer behavior (i.e., *highly relevant = 4*, *medium relevance = 3*, *low relevance = 2,* and *not relevant = 1*). There are five items each for the informational and value expressive dimensions, and four items for the utilitarian dimension. Item scores are summed within dimensions and then divided by the number of items within each dimension to form indices for each dimension.

Development: Informal interviews and author judgment were used to generate 18 items that tapped the three dimensions of reference group influence. These items were pretested with a student sample and then trimmed to the final 14-item scale. A number of reliability and validity tests were then performed on new samples over 20 different product categories.

Samples: A sample of 22 students was used to trim the pool of 18 statements down to 14. A sample of 42 consumers was used in a validity check study, and samples of 100 housewives and 51 and 37 students also participated in validation studies.

Validity: Test-retest reliabilities for the three dimensions ranged from 0.43 to 0.78 (for a subsample of 20 of the housewife sample of 100) and 0.56 to 0.96 (for a subsample of 13 from one of the student samples). Multitrait-multimethod analyses supported the convergent and discriminant validity of the measures, as across products, the correlations among measures of the same trait were high, and correlations with different traits were low. (Beyond this, little detail was provided by Park and Lessig on their MTMM analyses.) Also, a number of mean difference tests between the housewife and student samples supported the scale's validity. That is, students were more susceptible to reference group influence for products like beer and cigarettes, and housewives were more susceptible to influence for products like furniture.

Scores: A number of mean scores are reported by Park and Lessig (1977, Tables 1, 2, 3, and 4, pp. 106–8). Across the 20 products studied, mean scores ranged from 2.46 to 4.00 for informational influence, 2.33 to 3.95 for utilitarian influence, and 1.93 to 3.97 for value expressive influence.

Source: Park, C. Whan and V. Parker Lessig (1977), "Students and Housewives: Differences in Susceptibility of Reference Group Influence," *Journal of Consumer Research*, 4, 102–10.

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Other evidence: Bearden and Etzel (1982) used a slightly modified version of the Park and Lessig measures. Thirteen of the items were used with slight wording changes and measures on 6-point disagree–agree statements (i.e., four items for informational, five for value expressive, and four for utilitarian). Across several product decisions, alphas for the dimensions were 0.63, 0.88, and 0.71 for the informational, value expressive, and utilitarian subscales, respectively. Across several brand decisions, alphas were 0.70, 0.80, and 0.77 for the three dimensions. Average test-retest reliabilities over a 3-week period ranged from 0.53 to 0.68 for the dimensions. A number of mean difference tests showed hypothesized differences between the three influence types.

Other source: Bearden, William O. and Michael J. Etzel (1982), "Reference Group Influence on Product and Brand Purchase Decisions," *Journal of Consumer Research,* 9, 183–94.

Reference Group Influence:
Consumer Susceptibility to Reference Group Influence
(Park and Lessig 1977)

Informational Influence

1. The individual seeks information about various brands and products from an association of professionals or independent group of experts.

2. The individual seeks information from those who work with the products as a profession.

3. The individual seeks brand-related knowledge and experience (such as how Brand A's performance compares to Brand B's) from those friends, neighbors, relatives, or work associates who have reliable information about the brands.

4. The brand which the individual selects is influenced by observing a seal of approval of an independent testing agency (such as Good Housekeeping).

5. The individual's observation of what experts do influences his choice of a brand (such as observing the type of car which police drive or the brand of TV which repairmen buy).

Utilitarian Influence

1. To satisfy the expectations of fellow work associates, the individual's decision to purchase a particular brand is influenced by their preferences.

2. The individual's decision to purchase a particular brand is influenced by the preferences of people with whom he has social interaction.

3. The individual's decision to purchase a particular brand is influenced by the preferences of family members.

4. The desire to satisfy the expectations that others have of him has an impact on the individual's brand choice.

Value Expressive Influence

1. The individual feels that the purchase or use of a particular brand will enhance the image which others will have of him.

2. The individual feels that those who purchase or use a particular brand possess the characteristics which he would like to have.

3. The individual sometimes feels that it would be nice to be like the type of person which advertisements show using a particular brand.

4. The individual feels that the people who purchase a particular brand are admired or respected by others.

5. The individual feels that the purchase of a particular brand helps him show others what he is, or would like to be (such as an athlete, successful businessman, good father, etc.).

Notes: Each statement is measured along 4-point scales in regard to one's consumer behavior (i.e., *highly relevant* = 4, *medium relevance* = 3, *low relevance* = 2, and *not relevant* = 1).

Item scores are summed within dimensions and then divided by the number of items within each dimension to form indices for each dimension.

Self-Monitoring Scale

(Snyder 1974)

Construct: Self-monitoring of expressive behavior and self-presentation were defined originally by Snyder (1974) as self-observation and self-control guided by situational cues to social appropriateness. An instrument was designed to discriminate individual differences in concern for social appropriateness, sensitivity to the expression and self-presentation of others in social situations as cues to social appropriateness of self-expression, and use of these cues as guidelines for monitoring and managing self-presentation and expressive behavior (Snyder 1974). The self-monitoring scale has generated a substantial body of research that continues to develop. The research includes a number of evaluations of the scale that include both supportive and critical evaluations. The scale has been used successfully in a number of consumer behavior studies (e.g., Becherer and Richard 1978) and has implications for salesperson behavior as well.

Description: The scale consists of 25 true-false items. Negatively worded items are reverse scored such that higher scores reflect higher self-monitoring. Labels for each item or situation were "True or Mostly True" and "False or Not Usually True." Five factors were assumed to underlie the original development of items: (a) concern with the social appropriateness of one's self-presentation, (b) attention to social comparison information as cues to appropriate self-expression, (c) the ability to control and modify one's self-presentation and expressive behavior, (d) the use of this ability in particular situations, and (e) the extent to which the person's self-presentation is cross-situationally consistent or variable (Snyder 1974, p. 529), Items are scored 0 or 1 and summed such that scores range from 0 to 25.

Development: A beginning set of 41 true-false items was first administered to 192 Stanford undergraduates. This set included items designed to reflect the above five factors. Items in the final scale were selected based on their contribution to internal consistency and their ability to discriminate between low and high scorers on the original set.

Samples: Student samples of 192 and 146 from Stanford and Minnesota were used in the initial development of the scale. Subsamples of actors *(n = 24)* and psychiatric patients *(n = 31)* also were used in validity testing.

Validity: The KR-20 and test-retest estimates of reliability were 0.70 and 0.83, respectively. The KR-20 estimate reliability for a separate sample of 146 undergraduates was 0.63. Evidence of discriminant validity was provided by a –0.19 *(p < 0.05)* correlation with the Marlowe-Crowne Social Desirability Scale. Modest correlations with measures of Machiavellianism *(r = –0.09)* and inner-other directedness (r = –0.19), among others, were also cited as evidence of discriminant validity.

A series of other studies were conducted to validate the measure. First, 16 fraternity members participated in a peer rating study of other fraternity members which found the SM measure to be related to external peer ratings of self-monitoring, *r = 0.45, p < 0.05*. Second, differences in mean scores were obtained between a sample of actors, the Stanford student sample, and a sample of psychiatric patients. Third, in a study of taped expressions, high self-monitors were better able than low self-monitors to express arbitrary emotional states in facial and vocal behavior. Also, in a study in which subjects were allowed to look or not to look at social comparison information (i.e., normative social comparison information) prior to an anticipated task, high self-monitors were more likely than low self-monitors to seek out social comparison information.

Scores: The mean scores for the actor and psychiatric patient samples were 18.41 and 10.19, respectively. These means were also said to be significantly above and below the Stanford student sample.

Source: Snyder, Mark (1974), "Self-Monitoring of Expressive Behavior," *Journal of Personality and Social Psychology,* 30 (4), 526–37.

© 1974 by the American Psychological Association. Scale items taken from Table 1 (p. 531). Reprinted with permission.

Other evidence: Snyder and Gangestad (1986) also offer an 18-item reduced version of Snyder's (1974) original scale. This version exhibited alpha estimates in excess of 0.70, and the first unrotated factor accounted for 62% of the scale variance.

As noted above, the research stimulated by Snyder's (1974) self-monitoring concept, measure, and related work has been extensive. For an excellent review of this work see Snyder and Gangestad (1986). For consumer behavior purposes, only the manuscript by Becherer and Richard (1978), which reproduces the original scale in their *Journal of Consumer Research* article, is referenced here. In that research, self-monitoring was shown to moderate the effects on consumer decisions. Specifically, as expected from the theory underlying the self-monitoring construct, situational factors (as opposed to personal dispositions or personality traits) were suggested as being most related to consumption for high self-monitors. In addition, the data indicated that, among the low self-monitoring group, the relationship between a series of personality measures (e.g., tolerance) and private brand proneness was significant for both social and nonsocial products.

Other sources: Becherer, Richard C. and Lawrence M. Richard (1978), "Self-Monitoring as a Moderating Variable in Consumer Behavior," *Journal of Consumer Research,* 5, 159–62.

Snyder, Mark and Steve Gangestad (1986), "On the Nature of Self-Monitoring: Matters of Assessment, Matters of Validity," *Journal of Personality and Social Psychology,* 51, 125–39.

Self-Monitoring Scale

(Snyder 1974)

1. I find it hard to imitate the behavior of other people.

2. My behavior is usually an expression of my true inner feelings, attitudes, and beliefs.

3. At parties and social gatherings, I do not attempt to do or say things that others will like.

4. I only argue for ideas which I already believe.

5. I can make impromptu speeches on topics about which I have almost no information.

6. I guess I put on a show to impress or entertain people.

7. When I am uncertain how to act in a social situation, I look to the behavior of others for cues.

8. I would probably make a good actor.

9. I rarely need the advice of my friends to choose books, movies, or music.

10. I sometimes appear to others to be experiencing deeper emotions than I am.

11. I laugh more when I watch a comedy with others than I do when I watch alone.

12. In a group of people, I am rarely the center of attention.

13. In different situations with different people, I often act like very different people.

14. I am not particularly good at making other people like me.

15. Even if I am not enjoying myself, I often pretend to be having a good time.

16. I am not always the person I appear to be.

17. I would not change my opinions (or the way I do things) in order to please someone else or to win their favor.

18. I have considered being an entertainer.

19. In order to get along and be liked, I tend to be what people expect me to be rather than anything else.

20. I have never been good at games like charades or improvisational acting.

21. I have trouble changing my behavior to suit different people and different situations.

22. At a party I let others keep the jokes and stories going.

23. I feel a bit awkward in company and do not show up quite so well as I should.

24. I can look anyone in the eye and tell a lie with straight face (if for a right end).

25. I may deceive people by being friendly when I really dislike them.

Notes: A "TRUE" response for items 5 through 8, 10, 11, 13, 15, 16, 18, 19, 24, and 25 reflects high self-monitoring. A "FALSE" response for items 1 through 4, 9, 12, 14, 17, and 20 through 23 also reflects high self-monitoring.

Items 1, 3, 4, 5, 6, 8, 12, 13, 14, 16, 17, 18, and 20 through 25 represent Snyder and Gangestad's 18-item version.

The scale consists of 25 true-false items. Items are scored 0 or 1.

Self-Monitoring Scale: Revised Form

(Lennox and Wolfe 1984)

Construct: Lennox and Wolfe (1984) restrict the concept of self-monitoring to the ability to modify self-presentation and sensitivity to the expressive behavior of others. This more narrow definition of the construct is felt to be more reflective of the forte of the high self-monitor (Lennox and Wolfe 1984).

Description: The Lennox and Wolfe version of the scale is composed of 13 items each scored on 6-point scales. Subjects are asked to indicate the degree to which each item is reflective of their own behavior: 0 = *certainly, always false;* 1 = *generally false;* 2 = *somewhat false, but with exceptions;* 3 = *somewhat true, but with exceptions;* 4 = *generally true;* and 5 = *certainly, always true.* Seven items represent ability to modify self-presentation, and six items represent sensitivity to the expressive behavior of others. Item scores can be summed within these two factors to form factor indices, or overall to form an overall measure of self-monitoring (Lennox and Wolfe 1984).

Development: Over four studies, Lennox and Wolfe administered and factor-analyzed Snyder's (1974) original scale and items they generated to measure the construct. In Study 1, they factor-analyzed the original scale and found that several items did not load as hypothesized. In Study 2, they retained 19 of Snyder's original items, added 28 of their own, and factor-analyzed them using the previously described 6-point scoring system. From these 28 items, a four-factor structure was retained. Studies 3 and 4 further analyzed the scale and resulted in the final two-factor scale to measure self-monitoring. Coefficient alpha and a number of validity checks were performed on the final scale.

Samples: The four samples used for the four studies were all composed of student subjects. Samples sizes were 179, 128, 224, and 201 for the four studies, respectively.

Validity: The final scale had a coefficient alpha of 0.75 for the total scale (all 13 items), 0.77 for the seven-item ability to modify self-presentation factor, and 0.70 for the six-item sensitivity to the expressive behavior of others (n = 201). Correlations with related constructs revealed evidence of construct validity. For example, the overall scale had a correlation of 0.30 with a measure of individuation and of 0.17 with private self-consciousness.

Scores: Mean scores for the total scale and subscales were not provided. Table 9 of Lennox and Wolfe (1984, p. 1361) provides item means and standard deviations.

Source: Lennox, Richard D. and Raymond N. Wolfe (1984), "Revision of the Self-Monitoring Scale," *Journal of Personality and Social Psychology,* 46, 1349–64.

© 1984 by the American Psychological Association. Scale items taken from Table 9 (p. 1361). Reprinted with permission.

Reference: Snyder, Mark (1974), "The Self-Monitoring of Expressive Behavior," *Journal of Personality and Social Psychology,* 30 (4), 526–37.

Self-Monitoring Scale: Revised Form

(Lennox and Wolfe 1984)

Ability to Modify Self-Presentation

1. In social situations, I have the ability to alter my behavior if I feel that something else is called for.

2. I have the ability to control the way I come across to people, depending on the impression I wish to give them.

3. When I feel that the image I am portraying isn't working, I can readily change it to something that does.

4. I have trouble changing my behavior to suit different people and different situations.*

5. I have found that I can adjust my behavior to meet the requirements of any situation I find myself in.

6. Even when it might be to my advantage, I have difficulty putting up a good front.*

7. Once I know what the situation calls for, it's easy for me to regulate my actions accordingly.

Sensitivity to the Expressive Behaviors of Others

1. I am often able to read people's true emotions correctly through their eyes.

2. In conversations, I am sensitive to even the slightest change in the facial expression of the person I'm conversing with.

3. My powers of intuition are quite good when it comes to understanding others' emotions and motives.

4. I can usually tell when others consider a joke to be in bad taste, even though they may laugh convincingly.

5. I can usually tell when I've said something inappropriate by reading it in the listener's eyes.

6. If someone is lying to me, I usually know it at once from that person's manner of expression.

Note: * Denotes items that require reverse coding.

Items scored on 6-point scales (0 = *certainly, always false*; 1 = *generally false*; 2 = *somewhat false, but with exceptions*; 3 = *somewhat true, but with exceptions*; 4 = *generally true*; and 5 = *certainly, always true*).

TV Program Connectedness Scale

(Russell, Norman, and Heckler 2004)

Construct: TV program connectedness is defined as "the level of intensity of the relationship(s) that a viewer develops with the characters and contextual settings of a program in the parasocial television environment (Russell et al. 2004, p. 152).

Description: The scale is composed of sixteen 5-point Likert scales encompassing six factors. The six factors are considered first-order factors of an overall higher-order construct, and item scores are summed and then averaged over the 16 items to create an overall construct score ranging from 1 to 5.

The "Escape" factor (three items) assesses a cathartic element that connects a viewer to a TV program. The "Modeling" factor (three items) measures a social learning process by capturing the degree to which individuals relate their own lives to the lives of the characters in the show. The "Fashion" factor (three items) measures how extensively a viewer is influenced by a character's appearance. The "Imitation" factor (three items) measures the inclination for people to imitate the show's characters, likely due to the emotional stimulation of taking on another role. The "Aspiration" factor (two items) identifies how people become so identified with a program that they aspire to be the characters on the show, and the "Paraphernalia" factor (two items) measures the degree to which people collect items to bring the program and characters into their own world.

Development: Multiple focus groups were used to generate an 85-item pool based on the construct definition and descriptions of the factors described above. Via author judgment, this pool was trimmed to 45 items. An initial study of 175 students covering 20 TV shows was used to derive the final form of the scale. Via exploratory factor analysis, 16 items encompassing the six factors emerged with an overall coefficient alpha of 0.84. A confirmation study of 613 students tested multiple factor structures that showed a higher-order factor, with the six first-order factors described above fitting the data well.

The scale was then tested for various forms of validity via a web-based and mail-based survey ($n = 11,000$ complete responses). Two more studies, one experimental ($n = 104$) and one a survey-based recall study ($n = 99$), were further used to examine the scale's validity.

Samples: As noted above, several samples were used to develop and validate the scale: 1) $n = 175$ students; 2) $n = 613$ students; 3) $n = 11,000$ largely nonstudents; 4) $n = 104$; and 5) $n = 99$.

Validity: Coefficient alpha across all 16 items was reported for the $n = 175$ student study (alpha = 0.84). Standardized item loadings on their respective first-order factors ranged from 0.66 to 0.86. For the $n = 613$ study, unstandardized first-order factor loadings to the higher-order factor ranged from 0.32 to 1.16. Correlations among the first-order factors ranged from 0.15 to 0.62.

Using the $n = 11,000$ sample looking at eight genres of TV shows, discriminant validity was assessed. The correlation between the TV connectedness scale and attitude toward the TV show was 0.26; the correlation between the TV connectedness scale and involvement with the TV show was 0.53; the correlation between the TV connectedness scale and actual viewing of the TV show was 0.15. As evidence of predictive validity, the TV connectedness scale was used as a regression-based independent variable in the prediction of long-term recall of product placements in a show, brand community (with the show), social interaction with the show, and size of a social network with the show. Across all

regressions, the TV connectedness scale was a significant predictor while accounting for the effects of involvement with the show, attitude toward the show, and overall viewing of the show (standardized beta coefficients ranging from 0.09 to 0.66).

Via the $n = 104$ study, high TV connected individuals were shown to recall more audio and visual elements of a show than low TV connected individuals, and the $n = 99$ study showed that high TV connected individuals were shown to recall more brands shown in the show than low TV connected individuals.

Scores: One mean score was reported for the scale. For the $n = 11,000$ study, the mean was 2.64 ($SD = 0.68$).

Source: Russell, Cristel A., Andrew T. Norman, and Susan E. Heckler (2004), "The Consumption of Television Programming: Development and Validation of the Connectedness Scale," *Journal of Consumer Research*, 31 (June), 150–61.

TV Program Connectedness Scale

(Russell, Norman, and Heckler 2004)

Escape

1. Watching _____ is an escape for me.

2. _____ helps me forget about the day's problems.

3. If I am in a bad mood, watching _____puts me in a better mood.

Fashion

1. I like the clothes they wear on _____.

2. I like the hairstyles on _____.

3. I often buy the clothing that I've seen on _____.

Imitation

1. I imitate the gestures and facial expressions from the characters in _____.

2. I find myself saying phrases from _____ when I interact with other people.

3. I try to speak like the characters in _____.

Modeling

1. I learn to handle real-life situations by watching _____.

2. I get ideas from _____ about how to interact in my own life.

3. I relate what happens in _____ to my own life.

Aspiration

1. I would love to be an actor in _____.

2. I would love to meet the characters of _____.

Paraphernalia

1. I have objects that relate to _____ (badge, book, picture, etc.)

2. I read books if they are related to _____.

Note: All items are scored on 5-point Likert scales.

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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Rokeach, Milton J. (1968), "The Role of Values in Public Opinion Research," *Public Opinion Quarterly,* 32, 547–49.

Rokeach, Milton J. (1973), *The Nature of Human Values,* New York: Free Press.

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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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.

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 overall 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, reliability analyses, and several correlational and mean-level difference tests, the psychometric 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 single 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.
	© 1988 by The University of Wisconsin Press. Scale items taken from Table 3 (p. 103). Used by permission of The University of Wisconsin Press.

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.

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.
	© 1978 by the American Marketing Association. Scale items taken from Appendix (p. 607). Reprinted with permission.
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 "packrats," 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*).

4

Involvement, Information Processing, and Affect

Involvement General to Several Product Classes

Components of Involvement: CP

(Lastovicka and Gardner 1979)

Construct: Lastovicka and Gardner (1979) view involvement as having two major components: normative importance and commitment. Normative importance refers to how connected or engaged a product class is to an individual's values. Commitment refers to the pledging or binding of an individual to his/her brand choice.

Description: The Components of Involvement (CP) is composed of 22 Likert-type statements (*strongly disagree* to *strongly agree*), all on 7-point scales. The original CP is composed of three factors that encompass the two major components. These factors have been labeled familiarity, commitment, and normative importance. The items can be summed within each factor to derive an index for each factor.

Development: The items in the CP were chosen such that they reflect the three factors of involvement discussed above. Each item was evaluated across 14 different product categories. Via Tucker's (1963) three-mode factor analysis, the dimensionality of the CP was determined. This procedure uses an eigenvalue plot to derive the number of factors. The three-factor solution accounted for 72% of the variance in the data.

Sample: A sample of 40 graduate and undergraduate students was used in the scale development process. Each subject rated the 22 items across 14 different product categories, resulting in 560 observations.

Validity: Traditional estimates of reliability (i.e., coefficient alpha, test-retest) were not reported by Lastovicka and Gardner (1979). However, the pattern of factor loadings suggest that three distinct orthogonal factors did exist (Lastovicka and Gardner 1979, pp. 62–3). Though no formal statistical tests for validity were performed, it was also concluded that the CP possessed adequate levels of content, convergent, and discriminant validity.

Scores: Mean and/or percentage scores were not reported for the product classes. However, Lastovicka and Gardner (1979, pp. 66–7) do provide "transformed core matrix" scores across the three factors by high, low, and special interest involvement.

Source: Lastovicka, John L. and David M. Gardner (1979), "Components of Involvement," in *Attitude Research Plays for High Stakes,* eds. J. C. Maloney and B. Silverman, Chicago: American Marketing Association, pp. 53–73.

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Other evidence: In another study using 421 undergraduate students, Jenson, Carlson, and Tripp (1988) used three product categories to further examine the dimensionality of the CP. Jenson et al. (1988) do not provide estimates of reliability and validity; however, they do report that the CP was best represented by a correlated four-factor solution using LISREL. The four factors they found were labeled importance, knowledge, brand preference, and commitment. They also concluded that involvement may be multidimensional both between and across products.

Other source: Jenson, Thomas D., Les Carlson, and Carolyn Tripp (1988), "The Dimensionality of Involvement: An Empirical Test," in *Advances in Consumer Research,* Vol. 16, eds. Melanie Wallendorf and Paul Anderson, Provo, UT: Association for Consumer Research, pp. 680–89.

Reference: Tucker, L. (1963), "Implications of Factor Analysis of Three-Way Matrices for Measurement of Change," in *Problems in Measuring Change,* ed. C. Harris, Madison: University of Wisconsin Press.

Components of Involvement: CP

(Lastovicka and Gardner 1979)

1. This is a product that I could talk about for a long time.

2. I understand the features well enough to evaluate the brands.

3. This is a product that interests me.

4. I have a preference for one or more brands in this product class.

5. This is a product for which I have no need whatsoever.*

6. I am not at all familiar with this product.*

7. I usually purchase the same brand within this product class.

8. If I had made a brand choice in this product class before actually making the purchase, I might easily change my intended choice upon receiving discrepant information.*

9. If I received information that was contrary to my choice in this product class, I would—at all costs—keep my choice.

10. I can protect myself from acknowledging some basic truths about myself by using this product.*

11. If my preferred brand in this product class is not available at the store, it makes little difference to me if I must choose another brand.*

12. My use of this product allows others to see me as I would ideally like them to see me.

13. This product helps me attain the type of life I strive for.

14. I can make many connections or associations between experiences in my life and this product.

15. I definitely have a "wanting" for this product.

16. If evaluating brands in this class, I would examine a very long list of features.

17. I use this product to define and express the "I" and "me" within myself.

18. I rate this product as being of the highest importance to me personally.

19. Because of my personal values, I feel that this is a product that ought to be important to me.

20. Use of this product helps me behave in the manner that I would like to behave.

21. Because of what others think, I feel that this is a product that should be important to me.

22. Most of the brands in this product class are all alike.*

Notes: *Denotes items that are reverse scored. Items 1 through 7 compose the familiarity factor, items 8 through 11 compose the commitment factor, and items 12 through 22 compose the normative importance factor (Lastovicka and Gardner 1979).

Items 10, 12 through 15, and 17 through 21 compose the importance factor, items 1 through 3, 16, and 22 compose the knowledge factor, items 4 through 6 compose the brand preference factor, and items 7 through 9 and 11 compose the commitment factor (Jenson et al. 1988). Items scored on 7-point scales from *strongly disagree* to *strongly agree.*

Consumer Involvement Profiles: CIP

(Laurent and Kapferer 1985)

Construct: Laurent and Kapferer (1985) view involvement as a multifaceted construct along five dimensions (i.e., antecedents). Depending on these five antecedents, consequences on consumer behavior will differ across individuals. The five dimensions can be combined to form an overall involvement profile applicable to any product class. The five antecedents are briefly described below (see Laurent and Kapferer 1985, pp. 43–4)

The perceived importance and risk of the product class is its personal meaning and relevance, and the perceived importance of the consequences of a mispurchase.

The subjective probability of making a mispurchase is the probability of a poor brand choice.

The symbolic or sign value attributed by the consumer to the product class, its purchase, or its consumption differentiates functional risk from psychosocial risk.

The hedonic value of the product class is its emotional appeal, its ability to provide pleasure and affect.

Interest is an enduring relationship with the product class.

Description: The Consumer Involvement Profile (CIP) is a five-facet measure currently composed of 16 Likert-type statements (*totally disagree* to *totally agree*), all scored on a 5-point basis. The items in each facet are summed to form an overall measure of each facet. The CIP was originally drafted in French and then translated into English.

Development: The development of the CIP followed the recommended scaling procedures found in the psychometric literature. Based on the construct's domain and a comprehensive literature review, a pool of items was generated for each facet. Three preliminary samples were used to purify the measure using 14 different product categories. In the first two samples, items were rejected if they had a significant number of nonresponses or "don't know" answers across product categories. Furthermore, to make the CIP amenable to commercial research, each facet was limited to a maximum of five and a minimum of three items. In the third sample, coefficient alpha was used as a criterion in retaining items. From these samples, the final 16 items composing the CIP were obtained. The third sample was also used to assess validity and dimensionality.

Samples: The first two samples were composed of approximately 100 housewives each, where each person was asked about several products. The third and final sample was composed of 207 housewives recruited on the basis of age, socioeconomic quotas, and usage of at least 2 of the 14 products examined. Face-to-face, in-home interviewing was conducted for two product categories per subject with a systematic rotation of product categories by interviewee.

Validity: Internal consistency reliability was assessed via coefficient alpha ($n = 207$). These estimates were 0.80, 0.90, 0.88, 0.82, and 0.72 for perceived importance of the product, symbolic or sign value, hedonic value, perceived importance of the negative consequences of a poor choice, and probability of making a poor choice (mispurchase), respectively.

Laurent and Kapferer (1985) also ran a factor analysis and found that perceived importance of the product and perceived risk of the negative consequences of a poor choice were not distinct facets. Thus, they were combined to form a single facet of

product/risk importance with an alpha of 0.87. Furthermore, the four facets (i.e., product/risk importance, symbolic or sign value, hedonic value, and probability of a mispurchase) accounted for 66% of the total variance in the CIP. (Because the "interest" facet had not been added to the CIP at the time of its appearance in the *Journal of Marketing Research,* a reliability estimate was not reported.)

Discriminant validity among the facets of the CIP and trait validity for the CIP facets were reported. The correlations among the four facets ranged from 0.15 to 0.53, suggesting evidence of discriminant validity. Further correlational analyses of the four facets with various behavioral consequences associated with product class involvement showed evidence of construct validity for the CIP. For example, the facets of the CIP explained 71% of the variance in "extensive decision process" relating to product purchase and 28% of the variance in "keeping informed" about a given product class.

Scores: Mean scores for the four facets (i.e., product/risk importance, symbolic or sign value, hedonic value, and probability of a mispurchase) across each of the 14 product categories are reported in Table 3 of Laurent and Kapferer (1985, p. 45). These scores were based on an average product scoring system of 100 and were shown to vary widely across product categories, which further supports the validity of the CIP.

Source: Laurent, Gilles and Jean-Noel Kapferer (1985), "Measuring Consumer Involvement Profiles," *Journal of Marketing Research,* 22, 41–53.

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Other evidence: In two more studies, Kapferer and Laurent (1985, 1986) further examined the reliability and validity of the CIP. From a sample of 1,568 observations over 20 products, a five-item "interest" factor, a three-item "pleasure" factor, a three-item "sign" factor, a three-item "risk importance" factor, and a two-item "risk probability" factor had alphas of 0.76, 0.83, 0.81, 0.72, and 0.54, respectively. Factor correlations ranged from 0.10 to 0.55 (Kapferer and Laurent 1985). Correlations with various consequences of involvement (i.e., extensive decision making, brand commitment, and reading articles) supported the CIP's nomological validity. For example, as predictor variables, the involvement facets explained 54% of the variance in extensiveness of the decision process, 10% of the variance in brand commitment, and 21% of the variance in readership of articles related to the product category. Kapferer and Laurent (1986) also report mean scores (on the same 100-point scale alluded to above) across the 20 products that support the scale's validity. See also "Notes" below for the Jain and Srinivasan (1990) items.

More recently, Schneider and Rodgers (1996) proposed an "importance" subscale for the CIP. Their seven-item subscale showed coefficient alpha estimates of internal consistency of 0.846 and 0.839 for the evaluation of a health care clinic and financial institution, respectively. The subscale also showed some evidence of unidimensionality, and factor loadings ranged from 0.578 to 0.817 across the two products (services) examined. Using their importance subscale as a dependent variable in regression, they found that the "interest/pleasure," "sign," "risk importance," and "risk probability" aspects of the CIP were significant predictors of their importance subscale. See also "Notes" below for the Schneider and Rodgers items.

Other sources: Jain, Kapil and Narasimhan Srinivasan (1990), "An Empirical Assessment of Multiple Operationalizations of Involvement," in *Advances in Consumer Research,* Vol. 17, eds. Marvin Goldberg, Gerald Gorn, and Richard Pollay, Provo, UT: Association for Consumer Research, pp. 594–602.

Kapferer, Jean-Noel and Gilles Laurent (1985), "Consumer's Involvement Profile: New Empirical Results," in *Advances in Consumer Research,* Vol. 12, eds. Elizabeth Hirschman and Morris Holbrook, Provo, UT: Association for Consumer Research, pp. 290–95.

Kapferer, Jean-Noel and Gilles Laurent (1986), "Consumer Involvement Profiles: A New Practical Approach to Consumer Involvement," *Journal of Advertising Research,* 25, 49–56.

Schneider, Kenneth C. and William C. Rodgers (1996), "An 'Importance' Subscale for the Consumer Involvement Profile," in *Advances in Consumer Research,* Vol. 23, eds. Kim Corfman and John Lynch, Provo, UT: Association for Consumer Research pp. 249–54.

Consumer Involvement Profiles: CIP

(Laurent and Kapferer 1985)

1. When you choose _____, it is not a big deal if you make a mistake.*

2. It is really annoying to purchase _____ that are not suitable.

3. If, after I bought _____, my choice(s) prove to be poor, I would be really upset.

4. Whenever one buys _____, one never really knows whether they are the ones that should have been bought.

5. When I face a shelf of _____, I always feel a bit at a loss to make my choice.

6. Choosing _____is rather complicated.

7. When one purchases _____, one is never certain of one's choice.

8. You can tell a lot about a person by the _____ he or she chooses.

9. The _____I buy gives a glimpse of the type of man/woman I am.

10. The _____you buy tells a little bit about you.

11. It gives me pleasure to purchase _____.

12. Buying _____is like buying a gift for myself.

13. _____is somewhat of a pleasure to me.

14. I attach great importance to _____.

15. One can say _____interests me a lot.

16. _____ is a topic which leaves me totally indifferent.*

Notes: *Denotes items reverse scored.

Items 1 through 3 represent the "perceived product importance/risk" facet. Items 4 through 7 represent the "probability of a mispurchase" facet. Items 8 through 10 represent the "perceived symbolic/sign" facet. Items 11 through 13 represent the "hedonic/pleasure" facet, and items 14 through 16 represent the "interest" facet.

It should be noted that the 16 items above are from an updated version (circa 1989) of the CIP. The reliability and validity estimates reported on the previous pages pertain to an original 19-item CIP reported in Laurent and Kapferer (1985). Furthermore, the "interest" facet of the CIP was not included in the original Laurent and Kapferer article. As stated before, Laurent and Kapferer originally hypothesized five facets as follows:

1. The perceived importance of the product—its personal meaning and relevance.

2. The perceived importance of negative consequences in case of a poor choice (i.e., one facet of perceived risk).

3. The perceived probability of making such a mistake (the other facet of perceived risk).

4. The symbolic or sign value attributed by the consumer to the product, its purchase, or its consumption. This differentiates functional risk from psychosocial risk.

5. The hedonic value of the product, its emotional appeal, its ability to provide pleasure and affect.

However, their factor analysis retained four factors (i.e., product/risk importance, symbolic or sign value, hedonic value, and probability of a mispurchase); more recently, a fifth facet (interest) was added.

To our knowledge, the scale is currently represented by the 16 items above, encompassing the five facets below.

1. The perceived importance and risk of the product class: its personal meaning and relevance, and the perceived importance of the consequences of a mispurchase.

2. The subjective probability of making a mispurchase.

3. The symbolic or sign value attributed by the consumer to the product class, its purchase, or its consumption. This differentiates functional risk from psychosocial risk.

4. The hedonic value of the product class, its emotional appeal, its ability to provide pleasure and affect.

5. Interest: an enduring relationship with the product class.

In a more recent study, Jain and Srinivasan (1990) reported coefficient alphas of 0.76, 0.57, 0.72, 0.82, and 0.78, respectively, for interest, probability of making a mispurchase, hedonic/pleasure, sign/symbol, and perceived importance/risk facets of the CIP. These estimates are based on the current 16-item CIP. It should be noted, though, that Jain and Srinivasan (1990) translated the items using a semantic differential format, rather than the Likert-type format originally used by Laurent and Kapferer. The Jain and Srinivasan items are listed below.

Jain and Srinivasan (1990) CIP Scale

With regard to the following product category . . .

1. It is not a big deal if I make a mistake in choosing it—It is a big deal if I make a mistake in choosing it.

2. It is really annoying to make an unsuitable purchase—It is not annoying to make an unsuitable purchase.*

3. A poor choice wouldn't be upsetting—A poor choice would be upsetting.

4. I never know if I am making the right purchase—I know for sure that I am making the right purchase.*

5. I feel a bit at a loss in choosing it—I don't feel at a loss in choosing it.*

6. Choosing it isn't complicated—Choosing it is complicated.

7. In purchasing it, I am certain of my choice—In purchasing it, I am uncertain of my choice.

8. It tells something about a person—It doesn't tell anything about a person.*

9. What I buy doesn't reflect the kind of person I am—What I buy reflects the kind of person I am.

10. What I buy says something about me—What I buy doesn't say anything about me.*

11. I enjoy buying it for myself—I do not enjoy buying it for myself.*

12. Buying it feels like giving myself a gift—Buying it doesn't feel like giving myself a gift.*

13. I do not find it pleasurable—I find it pleasurable.

14. I attach great importance to it—I attach no importance to it.*

15. I am not at all interested in it—I am very interested in it.

16. I am indifferent to it—I am not indifferent to it.

Notes: *Denotes items reverse scored.

Items 1 through 3 represent the "perceived product importance/risk" facet. Items 4 through 7 represent the "probability of a mispurchase" facet. Items 8 through 10 represent the "perceived symbolic/sign" facet. Items 11 through 13 represent the "hedonic/pleasure" facet, and items 14 through 16 represent the "interest" facet.

Schneider and Rodgers (1996) "Importance" Subscale

1. Choosing a _____is a big decision in one's life.

2. I attach great importance to selecting a _____.

3. I don't usually get overly concerned about selecting a _____.

4. Which _____I choose doesn't really matter to me.

5. Choosing a _____takes a lot of careful thought.

6. Decisions about selecting _____are serious, important decisions.

7. It means a lot to me to have a _____to use.

Note: Items can be scored on 5-point Likert-type scales ranging from *totally disagree* to *totally agree*. Items 3 and 4 require reverse scoring.

Enduring Involvement Index

(Bloch, Sherrell, and Ridgway 1986)

Construct: In a study investigating the antecedents and consequences of search, Bloch et al. (1986, p. 120) viewed involvement as enduring in character, representing a continuing interest or enthusiasm rather than a temporary product interest resulting from purchase requirements.

Description: The Bloch et al. Enduring Involvement Index is composed of five items. The first three items assess the importance of the product category to the individual's social life and career. These three items are measured on 7-point scales from *not important at all* to *extremely important*. The fourth item is an interest item scored on a 4-point format from *not at all interested* to *very interested*, and the fifth item is a frequency of thought item scored on a 5-point scale from *never or almost never* to *very frequently*. Scores from the three-item importance facet can be summed to form an importance index, or all five items can be summed to form an overall enduring involvement index.

Development: Little information as to the development of the index was offered. However, reliability and validity estimates were reported.

Samples: A sample of 679 (usable responses) consumers participated in the study. Subsamples based on interest in clothing and computers, the focal products of the study, were also derived.

Validity: Coefficient alpha estimates of internal consistency were reported for the three-item importance facet. These estimates were 0.83 and 0.77 for clothing and computers, respectively. Summed over all five items, the enduring involvement index showed correlations of 0.70 and 0.67 (for clothing and computers) for a measure of search, offering evidence of nomological validity.

Scores: Neither mean nor percentage scores were reported.

Source: Bloch, Peter H., Daniel L. Sherrell, and Nancy M. Ridgway (1986), "Consumer Search: An Extended Framework," *Journal of Consumer Research,* 13, 119–26.

Enduring Involvement Index

(Bloch, Sherrell, and Ridgway 1986)

How important is knowledge of _____ to:

1. The quality of your social life?

2. Your present job or career?

3. Your future job or career plans?

4. How interested are you in the subject of_____?

   _____ Not at all interested
   _____ Slightly interested
   _____ Moderately interested
   _____ Very interested

5. How frequently do you find yourself thinking about _____?

   Never or almost never ____:____:____:____: Very frequently

---

Notes: The first three items are scored on 7-point scales from *not important at all* to *extremely important.* The fourth item is scored on a 4-point scale from *not at all interested* to *very interested.* The product category of interest is inserted where the _____ are.

New Involvement Profile: NIP

(Jain and Srinivasan 1990)

Construct: In an effort to compare a number of the scales designed to measure involvement and assess whether involvement is a multifaceted or unidimensional construct, Jain and Srinivasan (1990) developed the New Involvement Profile (NIP). The NIP takes a multidimensional approach to measuring involvement that includes five facets: relevance, pleasure, sign, risk importance, and risk probability. These facets are consistent with Laurent and Kapferer's (1985) approach.

Description: The NIP is composed of 15 semantic differential items. The items are scored on a 7-point basis. There are five factors, each composed of three items (i.e., relevance, pleasure, sign, risk importance, and risk probability). Item scores can be summed within each factor to form indices of each factor.

Development: The NIP was developed with an original pool of 49 items from Zaichkowsky's (1985) PII, McQuarrie and Munson's (1986) RPII, Higie and Feick's (1988) EIS, Laurent and Kapferer's (1985) CIP, and the FCBI (Ratchford 1987; Vaughn 1986). All items were adjusted to a semantic differential format. These items were administered to 375 students across 10 products. Through factor structure comparisons, domain overlap testing, and reliability analysis, the 15-item, five-factor scale was derived.

Sample: A sample of 375 of mostly undergraduate students was used to derive the NIP.

Validity: The internal consistency reliability estimates for the relevance, pleasure, sign, risk importance, and risk probability factors of NIP were 0.80, 0.84, 0.84, 0.80, and 0.56, respectively. Correlations among the factors ranged from −0.02 to 0.58. It should be noted that the correlations among the first four factors were relatively strong (i.e., 0.33 to 0.58), and the correlations of the risk probability factor with the other four factors were low (i.e., −0.02 to 0.23).

These five factors were also correlated with measures of the consequences of involvement (i.e., information search and brand preference). The pattern of correlations suggests that the five NIP factors possess predictive validity. For example, the NIP factors explained 35% of the variance in information search and 13% of the variance in brand preference.

Scores: Mean scores across the 10 products studied are reported in Table 5 of Jain and Srinivasan (1990, p. 601) for the Zaichkowsky PII and for a recent version of Laurent and Kapferer's CIP. These mean scores are standardized on a 100-point basis. Mean scores for the NIP factors were not reported.

Source: Jain, Kapil and Narasimhan Srinivasan (1990), "An Empirical Assessment of Multiple Operationalizations of Involvement," in *Advances in Consumer Research,* Vol. 17, eds. Marvin Goldberg, Gerald Gorn, and Richard Pollay, Provo, UT: Association for Consumer Research, pp. 594–602.

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References: Higie, Robin A. and Lawrence F. Feick (1988), "Enduring Involvement: Conceptual and Methodological Issues," in *Advances in Consumer Research,* Vol. 16, ed. Thomas K. Srull, Provo, UT: Association for Consumer Research, pp. 690–96.

Laurent, Gilles and Jean-Noel Kapferer (1985), "Measuring Consumer Involvement Profiles," *Journal of Marketing Research,* 22, 41–53.

McQuarrie, Edward R. and J. Michael Munson (1986), "The Zaichkowsky Personal Involvement Inventory: Modification and Extension," in *Advances in Consumer Research,* Vol. 14, eds. Paul Anderson and Melanie Wallendorf, Provo, UT: Association for Consumer Research, pp. 36–40.

Ratchford, Brian T. (1987), "New Insights About the FCB Grid," *Journal of Advertising Research*, 27, 24–38.

Vaughn, Richard (1986), "How Advertising Works: A Planning Model Revisited," *Journal of Advertising Research,* 27, 57–66.

Zaichkowsky, Judith Lynne (1985), "Measuring the Involvement Construct," *Journal of Consumer Research,* 12, 341–52.

New Involvement Profile: NIP

(Jain and Srinivasan 1990)

1. Essential—nonessential*

2. Beneficial—not beneficial*

3. Not needed—needed

4. I do not find it pleasurable—I find it pleasurable

5. Unexciting—exciting

6. Fun—not fun*

7. Tells others about me—doesn't tell others about me*

8. Others use to judge me—others won't use to judge me*

9. Does not portray an image of me to others—portrays an image of me to others

10. It is really annoying to make an unsuitable purchase—it is not annoying to make an unsuitable purchase*

11. A poor choice wouldn't be upsetting—a poor choice would be upsetting

12. Little to lose by choosing poorly—a lot to lose by choosing poorly

13. In purchasing it, I am certain of my choice—in purchasing it, I am uncertain of my choice

14. I never know if I am making the right purchase—I know for sure that I am making the right purchase*

15. I feel a bit at a loss in choosing it—I don't feel at a loss in choosing it*

Notes: *Denotes items that are reverse scored.

Items 1 through 3 compose the relevance factor, items 4 through 6 compose the pleasure factor, items 7 through 9 compose the sign factor, items 10 through 13 compose the risk importance factor, and items 14 through 15 compose the risk probability factor. Items are scored on a 7-point basis.

Personal Involvement Inventory: PII

(Zaichkowsky 1985)

Construct: Zaichkowsky (1985, p. 342) defines involvement as a person's perceived relevance of the object based on inherent needs, values, and interests. This definition recognizes past definitions of involvement, and the corresponding scale, the Personal Involvement Inventory (PII), is applicable to advertisements, products, or purchase decisions.

Description: The PII is composed of 20 semantic differential items scored on 7-point scales. Scores on the items are summed to form an overall measure of involvement ranging from a low score of 20 to a high score of 140. As originally developed, the scale was felt to be unidimensional.

Development: Development of the PII closely followed recommended scaling procedures found in the psychometric literature. Based on the construct's definition, 168 word pairs were initially generated to tap the domain of involvement. These items were then judged for content validity by two panels of expert judges and the author, resulting in 30 semantic differential pairs retained. The remaining items were checked for reliability and content validity over a number of samples, resulting in 20 items retained for the final scale. The final version of the PII was then examined again for reliability and construct validity over several samples.

Samples: Several samples were used at the various stages of scale development. Along with the author's judgment, two samples of expert judges ($n = 3$ and $n = 5$) rated the content validity of the 168 items, trimming this initial pool to 30 items. A sample of 152 undergraduate students were then used to assess the internal consistency of the 30 items over two products. Adjective pairs with item-to-total correlations of 0.50 were retained, resulting in 26 items. Based on a factor analysis, two more adjective pairs were dropped, with the resulting 24 items explaining 70% of the variance in the data (Zaichkowsky 1985).

A second sample comprising 68 undergraduate and 45 MBA students was used to assess test-retest reliability and internal consistency over four product categories (two for the undergraduates and two for the MBAs). (Of this total sample of 113, 32 were lost to attrition, resulting in 81 for the estimates of reliability.) After deleting 4 more items with low item-to-total correlations, the final 20-item scale was formed. (The sample of 45 MBAs was also used to further assess content validity.) Two more samples were used to assess the criterion validity of the 20-item PII. One sample ($n = 68$ undergraduates) was used to elicit the product categories used, and the other sample ($n = 47$ undergraduates) responded to the PII across the products elicited. A final sample used to assess construct validity was composed of 57 clerical/administrative staff members at a major university.

In all, four data sets over numerous product categories were used in the development process (not including the expert judges).

Validity: Several estimates of reliability were obtained by Zaichkowsky (1985). For the second sample ($n = 81$), test-retest reliability was 0.88, 0.89, 0.88, and 0.93 for the four products studied over a 3-week period. Internal consistency for this sample ranged from alpha = 0.95 to alpha = 0.97. Internal consistency was also assessed with the clerical/administrative sample ($n = 57$) over three products with alphas of 0.97, 0.99, and 0.97., and with purchase scenarios via a subsample ($n = 41$) of the clerical/administrative sample over two more products with alphas of 0.97 and 0.98.

Several criterion and construct validity tests were also offered by Zaichkowsky (1985). The pattern of means for products to be hypothesized as high, medium, and low involvement supported the PII's criterion validity over two samples (i.e., the $n = 47$ undergraduate students and the $n = 57$ clerical/administrative sample). Furthermore, the correlations of the PII with a number of behavioral measures relating to product involvement showed that the PII possessed adequate levels of construct validity ($n = 57$). For example, the correlations of the PII with a measure of reading about how a product is made ranged from 0.14 to 0.37 across three product categories. The correlations of the PII with a measure of comparing product characteristics across brands ranged from 0.23 to 0.52 across three product categories, and the correlations of the PII with a measure of having a most preferred brand in a product category ranged from 0.42 to 0.68.

Scores: Mean scores across samples and the various products examined were reported (Zaichkowsky 1985, pp. 345–51). An overall grand mean score was reported to be 89.55. In addition, those subjects deemed as low involvement across the products studied scored in the 20 to 69 range, medium involvement in the 70 to 110 range, and high involvement in the 111 to 140 range.

Source: Zaichkowsky, Judith Lynne (1985), "Measuring the Involvement Construct," *Journal of Consumer Research*, 12, 341–52.

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Other evidence: Mean scores across eight different product categories are reported in Zaichkowsky (1986). A sample of 230 students rated each product category. Automobiles had the highest mean rating on the PII of 131, and cigarettes had the lowest mean rating of 49. Mean scores were also broken down by gender, and many of the differences on the PII between males and females were significant in a direction that supports the PII's validity. See also the next several pages (i.e., revised versions of the PII).

Other source: Zaichkowsky, Judith Lynne (1986), "The Emotional Aspect of Product Involvement," in *Advances in Consumer Research*, Vol. 14, eds. Melanie Wallendorf and Paul Anderson, Provo, UT: Association for Consumer Research, pp. 32–5.

Personal Involvement Inventory: PII

(Zaichkowsky 1985)

PII Instructions

The purpose of this study is to measure a person's involvement or interest in (product category). To take this measure, we need you to judge (product category) against a series of descriptive scales according to how YOU perceive the product you will be shown. Here is how you are to use these scales.

If you feel that the (product) is **very closely related** to one end of the scale, you should place your check mark as follows:

Unimportant   ✓__:___:___:___:___:___   Important

or

Unimportant   ___:___:___:___:___:_✓   Important

If you feel that the (product) is **quite closely related** to one or the other end of the scale (but not extremely), you should place your check mark as follows:

Appealing   ___:___:___:___:_✓:___   Unappealing

or

Appealing   ___:_✓:___:___:___:___   Unappealing

If you feel that the (product) seems **only slightly related** to one or the other end of the scale (but not really neutral), you should place your check mark as follows:

Uninterested   ___:___:_✓:___:___:___   Interested

or

Uninterested   ___:___:___:_✓:___:___   Interested

Important:

1. Be sure that you check every scale for every (product); do not omit any.

2. Never put more than one check mark on a single scale.

Make each item a separate and independent judgment. Work at fairly high speed through this questionnaire. Do not worry or puzzle over individual items. It is your first impressions, the immediate feelings about the items, that we want. On the other hand, please do not be careless, because we want your true impressions.

The PII Items

1. important—unimportant*
2. of no concern—of concern to me
3. irrelevant—relevant
4. means a lot to me—means nothing to me*
5. useless—useful

6. valuable—worthless*

7. trivial—fundamental

8. beneficial—not beneficial*

9. matters to me—doesn't matter*

10. uninterested—interested

11. significant—insignificant*

12. vital—superfluous*

13. boring—interesting

14. unexciting—exciting

15. appealing—unappealing*

16. mundane—fascinating

17. essential—nonessential*

18. undesirable—desirable

19. wanted—unwanted*

20. not needed—needed

Note: Items are scored on 7-point scales. * Denotes items that are reverse scored.

PII for Advertising: PIIA

(Zaichkowsky 1994)

Construct: In measuring involvement toward advertising, a measure must be able to capture personal rational relevance as well as personal emotional relevance of the ad. Furthermore, an involvement measure directed toward advertising should be able to discriminate between high and low involvement with advertising.

Description: The PII for Advertising (PIIA) is a 10-item semantic differential scale. All items are scored on a 7-point basis. The items are summed to form an overall measure of advertising involvement. The scale is considered unidimensional.

Development: The PIIA was developed along recommended scaling procedures. After a review of the advertising involvement literature, 15 bipolar adjective pairs were added to the original 20-item PII (Zaichkowsky 1985). These 35 items were judged for content validity, and then via item analysis and reliability estimates, the final 10-item PIIA was derived. The PIIA was checked again for content validity, as well as construct validity and dimensionality.

Samples: Four samples and a panel of experts were used in developing the PIIA. The first sample of 54 students was used to assess the internal consistency of the 35 items across two products. Items with low reliability were deleted, resulting in 22 items retained. The second sample of 52 students rated the remaining 22 items on a number of ads and products (twice over a 3-week interval). Again, items with low reliability or redundant items were dropped, resulting in the final 10-item PIIA. Content validity and dimensionality were also assessed with the second sample. Two more student samples of 79 and 53 subjects were used to assess the validity of the scale (Zaichkowsky 1990).

Validity: A number of reliability and validity assessments were performed on the PIIA. With the second sample ($n = 52$), coefficient alpha for the final 10-item PIIA ranged from 0.91 to 0.96 across products and ads. For the latter two samples, reported alphas ranged from 0.68 to 0.95 across ads. Furthermore, factor analysis ($n = 52$) revealed a unidimensional structure for the PIIA.

The 10-item PIIA was correlated with a number of measures reflecting behavioral response of involvement with products ($n = 52$). The pattern of correlations suggest an adequate level of construct validity for the PIIA. For example, the correlations between the PIIA and a measure of interest in reading product information ranged from 0.15 to 0.40 across three product categories. The correlations between the PIIA and a measure of comparing product attributes across brands ranged from 0.21 to 0.50, and the correlations between the PIIA and a measure of having a most preferred brand ranged from 0.40 to 0.66 across the three product categories. Construct validity was also assessed in two studies across a number of ads. The pattern of means and statistical significance tests indicate that the PIIA possessed construct validity and was able to discriminate between groups that showed high and low involvement with ads.

Scores: A number of scores across various ads and treatment levels are reported by Zaichkowsky (1994, Table 3, p. 31). As indicated above, these scores showed that the PIIA was able to discriminate between high- and low-involved groups.

Source: Zaichkowsky, Judith Lynne (1994), "The Personal Involvement Inventory: Reduction, Revision, and Application to Advertising," *Journal of Advertising,* 23 (4), 59–70. Scale items appear on p. 68.

Reference: Zaichkowsky, Judith Lynne (1985), "Measuring the Involvement Construct," *Journal of Consumer Research,* 12 (December), 341–52.

PII for Advertising: PIIA

(Zaichkowsky 1994)

1. important—unimportant*

2. boring—interesting

3. relevant—irrelevant*

4. exciting—unexciting*

5. means nothing—means a lot to me

6. appealing—unappealing*

7. fascinating—mundane*

8. worthless—valuable

9. involving—uninvolving*

10. not needed—needed

Note: Items are scored on 7-point scales. *Denotes items that are reverse scored.

Product Intelligence

(Rijsdijk, Hultink, and Diamantopoulos 2007)

Construct: Product intelligence is conceptualized as consisting of six dimensions: autonomy, ability to learn, reactivity, ability to cooperate, humanlike interaction, and personality. Overall intelligence of a product is conceptualized as the extent to which it possesses each of these formative indicators. As an example, for one of the dimensions, autonomy refers to the extent to which a product is able to operate in an independent and goal-directed way without interference of the user (Rijsdijk et al. 2007, p. 342).

Description: The six dimensions are viewed as formative indicators of product intelligence. The indicators for the dimensions are viewed as reflective. Twenty-six items were used across the six dimensions. All items were started with the sentence stem, "This product . . . ." Items (except where noted) were measured using 7-point Likert-type scales where 1 = *totally disagree* and 7 = *totally agree*. As such, product intelligence is measured as a second-order construct with six formative first-order dimensions and each dimension assessed with four or five reflective indicators. Factor means are summed for an overall product intelligence score.

Development: Exploratory interviews and a review of the literature, plus input from four academic colleagues, were used to generate 121 items. Three pretests were used. First, a pretest group of five judges assigned items to dimensions and offered editorial changes, reducing the number of items to 114. In a second pretest, seven faculty and three student judges reduced the pool of items to 79 in a task assigning items to dimensions. Third, 37 product design students evaluated three product descriptions. The pool of items was reduced to 52 by selecting those items with high standard deviations over products and low standard deviations over persons.

Using the data from the sample of 313 respondents, common methods variance was first investigated and judged nonproblematic. Factor analyses were used to delete poorly fitting items. Single factor models for each of the six dimensions indicated adequate fit based on chi-square fit statistics and RMSEA values. Coefficient alpha estimates, construct reliability estimates, and average variance extracted (AVE) values were all above acceptable levels (Table 3, Rijsdijk et al. 2007, p. 351).

Samples: Overall, 313 (237 consumer panel and 76 Internet respondents) usable responses from product owners were obtained. One hundred eighty-six questionnaires were for intelligent products; 127 questionnaires were for nonintelligent products. A combination of faculty, doctoral students, and undergraduates was used in the series of developmental pretest studies.

Validity: Known group comparisons for the intelligent and nonintelligent products resulted in significant differences in overall product intelligence. Additional evidence of validity is provided from a series of analyses testing hypothesized relationships. Product intelligence was found to have, as predicted, a positive relationship with measures of relative advantage, product compatibility, and complexity, as well as consumer satisfaction. Moreover, tests of mediation indicated that product intelligence performed as expected. These effects were offered evidence of nomological validity.

Scores: Means and standard deviations for the six dimensions were reported as follows: AU—3.03 (1.68); AL—1.91 (1.35); R—2.71 (1.87); AC—3.62 (2.09); HI—2.90 (1.53); and P—1.52 (0.53). (See Table 4 of Rijsdijk et al. 2007, p. 352.) These product

means are also affected by the weighting scheme developed by using the expert ratings described by Rijsdijk et al. (p. 347). Means and standard deviations for the overall measure and for the intelligent and nonintelligent groups of products were reported as 93.48 (27.41) versus 61.61 (26.50), respectively.

Source: Rijsdijk, Serge A., Erik Jan Hultink, and Adamantios Diamantopoulos (2007), "Product Intelligence: Its Conceptualization, Measurement and Impact on Consumer Satisfaction," *Journal of the Academy of Marketing Science*, 35 (September), 340–56.

Product Intelligence

(Rijsdijk, Hultink, and Diamantopoulos 2007)

"This product . . ."

Autonomy

1. determines itself how it conducts tasks.

2. makes decisions by itself.

3. takes the initiative.

4. does things by itself.

Ability to Learn

1. can learn.

2. performs better and better.

3. learns from experience.

4. improves itself.

5. adapts itself over time.

Reactivity

1. acts on the basis of observations.

2. keeps an eye on its environment.

3. reacts to changes.

4. directly adapts its behavior to the environment.

Ability to Cooperate

1. can cooperate with other products.

2. communicates with other products.

3. can be connected with other products.

4. works better in cooperation with other products.

Humanlike Interaction

1. consults the user.

2. assists the user.

3. starts a dialogue with the user.

4. explains to the user how it should be used.

5. explains what it is doing.

Personality

1. has human properties.

2. has its own character.

3. is like a person.

4. behaves like a human being.

Relative Advantage

1. offers advantages that are not offered by competing products.

2. is, in my eyes, superior to competing products.

3. solves a problem that I cannot solve with competing products.

Compatibility

1. fits into my way of living.

2. fits the way I do things.

3. suits me well.

Complexity

1. is complicated for a lot of people.

2. How much knowledge is needed to use your product?

3. How much help is needed in taking your product into use?

4. How much effort do you think it costs to learn how to use your product?

Consumer Satisfaction

1. I am very satisfied with my product.

2. This product matches my ideal product in the product category.

3. What is your general experience with the product? (1 = *much worse than expected*, and 7 = *much better than expected*.)

Note: Items (except where noted) were measured using 7-point Likert scales where 1 = *totally disagree* and 7 = *totally agree*.

RPII and OPII

(McQuarrie and Munson 1986)

Construct: McQuarrie and Munson (1986) argue that involvement is a multidimensional construct. They also feel that the PII was contaminated with "attitudinal" variables, and thus, some interpretational confounding was evident. Their conceptual view of involvement is somewhat similar to Zaichkowsky's but tries to incorporate risk and sign components into the involvement construct.

Description: The RPII is a multidimensional measure of involvement that includes the dimensions of importance, pleasure, and risk. It is composed of 14 semantic differential items, many of which are derived from Zaichkowsky's (1985) original PII. The items are scored on 7-point scales. Items can be summed within dimensions to form indices for each dimension, or all 14 items can be summed to form an overall RPII score.

The OPII is another involvement measure derived from Zaichkowsky's PII. It is composed of 16 items and may or may not be unidimensional (McQuarrie and Munson 1986, p. 37). The 16 items can be summed to form an overall OPII score.

Development: Four pairs of adjectives from the original PII were deleted because they were considered inappropriate for a non-college-educated population (i.e., superfluous-vital, mundane-fascinating, significant-insignificant, and fundamental-trivial). The remaining 16 items form the OPII. Factor analysis, reliability, and validity estimates were used to examine the OPII.

The RPII was derived by adding eight new adjective pairs to the OPII. Then, via reliability and factor analysis, the final 14-item RPII was derived. Although four factors were hypothesized (i.e., importance, risk, pleasure, and sign value), three factors were retained (importance, pleasure, and risk).

Sample: Student subjects (80 undergraduates and 56 MBAs) responded to 24 adjective pairs (the OPII items and the 8 new RPII items), over 12 stimulus objects (see McQuarrie and Munson, 1986, p. 37).

Validity: McQuarrie and Munson (1986) report reliability estimates for both the OPII and the RPII. The OPII (16 items) had an alpha of 0.95. The 14-item RPII (though considered multidimensional) had a coefficient alpha of 0.93. A factor analysis of the RPII revealed that the scale had three factors, labeled importance (five items), pleasure (six items), and risk (three items), with alphas of 0.85, 0.90, and 0.67, respectively. Correlations among the three factors ranged from 0.41 to 0.60.

Estimates of validity also indicated that both the OPII and the RPII showed evidence of construct validity when correlated with measures reflecting the consequences of involvement (i.e., brand commitment and differentiation, and information search). For example, using the three involvement factors as predictor variables resulted in multiple *Rs* of 0.36, 0.22, and 0.57 for the prediction of brand commitment, brand differentiation, and information search, respectively.

Lastly, given its fewer items and multidimensional nature, McQuarrie and Munson (1986) concluded that the RPII is a more parsimonious measure of enduring involvement than the OPII or the PII.

Scores: No mean or percentage scores were reported.

Source: McQuarrie, Edward F. and J. Michael Munson, (1986), "The Zaichkowsky Personal Involvement Inventory: Modification and Extension," in *Advances in Consumer Research,* Vol. 14, eds. Paul Anderson and Melanie Wallendorf, Provo, UT: Association for Consumer Research, pp. 36–40.

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Other evidence: See the next several pages (i.e., more revisions of the PII).

Other sources: See the next several pages (i.e., more revisions of the PII).

Reference: Zaichkowsky, Judith Lynne (1985), "Measuring the Involvement Construct," *Journal of Consumer Research,* 12, 341–52.

Purchasing Involvement

RPII and OPII

(McQuarrie and Munson 1986)

1. important—unimportant*
2. of no concern—of concern to me
3. irrelevant—relevant
4. means a lot to me—means nothing to me*
5. valuable—worthless*
6. beneficial—not beneficial*
7. matters to me—doesn't matter*
8. uninterested—interested
9. boring—interesting
10. unexciting—exciting
11. appealing—unappealing*
12. useless—useful
13. essential—nonessential*
14. undesirable—desirable
15. wanted—unwanted*
16. not needed—needed
17. fun—not fun*
18. says nothing about me—says something about me
19. tells me about a person—shows nothing*
20. easy to go wrong—hard to go wrong*
21. not risky—risky
22. easy to choose—hard to pick

Notes: *Denotes items that are reverse scored.

Items 1 through 16 compose the OPII. Items 1 through 4 and 7 compose the RPII importance factor. Items 9 through 11, and 17 through 19 compose the RPII pleasure factor. Items 20 through 22 compose the RPII risk factor. Items are scored on 7-point scales.

Purchase Decision Involvement: PDI

(Mittal 1989)

Construct:	Purchase decision involvement (PDI) is defined as the extent of interest and concern that a consumer brings to bear on a purchase-decision task (Mittal 1989). PDI is felt to be analogous to the situational involvement of Houston and Rothschild (1977), has the purchase decision task as its goal object, and is considered a mind-set—not a response behavior (Mittal 1989).
Description:	The PDI scale is a four-item measure on 7-point bipolar phrases. The item scores are summed and then divided by four, to form an average score of PDI.
Development:	Development of the PDI scale generally followed recommended scaling procedures. An initial pool of nine items was derived via a review of the literature, an open-ended question regarding purchase decision involvement ($n = 20$), and the author's definition of the construct. These items were then administered to 40 consumers over a variety of products. Inter-item correlations, factor analyses, and the author's judgment resulted in the final four items. Then, two more studies assessing the validity of the scale were conducted, as well as a study that assessed the test-retest reliability of the scale.
Samples:	Overall, five samples were used in scale development and validation. One sample ($n = 20$) was used for generating items, one sample ($n = 40$) was used to arrive at the final four items, two samples ($n = 256$ nonstudents and $n = 138$ students) were used for validation purposes, and one sample ($n = 85$ students) was used to look at test-retest reliability.
Validity:	The first validation study looked at the convergent, discriminant, and criterion validity of the PDI scale ($n = 256$). The factor structure and correlations with product importance/involvement demonstrated convergent and discriminant validity for the PDI scale. Correlations with a measure of consumer information search (0.50 for beer and 0.67 for a camera) indicated criterion validity. The second validation study examined the mean responses to the PDI scale with respect to several product categories ranked with respect to financial and product importance. The pattern of means across the PDI measures suggests that the PDI scale is a valid measure of PDI (Mittal 1989, p. 157, Table 3). For example, the mean scores ranged from a high of 6.27 ($SD = 0.58$) for eyeglasses (i.e., a high involvement product) to 1.91 ($SD = 1.32$) for pencils (i.e., a low involvement product). Test-retest reliability ($n = 85$) over a 2-week period was 0.79 for the PDI scale. Although coefficient alpha was not offered, factor loadings for items on the scale ranged from 0.58 to 0.88 across three product categories.
Scores:	As stated above, mean scores across 15 different products were reported. The mean scores ranged from a high of 6.27 ($SD = 0.58$) for eyeglasses to 1.91 ($SD = 1.32$) for pencils.
Source:	Mittal, Banwari (1989), "Measuring Purchase-Decision Involvement," *Psychology & Marketing,* 6, 147–62. © 1989 by John Wiley & Sons, Inc. Scale items taken from Figure 1 (p. 152). Adapted by permission of John Wiley & Sons, Inc.
Reference:	Houston, Michael J. and M. L. Rothschild (1977), *A Paradigm for Research on Consumer Involvement* (Working Paper 11–77–46), Madison: University of Wisconsin Press.

Purchase Decision Involvement: PDI

(Mittal 1989)

1. In selecting from many types and brands of this product available in the market, would you say that:

   I would not care at all as to which one I buy   1 2 3 4 5 6 7   I would care a great deal as to which one I buy.

2. Do you think that the various types and brands of this product available in the market are all very alike or are all very different?

   They are alike.   1 2 3 4 5 6 7   They are all different.

3. How important would it be to you to make a right choice of this product?

   Not at all important   1 2 3 4 5 6 7   Extremely important

4. In making your selection of this product, how concerned would you be about the outcome of your choice?

   Not at all concerned   1 2 3 4 5 6 7   Very much concerned.

Note: The items are scored on 7-point scales.

Purchasing Involvement: PI

(Slama and Tashchian 1985)

Construct: Purchasing involvement (PI) is defined as the self-relevance of purchasing activities to the individual (Slama and Tashchian 1985, p. 73). Purchasing involvement is expected to affect consumer decision processes from pre-search to post-search evaluation, as well as attitudes and behaviors toward purchasing.

Description: The PI comprises 33 6-point Likert-type items (*strongly disagree* to *strongly agree*). The items are summed to form an overall purchasing involvement score. Thus, scores on the scale can range from 33 to 198.

Development: Following the literature review and construct definition, 150 items were generated to tap the domain of the construct. This pool of items was trimmed to 75 by a panel familiar with the involvement literature. The remaining pool of items was administered to two samples. Using a number of reliability and validity checks, the final 33-item scale was derived.

Samples: Three samples were used in the scale development process. The first sample consisted of 30 marketing research students familiar with the involvement literature to trim the initial pool of items. Items that at least 75% of these judges agreed on as being reflective of the construct were retained, resulting in 75 items. The second sample consisted of 365 adults from a small southern city. With this sample, the 75 items were trimmed to the final 33-item scale using item-to-total correlations as a guide. Internal consistency and validity of the scale were also assessed with this sample. The third sample, used to assess test-retest reliability, consisted of 76 students.

Validity: Coefficient alpha internal consistency for the PI was 0.93 ($n = 365$), and test-retest reliability over a 2-week period was 0.86 ($n = 76$).

                     Convergent and discriminant validity of the scale were assessed via a multitrait-multimethod analysis. The correlations between the PI, measures of religious involvement, measures of automobile involvement, and other measures of purchasing involvement indicated that the PI had adequate levels of convergent and discriminant validity. For example, the PI exhibited convergent validity correlations 0.56 and 0.48 with other involvement measures. Furthermore, the scale was relatively free of social desirability bias ($r = 0.06$, ns, $n = 365$).

Scores: Mean scores were reported by various demographic characteristics, including family life cycle, education, income, gender, working status of wife, and race (Slama and Tashchian 1985, p. 78). The mean scores ranged from a low of 136 (for an advanced family life cycle group) to a high of 155.05 (for a married, but wife unemployed, group). The pattern of means and statistical significance tests also show general support for hypothesized predictions pertaining to the validity of the PI (see Table 6, p. 78).

Source: Slama, Mark E. and Armen Tashchian (1985), "Selected Socio-economic and Demographic Characteristics Associated With Purchasing Involvement," *Journal of Marketing,* 49, 72–82.

                     © 1985 by the American Marketing Association. Scale items taken from Appendix (pp. 79–80). Reprinted with permission.

Purchasing Involvement: PI

(Slama and Tashchian 1985)

1. On most purchase decisions the choice I make is of little consequence.*

2. Usually reading about products or asking people about them won't really help you make a decision.*

3. I have little or no interest in shopping.*

4. *Consumer Reports* is not very relevant to me.*

5. I am not interested in bargain seeking.*

6. I am not interested in sales.*

7. You can't save a lot of money by careful shopping.*

8. I often take advantage of coupon offers in the newspapers.

9. Because of my personal values, I feel that "smart purchasing" ought to be important to me.

10. I am usually not annoyed when I find out I could have bought something cheaper than I did.

11. Being a smart shopper is worth the extra time it takes.

12. Even with inexpensive products like shampoo, I will often evaluate a recent purchase and become annoyed because the product doesn't adequately meet my needs.

13. Sales don't excite me.*

14. I am not really committed to getting the most for my money.*

15. For expensive items I spend a lot of time and effort making my purchase decision, since it is important to get the best deal.

16. Consumerism issues are irrelevant to me.*

17. I view the purchasing of goods and services as a rather petty activity, not relevant to my main concerns in life.*

18. It is important to me to be aware of all the alternatives before buying an expensive item.

19. It is important to me to keep up with special deals being offered by the grocery stores in my area.

20. I am too absorbed in more personally relevant matters to worry about making smart purchases.*

21. It is part of my value system to shop around for the best buy.

22. The consumer and business sections of the newspaper are highly relevant to me.

23. If I were buying a major appliance it wouldn't make much difference which brand I chose.*

24. The brands of goods I buy make very little difference to me.*

25. It is not worth it to read *Consumer Reports* since most brands are about the same.*

26. You can save a lot of money by clipping coupons from the newspaper.

27 Thinking about what you are going to buy before going shopping won't make much difference in your long-run expectations.*

28. It doesn't make much sense to get upset over a purchase decision since most brands are about the same.*

29. I am willing to spend extra time shopping in order to get the cheapest possible price on goods of like quality.

30. I pay attention to advertisements for products I am interested in.

31. Shopping wisely is rather a petty issue compared to thinking about how to make more money.*

32. I don't like worrying about getting the best deal when I go shopping; I like to spend money as I please.*

33. I don't like to waste a lot of time trying to get good deals on groceries.*

Notes: Items are scored on 6-point Likert-type scales from *strongly disagree* to *strongly agree*. *Denotes items that are reverse scored.

Appendix to Involvement:
Comparing Four Modified Involvement Scales

(Mittal 1995)

Mittal (1995) compared the psychometric properties of modified versions of four prominent involvement measures. The four were chosen, modified, and compared on the basis that the concept of involvement has the recurrent theme of perceived relevance/importance; namely, it represents "the perceived importance of the stimulus; be that stimulus the product itself or the purchase decision task" (Mittal 1995, p. 664). The four involvement measures examined (and modified) were Zaichkowsky's (1985) Personal Involvement Inventory (PII), Laurent and Kapferer's (1985) Consumer Involvement Profile (CIP), the Foote, Cone, & Belding Involvement (FCB) Grid (Ratchford 1987), and the Mittal (1989) Purchase Decision Involvement (PDI) measure. Using the product/purchase decision categories of beer ($n = 90$), cameras ($n = 80$), jeans ($n = 86$ and $n = 144$), and VCRs ($n = 136$), Mittal (1995) offered the following results from confirmatory factor analyzes (via LISREL) and reliability/item analyses.

A modified five-item PII showed adequate evidence of unidimensionality and internal consistency as a measure of both purchase decision involvement and product involvement. Two modified three-item versions of the CIP product class involvement and purchase decision involvement scales showed adequate evidence of unidimensionality and internal consistency for product class involvement and purchase decision involvement, respectively. A modified three-item PDI showed adequate evidence of unidimensionality and internal consistency as a measure of purchase decision involvement. A modified three-item FCB showed adequate evidence of unidimensionality and internal consistency as a measure of purchase decision involvement. Table 4.1 (Table 2 in Mittal 1995, p. 673) summarizes the results.

Table 4.1   Modified Scale Comparisons

	Purchase-Decision Involvement		Product Involvement	
	Construct Reliability	Captured Variance	Construct Reliability	Captured Variance
Modified PII	.90	.67	.90	.64
Modified CIP	.80	.59	.75	.51
Modified PDI	.85	.66		
Modified FCB	.84	.64		

Intercorrelations among the scales (for the same product or purchase decision) ranged from 0.55 to 0.99. Mittal (1995) offered rank ordered recommendations for the scales in terms of unidimensionality, convergent validity, nomological validity, simplicity, and response set bias (see Table 3, p. 676). However, no one scale was universally endorsed over all these rank ordered criteria. The pages that follow offer the modified versions of the scales.

Sources: Mittal, Banwari (1995), "A Comparative Analysis of Four Scales of Involvement," *Psychology & Marketing,* 12, 663–82.

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Laurent, Gilles and Jean-Noel Kapferer (1985), "Measuring Consumer Involvement Profiles," *Journal of Marketing Research,* 22, 41–53.

Mittal, Banwari (1989), "Measuring Purchase-Decision Involvement," *Psychology & Marketing,* 6, 147–62.

Ratchford, Brian T. (1987), "New Insights About the FCB Grid," *Journal of Advertising Research,* 27, 24–38.

Zaichkowsky, Judith Lynne (1985), "Measuring the Involvement Construct," *Journal of Consumer Research,* 12, 341–52.

The Modified PII

1. important—unimportant*

2. means a lot to me—means nothing to me*

3. matters to me—does not matter*

4. significant—insignificant*

5. of no concern—of concern to me

Notes: * Denotes reverse-scored items. Items are scored on 7-point scales.

The Modified CIP

Product Class Involvement

1. _____is very important to me.

2. For me, _____do (does) not matter.

3. _____are an important part of my life.

Purchase Decision Involvement

1. Choose _____ very carefully.

2. Which _____ I buy matters to me a lot.

3. Choosing _____ is an important decision for me.

Notes: Items are scored on 7-point *strongly disagree* to *strongly agree* scales. Item 3 of the product class involvement measure in one of Mittal's (1995) studies was worded "I have a strong interest in _____." Item 2 of Product Class Involvement requires reverse scoring.

The Modified PDI

1. In selecting from many types and brands of _____ available in the market, would you say that:

    I would not care at all   1 2 3 4 5 6 7   *I would care a great deal as to which one I buy*

2. How important would it be to you to make a right choice of this product?

    Not at all important   1 2 3 4 5 6 7   *Extremely important*

3. In making your selection of this product, how concerned would you be about the outcome of your choice?

    Not at all concerned   1 2 3 4 5 6 7   *Very much concerned*

The Modified FCB

1. In deciding which _____ to buy, there is:

    a little to lose   1 2 3 4 5 6 7   *a lot to lose*

2. Making one's selection of _____ is:

    a very unimportant decision   1 2 3 4 5 6 7   *a very important decision*

3. The decision about which _____ to buy requires:

    a little thought   1 2 3 4 5 6 7   *a lot of thought*

Scales Related to Information Processing: Optimal Stimulation Measures

Arousal Seeking Tendency: AST

(Mehrabian and Russell 1974)

Construct: Optimal Stimulation Level (OSL) is viewed as a uniquely determined, homeostatic degree of stimulation with which an individual is comfortable. If the environment is deficient at providing this level of stimulation, the individual will tend to seek complexity or novelty. If the environment provides more stimulation than the desired optimal level, the individual will engage in behavior to reduce stimulation (e.g., Raju 1980; Wahlers and Etzel 1990). OSL is considered to be predictive of a wide range of consumer-related behaviors.

Likewise, arousal seeking tendency is viewed as a characteristic that varies across individuals. An individual's preference for an environment is closely related to his/her preferred arousal level. Some people prefer calm settings, whereas others actively seek to increase their arousal by choosing novel, complex, or unpredictable settings (Mehrabian and Russell 1974). The AST is designed to measure this preference.

Description: The AST is a 40-item scale, where each item is evaluated on a 9-point Likert-type format (i.e., *very strong disagreement* [–4] to *very strong agreement* [+4]). The scale can be summed for an overall index assessing OSL, and it can be broken down into five underlying factors by summing item scores within factors: arousal from change, arousal from unusual stimuli, arousal from sensuality, arousal from risk, and arousal from new environments.

Although Mehrabian and Russell (1974) report a five-factor structure that corresponds to their five sources of arousal, they do not state exactly which items compose the five factors. They provide example items only (p. 42) and go on to state that arousal from change is composed of 12 items, arousal from unusual stimuli is composed of 11 items, arousal from risk is composed of 9 items, arousal from sensuality is composed of 5 items, and arousal from new environments is composed of 3 items. They do, however, state that the overall 40 items can be used as a measure assessing a single trait.

Development: Drawing from a vast literature search and previous scales measuring various aspects of change seeking, sensation seeking, and stimulus seeking, 312 items were initially generated. In the first scale development study, items highly correlated with social desirability (0.15 or greater) and with low item-to-total correlations (less than 0.20) were eliminated. The remaining items were factor analyzed. Items with high factor loadings on a given factor, high item-to-total correlations (0.25 and above), low social desirability bias, simple wording, and low redundancy with other items were retained, resulting in 125 items. A second study was performed to cross-validate the 125 items, and a third study was performed to derive the final 40-item scale. Here, items with item-to-total correlations of 0.40 and above and social desirability bias of 0.10 and below were retained. A fourth study reexamined the final 40 items, and a fifth study assessed the factor structure of the scale (Mehrabian and Russell 1974).

Samples: Five samples were used in scale development. For the studies mentioned above, student samples of 203, 316, 214, 202, and 530, respectively, were used.

Validity: Mehrabian and Russell (1974) report a coefficient alpha of 0.87 for the 40-item AST from their third study ($n = 214$), and based on a subsample from their third

study (n = 78), test-retest reliability over a 4- to 7-week interval was 0.88. Although factor analysis indicated five factors (n = 530), no estimates of internal consistency on a factor-by-factor basis were provided.

However, correlations among the five factors ranged from 0.27 to 0.65. Mehrabian and Russell also offer estimates of scale validity. Throughout their first three studies, the final 40 items composing the AST were correlated with various personality trait measures (i.e., extroversion, anxiety, trait arousal, etc.). These correlations ranged from 0.05 to 0.70 (in absolute value). The pattern of correlations between the AST and these measures offer evidence of construct validity.

Scores: Mehrabian and Russell (1974) report a mean score of 39 (SD = 34) for their samples of 214 and 202.

Sources: Mehrabian, Albert and James A. Russell (1974), *An Approach to Environmental Psychology*, Cambridge: MIT Press.

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Raju, P. S. (1980), "Optimum Stimulation Level: Its Relationship to Personality, Demographics, and Exploratory Behavior," *Journal of Consumer Research*, 7, 272–82.

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Other evidence: In consumer behavior-related studies, the AST has also been examined. Raju (1980) examined the relationship of AST with a number of personality traits and behavioral response scales with two student samples of 185 and 109, and two homemaker samples of 197 and 336. Wahlers, Dunn, and Etzel (1986) used 69 students to examine the relation of the AST to other OSL measures. Wahlers and Etzel (1990) used a sample of 697 from a midwestern consumer panel to compare measures of OSL.

In the Raju (1980) study, reliability estimates for the AST were not reported. However, the AST was found to be significantly correlated with various personality traits and behavioral measures reflecting OSL tendencies, supporting the AST as a measure of OSL. For example, AST correlations with a measure of intolerance of ambiguity were –0.60 and –0.55 for two samples. AST correlations with a measure of rigidity were –0.43 and –0.45.

In the Wahlers et al. (1986) study, the internal consistency estimate for the 40-item AST was 0.88. (Reliability estimates for the five subscales were not reported.) The AST was also highly correlated with other measures of arousal seeking and with OSL in general (ranging from 0.17 to 0.96), suggesting convergent validity for the AST.

In the Wahlers and Etzel (1990) study, the internal consistency estimate for the 40-item AST was reported as 0.85. Though no direct estimate of subscale reliability was offered, it was stated that the subscales possessed adequate internal consistency. Furthermore, the correlation of the AST with another measure of OSL was extremely high (r = 0.95), indicating convergent validity.

Other source: Wahlers, Russell G., Mark G. Dunn, and Michael J. Etzel (1986), "The Congruence of Alternative OSL Measures With Exploratory Behavior Tendencies," in *Advances in Consumer Research*, Vol. 13, ed. Richard Lutz, Provo, UT: Association for Consumer Research, pp. 398–402.

Reference: Wahlers, Russell G. and Michael J. Etzel (1990), "A Structural Examination of Two Optimal Stimulation Level Measurement Models," in *Advances in Consumer Research*, Vol. 17, eds. Marvin Goldberg, Gerald Gorn, and Richard Pollay, Provo, UT: Association for Consumer Research, pp. 415–25.

Arousal Seeking Tendency: AST

(Mehrabian and Russell 1974)

1. I seldom change the pictures on my walls.*

2. I am not interested in poetry.*

3. It is unpleasant seeing people in strange weird clothes.*

4. I am continually seeking new ideas and experiences.

5. I much prefer familiar people and places.*

6. When things get boring, I like to find some new and unfamiliar experience.

7. I like to touch and feel a sculpture.

8. I don't enjoy doing daring foolhardy things just for fun.*

9. I prefer a routine way of life to an unpredictable one full of change.*

10. People view me as quite an unpredictable person.

11. I like to run through heaps of fallen leaves.

12. I sometimes like to do things that are a little frightening.

13. I prefer friends who are reliable and predictable to those who are excitingly unpredictable.*

14. I prefer an unpredictable life full of change to a more routine one.

15. I wouldn't like to try the new group therapy techniques involving strange body sensations.*

16. Sometimes I really stir up excitement.

17. I never notice textures.*

18. I like surprises.

19. My ideal home would be peaceful and quiet.*

20. I eat the same kind of food most of the time.*

21. As a child, I often imagined leaving home just to explore the world.

22. I like to experience novelty and change in my daily routine.

23. Shops with thousands of exotic herbs and fragrances fascinate me.

24. Designs and patterns should be bold and exciting.

25. I feel best when I am safe and secure.*

26. I would like the job of a foreign correspondent of a newspaper.

27. I don't pay much attention to my surroundings.*

28. I don't like the feeling of wind in my hair.*

29. I like to go somewhere different nearly every day.

30. I seldom change the decor and furniture arrangement at my place.*

31. I am interested in new and varied interpretations of different art forms.

32. I wouldn't enjoy dangerous sports such as mountain climbing, airplane flying, or sky diving.*

33. I don't like to have lots of activity around me.*

34. 1 am interested only in what I need to know.*

35. I like meeting people who give me new ideas.

36. I would be content to live in the same house the rest of my life.*

37. I like continually changing activities.

38. I like a job that offers change, variety, and travel even if it involves some danger.

39. I avoid busy, noisy places.*

40. I like to look at pictures that are puzzling in some way.

Notes: *Denotes items that are reverse scored. Although Mehrabian and Russell report a five-factor structure that corresponds to their five sources of arousal, they do not state exactly which items compose the five factors. They provide example items only (p. 42) and go on to state that arousal from change is composed of 12 items, arousal from unusual stimuli is composed of 11 items, arousal from risk is composed of 9 items, arousal from sensuality is composed of 5 items, and arousal from new environments is composed of 3 items. They do, however, state that the overall 40 items can be used as a measure assessing a single trait. Items are scored on 9-point Likert-type scales from *very strong disagreement* [−4] to *very strong agreement* [+4].

Change Seeking Index: CSI Short Form

(Steenkamp and Baumgartner 1994)

Construct: Based on the work of Garlington and Shimota (1964), change seeking is viewed as "the need for variation in one's stimulus input in order to maintain optimal functioning" (p. 919). Garlington and Shimota developed a 95-item scale (i.e., the CSI) to assess the change seeking construct. The Change Seeking Index (CSI) has been used as a measure of optimum stimulation level (OSL). In their research, Steenkamp and Baumgartner (1994) offer a 7-item reduced form of the CSI as a measure of OSL.

Description: The short form CSI of Steenkamp and Baumgartner is composed of seven items scored on 5-point scales ranging from +2 to –2 with endpoints of *completely true* and *completely false*. It seems that item scores can be summed to form an overall CSI composite score.

Development: The 95 original CSI items were administered to a large sample. Via principal component analysis, reliability analysis, and confirmatory factor analysis (using an iterative process), the final seven-item form of the scale was derived. Four more samples were collected to cross-validate the findings of the first sample. Several estimates of scale dimensionality, internal consistency, and validity were offered over the five samples.

Samples: Five samples were gathered: *n* = 223 U.S. undergraduate college students, *n* = 289 U.S. undergraduate students, *n* = 79 international college students, *n* = 139 Dutch college students, and *n* = 79 Belgian managers enrolled in an executive education program.

Validity: Via an iterative process, a one-factor, seven-item confirmatory model fit the data well with the first sample *(n* = 223). Then, using multigroup analyses, invariance tests of scale structure were performed over the five samples. Though not statistically invariant across all samples and tests, some evidence of the equality of the seven-item, single-dimension structure was found across samples. Coefficient alpha estimates of internal consistency ranged from 0.82 to 0.92 across the samples, and alpha for the scale where data was pooled over all samples was 0.84. Factor loadings from the pooled data ranged from 0.571 to 0.733. Numerous correlational estimates of nomological validity were offered. For example, the seven-item CSI showed correlations of 0.775, 0.505, 0.406, and –0.045 (ns) with measures of arousal seeking tendency, need for cognition, trait curiosity, and social desirability bias, respectively (across the larger samples). The seven-item CSI also had correlations of 0.480, 0.355, and 0.452 with measures of risk taking, variety seeking, and exploratory purchase behavior, respectively. These correlations were similar to correlations of the 95-item CSI version with the same constructs, suggesting that the seven-item short form is preferable.

Scores: Mean scores were not reported.

Source: Steenkamp, Jan-Benedict E. M. and Hans Baumgartner (1994), "Development and Cross-Cultural Validation of a Short Form of CSI as a Measure of Optimum Stimulation Level," *International Journal of Research in Marketing,* 12, 97–104.

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Reference: Garlington, Warren K. and Helen Shimota (1964), "The Change Seeker Index: A Measure of the Need for Variable Stimulus Input," *Psychological Reports,* 14, 919–24.

Change Seeking Index: CSI Short Form

(Steenkamp and Baumgartner 1994)

1. I like to continue doing the same old things rather than trying new and different things.

2. I like to experience novelty and change in my daily routine.

3. I like a job that offers change, variety, and travel, even if it involves some danger.

4. I am continually seeking new ideas and experiences.

5. I like continually changing activities.

6. When things get boring, I like to find some new and unfamiliar experience.

7. I prefer a routine way of life to an unpredictable one full of change.

Notes: Items 1 and 7 require reverse scoring to reflect higher levels of the construct. Items scored on 5-point scales ranging from *completely true* [+2] to *completely false* [–2].

Exploratory Buying Behavior Tendencies: EBBT

(Baumgartner and Steenkamp 1996)

Construct: Exploratory buying behavior tendency (EBBT) is viewed as an individual difference variable of people's disposition to engage in two forms of exploratory buying behavior: (a) exploratory acquisition of products (EAP) and (b) exploratory information seeking (EIS). EAP reflects the tendency to seek sensory stimulation in product purchase through risky and innovative product choices, and varied and changing purchase and consumption experiences. High EAP individuals enjoy unfamiliar and innovative products and seek variety in their purchases. EIS reflects a tendency to obtain cognitive stimulation through the acquisition of consumption-relevant knowledge out of curiosity. High EIS individuals like to go browsing and window shopping, and they are interested in talking with other consumers about their consumption experiences (Baumgartner and Steenkamp 1996, pp. 124–25).

Description: The EBBT scale is two-dimensional: (a) the exploratory acquisition of products dimension (EAP) and (b) the exploratory information seeking dimension (EIS). Both dimensions are composed of 10 items scored on 5-point *strongly disagree* to *strongly agree* scales. It seems that item scores can be summed within each dimension to create overall EAP and EIS scores.

Development: Numerous psychometric procedures were used to develop and validate the EBBT. A pool of 89 items was originally generated to tap the two dimensions (35 of these items were from Raju's [1980], exploratory tendencies measure). The items were judged for representativeness by a panel of expert judges, reducing the pool to 41 EAP and 28 EIS items. Via factor, item, and reliability analyses using three large samples, the final forms of the EAP and EIS were derived. Numerous estimates of internal consistency and validity were offered.

Samples: Throughout scale development and validity testing, several samples were used. The main developmental samples were composed of $n = 288$, $n = 320$, and $n = 159$ undergraduate college students. Samples of $n = 129$, $n = 134$, $n = 45$, $n = 62$, and $n = 60$ undergraduate students (some of which were subsamples of the larger samples) were used in five more studies (four of which were experiments) to validate the EBBT. (Some of the samples were from the Netherlands and some were from the United States.)

Validity: Confirmatory factor analyses provided evidence that the two-factor EAP-EIS structure showed an adequate fit to the data for the first three samples. Estimates of internal consistency (i.e., coefficient alpha and composite reliability) for the EAP and EIS ranged from 0.75 to 0.84 across these samples. A correlation of 0.30 was found between EAP and EIS in the $n = 288$ sample, and this correlation showed evidence of discriminant validity between these two dimensions. Structural equation modeling using the summed EAP and EIS composites as dependent variables showed significant relationships with related constructs. For example, standardized parameter estimates between measures of optimum stimulation level, sensation seeking, and cognitive stimulation and EAP ranged from 0.43 to 0.45 ($p < 0.01$). Standardized parameter estimates between optimum stimulation level, sensation seeking, and cognitive stimulation and EIS ranged from 0.24 to 0.25 ($p < 0.01$). (Estimates of 0.35 and 0.22 were found between EAP and EIS in these models.) In addition, neither EAP nor EIS showed any significant correlation with a measure of social desirability bias.

Numerous other estimates of validity were provided over four experiments that examined actual behaviors that should be related to EBBT. These experiments included lottery ticket purchases, food (i.e., cookie) consumption, cognitive responses to ads, and browsing through ads for different automobiles. The results of these studies showed support for the validity of the EBBT scales.

Scores: Individual item mean scores and standard deviations are provided in Baumgartner and Steenkamp (1996, pp. 134–35).

Source: Baumgartner, Hans and Jan-Benedict E. M. Steenkamp (1996), "Exploratory Consumer Buying Behavior: Conceptualization and Measurement," *International Journal of Research in Marketing,* 13, 121–37.

© 1996 by Elsevier Science. Scale items taken from Appendix A (pp. 134–35). Reprinted with permission from Elsevier Science.

Reference: Raju, P. S. (1980), "Optimum Stimulation Level: Its Relationship to Personality, Demographics, and Exploratory Behavior," *Journal of Consumer Research,* 7, 272–82.

Exploratory Buying Behavior Tendencies: EBBT

(Baumgartner and Steenkamp 1996)

Exploratory Acquisition of Products (EAP) Items

1. Even though certain food products are available in a number of different flavors, I tend to buy the same flavors.

2. I would rather stick with a brand I usually buy than try something I am not very sure of.

3. I think of myself as a brand-loyal consumer.

4. When I see a new brand on the shelf, I'm not afraid of giving it a try.

5. When I go to a restaurant, I feel it is safer to order dishes I am familiar with.

6. If I like a brand, I rarely switch from it just to try something different.

7. I am very cautious in trying new or different products.

8. I enjoy taking chances in buying unfamiliar brands just to get some variety in my purchases.

9. I rarely buy brands about which I am uncertain how well they perform.

10. I usually eat the same kind of foods on a regular basis.

Exploratory Information Seeking (EIS) Items

11. Reading mail advertising to find out what's new is a waste of time.

12. I like to go window shopping and find out about the latest styles.

13. I get very bored listening to others about their purchases.

14. I generally read even my junk mail just to know what it is about.

15. I don't like to shop around just out of curiosity.

16. I like to browse through mail-order catalogs even when I don't plan to buy anything.

17. I usually throw away mail advertisements without reading them.

18. 1 like to shop around and look at displays.

19. I don't like to talk to my friends about my purchases.

20. I often read advertisements just out of curiosity.

Notes: Items 1, 2, 3, 5, 6, 7, 9, 10, 11, 13, 15, 17, and 19 require reverse scoring. Items scored on 5-point scales from *strongly disagree* to *strongly agree.*

Exploratory Tendencies in Consumer Behavior Scales: ETCBS

(Raju 1980)

Construct: Exploratory tendency behavior is viewed as behavior aimed at modifying stimulation from the environment. In a consumer behavior context, these behaviors include the following (Raju, 1980, pp. 278–79):

Repetitive behavior proneness: the tendency to stick with the same response over time.

Innovativeness: eagerness to buy or know about new products and services.

Risk taking: a preference for taking risks or being adventurous.

Exploration through shopping: a preference for shopping and investigating.

Interpersonal communication: communicating with friends about purchases.

Brand switching: switching brands primarily for change and variety.

Information seeking: interest in knowing about various products and brands mainly out of curiosity.

Description: The ETCBS is composed of 39 items that measure the above seven exploratory tendency behaviors, all measured on 7-point agree–disagree scales. Items scores can be summed within each category to form an overall score for each category.

Development: An initial pool of 90 statements was developed to reflect the seven exploratory tendency behaviors. With two samples, this pool of items was trimmed to 60 by eliminating items with high social desirability bias and low item-to-total correlations.

The remaining items common to both samples (i.e., 39 items) were used as the final measures for the seven exploratory tendency behaviors. The final 30 items possessed high face validity, low social desirability, and adequate reliability (Raju 1980).

Samples: Two samples were used in the development of the ETCBS: a sample of 105 students and a sample of 336 homemakers.

Validity: The Spearman-Brown reliability coefficients for the repetitive behavior proneness measure, innovativeness measure, risk taking measure, exploration through shopping measure, interpersonal communication measure, brand switching measure, and information seeking measure were 0.697 and 0.700, 0.804 and 0.845, 0.808 and 0.831, 0.759 and 0.866, 0.725 and 0.738, 0.784 and 0.832, and 0.761 and 0.842 for the homemaker and student samples, respectively. In addition, average item-to-total correlations across all measures (both samples) ranged from 0.458 to 0.696 (Raju 1980, p. 279). Correlations of the seven exploratory tendency behavior measures with a measure of optimal stimulation level ranged from 0.218 to 0.622 across the two samples, offering evidence for the validity of the ETCBS.

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

Source: Raju, P. S. (1980), "Optimum Stimulation Level: Its Relationship to Personality, Demographics, and Exploratory Behavior," *Journal of Consumer Research*, 7, 272–82.

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Other evidence: In another study, Wahlers, Dunn, and Etzel (1986) used a convenience sample of 69 students to examine the dimensionality of the ETCBS and correlated it with measures of optimal stimulation level. In this study, reliability coefficients for the repetitive

behavior proneness measure, innovativeness measure, risk taking measure, exploration through shopping measure, interpersonal communication measure, brand switching measure, and information seeking measures were reported to be 0.591, 0.745, 0.761, 0.803, 0.561, 0.677, and 0.669, respectively.

Wahlers et al. (1986) also report significant correlations of the ETCBS factors with various measures of optimum stimulation level ranging from –0.35 to 0.47 (Table 5, p. 401).

Other source: Wahlers, Russell G., Mark G. Dunn, and Michael J. Etzel (1986), "The Congruence of Alternative OSL Measures With Exploratory Behavior Tendencies," in *Advances in Consumer Research,* Vol. 13, ed. Richard Lutz, Provo, UT: Association for Consumer Research, pp. 398–402.

Exploratory Tendencies in Consumer Behavior Scales: ETCBS

(Raju 1980)

1. Even though certain food products are available in a number of different flavors, I always tend to buy the same flavor.

2. I have little interest in fads and fashion.

3. When I eat out, I like to try the most unusual items the restaurant serves, even if I am not sure I would like them.

4. I like to shop around and look at displays.

5. I get very bored listening to others talk about their purchases.

6. I like to browse through mail order catalogs even when I don't plan to buy anything.

7. When I see a new or different brand on the shelf, I often pick it up just to see what it is like.

8. I often read the information on the packages of products just out of curiosity.

9. I am the kind of person who would try any new product once.

10. I shop around a lot for my clothes just to find out more about the latest styles.

11. A new store or restaurant is not something I would be eager to find out about.

12. When I go to a restaurant, I feel it is safer to order dishes I am familiar with.

13. I am very cautious in trying new/different products.

14. Even for an important date or dinner, I wouldn't be wary of trying a new or unfamiliar restaurant.

15. I generally read even my junk mail just to know what it is about.

16. I don't like to talk to my friends about my purchases.

17. I enjoy sampling different brands of commonplace products for the sake of comparison.

18. I like introducing new brands and products to my friends.

19. I would rather stick with a brand I usually buy than try something I am not very sure of.

20. I usually throw away mail advertisements without reading them.

21. If I like a brand, I rarely switch from it just to try something different.

22. I don't care to find out what types or brand names of appliances and gadgets my friends have.

23. I hate window shopping.

24. I often read advertisements just out of curiosity.

25. I would rather wait for others to try a new store or restaurant than try it myself.

26. I get bored with buying the same brands even if they are good.

27. When I see a new brand somewhat different from the usual, I investigate it.

28. I never buy something I don't know about at the risk of making a mistake.

29. I would get tired of flying the same airline every time.

30. If I buy appliances, I will buy only well established brands.

31. Investigating new brands of grocery and other similar products is generally a waste of time.

32. My friends and neighbors often come to me for advice.

33. I rarely read advertisements that just seem to contain a lot of information.

34. When I hear about a new store or restaurant, I take advantage of the first opportunity to find out more about it.

35. I would prefer to keep using old appliances and gadgets even if it means having to get them fixed, rather than buying new ones every few years.

36. A lot of the time I feel the urge to buy something really different from the brands I usually buy.

37. I enjoy taking chances in buying unfamiliar brands just to get some variety in my purchases.

38. If I did a lot of flying, I would probably like to try all the different airlines, instead of flying just one most of the time.

39. I enjoy exploring several different alternatives or brands while shopping.

Notes: Though not indicated by Raju (1980), items that require reverse scoring seem to include items 1, 2, 5, 11 through 14, 16, 19 through 23, 25, 18, 30, 31, 33, and 35.

Several items cross-load on the seven ETCBS measures. Items 1, 21, 26, 29, 35, 36, and 38 measure repetitive behavior proneness. Items 7, 9, 11, 13, 14, 25, 27, 31, 34, and 37 measure innovativeness. Items 3, 9, 12, 13, 14, 19, 28, 30, and 37 measure risk taking. Items 2, 4, 6, 10, 23, 27, and 39 measure exploration through shopping. Items 16, 18, and 32 measure interpersonal communication. Items 17, 19, 21, 26, 36, 38, and 39 measure brand switching. Items 5, 6, 8, 10, 11, 15, 17, 20, 24, 33, and 34 measure information seeking. Items scored on 7-point scales from *agree* to *disagree.*

Appendix to Optimum Stimulation Levels:
Reviewing/Integrating Four OSL Measures

(Steenkamp and Baumgartner 1992)

In an excellent review and empirical examination, Steenkamp and Baumgartner (1992) found that four measures of OSL showed adequate levels of convergent validity such that their summed item composite scores could be used as indicators of one overall OSL measure. The four OSL measures examined were (a) the AST-II, a revised version of the Arousal Seeking Tendency Scale (Mehrabian 1978); (b) the SS-V, the Form V Sensation Seeking Scale (Zuckerman 1979); (c) the CSI—Change Seeking Index (Garlington and Shimota 1964); and (d) the NES—Novelty Experiencing Scale (Pearson 1970). Across all measures, item scoring was converted to a +2 to –2 Likert-type format with endpoints of strongly disagree/strongly agree, completely false/completely true, or strongly dislike/strongly like, depending on the measure.

Reliability estimates for the four OSL measures ranged from 0.806 to 0.913. (Subscale reliabilities for the SS-V ranged from 0.50 to 0.79, and subscale reliabilities for the NES ranged from 0.81 to 0.89.) Correlations among the summed-item composites of the four scales ranged from 0.411 to 0.759, and factor loadings (on a one-factor model) for the summed-item composites ranged from 0.510 to 0.886, offering evidence for the convergent validity of the four OSL measures.

Over six experiments using behaviors such as gambling and decision making under risk, evidence for the predictive/nomological validity of the four-indicator OSL measure (i.e., the summed-item composites of AST-II, SS-V, CSI, and NES) was found.

Source: Steenkamp, Jan-Benedict E. M. and Hans Baumgartner (1992), "The Role of Optimum Stimulation Level in Exploratory Consumer Behavior," *Journal of Consumer Research*, 19, 434–48.

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References: Garlington, Warren K. and Helen Shimota (1964), "The Change Seeker Index: A Measure of the Need for Variable Stimulus Input," *Psychological Reports,* 14, 919–24.

Mehrabian, Albert (1978), "Characteristic Individual Reactions to Preferred and Unpreferred Environments," *Journal of Personality,* 46, 717–31.

Pearson, Pamela (1970), "Relationships Between Global and Specific Measures of Novelty Seeking," *Journal of Consulting and Clinical Psychology,* 43 (2), 199–204.

Zuckerman, Marvin (1979), *Sensation Seeking: Beyond the Optimal Level of Arousal,* Hillsdale, NJ: Erlbaum.

Scales Related to Processing Style

Analytic/Holistic Thinking Scale: AHS

(Choi, Koo, and Choi 2007)

Construct: Analytic versus holistic thinking is intended to capture differences in cultural thinking styles, similar to the distinction between individualism and collectivism. Key characteristics of analytic-holistic style that were used in scale development and shown to represent subdimensions of thinking style include 1) Locus of Attention (to the whole or to parts), 2) Causality (interactionism vs. dispositionism), 3) Perception of Change (cyclic vs. linear), and 4) Attitude Toward Contradictions (naïve dialecticism vs. formal logic).

Description: The Analysis-Holism Scale (AHS) measures analytic versus holistic thinking tendencies. The scale contains 24 items, assessed on a 7-point Likert-type scale, where 1 = *strongly disagree* and 7 = *strongly agree*. The items split into four factors, with six items each representing the hypothesized factors of Causality, Attitude Toward Contradictions, Perception of Change, and Locus of Attention. The items can be used as a composite score as well, with higher values indicating more holistic thinking.

Development: Researchers began with 80 different potential items that represented each of four domains (Locus of Attention, Causal Theory, Perception of Change, and Attitude Toward Contradictions). From this set of items, 40 of the items were then selected for further testing based on assessments of their face validity. Exploratory factor analysis of Study 1 data was used to reduce the set of items. This analysis suggested a four-factor model, and items with loadings less than 0.30 or with significant cross loadings were eliminated, resulting in a final item set of 24.

Samples: In Study 1, a sample of 303 Korean students was used, and a separate sample of 534 Korean students was used for confirmatory factor analysis. Study 2 included 328 undergraduate Korean students. Study 3 involved 104 Korean students and 87 American students. Study 4 included 129 Korean undergraduate psychology students and 201 Korean Oriental Medicine students.

Validity: Study 1 items had a coefficient alpha of 0.74 for the scale as a whole, with dimensional reliabilities of 0.71 (Causality), 0.69 (Attitude Toward Contradictions), 0.58 (Perception of Change), and 0.56 (Locus of Attention). The correlations among the subdimensions ranged from 0.07 between Change and Contradiction and 0.25 between Contradiction and Causality. Confirmatory factor analysis using a follow-up sample of 534 students was used to compare the four-factor model to alternative models, and the four-factor was found to be the best fit for the data. In this follow-up study, the overall coefficient alpha was 0.73, with alphas ranging from 0.67 (Attention) to 0.76 (Causality) for the subdimensions. Other studies also reported estimates of coefficient alpha. Study 2 was used to assess the convergent validity of the AHS by assessing its relationship to other measures designed to capture constructs (e.g., causal complexity, focus on the whole versus the parts, and attitude toward conflict) closely related to the AHS dimension. Positive relationships were found consistent with expectations and were strongest between each measure and the corresponding subdimension of the AHS. In addition, for discriminant validity purposes, AHS was compared to the Individual-Collectivism Scale (INDCOL; Triandis 1996) and the Self-Construal Scale (SCS; Singelis 1994) and found to have an insignificant correlation with each of these measures, providing evidence that AHS is distinct from them. Studies 3 and 4 were used to validate

the AHS scale using a known-groups validation approach—that is, using participants from two different cultures known to be associated with either more analytic (American) or holistic (Korean) processing styles. In Study 4, both groups were students in Korea, however one group was associated with more holistic thinking (Oriental Medicine students). As expected, mean scores were higher for Koreans (5.16) than for Americans (4.82) and higher for Oriental Medicine students (5.23) than for students with other majors (5.03). Subdimension differences supported the overall differences in scores for all four dimensions in Study 3 and for both Locus of Attention and Causality in Study 4. Studies 5 and 6 assessed predictive validity by examining two different sets of outcomes, that is, similarity judgments and causal reasoning, and Study 6 also included the INDCOL and SCS to demonstrate the improved predictive validity of the AHS.

Scores: Mean scores were provided for purposes of comparison in Studies 3 and 4. Korean students had higher mean scores than did American students in Study 3: 5.16 versus 4.82. Further, within-culture differences were reported with means of 5.23 for Oriental Medicine students and 5.03 for other Korean students.

Source: Choi, Incheol, Minkyung Koo, and Jong An Choi (2007), "Individual Differences in Analytic Versus Holistic Thinking," *Personality and Social Psychology Bulletin,* 33 (5), 691–705.

References: Singelis, Theodore M. (1994), "The Measurement of Independent and Interdependent Self-Construals," *Personality and Social Psychology Bulletin,* 20, 580–91.

Triandis, Harry C. (1996), "The Psychological Measurement of Cultural Syndromes," *American Psychologist,* 51, 407–15.

Analytic/Holistic Thinking Scale: AHS

(Choi, Koo, and Choi 2007)

Factor 1: Causality

1. Everything in the universe is somehow related to one another.

2. Nothing is unrelated.

3. Everything in the world is intertwined in a causal relationship.

4. Even a small change in any element of the universe can lead to significant alterations in other elements.

5. Any phenomenon has numerous numbers of causes, although some of the causes are not known.

6. Any phenomenon entails a numerous number of consequences, although some of them may not be known.

Factor 2: Attitude Toward Contradictions

1. It is more desirable to take the middle ground than go to extremes.

2. When disagreement exists among people, they should search for ways to compromise and embrace everyone's opinions.

3. It is more important to find a point of compromise than to debate who is right/wrong, when one's opinions conflict with other's opinions.

4. It is desirable to be in harmony, rather than in discord, with others of different opinions than one's own.

5. Choosing a middle ground in an argument should be avoided. (R)

6. We should avoid going to extremes.

Factor 3: Perception of Change

1. Every phenomenon in the world moves in predictable directions. (R)

2. A person who is currently living a successful life will continue to stay successful. (R)

3. An individual who is currently honest will stay honest in the future. (R)

4. If an event is moving toward a certain direction, it will continue to move toward that direction. (R)

5. Current situations can change at any time.

6. Future events are predictable based on present situations. (R)

Factor 4: Locus of Attention

1. The whole, rather than its parts, should be considered in order to understand a phenomenon.

2. It is more important to pay attention to the whole than its parts.

3. The whole is greater than the sum of its parts.

4. It is more important to pay attention to the whole context rather than the details.

5. It is not possible to understand the parts without considering the whole picture.

6. We should consider the situation a person is faced with, as well as his/her personality, in order to understand one's behavior.

Notes: Items are assessed on a 7-point Likert-type scale, where 1 = *strongly disagree* and 7 = *strongly agree*. (R) denotes items that are reverse scored.

Behavioral Identification Form: BIF

(Vallacher and Wegner 1989)

Construct: Based on action identification theory, the Behavioral Identification Form (BIF) assesses the range from low-level identities associated with *how* an action is performed to high-level identities that are intended to understand *why* an action is undertaken. Also called personal agency level, the BIF is based on high-level agents thinking about their actions in encompassing terms that incorporate the motives and larger meanings of the action, whereas low-level agents think about their acts in terms of the details or means of action. As such, the BIF has come to be used as an individual difference measure or dependent measure (Lee, Keller, and Sternthal 2010) to assess construal level, particularly within marketing research. Construal level theory (Trope and Liberman 2003) proposes that events may be viewed in distant, abstract terms (high-level construal) or near, concrete terms (low-level construal), and the BIF appears to capture such differences.

Description: The BIF scale has 25 items with two response choices, one of which represents a lower-level construal and the other which represents a higher-level construal of a given situation or task. Items are scored such that a "1" is assigned for each higher-level alternative selected, and the scores are then summed to form a single index whose value could range from 0 to 25. Higher scores indicate a higher level of construal.

Development: A pilot study with 20 participants was used to generate descriptions of each of the 60 activities being considered for inclusion in the BIF. The most frequently mentioned higher- and lower-level descriptions were used in the BIF. An initial sample of 274 students responded to 60 items. A cut-off of 0.27 based on the item-to-total correlations was used to reduce the scale to 25 items with item-to-total correlations ranging from 0.28 to 0.48. This 25-item version was used in all subsequent samples, and the set of items represented a single dimension.

Samples: A total of 1,404 subjects across 13 samples were used to assess the BIF. While many of these samples were composed of undergraduate students, one sample consisted of faculty, staff, and employee volunteers at Trinity University. Another sample consisted of gynecological outpatients, and another consisted of juvenile detainees.

Validity: Coefficient alpha estimate for the first sample was 0.85. Sample 4 was used to assess test-retest reliability over a 2-week period, resulting in a correlation of 0.91 over the two time periods. In addition to assessing the BIF, a total of 34 different measures were obtained throughout the samples. The measures were relevant to action effectiveness, action orientation, or self-understanding. Results show that BIF was often associated with increased action effectiveness and action planning, as well as a greater understanding of oneself. Other measures were included to provide evidence of divergent validity, and results showed, for example, that BIF scores were not related to IQ, tolerance for ambiguity, self-consciousness, or masculinity/femininity.

Scores: Mean scores and standard deviations are provided for all 13 samples and are relatively consistent across the samples. Means ranged from 14.98 to 16.62, while standard deviations ranged from 4.85 to 5.88. No differences were found in any sample based on gender.

Source: Vallacher, Robin R. and Daniel M. Wegner (1989), "Levels of Personal Agency: Individual Variation in Action Identification," *Journal of Personality and Social Psychology,* 57 (4), 660–71.

References: Lee, Angela, Punam Anand Keller, and Brian Sternthal (2010), "Value from Regulatory Construal Fit: The Persuasive Impact of Fit Between Consumer Goals and Message Concreteness," *Journal of Consumer Research,* 36 (February), pp. 735–47.

Trope, Yaacov and Nira Liberman (2003), "Temporal Construal," *Psychological Review,* 110 (3), 403–21.

Behavioral Identification Form: BIF

(Vallacher and Wegner 1989)

Directions

Any behavior can be identified in many ways. For example, one person might describe a behavior as "typing a paper," while another might describe the behavior as "pushing keys." Yet another person might describe the behavior as "expressing thoughts." We are interested in your personal preferences for how a number of different behaviors should be described. On the following pages, you will find several different behaviors listed. After each behavior will be two choices of different ways in which the behavior might be identified. Here is an example:

Attending class

_____ a. Sitting in a chair

_____ b. Looking at the blackboard

Your task is to choose the identification, a or b, that best describes the behavior for you. Simply place a check mark in the space beside the identification statement that you pick. Please mark only one alternative for each pair. Of course, there are no right or wrong answers. People simply differ in their preferences for the different behavior descriptions, and we are interested in your personal preferences. Be sure to mark your choice for each behavior. Remember, choose the description that you personally believe is more appropriate in each pair.

1.	Making a list	7.	Climbing a tree
	_____ a. Getting organized*		_____ a. Getting a good view*
	_____ b. Writing things down		_____ b. Holding onto branches
2.	Reading	8.	Filling out a personality test
	_____ a. Following lines of print		_____ a. Answering questions
	_____ b. Gaining knowledge*		_____ b. Revealing what you're like*
3.	Joining the Army	9.	Toothbrushing
	_____ a. Helping the Nation's defense*		_____ a. Preventing tooth decay*
	_____ b. Signing up		_____ b. Moving a brush around in one's mouth
4.	Washing clothes	10.	Taking a test
	_____ a. Removing odors from clothes*		_____ a. Answering questions
	_____ b. Putting clothes into the machine		_____ b. Showing one's knowledge*
5.	Picking an apple	11.	Greeting someone
	_____ a. Getting something to eat*		_____ a. Saying hello
	_____ b. Pulling an apple off a branch		_____ b. Showing friendliness*
6.	Chopping down a tree	12.	Resisting temptation
	_____ a. Wielding an axe		_____ a. Saying "no"
	_____ b. Getting firewood*		_____ b. Showing moral courage*

13.	Measuring a room for carpeting Eating	20.	Eating
	____ a. Getting ready to remodel*		____ a. Getting nutrition*
	____ b. Using a yardstick		____ b. Chewing and swallowing
14.	Cleaning the house	21.	Growing a garden
	____ a. Showing one's cleanliness*		____ a. Planting seeds
	____ b. Vacuuming the floor		____ b. Getting fresh vegetables*
15.	Painting a room	22.	Traveling by car
	____ a. Applying brush strokes		____ a. Following a map
	____ b. Making the room look fresh*		____ b. Seeing countryside*
16.	Paying the rent	23.	Having a cavity filled
	____ a. Maintaining a place to live*		____ a. Protecting your teeth*
	____ b. Writing a check		____ b. Going to the dentist
17.	Caring for houseplants	24.	Talking to a child
	____ a. Watering plants		____ a. Teaching a child something*
	____ b. Making the room look nice*		____ b. Using simple words
18.	Locking a door	25.	Pushing a doorbell
	____ a. Putting a key in the lock		____ a. Moving a finger
	____ b. Securing the house*		____ b. Seeing if someone is home*
19.	Voting		
	____ a. Influencing the election*		
	____ b. Marking a ballot		

Notes: The alternative with an * indicates the higher-level alternative. Items are scored such that a "1" is assigned for each higher-level alternative selected. The scores are then summed to form a single index.

Situation-Specific Thinking Styles: STSS

(Novak and Hoffman 2009)

Construct: Much previous literature about dual-processing theories suggests that consumers process information in two distinct ways that are either more rational or experiential. In any given situation, a more experiential or more cognitive thinking style may be used. Experiential thinking is described as low-effort, emotional, associative, immediate, outcome oriented, and holistic. Rational cognition thinking is described as logical, sequential, rule-based, conscious, and active. Situation-Specific Thinking Style (SSTS) is defined as "the particular thinking style or momentary thinking orientation adopted by a consumer in a specific situation" (p. 57). Assessing these thinking styles facilitates understanding the processes of consumer decision making.

Description: The SSTS is a two dimensional scale including Experiential SSTS and Rational SSTS. Each dimension consists of ten items that are assessed on a 5-point scale with the following scale points: 1 = *definitely false*, 2 = *mostly false*, 3 = *undecided or equally true*, 4 = *mostly true*, and 5 = *definitely true*. Responses are averaged across the 10 items for each subdimension, with higher values indicating a greater use of the specific thinking style. The scale is developed to be used in response to a specific task, for example a performance task or consumer web activities, in order to assess the manner in which the consumer made his or her decision.

Development: The researchers began with 53 items based on 13 characteristics differentiating experimental and rational processing. These items included 28 for experiential and 25 for rational. The sources of these items included 15 items adapted from the Rational-Experiential Inventory (Pacini and Epstein 1999). The 38 additional items were generated by the authors to expand the vocabulary of the other 15 items and address the 13 identified points of divergence between the processing styles. Principal components analysis of the 53 items led to the elimination of 21 items with item-to-total correlations less than 0.4. Then, items were dropped that minimized the decrease in coefficient alpha until a final set of 10 items each of rational and experimental thinking styles remained. Factor loadings suggested that this final set of items created two distinct factors, which explained 52.6% of the variance.

Samples: For Study 1, the final sample consisted of 602 usable responses out of 2,400 invitations sent to an online panel. The same method was used for Study 2 with a final sample size of 319 consumers out of 1,100 randomly selected potential participants.

Validity: In Study 1, coefficient alpha estimates were 0.90 for the 10 experiential items and 0.89 for the 10 rational items, and the correlation between the two dimensions was –0.10. Study 1 respondents also completed five experimental tasks that were designed to be better suited for one thinking style or the other, and differences in scores on the dimensions of SSTS were offered as evidence of the validity of the measure. In Study 2, coefficient alpha estimates were 0.90 for the 10-item experiential measure and 0.92 for the 10-item rational measure, and the correlation between the two dimensions was –0.29. A two-factor model was shown to have acceptable fit using confirmatory factor analysis on the Study 2 data. In addition, six different tasks were used to provide support for the validity of the measures, with scores on the rational SSTS items being higher with known cognitive tasks and scores for the experiential SSTS items being higher on more creative types of tasks. Subsequent studies further examine the uses of the SSTS measures.

Scores: In Studies 1 and 2, means were reported with respect to responses to a series of tasks designed to be more rational or experiential. As an example, in Study 2, a verbal analogies task viewed as rational led to an SSTS rational mean of 3.74 and an SSTS experiential mean of 3.23, while a product improvement task viewed as experiential led to an SSTS rational mean of 3.29 and an SSTS experiential mean of 4.02.

Source: Novak, Thomas P. and Donna L. Hoffman (2009), "The Fit of Thinking Style and Situation: New Measures of Situation-Specific Experiential and Rational Cognition," *Journal of Consumer Research,* 36 (June), 56–72.

Reference: Pacini, Rosemary and Seymour Epstein (1999), "The Relation of Rational and Experiential Information Processing Styles to Personality, Basic Beliefs, and the Ratio-Bias Phenomenon," *Journal of Personality and Social Psychology,* 76 (June), 972–87.

Situation-Specific Thinking Styles: STSS

(Novak and Hoffman 2009)

Rational

I reasoned things out carefully.

I tackled this task systematically.

I figured things out logically.

I approached this task analytically.

I was very focused on the steps involved in doing this task.

I applied precise rules to deduce the answers.

I was very focused on what I was doing to arrive at the answers.

I was very aware of my thinking process.

I arrived at my answers by carefully assessing the information in front of me.

I used clear rules.

Experiential

I used my gut feelings.

I went by what felt good to me.

I trusted my hunches.

I relied on my sense of intuition.

I relied on my impressions.

I used my instincts.

I used my heart as a guide for my actions.

I had flashes of insight.

Ideas just popped into my head.

I used free-association, where one idea leads to the next.

Note: Scoring is as follows: 1 = *definitely false*, 2 = *mostly false*, 3 = *undecided or equally true*, 4 = *mostly true*, 5 = *definitely true*.

Style of Processing Scale: SOP

(Childers, Houston, and Heckler 1985)

Construct:	Childers et al. (1985) conceptualize processing style as a preference and propensity to engage in a verbal and/or visual modality of processing information about one's environment.
Description:	The Style of Processing Scale (SOP) is a 22-item scale, where the items are scored from 1 *(always true)* to 4 *(always false)*. Eleven items reflect a visual processing style, and 11 items reflect a verbal processing style. The scale can be broken down into two components by summing item scores within components, or used to compute a summed overall score of SOP representing a point on a continuum reflecting a preference for one of the two processing styles (Childers et al. 1985).
Development:	After defining the construct and reviewing the literature, items from existing measures of processing style and newly generated items were used as an initial pool. Six items from Richardson's (1977) VVQ and 36 new items were generated. These 42 items were then administered to a sample and trimmed to 22 items based on item-to-total correlations. The reliability, validity, and structure of the 22-item SOP were examined in later samples.
Samples:	A sample of 35 undergraduate students was used to trim the initial pool of items from 42 to 22. A sample of 106 undergraduate students was used to examine the reliability, validity, and structure of the SOP (Childers et al. 1985).
Validity:	The 11-item verbal component and the 11-item visual component of the SOP had alphas of 0.81 and 0.86, respectively. The alpha of the overall 22-item SOP was 0.88. Furthermore, factor analysis revealed that the SOP was best represented by a two-factor structure (i.e., 11 items for the verbal and 11 items for the visual components).
	Correlations of the SOP with other measures of processing style demonstrated discriminant validity for the SOP, and correlations of the SOP with measures of ad recall ($r = -0.34$) and recognition ($r = -0.31$) showed evidence of criterion validity for the SOP.
Scores:	No mean and/or percentage scores were reported.
Source:	Childers, Terry L., Michael J. Houston, and Susan Heckler (1985), "Measurement of Individual Differences in Visual Versus Verbal Information Processing," *Journal of Consumer Research*, 12, 125–34.
	© 1985 by University of Chicago Press. Scale items taken from Exhibit (p. 129). Reprinted with permission.
Reference:	Richardson, Alan (1977), "Verbalizer-Visualizer: A Cognitive Style Dimension," *Journal of Mental Imagery,* 1, 109–26.

Style of Processing Scale: SOP

(Childers, Houston, and Heckler 1985)

The aim of this exercise is to determine the style or manner you use when carrying out different mental tasks. Your answers to the questions should reflect the manner in which you typically engage in each of the tasks mentioned. There are no right or wrong answers, we only ask that you provide honest and accurate answers. Please answer each question by circling one of the four possible responses. For example, if I provided the statement "I seldom read books," and this was your **typical** behavior, even though you might read one book a year, you would circle the ALWAYS TRUE response. Responses can range from 1 = *always true* to 4 = *always false.*

1. I enjoy doing work that requires the use of words.

2. There are some special times in my life that I like to relive by mentally "picturing" just how everything looked.*

3. I can never seem to find the right word when I need it.*

4. I do a lot of reading.

5. When I'm trying to learn something new, I'd rather watch a demonstration than read how to do it.*

6. I think I often use words in the wrong way.*

7. I enjoy learning new words.

8. I like to picture how I could fix up my apartment or a room if I could buy anything I wanted.*

9. I often make written notes to myself.

10. I like to daydream.*

11. I generally prefer to use a diagram rather than a written set of instructions.*

12. I like to "doodle."*

13. I find it helps to think in terms of mental pictures when doing many things.*

14. After I meet someone for the first time, I can usually remember what they look like, but not much about them.*

15. I like to think of synonyms for words.

16. When I have forgotten something I frequently try to form a mental "picture" to remember it.*

17. I like learning new words.

18. I prefer to read instructions about how to do something rather than have someone show me.

19. I prefer activities that don't require a lot of reading.*

20. I seldom daydream.

21. I spend very little time trying to increase my vocabulary.*

22. My thinking often consists of mental "pictures" or images.*

Notes: *Denotes items that are reverse scored. Items 1, 3, 4, 6, 7, 9, 15, 17, 18, 19, and 21 compose the verbal component. Items 2, 5, 8, 10 through 14, 16, 20, and 22 compose the visual component. Items scored from 1 *(always true)* to 4 *(always false).*

Role Overload of the Wife

(Reilly 1982)

Construct:	Role overload for a housewife is defined as the conflict that occurs when the sheer volume of behavior demanded of the wife exceeds her available time and energy (Reilly 1982). This definition is consistent with the organizational behavior literature view of role overload (House and Rizzo 1972; Rizzo, House, and Lirtzman 1970).
Description:	The role overload scale is composed of 13 Likert-type items scored on a 5-point basis from *strongly disagree* to *strongly agree*. Item scores are summed to form an overall index of role overload.
Development:	The author and several doctoral students wrote a number of items to reflect the construct. These items were administered to a sample of housewives, and items with low item-to-total correlations were eliminated, resulting in the final 13-item scale. Reliability and validity estimates were also obtained.
Samples:	A sample of 106 married women responded to the scale.
Validity:	Coefficient alpha for the scale was 0.88, and item-to-total correlations ranged from 0.50 to 0.80. Correlations with other constructs showed some evidence of validity. For example, correlations of the scale with women's work attitude and work status were 0.15 and 0.17, respectively.
Scores:	Neither mean nor percentage scores were provided.
Source:	Reilly, Michael D. (1982), "Working Wives and Convenience Consumption," *Journal of Consumer Research*, 8, 407–17. © 1982 by University of Chicago Press. Scale items taken from Appendix A (p. 417). Reprinted with permission.
Other evidence:	In a study of time use (Kaufman, Lane, and Lindquist 1991), the role overload scale had a coefficient alpha of 0.86 and was negatively correlated with a measure of time use (–0.146), offering further evidence of the scale's reliability and validity.
Other 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.
References:	House, Robert L. and John R. Rizzo (1972), "Role Conflict and Ambiguity as Critical Variables in a Model of Organizational Behavior," *Organizational Behavior and Human Performance*, 7, 467–505. Rizzo, John R., Robert J. House, and Sidney Lirtzman (1970), "Role Conflict and Ambiguity in Complex Organizations," *Administrative Science Quarterly*, 15, 150–63.

Role Overload of the Wife

(Reilly 1982)

1. I have to do things which I don't really have the time and energy for.

2. There are too many demands on my time.

3. I need more hours in the day to do all the things which are expected of me.

4. I can't ever seem to get caught up.

5. I don't ever seem to have any time for myself.

6. There are times when I cannot meet everyone's expectations.

7. Sometimes I feel as if there are not enough hours in the day.

8. Many times I have to cancel my commitments.

9. I seem to have to overextend myself in order to be able to finish everything I have to do.

10. I seem to have more commitments to overcome than some of the other wives I know.

11. I find myself having to prepare priority lists (lists which tell me which things I should do first) to get done all the things I have to do. Otherwise, I forget because I have so much to do.

12. I feel I have to do things hastily and maybe less carefully in order to get everything done.

13. I just can't find the energy in me to do all the things expected of me.

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

Appendix: Derivation of Conflict Arousal Score

Conflict arousal score = TCI—1.33(DCI)/280
A linear transformation is needed to derive the above equation where:

TCI = total conditional influence which is equal to the sum of the husband's and wife's score on the 20-item SCAS.

DCI = the difference in conditional influence which is equal to the husband's score minus the wife's score on the 20-item SCAS.

The values 1.33 and 280 are constants such that the conflict arousal score ranges from 0 to 1, higher scores reflecting a higher level of conflict.

Thus, the following should hold true:

1. As DCI increases, conflict arousal decreases.

2. As TCI increases, conflict arousal increases.

3. When TCI is at a maximum of 280 (i.e., 20 items x 7 point scales across both husband and wife), and DCI is at a minimum (i.e., husband's SCAS score minus wife's SCAS score equals 0), the conflict arousal score should be 1.

4. When DCI is at a minimum of 120 (i.e., the maximum of any spouse's SCAS is 140 minus the minimum of any spouse's SCAS is 20), and TCI equals 160, the conflict arousal score is 0.

5. The maximum conflict arousal score is 1, and the minimum is 0.

Scales Related to Affect

Brief Mood Introspection Scale: BMIS

(Mayer and Gaschke 1988)

Construct: Mood can exist both at a direct level and at a more reflective or metalevel, as captured in one's thoughts and feelings about the mood. The underlying factor structure of the Brief Mood Introspection Scale (BMIS) is designed to test previous models of mood assessment. Specifically two original factors include pleasant-unpleasant and arousal-calm mood dimensions. Then, after a rotation, two additional dimensions are captured (positive-tired and negative-relaxed) for a total of four factors.

Description: The BMIS was developed to examine the underlying dimensions of mood in a very succinct manner. It is a shortened form of the Mood-State Introspection Scale (MIS; Mayer, Mamberg, and Volanth 1988), which has a 62-item adjective checklist. The BMIS contains 16 adjectives, 2 each from eight mood states: happy, loving, calm, energetic, fearful/ anxious, angry, tired, and sad. The scale is scored on a 4-point scale with the following values and labels: (XX) *definitely do not feel*, (X) *do not feel*, (V) *slightly feel*, and (VV) *definitely feel*, which are assigned values of 1 to 4 for scoring. Also suggested is using the same labels but spacing them two numbers apart to instead have a 7-point scale. Scoring is performed based on adding or subtracting responses to the adjectives based on the particular dimensions being assessed, and therefore four different scores are created using varying combinations of the 16 items. (See scale on next page for details.)

Development: Study 1 was used to assess the proposed factorial model of mood and also to develop and assess the BMIS measure. The BMIS items were simply selected from the longer MIS scale. To assign adjectives to dimensions, items were evaluated based on their factor loadings. Then, the psychometric properties were examined, as discussed below.

Samples: Study 1 included 1,572 undergraduate students from several different universities.

Validity: The BMIS measure reflects the proposed factorial structure with two first-order dimensions and two rotated dimensions emerging. In Study 1, coefficient alphas for each of the dimensions were as follows: pleasant-unpleasant = 0.83, arousal-calm = 0.58, positive-tired = 0.77, and negative-relaxed = 0.76. These dimensions correlated quite highly with the full MIS scale, with correlations ranging from 0.93 to 0.98 across the dimensions.

Scores: For Study 1, mean scores (standard deviations) were 5.05 (7.40) for pleasant-unpleasant, 17.50 (4.39) for arousal-calm, 7.92 (3.98) for positive-tired, and 6.92 (3.59) for negative-relaxed.

Source: Mayer, John D. and Yvonne N. Gaschke (1988), "The Experience and Meta-Experience of Mood," *Journal of Personality and Social Psychology,* 55 (July), 102–11.

Reference: Mayer, John D., Michelle Mamberg, and Alton Volanth (1988), "Cognitive Domains of the Mood System," *Journal of Personality,* 56 (3), 453–86.

Brief Mood Introspection Scale: BMIS

(Mayer and Gaschke 1988)

Four different dimensions represented and scored as follows:

Pleasant-Unpleasant Scale:		Arousal-Calm Scale:	
Add to score:	*Subtract from score:*	*Add to score:*	*Subtract from score:*
Active	Drowsy	Active	Calm
Calm	Fed up	Caring	Tired
Caring	Gloomy	Fed up	
Content	Grouchy	Gloomy	
Happy	Jittery	Jittery	
Lively	Nervous	Lively	
Loving	Sad	Loving	
Peppy	Tired	Nervous	
		Peppy	
		Sad	

Positive-Tired Scale:		Negative-Relaxed Scale:	
Add to score:	*Subtract from score:*	*Add to score:*	*Subtract from score:*
Active	Drowsy	Fed up	Calm
Caring	Tired	Gloomy	
Lively		Jittery	
Loving		Nervous	
Peppy		Sad	

List of just the 16 adjectives used:

Lively	Loving	Nervous	Sad
Peppy	Caring	Calm	Jittery
Active	Drowsy	Gloomy	Grouchy
Happy	Tired	Fed up	Content

Note: The 16 items are each scored on a 4-point scale with the following values and labels: (XX) *definitely do not feel*, (X) *do not feel*, (V) *slightly feel*, and (VV) *definitely feel*, which are assigned values of 1 to 4 for scoring.

Consumer Emotional Intelligence Scale: CEIS

(Kidwell, Hardesty, and Childers 2007)

Construct: Kidwell et al. (2007) define emotional intelligence (EI) as a "person's ability to skillfully use emotional information to achieve a desired consumer outcome" (p. 154). The Consumer Emotional Intelligence Scale (CEIS) is considered a higher-order construct represented by four first-order reflective factors (dimensions): 1) *Perceiving emotions*—the ability to perceive, appraise, and express emotions accurately; 2) *Facilitating emotion*—the ability to access, generate, and use emotions to facilitate thought; 3) *Understanding emotion*—the ability to analyze complex emotions and form emotional knowledge; and 4) *Managing emotion*—the ability to regulate emotions to promote a desired outcome by understanding the implications of social acts on emotion and the regulation of emotion in the self and others.

Description: The CEIS has four first-order factors (dimensions) under one higher-order factor. Five items tap the *perceiving emotions* dimension scored on 5-point scales ranging from *not at all present* to *extremely present*; four items tap the *facilitating emotion* dimension scored on 5-point scales ranging from *useless* to *quite useful*; five items tap the *understanding emotion* dimension scored on a variety of descriptive words or phrases; and four items top the *managing emotion* dimension scored on 5-point *very ineffective* to *very effective* scales. Item scores can be summed within dimensions to create individual dimension scores or summed across all items to create an overall CEIS score.

Development: Numerous advocated psychometric procedures were used to develop and validate the CEIS. An initial pool of 112 items tapping the four dimensions of EI noted above were screened by 16 expert judges for content and appropriate item response categories. From this procedure, 110 items were retained for two student sample studies (Study 1, $n = 104$, and Study 2, $n = 100$). Via item analyses and exploratory factor analyses, the final form of the 18-item CEIS was derived. Study 3 ($n = 219$ students) used confirmatory factor analysis and reliability analysis to establish CEIS dimensionality and internal consistency. Studies 1, 2, and 3 included constructs to assess various aspects of construct validity. Studies 4 and 5 were used to further validate the CEIS. Study 4 used a sample of 231 students to examine the predictive validity of the CEIS for healthy food choices, and Study 5 used a sample of 86 students to assess the scale's generalizability for predicting digital camera choice.

Samples: As noted above, five student samples of $n = 104$, 100, 219, 231, and 86 were used in scale development and validation.

Validity: Study 3 confirmed the higher-order factor structure of the CEIS. The split half reliability for the overall CEIS was 0.83. The split half reliabilities for the perceiving, facilitating, understanding, and managing CEIS dimensions were 0.78, 0.68, 0.69, and 0.81, respectively. Across Studies 1, 2, and 3, the CEIS showed discriminant validity from related constructs (e.g., a generalized self-report emotional intelligence measure—MSCEIT; Brackett et al. 2006), need for emotion, self-monitoring, affect orientation) and nomological validity and predictive validity with constructs such as compulsive buying and choosing a healthy diet. Further, the CEIS showed test-retest reliability of 0.84, and CEIS was not significantly correlated with a measure of socially desirable responding.

Study 4 showed that the CEIS explained variance in healthy food choice beyond that explained by cognitive ability and the MSCEIT, and Study 5 showed that the CEIS predicted digital camera choice beyond that of digital camera brand attitudes and

knowledge of digital cameras. Both Studies 4 and 5 also showed that individual dimensions of the CEIS were related to healthy food choice and digital camera choice in a manner consistent with EI theory. Study 4 also showed that CEIS dimensions had an average correlation with overall CEIS of 0.66 and an average intercorrelation among CEIS dimensions of 0.25. The split half reliabilities for the perceiving, facilitating, understanding, and managing CEIS dimensions were 0.75, 0.72, 0.68, and 0.78, respectively, for Study 4

In another set of studies using the CEIS, Kidwell et al. (2008) showed that emotionally calibrated (as measured by CEIS) individuals made healthier food decisions and moderated the relationship between impulsive eating and caloric intake. They also showed (using CEIS as a measure of emotional calibration) that emotional calibration moderated (lessened) the relationship between vividness of food displays and caloric intake.

Scores: Neither scale scores nor scoring procedures were provided in the paper. The CEIS is a proprietary measure that requires author permission for use. The CEIS website details scoring procedures and directions for use (ceis-research.com). ***Potential users of the CEIS are strongly urged to visit the website for permission and scale scoring procedures.***

Source: Kidwell, Blair, David M. Hardesty, and Terry L. Childers (2007), "Consumer Emotional Intelligence: Conceptualization, Measurement, and the Prediction of Consumer Decision Making," *Journal of Consumer Research*, 35 (June), 154–66.

References: Brackett, Marc A., Susan A. Rivers, Sara Shiffman, Nicole Lerner, and Peter Salovey (2006), "Relating Emotional Abilities to Social Functioning: A Comparison of Self-Report and Performance Measures of Emotional Intelligence," *Journal of Personality and Social Psychology*, 91 (4), 780–95.

Kidwell, Blair, David M. Hardesty, and Terry L. Childers (2008), "Emotional Calibration Effects on Consumer Choice," *Journal of Consumer Research*, 35 (December), 611–21.

Consumer Emotional Intelligence Scale: CEIS

(Kidwell, Hardesty, and Childers 2007)

1. "Indicate the amount of sadness expressed by the product in this picture."

2. "Indicate the amount of excitement expressed by the product in this picture."

3. "Indicate the amount of relaxation expressed by the product in this picture."

4. "Indicate the amount of guilt expressed by the product in this picture."

5. "Indicate the amount of surprise expressed by the product in this picture."

6. How useful might it be to feel **tension** when interacting with an aggressive/pushy salesperson when making a purchase?

7. How useful might it be to feel **hostility** when interacting with an aggressive/pushy salesperson at an auto dealership?

8. How useful might it be to feel **joy** when consuming unhealthy food when maintaining a healthy diet?

9. How useful might it be to feel **frustration** when purchasing something expensive and interacting with an incompetent salesperson?

10. Joe felt anxious and became stressed when he thought about having to negotiate a price with a car dealer when buying a new car. When the dealer became pushy and began aggressively negotiating the price, Joe then felt ____.
    a. Self-conscious
    b. Depressed
    c. Ashamed
    d. Overwhelmed
    e. Happy

11. John was in a hurry to eat lunch before an afternoon meeting. When John stopped at a fast food restaurant, he was happy to see that there were healthy food choices on the menu. After reading the nutritional information, he was even more pleased about the choice he made; he felt ____.
    a. Depressed
    b. Content
    c. Unsure
    d. Fatigued
    e. Active

12. A young woman went into a grocery store happy and left the store feeling sad. What happened in between?
    a. She noticed an elderly lady passing out free samples of food.
    b. She went to buy her favorite product and it wasn't there.
    c. She was buying products that made her feel uncomfortable taking to the cashier.
    d. She realized she had a lot of things to do in the afternoon.
    e. She was treated rudely by the cashier.

13. A young man was returning expensive clothes. He felt embarrassed and then he felt angry. What happened in between?
    a. He realized that he should not have bought the clothes in the first place.
    b. He saw an old friend in the store who was in a hurry and couldn't talk.
    c. He decided that he couldn't afford the clothes after all.
    d. He was encountered by a salesperson who was suspicious of his intentions.
    e. He realized that he lost one of the items he wanted to return.

14. A man watched a TV commercial. He felt sad and then he felt guilty. What happened in between?
    a. The commercial was offensive and made him not want to watch anymore.
    b. The commercial was inspiring and made him think about an old relationship.
    c. The commercial was thoughtful and made him think about losing touch with an old friend.
    d. The commercial was strange and made him think about his years growing up.
    e. The commercial was interesting and made him think about a new career path.

15. Debbie just came back from a day of clothes shopping. She was feeling peaceful and content. How well would the following behavior preserve Debbie's emotions?

    Behavior: She decided it was best to ignore the feeling since it wouldn't last.

16. John went to his favorite clothing store where he saw a shirt that he wanted to buy last week. He felt stressed and frustrated because the shirt that he wanted was no longer there. How well would the following behavior help John reduce his frustration?

    Behavior: He should discontinue future shopping at that store.

17. Becky and Steve want to buy a new car. They will share the car and both have specific preferences in the type of car to be purchased. They have a good relationship but are stubborn about the car that they each want. How effective would Becky be in maintaining a good relationship with Steve if she performed the following behavior?

    Behavior: She should be sarcastic so that Steve will back down and they buy the car she really wants.

18. Sarah has a job in which she interacts with many of her clients. These clients are very important to her and her company since they represent large accounts. She has a great relationship with her clients, although today, one of her clients is very rude and made an offensive comment to her. How effective would Sarah be in maintaining a good relationship with this client if performing the following behavior?

    Behavior: She should become rude and offensive back to the client.

Notes: Items 1 to 5 comprise the *perceiving emotions* dimension and are accompanied by a visual cue (picture; see ceis-research.com). These items are scored on a multiple-choice format of a) *Not at all present*, b) *Slightly present*, c) *Moderately present*, d) *Quite present*, e) *Extremely present*.

Items 6 to 9 compose the *facilitating emotion* dimension and are prefaced with the statement "*How useful might it be to feel certain emotions in the following situations?*" These items are scored on 5-point *useless* to *quite useful* scales.

Items 10 to 14 compose the *understanding emotion* dimension. As shown above, each item has its own set of response options.

Items 15 to 18 compose the *managing emotion* dimension. After reading the "Behavior" that follows each item, items are scored on 5-point *very ineffective* to *very effective* scales.

Emotions: Consumption Emotions Set: CES

(Richins 1997)

Construct: Based on the conceptual work of Clore, Ortony, and Foss (1987), and Ortony, Clore, and Collins (1988), emotion is viewed as a "valenced affective reaction to perceptions of situations" (Richins 1997, p. 127). This view excludes from the domain of emotions descriptors referring to (a) nonvalenced cognitions such as interest and surprise, (b) bodily states such as sleepy and droopy, and (c) subjective evaluations of people such as self-confident or feeling abandoned. Based on this view, the Consumption Emotion Set (CES) was developed to assess the range of emotions most frequently experienced in consumption situations.

Description: The author proposed a few versions of the CES. The first version covers 16 identifiable clusters comprising 43 descriptors (i.e., items). Another version includes the 16 identifiable clusters as well as an "other items" category. A third version includes nine more descriptors beyond those in the first two versions. Throughout the developmental process, Richins used 4-point scales as response categories for each descriptor (i.e., *not at all likely* [0] to *very likely* [3], or *never, rarely, sometimes,* and *often,* or *not at all, a little, moderately,* and *strongly)*. However, she notes that other scoring formats are tenable (p. 143). It seems that mean scores can be computed for each subscale (cluster) by correcting the means for differences in subscale length (most likely summing descriptor [item] scores within a given cluster and then dividing by the number of descriptor [items] in that cluster).

Development: Over six studies using several scaling procedures, the final versions of the CES were derived. Based on open-ended surveys and prior literature, a pool of 285 descriptors was first generated. Using the Clore et al. (1987) conceptualization as a guide, this pool was trimmed to 175 descriptors. (These procedures constituted Study 1.) Using some well-thought-out decision rules, Studies 2 and 3 reduced the pool of descriptors to 97. Studies 4 through 6 used several quantitative techniques to refine the number of descriptors to "clusters" or emotion subscales and to test their reliability, validity, and superiority over other emotion-based measures of consumption. Multidimensional Scaling (MDS) was used in Study 4 to define the clusters (subscales). Rigorous decision rules based on the MDS solutions were used to retain items. MDS, canonical correlation, and regression were used to compare the CES to existing measures of emotions in consumption in Study 5. Study 6 used discriminant analysis and ANOVA to demonstrate the predictive validity of the CES for three different consumption situations (i.e., automobiles, recreation-based products, and sentimental products).

Samples: Study 1 used samples of $n = 49$ undergraduate college students and $n = 48$ adult consumers. Study 2 used $n = 120$ undergraduate students. Study 3 used $n = 258$ adult consumers and $n = 203$ undergraduate students. Study 4 used a combination of $n = 448$ MBA and undergraduate students. Study 5 used $n = 256$ undergraduate students and $n = 194$ student respondents. Study 6 used four samples ranging in size from $n = 80$ to $n = 139$. Some of the Study 6 respondents were subset samples from Study 5.

Validity: As stated above in "Development," several procedures were used. Those relating to validity are briefly summarized here. Reliability was assessed via coefficient alpha for the three-item subscales. The correlation between items was used as a reliability estimate for two-item subscales (see items on the following pages). The MDS solutions, canonical correlations, and regression models of Study 5 generally showed that the CES captured more variance in the range of emotions than did other measures

of consumption-based emotions. Also, for those consumption situations where sentimental value of the product was evident, those CES emotion clusters (i.e., subscales) emphasizing sentiment (i.e., feelings of love) showed greater predictive validity than did those more associated with negative feelings, such as anger or fear. Similar supportive validity results were found for the CES with respect to automobile and recreational products purchase situations.

Scores: Mean scores across purchase situations are graphed in Richin's Figure 6 (p. 143).

Source: Richins, Marsha L. (1997), "Measuring Emotions in the Consumption Experience," *Journal of Consumer Research*, 24, 127–46.

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References: Clore, Gerald, Andrew Ortony, and Mark A. Foss (1987), "The Psychological Foundations of the Affective Lexicon," *Journal of Personality and Social Psychology*, 53, 751–55.

Ortony, Andrew, Gerald L. Clore, and Allan Collins (1988), *The Cognitive Structure of Emotions*, Cambridge, UK: Cambridge University Press.

Emotions: Consumption Emotions Set: CES

(Richins 1997)

Cluster (subscale)	Descriptor
Anger (alpha = 0.91, 0.87)	Frustrated Angry Irritated
Discontent (r = 0.73, 0.67)	Unfulfilled Discontented
Worry (alpha = 0.77, 0.77)	Nervous Worried Tense
Sadness (alpha = 0.83, 0.72)	Depressed Sad Miserable
Fear (alpha = 0.82, 0.74)	Scared Afraid Panicky
Shame (alpha = 0.82, 0.85)	Embarrassed Ashamed Humiliated
Envy (r = 0.39, 0.46)	Envious Jealous
Loneliness (r = 0.55, 0.59)	Lonely Homesick
Romantic Love (alpha = 0.82, 0.82)	Sexy Romantic Passionate
Love (alpha = 0.86, 0.86)	Loving Sentimental Warm Hearted
Peacefulness (r = 0.55, 0.68)	Calm Peaceful
Contentment (r = 0.60, 0.58)	Contented Fulfilled
Optimism (alpha = 0.82, 0.86)	Optimistic Encouraged Hopeful
Joy (alpha = 0.91, 0.88)	Happy Pleased Joyful

Cluster (subscale)	Descriptor
Excitement (alpha = 0.88, 0.89)	Excited Thrilled Enthusiastic
Surprise (N/A, alpha = 0.81)	Surprised Amazed Astonished
Other items	Guilty Proud Eager Relieved

Notes: The "Other items" correspond to a second version where these items are not specified to an identifiable cluster. An expanded CES (third version) included the following items: awed, carefree, comforted, helpless, impatient, longing, nostalgic, protective, and wishful. Items scored on 4-point scales with varying response categories (i.e., *not at all likely* [0] to *very likely* [3], or *never, rarely, sometimes,* and *often,* or *not at all, a little, moderately,* and *strongly).*

Emotions: Dimensions of Emotions: PAD

(Mehrabian and Russell 1974)

Construct: Emotional reactions to one's environment can be characterized by the three response dimensions of pleasure, arousal, and dominance. These dimensions are conceptualized to be relatively independent from one another (Mehrabian and Russell 1974, pp. 18–20).

Pleasure refers to a positive affective state that is felt to be distinguishable from preference, liking, positive reinforcement, and approach avoidance.

Arousal is a feeling state that varies along a single dimension from sleep to frantic excitement.

Dominance is based on the extent to which one feels unrestricted or free to act in a variety of ways.

Description: The PAD is composed of 18 semantic differential items scored on a +4 to –4 basis. There are six items representing each dimension described above. Item scores are summed within dimensions to form indices.

Development: Initially, 28 adjective pairs were generated by the authors. Then, based on 40 different hypothetical situations, 134 students responded to the 28 items. The responses were factor analyzed, and the six items in each dimension with the highest factor loadings were retained. In a second study, five additional items for dominance were generated, and the resulting 23 items were presented to another sample, and then factor analyzed. Based on the rule of eigenvalue greater than one, and again choosing the six items in each dimension with the highest loadings on their respective factors, a three-factor, 18-item version was retained (i.e., the final version of the PAD). The scale was then assessed for reliability and validity in another study.

Samples: Three student samples of 134, 163, and 214 were used in the initial scale development and validation.

Validity: From the third study ($n = 214$), estimates of internal consistency and test-retest reliability were performed. Internal consistency reliability was 0.81 for pleasure, 0.50 for arousal, and 0.77 for dominance. Test-retest (over 4 to 7 weeks) was 0.72, 0.69, and 0.77 for pleasure, arousal, and dominance, respectively. As originally conceptualized, the PAD dimensions were considered independent of one another. Factor analysis results across the three studies revealed low and mostly nonsignificant correlations among the three factors, ranging from –0.07 to 0.26, providing evidence that the dimensions are distinct.

The PAD factors were also used as independent variables to predict a number of emotional states and traits (i.e., anxiety, neuroticism, sensitivity to rejection). The results suggest predictive validity for the three PAD dimensions (Mehrabian and Russell 1974, Table 3.4, p. 47). For example, multiple *Rs* for the three PAD dimensions as predictor variables ranged from 0.24 to 0.73.

Scores: Appendix A (Mehrabian and Russell 1974, pp. 206–15) offers normalized scores for the PAD dimensions across 65 scenarios.

Source: Mehrabian, Albert, and James Russell (1974), *An Approach to Environmental Psychology,* Cambridge: MIT Press.

Other evidence: Although the scale has been used numerous times in social psychology applications, only evidence from consumer behavior studies is reviewed here.

Holbrook et al. (1984), in a study of how emotions affect enjoyment of games, used a 7-point format for the PAD dimensions and found coefficient alpha estimates of 0.89, 0.89, and 0.88 for pleasure, arousal, and dominance, respectively. Holbrook et al. (1984) also reported that the PAD dimensions were related to complexity and performance.

Havlena and Holbrook (1986) looked at how the PAD dimensions related to various consumption experiences by comparing PAD to another index of emotional response (i.e., Plutchik 1980).

A reduced set of 12 PAD items was used. On a sample of 10 MBAs, coefficient alpha for each PAD dimension exceeded 0.90. Intrajudge reliability among the 10 respondents ranged from 0.79 to 0.95 for the PAD dimensions (7-point scales were used for the PAD items). The correlations between the PAD dimensions and the other emotional index showed evidence of convergent validity. For example, average correlations between the PAD dimensions and the other index were 0.81 and 0.71 (based on vector spaces derived through discriminant and canonical analyses). Furthermore, the PAD was judged to be a better method for assessing emotions toward consumption experiences than the other index.

Other sources: Havlena, William J. and Morris Holbrook (1986), "The Varieties of Consumption Experience: Comparing Two Typologies of Emotions in Consumer Behavior," *Journal of Consumer Research,* 13, 394–404.

Holbrook, Morris B., Robert W. Chestnut, Terence A. Oliva, and Eric A. Greenleaf (1984), "Play as Consumption Experience: The Roles of Emotions, Performance, and Personality in the Enjoyment of Games," *Journal of Consumer Research,* 11, 728–39.

Reference: Plutchik, Robert (1980), *Emotions: A Psychoevolutionary Synthesis,* New York: Harper & Row.

Emotions: Dimensions of Emotions: PAD

(Mehrabian and Russell 1974)

Each pair of words below describes a feeling dimension. Some of the pairs might seem unusual, but you may generally feel more one way than the other. So, for each pair, put a check mark (Example: to show how you feel about_____. Please take your time so as to arrive at a real characteristic description of your feelings.

Pleasure

1. happy—unhappy
2. pleased—annoyed
3. satisfied—unsatisfied
4. contented—melancholic
5. hopeful—despairing
6. relaxed—bored

Arousal

7. stimulated—relaxed
8. excited—calm
9. frenzied—sluggish
10. jittery—dull
11. wide awake—sleepy
12. aroused—unaroused

Dominance

13. controlling—controlled
14. influential—influenced
15. in control—cared for
16. important—awed
17. dominant—submissive
18. autonomous—guided

Notes: All items must be recoded to reflect higher levels of the traits. The reduced set of items used by Havlena and Holbrook (1986) are items 1 through 4 for pleasure, items 7, 8, 9, and 12 for arousal, and items 13, 14, 17, and 18 for dominance. Items scored on a +4 to –4 basis.

Mood Short Form: MSF

(Peterson and Sauber 1983)

Construct: The term "mood" or "mood state" has a wide range of usage and definitions (see Peterson and Sauber 1983 and Gardner 1985 for critical reviews). However, most definitions agree that "mood" has a state of emotional or affective arousal that is varying and transient. The transient and varying nature of mood is emphasized in Mood Short Form (MSF; Peterson and Sauber 1983).

Description: The MSF is a four-item scale composed of Likert-type statements scored on 5-point formats *(strongly disagree* to *strongly agree)*. Item scores are summed to form a unidimensional MSF index.

Development: A large pool of items was generated to reflect the content domain of mood. Some items were drawn from Mehrabian's (1972) nonverbal communication scale and the Mood Adjective Check List (Nowlis 1965), as well as other items generated by the authors. This pool of items was then administered to a sample and factor analyzed, resulting in six items retained. After further item analysis and reliability checks, the four-item MSF was derived.

Samples: A sample of 323 undergraduate business students was used for scale development purposes. A subset of this sample ($n = 177$) was also used for test-retest reliability purposes. Four more samples were used to investigate other psychometric properties of the MSF: $n = 1,434$, $n = 713$, $n = 248$, and $n = 114$ (all nonstudents).

Validity: Coefficient alpha for the scale was reported to be 0.78, 0.74, and 0.77 for the samples of 1,434, 713, and 248, respectively. Test-retest reliability over a 30-day period ($n = 177$) was 0.18, indicating that mood does vary over time. Validity checks revealed that the MSF was marginally correlated with measures of satisfaction with the future (a beta weight of 0.22) and confidence in the American economic system (a beta weight of 0.24).

Scores: Mean scores were reported for the samples of 1,434, 713, and 248 and were 8.2, 7.8, and 8.1, respectively. (Scores could range from a low of 4 to a high of 20.)

Source: Peterson, Robert A. and Matthew Sauber (1983), "A Mood Scale for Survey Research," in *American Marketing Association Educator's Proceedings,* eds. Patrick Murphy et al., Chicago: American Marketing Association, pp. 409–14.

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References: Gardner, Meryl P. (1985), "Mood States and Consumer Behavior: A Critical Review," *Journal of Consumer Research,* 12, 281–300.

     Mehrabian, Albert (1972), *Nonverbal Communications,* Chicago: Aldine-Atherton.

     Nowlis, V. (1965), "Research With the Mood Adjective Check List," in *Affect, Cognition, and Personality,* eds. S. S. Tomkins and C. E. Izard, New York: Springer.

Mood Short Form: MSF

(Peterson and Sauber 1983)

1. Currently, I am in a good mood.

2. As I answer these questions I feel cheerful.

3. For some reason I am not very comfortable right now.*

4. At this moment I feel edgy or irritable.*

Notes: Items scored on 5-point Likert-type statements scales from *strongly disagree* to *strongly agree*. * Denotes items that are reverse scored.

Positive and Negative Affect Scales: PANAS

(Watson, Clark, and Tellegen 1988)

Construct: Positive and negative affect consistently emerge as the two dominant dimensions in the study of affect and its structure. The Positive and Negative Affect Scale (PANAS) is designed to provide a brief way to assess affect at a point in time. Positive Affect (PA) captures the extent to which a person feels enthusiasm and alertness, while Negative Affect (NA) is characterized by subjective unpleasantness that can be captured by a variety of aversive mood states. PA and NA are independent of each other.

Description: The PANAS is designed to provide a brief method of measuring positive and negative affect. The final scale consists of 20 items (single-word adjectives), 10 each for PA and NA. Each item is scored on a 5-point scale with the following labels: 1 = *very slightly or not at all*, 2 = *a little*, 3 = *moderately*, 4 = *quite a lot*, and 5 = *extremely*. Items are summed to indicate one score for PA and one for NA. Instructions for completing the PANAS can be adjusted to indicate the time frame of interest.

Development: From previous affect scales, 60 items were selected and reduced based on examining the loadings and lack of cross loadings to 12 items for PA and 25 items for NA. Items were further reduced to shorten the scale to the final set of 10 PA and 10 NA items. Reliability and validity of the scales was assessed with a number of samples.

Samples: A number of different samples of both undergraduate students and adult respondents (e.g., 164 university employees) are used to develop and validate the PANAS. A sample of 101 undergraduate students is used to assess test-retest reliability.

Validity: Coefficient alpha estimates of reliability are assessed across samples and instruction time periods and range from 0.86 to 0.90 for PA and from 0.84 to 0.87 for NA. Correlations between PA and NA range from –0.12 to –0.23, showing near independence of PA and NA. Results were confirmed using an adult sample. Although test-retest reliabilities strengthened over longer time periods provided in the instructions, the correlations between Time 1 and Time 2 for all time frame instructions (from "this moment" to the past year) showed some evidence of test-retest reliability, indicating a strong trait emphasis of the state affective assessments. The "in general" instructions provided test-retest reliabilities of 0.68 for PA and 0.71 for NA over an 8-week period. Principal factor analysis was used to assess the loadings and two-factor structure of the PANAS. All loadings were 0.50 or above on their respective dimension. PANAS was also compared to previous measures of positive and negative affect (for example, social activity, depression, and anxiety scales) with the brief scale comparing favorably to its longer counterparts on alternate rating formats (frequency and extent).

Scores: Mean scores (standard deviations) for PA ranged from 29.7 (7.9) for "moment" instructions to 36.2 (6.3) for "year" instructions. NA scores were noticeably lower, ranging from 14.8 (5.4) for "moment" and 22.1 (6.4) for "year."

Source: Watson, David, Lee A. Clark, and Auke Tellegen (1988), "Development and Validation of Brief Measures of Positive and Negative Affect," *Journal of Personality and Social Psychology,* 54, 1063–70.

Reference: Allen, Chris T. and Chris A. Janiszewski (1989), "Assessing the Role of Contingency Awareness in Attitudinal Conditioning with Implications for Advertising Research," *Journal of Marketing Research,* 26 (February), 30–43.

Positive and Negative Affect Scales (PANAS)

(Watson, Clark, and Tellegen 1988)

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel this way. [Insert Time Instruction]. Use the following scale to record your answers.

1	2	3	4	5
Very slightly or not at all	*A little*	*Moderately*	*Quite a bit*	*Extremely*

Positive Affect (PA)	*Negative Affect (NA)*
Enthusiastic	Scared
Interested	Afraid
Determined	Upset
Excited	Distressed
Inspired	Jittery
Alert	Nervous
Active	Ashamed
Strong	Guilty
Proud	Irritable
Attentive	Hostile

Notes: Time instructions suggested include the following:

Moment	You feel this way right now, that is, at the present moment.
Today	You have felt this way today.
Past few days	You have felt this way during the past few days.
Week	You have felt this way during the past week.
Past few weeks	You have felt this way during the past few weeks.
Year	You have felt this way during the past year.
General	You generally feel this way, that is, how you feel on the average.

Another approach to assessing momentary affect or mood was proposed by Allen and Janiszewski (1989). Although no formal scale development process was undertaken, the four-item scale that they used has been adopted by a number of researchers. The four items were presented as 7-point semantic differential measures and reported to have a coefficient alpha of 0.72.

At this moment I am feeling:

Good/bad

Positive/negative

Unpleasant/pleasant

Likeable/unlikeable

5

Reactions to Marketing Stimuli

Measures Related to Ad Emotions and Ad Content

Feelings Toward Ads

(Edell and Burke 1987)

Construct: Feelings toward the ad are felt to be composed of both positive affective feelings toward a given ad and negative affective feelings toward a given ad. Furthermore, positive affective feelings are composed of "warm" and "upbeat" feelings toward the ad. These feelings affect both attitude toward the ad and attitude toward the brand (Edell and Burke 1987).

Description: The feelings toward the ad scales were originally composed of 65 items composing three subdimensions: upbeat feelings (32 items), warm feelings (13 items), and negative feelings (20 items). A 52-item version of the scale was also used in Edell and Burke's Study 2, where 26, 14, and 12 items were used to measure upbeat, warm, and negative feelings, respectively. All items are measured on 5-point scales, and scores on items within each subdimension are summed to form indices of each subdimension.

Development: A pool of 169 feelings (items) gleaned from previous research served as the initial pool of items (Wells 1964; Wells, Leavitt, and McConville 1971). Sixty subjects viewed 16 TV ads in a theater setting. The 16 ads were selected to represent a variety of products and executional styles. After viewing the ads, the subjects were given the list of feelings and asked to indicate which feelings they experienced while viewing the ads. Sixty items checked by at least 50% of the sample were retained. Also, nine more items that were mentioned via an open-ended task (but not on the checklist) were added, resulting in 69 items. Two studies then examined the dimensionality and reliability of the items. From the first study, 65 items were retained for the original scale. Four items were dropped that did not load highly on any factor (i.e., less than 50). In the second study, the shorter 52-item version was derived by eliminating items with item-to-total correlations greater than 0.90 (i.e., redundant items).

Samples: In the first study, a sample of 29 people was used, and in the second study, a sample of 32 people was used. Both samples were obtained via announcements on a university campus.

Validity: In the first study, factor analysis retained 65 of the 69 items. Three factors were retained from the factor analysis. Coefficient alpha estimates for the three factors were 0.98, 0.96, and 0.93 for the upbeat, negative, and warm feelings factors, respectively. For the reduced versions of the scales (i.e., Study 2), corresponding alpha estimates were 0.95, 0.89, and 0.90. In both studies, the three dimensions of feelings toward the ad were related to measures of Aad and Abrand, providing evidence of predictive validity. For example, in Study 1, standardized regression coefficients for the prediction of Aad and Abrand ranged from –0.02 to 0.32 for upbeat feelings, –0.09 to –0.55 for negative feelings, and –0.02 to 0.18 for warm feelings. Also, R^2 estimates for the prediction of transformational and informational ads for the three subscales as predictors ranged from 0.63 to 0.78 across high/low conditions of transformational/informational ad content.

Scores: Mean or percentage scores were not reported.

Source: Edell, Julie A. and Marian Chapman Burke (1987), "The Power of Feelings in Understanding Advertising Effects," *Journal of Consumer Research,* 14, 421–33.

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Other evidence: Burke and Edell (1989) looked at the predictive power of the feelings scales (slightly modified versions) with a sample of 191 people recruited via announcements and newspaper ads on a university campus. Coefficient alpha estimates were 0.95, 0.89, and 0.88 for the upbeat, warm, and negative scale dimensions, respectively. All three dimensions were found to be related to several affective-based measures of Aad and Abrand. For example, across six Aad/Abrand type dependent variables, standardized predictive coefficients ranged from –0.02 to 0.80 for upbeat feelings, –0.19 to 0.72 for warm feelings, and –0.02 to 0.48 for negative feelings.

Other source: Burke, Marian Chapman and Julie Edell (1989), "The Impact of Feelings on Ad-Based Affect and Cognition," *Journal of Marketing Research,* 26, 69–83.

References: Wells, William D. (1964), "EQ, Son of EQ, and the Reaction Profile," *Journal of Marketing,* 28, 45–52.

Wells, William D., Clark Leavitt, and Maureen McConville (1971), "A Reaction Profile for TV Commercials," *Journal of Advertising Research,* 22, 11–17.

Feelings Toward Ads

(Edell and Burke 1987)

Instructions:

We would like you to tell us how the ad you just saw made you **feel.** We are interested in **your reactions** to the ad, **not** how you would describe it. Please tell us how much you felt each of these feelings while you were watching this commercial. If you felt the feeling very strongly . . . put a "5"; strongly . . . put a "4"; somewhat strongly . . . put a "3"; not very strongly . . . put a "2"; not at all . . . put a "1."

Column 1	*Column 2*	*Column 3*
1. active	angry	affectionate
2. adventurous	annoyed	calm
3. alive	bad	concerned
4. amused	bored	contemplative
5. attentive	critical	emotional
6. attractive	defiant	hopeful
7. carefree	depressed	kind
8. cheerful	disgusted	moved
9. confident	disinterested	peaceful
10. creative	dubious	pensive
11. delighted	dull	sentimental
12. elated	fed-up	touched
13. energetic	insulted	warm-hearted
14. enthusiastic	irritated	
15. excited	lonely	
16. exhilarated	offended	
17. good	regretful	
18. happy	sad	
19. humorous	skeptical	
20. independent	suspicious	
21. industrious		
22. inspired		
23. interested		
24. joyous		
25. lighthearted		

Column 1	Column 2	Column 3
26. lively		
27. playful		
28. pleased		
29. proud		
30. satisfied		
31. stimulated		
32. strong		

Notes: Column 1 represents the "upbeat" factor, column 2 represents the "negative" factor, and column 3 represents the "warm" factor. Item numbers 1, 3 through 13, 18 through 25, and 27 through 32 of the first column compose the reduced version of the upbeat factor used in Study 2 of Edell and Burke (1987). Items 4 through 11 and 15 through 20 of the second column compose the reduced version of the negative factor in Study 2 of Edell and Burke (1987). Items 1 through 11 and 13 of column 3 compose the reduced version of the warm factor in Study 2 of Edell and Burke (1987).

In the Burke and Edell (1989) study, items 1, 3 through 13, 18 through 25, and 27 through 32 of column 1 compose the warm factor. An additional item, "silly," was also used as an item for this factor. Items 4 through 11 and 15 through 20 of column 2 compose the negative factor items used in the Burke and Edell (1989) study. Items 1 through 11 and 13 of column 3 compose the warm factor in the Burke and Edell (1989) study.

Informational and Transformational Ad Content

(Puto and Wells 1984)

Construct: An informational advertisement was defined as an ad that provides consumers with factual, relevant brand data in a clear and logical manner such that they have greater confidence in their ability to assess the merits of buying the brand after having seen the advertisement. An important aspect of the definition is that the ad becomes informational if consumers perceive it as such. For an ad to be judged informational, it must reflect the following characteristics: (a) present factual, relevant information about the brand; (b) present information which is immediately and obviously important to the potential consumer; and (c) present data which the consumer accepts as being verifiable. A transformational advertisement is one that associates the experience of using (consuming) the advertised brand with a unique set of psychological characteristics which typically would not be associated with the brand experience to the same degree without exposure to the advertisement. Specifically, the advertisement itself links the brand with the capacity to provide the consumer with an experience that is different from the consumption experience which would normally be expected to occur without ad exposure. For an ad to be judged transformational, it must reflect the following characteristics: (a) the experience of using the product must be made richer, warmer, more exciting, and/or more enjoyable than that obtained solely from an objective ad description; and (b) the experience of the advertisement and the experience of using the brand must be so tightly connected that the consumers cannot remember the brand without recalling the experience generated by the advertisement. The transformation occurs when the descriptors are explicitly related by consumers to the experience of owning or consuming the advertised brand. Advertisements can be classified as belonging to one of four basic categories: (a) high transformational/low information, (b) low transformational/high information, (c) high transformational/high information, and (d) low transformational/low information (Puto and Wells 1984, p. 638).

Description: Puto and Wells's measures include 23 items scored on 6-point *strongly agree* to *strongly disagree* scales. Fifteen of the items tap the transformation construct, while the eight remaining relate to the information construct. The responses are averaged across the items within each subscale to form indices of each subscale.

Development: Scale items which were considered candidates for inclusion on the informational scales were derived from items used in prior research on the informational content of advertisements (e.g., Aaker and Norris 1982). Additionally, a set of items was generated from the definition of informational advertisements. Although research with respect to the emotional and experiential aspects of transformation was also examined, the majority of this research was concerned with measuring empathetic tendencies of individuals. Because the research objectives of this study were concerned with products, it was necessary to develop original items for this aspect of the transformational scale. Personal relevance aspects of the transformation scale were derived from the viewer response profile measures (Schlinger 1979). In sum, a total of 23 items were retained to represent the transformational and informational measures.

To test these items, approximately 400 television commercials were reviewed, and 20 were selected for the initial study. The two basic criteria for commercial selection were that they (a) were mainly informational or mainly transformational, and (b) promoted products of interest to the test audience. From these 20 commercials, 5 were kept as informational ads and 8 as transformational ads (i.e., 13 in all).

Subjects were then exposed to the 13 commercials, and immediately after seeing each commercial, they reported their prior exposure to the commercial and their overall opinion of each ad. Lastly, subjects responded to the 23 transformational and informational items with respect to the commercials. Reliability and validity checks were then assessed.

Samples: Two judges, knowledgeable of the definitions of informational and transformational ads but blind to prior classifications of the ads, independently judged the commercials with respect to the information and transformation constructs. The subjects were 130 undergraduate psychology students.

Validity: Reliability coefficients were computed separately for each commercial and then averaged across the 13 test commercials. The average internal consistency reliability estimates across advertisements were 0.73 and 0.88 for the information and transformation scales, respectively. The mean scale values for the information and transformation scales for each commercial differed at the $p < 0.01$ level (one-tailed t test). These differences reflect the authors' *a priori* assessment of an ad either being primarily informational or primarily transformational, and offer evidence for the validity of the scales. (Those commercials below the 3.5 midpoint were classified as being "low" on the specific dimension, whereas those above it were classified as being "high.")

Scores: Means and standard deviations for each commercial were presented in Table 4 (p. 642) of the Puto and Wells (1984) study. As an example, the mean information and transformation scores for the first advertisement (i.e., an informational toothbrush advertisement) were 4.00 *(SD = 0.69)* and 3.08 *(SD = 0.70)*, respectively.

Source: Puto, Christopher P. and William D. Wells (1984), "Informational and Transformational Advertising: The Differential Effects of Time," in *Advances in Consumer Research,* Vol. 11, ed. Thomas C. Kinnear, Provo, UT: Association for Consumer Research, pp. 638–43.

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References: Aaker, David A. and Donald Norris (1982), "Characteristics of TV Commercials Perceived as Informative," *Journal of Advertising Research*, 22, 61–70.

Schlinger, Mary (1979), "A Profile of Responses to Commercials," *Journal of Advertising Research*, 19, 37–46.

Informational and Transformational Ad Content

(Puto and Wells 1984)

1. I learned something from this commercial that I didn't know before about (this brand).

2. I would like to have an expertise like the one shown in the commercial.

3. The commercial did not seem to be speaking directly to me.

4. There is nothing special about (this brand) that makes it different from the others.

5. While I watched this commercial, I thought how this brand might be useful to me.

6. The commercial did not teach me what to look for when buying (this product).

7. This commercial was meaningful to me.

8. This commercial was very uninformative.

9. (This brand) fits my lifestyle very well.

10. I could really relate to this commercial.

11. Using (this brand) makes me feel good about myself.

12. If they had to, the company could provide evidence to support the claims made in this commercial.

13. It's hard to give a specific reason, but somehow (this brand) is not really for me.

14. This commercial did not really hold my attention.

15. This commercial reminded me of some important facts about (this brand) which I already knew.

16. If I could change my lifestyle, I would make it less like the people who use (this brand).

17. When I think of (this brand), I think of this commercial.

18. I felt as though I were right there in the commercial, experiencing the same thing.

19. I can now accurately compare (this brand) with other competing brands on matters that are important to me.

20. This commercial did not remind me of any experiences or feelings I've had in my own life.

21. I would have less confidence in using (this brand) now than before I saw this commercial.

22. It is the kind of commercial that keeps running through your head after you've seen it.

23. It's hard to put into words, but this commercial leaves me with a good feeling about using (this brand).

Notes: ( ) denotes brand name of the advertised product. Items 1, 4, 6, 8, 12, 15, 19, and 21 compose the informational content measure. The remaining items compose the transformational content scale.

Although reverse coding is not specified by the authors, it seems that items 3, 6, 8, 12, 14, and 20 need such coding to reflect higher transformational and informational scores. Items scored on 6-point scales from *strongly agree* to *strongly disagree*.

Response Profile: Viewer Response Profile: VRP

(Schlinger 1979)

Construct:	The Viewer Response Profile (VRP) gauges affective reactions to advertisements. It focuses on the emotional component of communication effects and indicates how people feel after seeing a commercial rather than what they know (Schlinger 1979, p. 37). The VRP assesses seven facets relating to how people feel about an advertisement, as follows:

Entertainment is the degree to which a commercial is pleasurable, enjoyable, and fun to watch.

Confusion is the degree to which the viewer feels that the commercial is difficult to follow.

Relevant news is the degree to which viewers feel that the commercial has told them something important and interesting about a brand, or some useful information.

Brand reinforcement is the degree to which the ad reinforces existing positive attitudes toward the brand.

Empathy is the degree to which viewers participate vicariously in events, feelings, and behaviors that are shown in the ad. This empathy can be positive or negative.

Familiarity is the degree to which viewers see commercials as unusual and different either from advertising in general or from current campaigns for the product category or brand.

Alienation is the degree to which the ad is felt to be irrelevant or irritating (i.e., negative judgments about the message or the execution of the message).

Description:	The VRP is composed of 32 Likert-type items on 7-point scales from *strongly disagree* to *strongly agree*. There are seven items for entertainment, four for confusion, five for relevant news, two for brand reinforcement, five for empathy, three for familiarity, and six for alienation. Item scores are summed within the facets and then divided by the number of items in each facet to form indices for each facet.
Development:	A number of procedures, samples, and analyses were used in scale development. Six hundred statements were initially generated based on the open-ended responses of 400 viewers to 14 commercials and storyboards. This pool of items was trimmed to 139 items (both positively and negatively worded) via subjective judgment. Then, two samples, one of 500 women for 25 different commercials (20 women per commercial) and one of 500 for 10 commercials (50 per commercial) responded to the items. Via factor analyses, these two studies retained 70 items that had loadings of 0.50 or greater on a given factor and discriminated among commercials. Two more large samples were used to further trim the pool of items over a total of 82 commercials and 377 storyboards. Across several factor analyses, the final 32-item, seven-factor scale was derived. A number of reliability and validity checks using new samples were also performed.
Samples:	As stated above, several samples were used in scale development and validation: samples of $n = 400$ in item generation, two samples of $n = 500$ women each in item purification, and two more samples of $n = 1,504$ and $n = 1,871$ men and women in item purification. Also, at least five more samples ranging in size from 12 to 50 were used to assess the reliability and validity of the VRP. (As stated by Schlinger 1979, p. 46, more than 5,000 individual interviews were conducted in development and validation of the VRP over a 5-year period.)

Validity: Test-retest reliability ranged from 0.62 for familiarity to 0.96 for brand reinforcement. Though coefficient alpha was not reported, item-factor loadings ranged from 0.33 to 0.88 over the first four samples (i.e., 500, 500, 1,504, and 1,871) discussed above.

A number of mean differences provided support for the validity of the scale. In addition, the VRP factors were used as independent variables to predict ad awareness. The VRP facets explained 52% of the variance in ad awareness, offering evidence of predictive validity. Furthermore, the VRP was strongly correlated with the Wells, Leavitt, and McConville (1971) reaction measure, offering evidence of convergent validity (i.e., together, the VRP and Wells et al.'s measure accounted for 78% of the variance when jointly factor analyzed).

Scores: A number of mean scores are presented in Tables 3, 4, and 5 of Schlinger (1979, pp. 43–4). These scores range from 3.8 to 5.3 for entertainment, 2.1 to 2.6 for confusion, 2.8 to 4.9 for relevant news, 3.8 to 5.6 for brand reinforcement, 2.5 to 3.9 for empathy, 2.1 to 3.5 for familiarity, and 2.6 to 3.6 for alienation.

Source: Schlinger, Mary (1979), "A Profile of Responses to Commercials," *Journal of Advertising Research*, 19, 37–46.

Scale items taken from Table 1 (p. 40). © 1979; reprinted by permission of the Advertising Research Foundation.

Other evidence: Stout and Rust (1993) used 44 items from a longer list of 52 items employed by Schlinger. The coefficient alpha estimates were 0.90, 0.74, 0.90, 0.82, 0.72, and 0.65 for the factors Relevant News, Brand Reinforcement, Stimulation, Empathy, Familiarity, and Confusion, respectively. These variables were then used in a series of television commercial analyses. The results reported suggest that emotional response measures may complement the VRP, rather than being redundant with the VRP (Stout and Rust 1993, p. 61).

Other source: Stout, Patricia A. and Roland Rust (1993), "Emotional Feelings and Evaluative Dimensions of Advertising: Are They Related?" *Journal of Advertising*, 22, 61–70.

Reference: Wells, William, Clark Leavitt, and Maureen McConville. (1971), "A Reaction Profile for TV Commercials," *Journal of Advertising Research*, 11, 11–17.

Response Profile: Viewer Response Profile: VRP

(Schlinger 1979)

Entertainment

1. The commercial was lots of fun to watch and listen to.

2. I thought it was clever and entertaining.

3. The enthusiasm of the commercial is catching—it picks you up.

4. The ad wasn't just selling the product—it was entertaining me and I appreciate that.

5. The characters (or persons) in the commercial capture your attention.

6. It's the kind of commercial that keeps running through your mind after you've seen it.

7. I just laughed at it—I thought it was very funny and good.

Confusion

8. It was distracting—trying to watch the screen and listen to the words at the same time.

9. It required a lot of effort to follow the commercial.

10. It was too complex. I wasn't sure of what was going on.

11. I was so busy watching the screen, I didn't listen to the talk.

Relevant News

12. The commercial gave me a new idea.

13. The commercial reminded me that I'm dissatisfied with what I'm using now and I'm looking for something better.

14. I learned something from the commercial that I didn't know before.

15. The commercial told about a new product I think I'd like to try.

16. During the commercial I thought how that product might be useful to me.

Brand Reinforcement

17. That's a good brand and I wouldn't hesitate recommending it to others.

18. I know that the advertised brand is a dependable, reliable one.

Empathy

19. The commercial was very realistic—that is, true to life.

20. I felt that the commercial was acting out what I feel at times.

21. I felt as though I was right there in the commercial experiencing the same thing.

22. That's my idea—the kind of life that commercial showed.

23. I liked the commercial because it was personal and intimate.

Familiarity

24. This kind of commercial has been done many times . . . it's the same old thing.

25. I've seen this commercial so many times—I'm tired of it.

26. I think this is an unusual commercial. I'm not sure I've seen another like it.*

Alienation

27. What they showed didn't demonstrate the claims they were making about the product.

28. The ad didn't have anything to do with me or my needs.

29. The commercial did not show me anything that would make me want to use their products.

30. The commercial made exaggerated claims. The product would not live up to what they said or implied.

31. It was an unrealistic ad—very far fetched.

32. The commercial irritated me—it was annoying.

Note: Items scored on 7-point Likert-type scales from *strongly disagree* to *strongly agree*. * denotes items that are reverse scored.

Expertise, Trustworthiness, and Attractiveness of Celebrity Endorsers

(Ohanian 1990)

Construct: The celebrity endorser's source credibility is posited to be characterized by three dimensions: the source's expertise, trustworthiness, and attractiveness (Ohanian 1990). In the persuasive communications literature, these three dimensions have been shown to be effective in attitude change studies. Each of the dimensions is briefly defined below.

Expertise: Consistent with the work of Hovland, Janis, and Kelley (1963), Ohanian views expertise as the extent to which the communicator is perceived to be a source of valid assertions about the object/message. This includes the source's competence, expertise, and qualifications with regard to the object/message.

Trustworthiness: Also consistent with Hovland et al. (1963), trustworthiness is viewed as the degree of confidence in the communicator's intent to communicate the assertions he or she considers most valid. This includes both trust and acceptance of speaker and message.

Attractiveness: In this context, attractiveness is referred to as physical attractiveness of the source to the listener, and to a lesser extent, the emotional attractiveness of the source. This includes elements of physical beauty, sexiness, chicness, and elegance.

Description: Each dimension of source credibility is composed of five semantic differential items scored on 7-point scales. Thus, the measure is multidimensional, and scores on each dimension are derived by summing the responses per items within each dimension.

Development: Development of the scale closely adhered to recommended scaling procedures. Based on definitions of the construct dimensions, 182 adjective pairs were initially generated. Based on author judgment and a sample of 38 student judges, this initial pool was trimmed to 104 items. Then, 52 students were supplied with the definitions of the source components and eliminated those items they felt did not represent the definitions, resulting in 72 adjective pairs. Using three celebrity spokespeople and several product categories (derived from a pretest of $n = 40$), two samples responded to the 72 items. Via exploratory factor analysis using stringent *a priori* decision rules and coefficient alpha statistics, five items within each dimension with the highest item-to-total correlations were retained. The final five-item scales were then subjected to confirmatory factor analysis and multitrait-multimethod (MTMM) analysis using another sample. Reliability and validity checks were also gathered.

Samples: Several samples were used throughout the scale development process. Three samples of 38, 52, and 40 students were used to judge the initial pool of items or generate celebrity names and products required for scale development. Two more samples of 250 and 240 students were used in the exploratory factor analyses to derive the final five-item scales. For the confirmatory factor analyses, two more samples of 138 and 127 nonstudents were used to examine the factor structure and further validate the scales.

Validity: Construct reliability from confirmatory factor analysis (via LISREL) showed strong internal consistency for the three subscales. These estimates were 0.90 and 0.89 for attractiveness, 0.90 and 0.90 for trustworthiness, and 0.89 and 0.89 for expertise across the samples of 138 and 127, respectively. The correlations among the factors across these two samples ranged from 0.32 to 0.62, and the hypothesized three-factor model offered the best fit to the data. In sum, the reliability and dimensionality of the scales were supported.

Numerous assessments of convergent, discriminant, and nomological validity are offered by Ohanian (1990, Table 5, p. 48). The correlations across measures used in these analyses range from 0.15 to 0.66, and they offer support for the scale's validity. Also, MTMM analysis also supports the discriminant and convergent validity for the measures.

Scores: Mean or percentage scores were not reported.

Source: Ohanian, Roobina (1990), "Construction and Validation of a Scale to Measure Celebrity Endorsers' Perceived Expertise, Trustworthiness, and Attractiveness," *Journal of Advertising,* 19, 39–52.

Scale items taken from Appendix (p. 50). © 1990; reprinted with permission of the *Journal of Advertising.*

Reference: Hovland, Carl I., Irving K. Janis, and Harold H. Kelley (1963), *Communication and Persuasion,* New Haven, CT: Yale University Press.

Expertise, Trustworthiness, and Attractiveness of Celebrity Endorsers

(Ohanian 1990)

Attractiveness

1. unattractive—attractive

2. not classy—classy

3. ugly—beautiful

4. plain—elegant

5. not sexy—sexy

Trustworthiness

6. undependable—dependable

7. dishonest—honest

8. unreliable—reliable

9. insincere—sincere

10. untrustworthy—trustworthy

Expertise

11. not an expert—expert

12. inexperienced—experienced

13. unknowledgeable—knowledgeable

14. unqualified—qualified

15. unskilled—skilled

Note: Items scored on 7-point scales.

Public Opinion Toward Advertising

(Pollay and Mittal 1993)

Construct:	Overall global attitudes toward advertising are depicted as a function of a series of beliefs reflecting three personal use and four societal effects. Personal use factors include product information, social role and image, and hedonic/pleasure. Societal effects include the following four factors: good for the economy, materialism, value corruption, and falsity/no sense. Four distal antecedents were also included in Pollay and Mittal's model of beliefs and attitudes about advertising. "Better living" and "lowers cost of goods" were depicted as antecedents of good for the economy; "sex in ads" and "promotes undesirables" were depicted as distal antecedents of corrupt values.
Description:	The seven factors are measured using a total of 27 items distributed in part as follows: product information (3), social image information (3), hedonic amusement (3), good for economy (3), fostering materialism (4), corrupting values (2), and falsity/no sense (3). Other items measure distal constructs. Each item was operationalized via 5-place agree–disagree scales. Further description of the authors' instructions and item allocation is provided in their appendix (Pollay and Mittal 1993, pp. 112–13).
Development:	Two convenience samples *(n = 18* and *n = 30)* responded to a series of open-ended questions. These responses were used to draft the measurement items administered to two larger samples. The initial set of items was administered with a series of similar items from Bauer and Greyser (1968). Principal components factor analysis on both sets of data was used to establish the seven-factor belief structure.
Samples:	A series of convenience samples was used in item generation. Subsequently, in Sample 1, 188 student subjects with varied background (e.g., ages ranged from 17 to 50) were surveyed during class. Sample 2 consisted of 195 respondents from a southern state consumer panel.
Validity:	Evidence of validity was provided from LISREL tests of predictive validity of overall attitudes. Coefficient alpha estimates for those factors with three or more items ranged across the two larger samples from 0.47 to 0.78 (see Pollay and Mittal 1993, Table 3, p. 108).
Scores:	Factor mean scores in total and across segments of both samples comprising clusters of individuals differing in attitudes toward advertising are provided within the tables reported by Pollay and Mittal (1993, p. 110). As examples, the factor average item scores across the seven factors for the second household sample were as follows: information (3.06), social role (2.35), hedonic (2.71), economic (2.99), materialism (3.59), corrupts values (3.62), and falsity/no sense (3.00).
Source:	Pollay, Richard W. and Banwari Mittal (1993), "Here's the Beef: Factors, Determinants, and Segments in Consumer Criticism of Advertising," *Journal of Marketing,* 57, 99–114.
	© 1993 by the American Marketing Association. Scale items taken from Appendix (pp. 112–13). Reprinted with permission.
Reference:	Bauer, R. A. and S. A. Greyser (1968), *Advertising in America: The Consumer View,* Boston: Harvard University, Graduate School of Business Administration, Division of Research.

Public Opinion Toward Advertising

(Pollay and Mittal 1993)

1. Advertising is essential.

2. Advertising is a valuable source of information about local sales.

3. In general, advertising is misleading.

4. Quite often advertising is amusing and entertaining.

5. Advertising persuades people to buy things they should not buy.

6. Most advertising insults the intelligence of the average consumer.

7. From advertising I learn about fashions and about what to buy to impress others.

8. Advertising helps raise our standard of living.

9. Advertising results in better products for the public.

10. Advertising tells me what people with lifestyles similar to mine are buying and using.

11. Advertising is making us a materialistic society, overly interested in buying and owning things.

12. Advertising tells me which brands have the features I am looking for.

13. Advertising promotes undesirable values in our society.

14. Sometimes I take pleasure in thinking about what I saw or heard or read in advertisements.

15. Advertising makes people buy unaffordable products just to show off.

16. In general, advertising results in lower prices.

17. Advertising helps me know which products will or will not reflect the sort of person I am.

18. In general, advertisements present a true picture of the product advertised.

19. Sometimes advertisements are even more enjoyable than other media contents.

20. In general, advertising helps our nation's economy.

21. Most advertising distorts the values of our youth.

22. Advertising helps me keep up to date about products/services available in the marketplace.

23. Mostly, advertising is wasteful of economic resources.

24. Overall, I consider advertising a good thing.

25. Advertising makes people live in a world of fantasy.

26. There is too much sex in advertising today.

27. Because of advertising, people buy a lot of things they do not really need.

28. My general opinion of advertising is unfavorable.

29. In general, advertising promotes competition, which benefits the consumer.

30. Some products/services promoted in advertising are bad for our society.

Notes: The instrument measures these constructs with items in parentheses: global attitudes (24, 28, 33), information (2, 12, 22), social role and image (7, 10, 17), hedonic/pleasure (4, 14, 19), good for the economy (20, 23, 29), materialism (11, 15, 25, 27), falsity/no sense (3, 6, 18), and value corruption (13, 21). Bauer-Greyser (1968) items are 1, 5, 6, 8, 9, 16, and 18, of which 6 and 8 are absorbed in the authors' principal constructs, whereas 1 and 5 are supplanted; 8, 9, and 16 measure distal antecedents, as do additional items 26 and 30. Items scored on 5-point *agree–disagree* scales.

Skepticism Toward Advertising

(Obermiller and Spangenberg 1998)

Construct: Skepticism toward advertising is defined as the general tendency toward disbelief of advertising claims. Skepticism is hypothesized as a general trait that varies across individuals and is related to general persuadability. The measure assesses a generalizable characteristic rather than responses to specific ads or ad claims. Moreover, the construct is more limited than concepts such as attitudes toward advertising in general and attitudes toward marketing.

Description: The unidimensional scale consists of nine items operationalized using a 5-place response format ranging from *strongly agree* to *strongly disagree*. The summed scores can range from 9 to 45, with higher scores representing higher skepticism.

Development: A search of relevant literature, brainstorming, and consulting with marketing academics produced 124 statements. Two marketing professors and two advertising executives served as expert judges of the appropriateness of the items following exposure to the construct definition. The judging stage reduced the number to 31 (16 skeptical) items. Twelve items were deleted based on low item-to-total correlations. Subsequent factor analyses over the first ($n = 304$) and second administrations ($n = 772$) revealed a stable single factor comprising nine items. Confirmatory factor analysis on the second administration data, as well as the first sample, verified the superior fit of a single-factor model relative to competing models.

Samples: The scale was developed and validated using eight different, independent samples ranging in size from 32 to 365 participants. The first and second administrations used in estimation of the final confirmatory factor analyses were 304 undergraduates and 772 nonstudents and secondary students. Five of the subsamples had 174 or more subjects. The mix of samples included a variety of groups including heterogeneous, nonstudent adults; university undergraduate students; MBAs; university faculty; and secondary students.

Validity: A large number of samples and studies are reported by Obermiller and Spangenberg (1998). These tests include substantial evidence of discriminant and predictive validity. Only some of these results are summarized here. Coefficient alpha estimates of internal reliability consistency for the first and second administrations were 0.85 and 0.86, respectively. (See Obermiller and Spangenberg 1998, Table 1, p. 171 for a more complete description of fit statistics across the first and second administrations.) Average variance extracted statistics were 0.33 and 0.35. Again, a large number of criterion and nomological validity tests, as well as other evidence of reliability, were reported. Some specifics from these analyses include the following results. Evidence of criterion validity was provided by differences in mean scores across student age groups, across industry occupations, and across faculty disciplines as predicted. In addition, the scale was negatively correlated with responses (i.e., likability, believability, and likely influence) to a sample of 13 ads as hypothesized. Correlations with attitude toward marketing, attitude toward advertising, self-esteem, and need for cognition were 0.49, 0.48, 0.25, and 0.13, respectively. Other evidence was provided regarding a series of behaviors consequent to advertising exposures. In addition, test-retest correlation across a 6-week delay was 0.66.

Scores: A number of mean scores are reported. For example, mean scores are reported for students and faculty. Overall, students average 28.0, with a breakdown of 27.7 for secondary

students, 27.9 for undergraduates, and 29.4 for MBAs. Faculty averaged 33.8, with a breakdown of 36.1 for liberal arts, 33.5 for sciences, and 31.6 for business. Means for adaptations of the measure's target are reported as well.

Source: Obermiller, Carl and Eric Spangenberg (1998), "Development of a Scale to Measure Skepticism Toward Advertising," *Journal of Consumer Psychology,* 7 (2), 159–86.

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Skepticism Toward Advertising

(Obermiller and Spangenberg 1998)

1. We can depend on getting the truth in most advertising.

2. Advertising's aim is to inform the consumer.

3. I believe advertising is informative.

4. Advertising is generally truthful.

5. Advertising is a reliable source of information about the quality and performance of products.

6. Advertising is truth well told.

7. In general, advertising presents a true picture of the product being advertised.

8. I feel I've been accurately informed after viewing most advertisements.

9. Most advertising provides consumers with essential information.

Note: Items scored on 5-point scales from *strongly agree* to *strongly disagree*.

Measures Related to Brand/Product Responses and Shopping Styles

Brand Experience Scale

(Brakus, Schmitt, and Zarantello 2009)

Construct: Brakus et al. (2009, p. 53) conceptualize brand experience as "subjective internal consumer responses (sensations, feelings, and cognitions) and behavioral responses evoked by brand-related stimuli that are part of a brand's design and identity, packaging, communications, and environments." The brand experience scale has four dimensions—sensory, affective, intellectual, and behavioral—reflecting this conceptualization.

Description: As noted above, the brand experience scale has four dimensions. These dimensions encompass 12 seven-point items (3 items per dimension) that can be scored on *strongly disagree–strongly agree* scales or *not at all descriptive-very descriptive* scales. Item scores can be summed and averaged within dimension to form dimension scores or summed and averaged over all 12 items to form an overall brand experience scale score.

Development: Using recommended scaling procedures, the authors conducted a pilot study (*n* = 25 graduate business students) to generate a partial list of experiential brands to be used in the six studies that followed. Then, six studies were used to develop and validate the final form of the brand experience scale. The first three studies were used to develop and refine the scale and offer initial estimates of validity. In Studies 1 and 2, an initial pool of 131 brand experience items were reduced to 20 items via exploratory factor analyses and reliability analyses (in Study 2) using 21 brands—16 classified as experiential and 5 as non-experiential. Study 3 used confirmatory factor analyses (CFA) to derive the final 12-item, four-dimensional structure of the brand experience scale using 30 brands. Studies 4, 5, and 6 further validated the scale.

Samples: Study 1, *n* = 30 university students; Study 2, pretest *n* = 68 university students, main study *n* = 276 university students; Study 3, *n* = 193 university students; Study 4, *n* = 150 mall/street shoppers; Study 5, *n* = 144 unspecified participants; and Study 6, *n* = 209 university students.

Validity: Numerous estimates of dimensionality, reliability, and validity were assessed. Study 3 showed that a four-factor CFA fit the 12 items best, confirming the sensory (3 items), affective (3 items), intellectual (3 items), and behavioral (3 items) dimensionality conceptualization. Coefficient alpha ranged from 0.76 to 0.83 across the dimensions. Correlations among the four dimensions ranged from 0.57 to 0.81.

As evidence of validity, Study 3 examined mean brand experience scores over 30 brands. Table 3 of Brakus et al. (2009, p. 59) highlights a pattern of mean scores for the overall 12-item brand experience scale and its individual dimensions that shows higher scores for brands that are considered highly experiential (e.g., LEGO, Victoria's Secret, iPod, Starbucks) versus those not considered experiential (e.g., La Prairie, Crate & Barrel, Motorola, Calvin Klein).

Using Nokia as the focal brand, a CFA in Study 4 further confirmed the scale's four-dimensional structure. Test-retest reliability over a 2-week interval ranged from 0.69 to 0.77 across dimensions and the overall brand experience scale. The overall scale and its dimensions also showed discriminant validity from brand attitude via exploratory factor analyses (EFA). Via EFA again, Study 5 demonstrated that the brand experience scale and its dimensions showed discriminant validity from brand evaluation, brand involvement,

and brand attachment (among others). Finally, using 12 different brands, Study 6 used a structural equations model that showed that brand experience was directly related to brand personality (beta = 0.69), directly related to brand satisfaction (beta = 0.15), and directly related to brand loyalty (beta = 0.24), as hypothesized. A series of predicted indirect effects were also supported. Coefficient alpha for the brand experience dimensions ranged from 0.72 to 0.79 in Study 6.

Scores: As noted above, Table 3 of Brakus et al. (2009, p. 59) shows numerous mean scores across 30 brands. Average mean scores across the brands in this table were as follows: overall brand experience = 4.18, sensory dimension = 4.60, affective dimension = 4.25, intellectual dimension = 3.71, and behavioral dimension = 4.17.

Source: Brakus, J. Josko, Bernd H. Schmitt, and Lia Zarantonello (2009), "Brand Experience: What Is It? How Is It Measured? Does It Affect Loyalty?" *Journal of Marketing*, 73 (May), 52–68.

Brand Experience Scale

(Brakus, Schmitt, and Zarantello 2009)

Sensory Dimension

1. This brand makes a strong impression on my visual senses or other senses.

2. I find this brand interesting in a sensory way.

3. This brand does not appeal to my senses.*

Affective Dimension

4. This brand induces feelings and sentiments.

5. I do not have strong emotions for this brand.*

6. This brand is an emotional brand.

Behavioral Dimension

7. I engage in physical actions and behaviors when I use this brand.

8. This brand results in bodily experiences.

9. This brand is not action oriented.*

Intellectual Dimension

10. I engage in a lot of thinking when I encounter this brand.

11. This brand does not make me think.*

12. This brand stimulates my curiosity and problem solving.

Notes: All items are 7-point scales that can be scored from *strongly disagree–strongly agree* scales or *not at all descriptive-very descriptive*. * denotes items that are reverse scored.

Consumer Evaluations of Brand Extensions

(Aaker and Keller 1990)

Construct: Aaker and Keller (1990) describe bases of fit between two product classes in their research on consumer evaluations of brand extensions. In their heavily cited article, three measures of fit are presented. Two measures take a demand-side perspective to consider the economic notions of substitutes and complements in product use. The third measure, transfer, takes a supply-side view to consider aspects of the firm's manufacturing abilities (Aaker and Keller 1990, p. 30). Specifically, transfer reflects the perceived ability of any firm operating in one product class to make a product in another product class.

Description: These three fit measures are simple single-item statements assessed as 7-point scales bounded by bipolar adjective sets (e.g., for complement, 1 = low and 7 = high). (Other measures included in the research are presented also.) Each of the single-item measures is scored 1 to 7.

Development: The single-item measures were apparently generated by the authors as part of the research reported in Aaker and Keller (1990).

Samples: Study 1 was based on the reactions of 107 undergraduate business students for 6 actual brands and 20 hypothetical brand extensions. One hundred and twenty-one students participated in Study 2 and the evaluation of four brand extensions.

Validity: Evidence of validity is provided indirectly through the results from the two studies and the extent to which other researchers have employed these measures or adaptations of the measures based on research on similar concepts in the brand extension literature. As summarized by Aaker and Keller (1990, p. 38), transfer and complement were more important as predictors than substitute. The complement and substitute fit measures interacted with perceived quality of the original brand to predict brand extension evaluations. Transfer had primarily a direct effect on extension evaluations.

Scores: Means scores for 20 brand extensions for the three fit items (substitute, complement, and transfer) are depicted in Table 2 (Aaker and Keller 1990, p. 33).

Source: Aaker, David A. and Kevin Lane Keller (1990), "Consumer Evaluations of Brand Extensions," *Journal of Marketing*, 54 (January), 27–41.

Consumer Evaluations of Brand Extensions

(Aaker and Keller 1990)

Open-Ended Elicitation of Associations

Open-ended associations were obtained first for the original brand and then for the set of extensions. Respondents were asked to take roughly 30 seconds to write down the associations or thoughts that came to mind when they considered the idea of purchasing each brand name product or extension.

Attitude Toward the Extension

1. Perceived overall quality of the extension (1 = *inferior*, 7 = *superior*)

2. Likelihood of trying the extension assuming a purchase was planned in the product class (1 = *not at all likely*, 7 = *very likely*)

Quality

3. Overall quality of the original brand (1 = *inferior*, 7 = *superior*)

Difficult

4. Perceived difficulty in designing and making the extension (1 = *not at all difficult*, 7 = *difficult*)

Fit Measures

5. The extent to which the products are substitutes that they would select between in certain usage situations (1 = *low*, 7 = *high*) (SUBSTITUTE)

6. The extent to which the products would be used together in certain usage situations (1 = *low*, 7 = *high*) (COMPLEMENT)

7. Would the people, facilities, and skills used in developing, refining, and making the original product be helpful if the manufacturer were to make the product extension? (1 = *not at all helpful*, 7 = *very helpful*) (TRANSFER)

Notes: Sets of open-ended association tasks were separated from sets of scaling tasks. Participants indicated scores in a Likert format with endpoints as indicated above.

Brand Personality

(Aaker 1997)

Construct: Brand personality is defined as "the set of human characteristics associated with a brand" (Aaker 1997, p. 347). As such, brand personality tends to serve a symbolic or self-expressive function beyond the utilitarian function of product-related attributes. Brand personality is a multidimensional and multifaceted construct (see actual scale items/descriptors) where some dimensions and facets are more relevant and descriptive of certain brands than others.

Description: The brand personality scale has five dimensions and 15 facets that encompass 42 items. Items are scored on 5-point Likert-type scales ranging from *not at all descriptive* (1) to *extremely descriptive* (5) for each brand rated. Item scores are summed within each dimension, and then divided by the number of items within a dimension, to form scores for each dimension that can theoretically range from 1 to 5.

Development: Numerous procedures were used to develop the brand personality dimensions. Initially, a pool of 309 personality trait descriptors was generated and/or drawn from the personality literature and a free-association elicitation procedure involving 16 subjects. Then, using a similar procedure with 25 subjects, this pool was trimmed to 114. Using 37 brands that represented symbolic functions, utilitarian functions, and both symbolic/utilitarian functions, the 114 items were analyzed with a large sample. Via factor, item, and reliability analyses, the final 42-item form for the five dimensions was derived. Using another large sample, the stability of the five dimension structure was further assessed and validated using confirmatory factor and principal components analyzes (using 20 brands as stimuli).

Samples: To help generate the trait descriptors, adult samples of $n = 16$ and $n = 25$ were used. The first large sample consisted of $n = 631$ subjects reflective of the demographic breakdown of the 1990 U.S. Census, and the second large sample was composed of $n = 180$ subjects with a similar demographic breakdown.

Validity: Throughout the development of the scale, several reliability/validity tests were performed. Only a few relevant to the final scale are summarized. Using a subsample of $n = 81$ from the first large sample over a 2-month period, the five brand personality dimensions showed test-retest reliability correlations ranging from 0.74 to 0.77. Coefficient alphas estimates of internal consistency ranged from 0.90 to 0.95, and item-to-total correlations averaged 0.85 across the five dimensions. With the second large sample, both confirmatory factor and principal components analyses showed evidence for a stable five-factor model representing the five hypothesized dimensions of brand personality. In sum, high levels of reliability and validity were consistently found over samples and brands.

Scores: Mean scores (with standard deviations) were reported for all 42 items and for the five dimensions in an appendix (Aaker 1997, p. 354). Just the dimension means will be listed here. They are as follow: 2.72 (0.99) for Sincerity, 2.79 (1.05) for Excitement, 3.17 (1.02) for Competence, 2.66 (1.02) for Sophistication, and 2.49 (1.08) for Ruggedness.

Source: Aaker, Jennifer (1997), "Dimensions of Brand Personality," *Journal of Marketing Research,* 34, 347–56.

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Brand Personality

(Aaker 1997)

Trait (Item)	Facet	Dimension
Down-to-earth	Down-to-earth	Sincerity
Family-oriented		
Small-town		
Honest	Honest	
Sincere		
Real		
Wholesome	Wholesome	
Original		
Cheerful	Cheerful	
Sentimental		
Friendly		
Daring	Daring	Excitement
Trendy		
Exciting		
Spirited	Spirited	
Cool		
Young		
Imaginative	Imaginative	
Unique		
Up-to-date	Up-to-date	
Independent		
Contemporary		
Reliable	Reliable	Competence
Hard-working		
Secure		
Intelligent	Intelligent	
Technical		
Corporate		
Successful	Successful	

Leader		
Confident		
Upper-class	Upper-class	Sophistication
Glamorous		
Good looking		
Charming	Charming	
Feminine		
Smooth		
Outdoorsy	Outdoorsy	Ruggedness
Masculine		
Western		
Tough	Tough	
Rugged		

Note: Items scored on 5-point Likert-type scales from *not at all descriptive* (1) to *extremely descriptive* (5).

Gender Dimensions of Brand Personality

(Grohmann 2009)

Construct: Consistent with the definition of brand personality (Aaker 1997), gender dimensions of brand personality are defined as the set of human personality traits associated with masculinity and femininity applicable to and relevant to brands (Grohmann 2009, p. 106).

Description: The MBP/FBP scale is two-dimensional and measures masculine and feminine brand personality traits. The brand personality measure consists of 12 characteristics with six characteristics per dimension. The characteristics used to assess masculine brand personality (MBP) are adventurous, aggressive, brave, daring, dominant, and sturdy. The six feminine characteristics (FBP) are expresses tender feelings, fragile, graceful, sensitive, sweet, and tender. Participants ranked brands on the dimensions using 9-point scales anchored by *not at all descriptive* and *extremely descriptive*. Average item scores are used to reflect each dimension.

Development: Items were first generated from 60 undergraduates who listed words associated with MBP and FBP (Grohmann 2009, p. 107). Additional items were added from the extant literature for similar existing measures. The total pool of items consisted of 184 adjectives pertaining to MBP and 202 adjectives pertaining to FBP. Judgmental procedures regarding the representativeness of the items reduced the pool of adjectives to 40 and 32 for MBP and FBP, respectively. Study 1, involving 369 undergraduates, was used to finalize the two-dimensional scale. The final form of the scale was derived from principal components exploratory factor analysis and confirmatory factor analyses in which information regarding item reliabilities and chi-square difference tests were evaluated. The overall model fit statistics were acceptable. The correlation between the factors (–0.12) suggests that the factors are independent.

Samples: The initial administration study was based on the responses of 369 students to four widely recognized brands. Study 2 (generalizability across product categories) was based on 3,174 ratings of brands from 281 students participating in an online survey. Study 3 was based on the use of 280 undergraduate students; Studies 4a and 4b comprised 544 and 461 undergraduates. Studies 5 and 6 involved the participation of 292 and 371 undergraduates, respectively. Study 7 was based on the responses of 112 undergraduates.

Validity: Extensive evidence of validity was offered in the last six additional studies (i.e., Study 2 through Study 7). These studies report consistent supportive evidence of appropriate psychometric properties for a two-factor model. Confirmatory factor analysis model fit and indicator statistics from Study 2 provided evidence of generalizability across symbolic and utilitarian product categories. In Study 3, product mean scores for the two factors confirmed expectations for products expected to differ in terms of masculinity and femininity. Evidence of discriminant validity was provided from Studies 4a and 4b in terms of discrimination from competing measures, including Aaker's (1997) ruggedness and sophistication factors.

Evidence of nomological validity was derived from the results of Studies 5 through 7. For Study 5 and for males and females, a masculine spokesperson increased consumers' association of masculine personality traits with the brand. Likewise, a feminine spokesperson in a print ad increased consumers' association of feminine personality traits with the brand. In Study 6, brand personality and self-concept congruence led to positive consumer responses (Grohmann 2009, p. 114). Last, and based on the results for Study 7, brand fit in terms of gender dimensions of brand personality and brand extension category perceptions resulted in more positive extension evaluations and purchase likelihood.

Scores: An expected pattern of mean scores (with standard deviations) is presented in Table 2 and Appendix B from Grohmann (2009) for four brands for each of four different product categories. For example, the means for Old Spice were 5.39 for MBP and 2.71 for FBP.

Source: Grohmann, Bianca (2009), "Gender Dimensions of Brand Personality," *Journal of Marketing Research,* 46 (January), 105–19.

References: Aaker, Jennifer L. (1997), "Dimensions of Brand Personality," *Journal of Marketing Research,* 34 (August), 347–56.

Gender Dimensions of Brand Personality

(Grohmann 2009)

Masculine Brand Personality

1. Adventurous

2. Aggressive

3. Brave

4. Daring

5. Dominant

6. Sturdy

Feminine Brand Personality

1. Expresses tender feelings

2. Fragile

3. Graceful

4. Sensitive

5. Sweet

6. Tender

Notes: Participants ranked brands on the dimensions using 9-point scales anchored by *not at all descriptive* and *extremely descriptive.*

New Measure of Brand Personality: NMBP

(Gruens, Weijters, and De Wulf 2009)

Construct: Gruens et al. (2009) define brand personality as "the set of human personality traits that are both applicable and relevant for brands" (p. 99). They consider their conceptualization of brand personality to be more relevant for brands than Aaker's (1997) view. Gruens et al. suggest their view goes beyond just human traits, yet excludes functional attributes, demographic characteristics, user imagery, user appearance, and brand attitudes.

Description: The New Measure of Brand Personality (NMBP) is a five-factor, 12-item measure: 1) Responsibility (3 items), 2) Activity (3 items), 3) Aggressiveness (2 items), 4) Simplicity (2 items), and 5) Emotionality (2 items). All items are scored on 7-point scales ranging from *not characteristic of the brand* to *very characteristic of the brand*. Item scores are summed and then averaged within each factor to drive means scores for each factor.

Development: Using recommended scaling procedures, the authors conducted five studies, plus initial item development/screening studies to develop and validate the final form of the NMBP. In the item development/screening studies, the authors used consumer focus groups and expert panels of marketing professionals (professors and marketing managers) to trim an initial pool of 244 items to 40. The five studies then followed to finalize and validate the NMBP.

Samples: Study 1 pretest, $n = 1,235$ Belgian panel member adults; Study 2, $n = 12,789$ Belgian adults; Study 3, $n = 4,500$ adults; Study 4, $n = 401$ U.S. adults; Study 5, nine samples across nine European countries totaling $n = 2,204$ panel member adults. The countries were France, Germany, Italy, Netherlands, Poland, Romania, Spain, Switzerland, and Turkey.

Validity: Numerous estimates of dimensionality, reliability, and validity were assessed. In Study 1 (pretest), the 40 items were applied to 20 well-known brands. Via exploratory factor analyses (EFA) and confirmatory factor analyses (CFA), the 40 items were reduced to 18 items encompassing a five-factor structure. Examining 193 brands from 20 different product categories, Study 2 used CFA to further trim the scale to its final five-factor, 12-item form. This final five-factor, 12-item form of the NMBP fit the data well with internal consistency estimates across the five factors of 0.95, 0.95, 0.95, 0.93, and 0.79. Average variance extracted estimates (AVE) ranged from 0.67 to 0.90, and all factors showed discriminant validity from one another.

Study 3 examined test-retest reliability using 193 brands across 12 product categories and a one-year time interval. (Part of the sample of Study 1 was used for this purpose). Test-retest correlations ranged from 0.84 to 0.93 across the NMBP factors. Study 4 examined nomological validity across 12 well-known brands. Via CFA, the five-factor, 12-item NMBP again fit the data well with internal consistency estimates ranging from 0.70 to 0.87 across factors. The NMBP factors showed differential correlations with a measure of brand attitude by high and low levels of the human value measures of conservation and self-transcendence, supporting the nomological validity of the NMBP (see Table 4, p. 104).

Using Generalizability Theory (G-Theory) as its psychometric focus, Study 5 examined just one brand (Coca-Cola) across nine European countries. The generalizability coefficient scores ranged from 0.70 to 0.91 across factors, suggesting that the items per factor tapped the content domain of each factor well (see Table 6, p. 105). Internal consistency estimates were strong across all countries (0.60 to 0.86) with the exception of the aggressiveness factor for the German sample (0.55).

Scores: Mean scores (SD) were reported for Study 2: Responsibility (M = 4.22, SD= 0.42), Activity (M = 4.21, SD = 0.44), Aggressiveness (M = 3.21, SD = 0.49), Simplicity (M = 4.10, SD = 0.40), and Emotionality (M = 3.46, SD = 0.48).

Source: Gruens, Maggie, Bert Weiters, and Kristof De Wulf (2009), "A New Measure of Brand Personality," *International Journal of Research in Marketing,* 26, 97–107.

References: Aaker, Jennifer (1997), "Dimensions of Brand Personality," *Journal of Marketing Research,* 34, 347–56.

New Measure of Brand Personality: NMBP

(Gruens, Weijters, and De Wulf 2009)

Responsibility

1. Down to earth

2. Stable

3. Responsible

Activity

4. Active

5. Dynamic

6. Innovative

Aggressiveness

7. Aggressive

8. Bold

Simplicity

9. Ordinary

10. Simple

Emotionality

11. Romantic

12. Sentimental

Notes: All items are scored on 7-point scales ranging from *not characteristic of the brand* to *very characteristic of the brand*. Items are prefaced by "This brand is . . . ."

Meaning of Branded Products Scale

(Strizhakova, Coulter, and Price 2008)

Construct: The authors state that the emphasis of their research is to better understand branded product meanings cross-nationally and develop measures that are cross-nationally valid. Based on an extensive literature review, the authors conclude that meaning of branded products encompasses seven dominant themes: *quality* as associated with risk reduction, brands as signals of *social status,* as reflective of *personality,* as a mechanism for *group identity,* as associated with other brand users reflecting *personal values,* as linked to both *family traditions* and *national/ethnic heritage.* The authors sought to examine relationships between these seven observed branded product meanings, assess their interconnectedness, and develop reliable and valid scales of branded product meanings cross-nationally.

Description: Though seven themes were conceptualized, the final form of the scale encompasses four dimensions over 32 items that are scored on 7-point Likert scales from *strongly disagree* to *strongly agree.* The final four dimensions are *quality, personal identity, values,* and *tradition. Personal identity* was also construed as a second-order construct with *self-identity, group identity,* and *status* first-order factors. The writing of the paper suggests that items scores can be summed and then averaged within dimension to form dimension mean scores that can range from 1 to 7.

Development: The authors conducted two studies, plus several initial item development/screening procedures to develop and validate the final form of their scales. Based on an extensive literature review and exploratory interviews with 24 informants (ages 18–29) from the United States, Ukraine, and Romania, 56 initial items were generated to tap the seven originally conceptualized themes. Then, in Study 1, principal component analyses (PCA) was used to reduce this pool of items to 35 items (5 items per theme). Study 2 was used to derive the final form of the scales and offer estimates of validity.

Samples: Study 1, $n = 123$ undergraduate CB students; Study 2 used five samples: $n = 218$ U.S. participants from U.S. universities; 287 participants from Timisoara, Romania; $n = 464$ participants from Kharkiv, Ukraine; $n = 292$ participants from Vladivostok, Russia; and a pooled sample, $n = 1,261$ (across these samples, average ages ranged from 18.56 to 21.01 years).

Validity: Multigroup confirmatory factor analyses (CFA) in Study 2 was used to derive the final form and structure of the scales across two brands (Volkswagen and an expensive chocolate). After CFA, several iterations that included invariance testing across the United States, Romania, Ukraine, and Russia samples, a 32-item four-factor structure was derived that fit the data well. Across samples, correlations among the four factors ranged from –0.03 to 0.67 (see Table 3, p. 87 of Strizhakova et al. 2008). All these correlations exhibited evidence of discriminant validity across factors and samples. Coefficient alpha estimates of reliability in Study 2 ranged from 0.65 to 0.94 across samples and factors; pooled over the samples, coefficient alpha ranged from 0.72 to 0.91 across factors.

As evidence of construct validity, the authors hypothesized and found that quality is the most important branded product meaning across samples. The latent factor mean scores (reported below) for quality demonstrated that quality is significantly more salient than each of the other three themes (factors) in each sample. The authors also suggested that identity-related meanings will be stronger in developed countries than they are in developing consumer cultures. Consistent with his suggestion, participants in the United States reported significantly greater salience for personal identity than participants in Romania, Ukraine, and Russia. Finally, as hypothesized, the authors show that branded products as traditions have the least prominent meaning across all four samples (see table below).

Scores: Latent factor means for branded product meanings by country were reported as follows in Table 4 (p. 88). A seven-point scale was used in which 1 = *lesser importance* and 7 = *more importance*.

Branded Product Meaning	USA (n = 218)	Romania (n = 287)	Ukraine (n = 464)	Russia (n = 292)	Pooled (n = 1,261)
Quality	5.54[ab]	5.60[cd]	4.96[ac]	4.84[bd]	5.17
Personal identity	3.60[abc]	3.13[a]	3.22[b]	3.15[c]	3.25
Values	3.86[ad]	4.47[abc]	4.11[bde]	3.71[ce]	4.06
Traditions	3.08[a]	2.48[a]	2.66[a]	2.23[a]	2.59

Notes: The means are reported on a 7-point scale, in which 1 = *lesser importance* and 7 = *more importance* of the branded product meaning. The same superscripts between the two countries on a given brand meaning indicate significant difference based on *z*-tests ($p < 0.05$).

Source: Strizhakova, Yuliya, Robin A. Coulter, and Linda L. Price (2008), "The Meaning of Branded Products: A Cross-National Scale Development and Meaning Assessment," *International Journal of Research in Marketing*, 25, 82–93.

Meaning of Branded Products Scale

(Strizhakova, Coulter, and Price 2008)

Quality Factor and Items

1. A brand name is an important source of information about the durability and reliability of the product.

2. I can tell a lot about a product's quality from the brand name.

3. I use brand names as a sign of quality for purchasing products.

4. I choose brands because of the quality they represent.

5. A brand name tells me a great deal about the quality of a product.

Values Factor and Items

1. I choose brands because I support the values they stand for.

2. I buy brands that are consistent with my values.

3. My choice of brand is based on the company's values.

Personal Identity Factor (a second-order construct with the following first-order factors and items)

Self-identity Factor and Items

1. I choose brands that help to express my identity to others.

2. The brands I use communicate important information about the type of person I am.

3. I use different brands to express different aspects of my personality.

4. I choose brands that bring out my personality.

5. My choice of brand says something about me as a person.

Group-Identity Factor and Items

1. Using brands can help me connect with other people and social groups.

2. I buy brands to be able to associate with specific people and groups.

3. I feel a bond with people who use the same brands as I do.

4. By choosing certain brands, I choose who I want to associate with.

5. My choice of a brand says something about the people I like to associate with.

Status Factor and Items

1. I avoid choosing brands that do not reflect my social status.

2. I use brands to communicate my social status.

3. I choose brands that are associated with the social class I belong to.

4. The brands I use reflect my social status.

5. I communicate my achievements through the brands I own and use.

Traditions Factors (a first-order construct comprising the Family Tradition and National Tradition items)

Family Tradition Items

1. I buy brands because they are an important tradition in my household.

2. I use brands that my family uses or have used.

3. I use brands that remind me of my family.

4. I buy brands in order to continue family traditions.

5. I buy brands that my parents buy/have bought.

National Tradition Items

1. I use brands that reflect my national heritage.

2. I prefer brands associated with my national heritage.

3. I avoid brands because they do not fit with my national heritage.

4. I choose brands because they are part of national traditions.

Note: Items are scored on 7-point Likert scales from *strongly disagree* to *strongly agree*.

Centrality of Visual Product Aesthetics

(Bloch, Brunel, and Arnold 2003)

Construct: Centrality of Visual Product Aesthetics (CVPA) is the overall level of significance that visual aesthetics hold for a consumer in his or her relationship with products. CVPA has four related dimensions, including 1) the value assigned to product appearances, 2) the acumen or ability to recognize and evaluate product designs, 3) the response to design aspects of products, and 4) the impact of visual design on product preferences and satisfaction (determinancy). Although the value, acumen, and response (which includes determinancy) components are conceptually distinct, the resulting CVPA is a unidimensional scale in which items representing these three dimensions load together.

Description: The final CVPA scale includes 11 items scored on 5-point Likert-type scales. Although conceptually comprising three dimensions, the scale is averaged to form one overall value of CVPA where higher values indicate a greater importance placed on visual aesthetics.

Development: A review of relevant research and depth interviews with four individuals known to have a greater than average interest in product aesthetics resulted in an initial pool of 86 items designed to represent one of the four dimensions. In two rounds of expert judging, the items were assigned to one of the four dimensions and then separately evaluated for how well they represented the dimension. This process reduced the number of items to 34. In Study 2, the items were analyzed using exploratory factor analysis and reduced to 15 items loading on three factors. Study 2 results were subjected to confirmatory factors analysis and demonstrated that an 11-item, one-factor, second-order model was the best fit. Additional samples provided further evidence of validity.

Samples: Study 1 involved the four interviewees. For Study 2, researchers mailed out 1,050 surveys followed by a reminder letter and received 318 usable responses for a 30% response rate. For Study 3, researchers sent out 520 surveys and received 136 usable responses for a 26% response rate.

Validity: In the confirmatory factor analysis of Study 3, the internal consistency, as judged by the average variance extracted and coefficient alpha, were both 0.89. In Study 4, the CVPA was shown to be positively correlated with each of the following: visual processing (0.34), desire for unique consumer products (0.53), and materialism (three dimensions, 0.34, 0.50, and 0.58). Coefficient alpha for Study 4 was again 0.89. Study 5 examined the potential for social desirability and found a correlation of –0.07 (NS) between CVPA and impression management. Known groups validation was conducted with a group of design professionals in Study 6. In Study 7, the top and bottom tercile of scores on the CVPA were used to create groups and low and high CVPA to assess differences in responses to high and low aesthetic products. Finally, conjoint analysis was used in Study 8 to provide additional evidence of validity.

Scores: In Study 6, the mean scores of CVPA for the design professionals was 4.26, which was significantly higher than the means from a general sample in Studies 2 and 3 (3.51 and 3.44, respectively). In Study 7, the top tercile scored 3.90 or above and the bottom tercile scored 2.96 or below.

Source: Bloch, Peter A., Frédéric F. Brunel, and Todd J. Arnold (2003), "Individual Differences in the Centrality of Visual Product Aesthetics: Concept and Measurement," *Journal of Consumer Research,* 29 (March), 551–65.

Centrality of Visual Product Aesthetics

(Bloch, Brunel, and Arnold 2003)

Value

1. Owning products that have superior designs makes me feel good about myself.

2. I enjoy seeing displays of products that have superior designs.

3. A product's design is a source of pleasure for me.

4. Beautiful product designs make our world a better place to live.

Acumen

1. Being able to see subtle difference in product designs is one skill that I have developed over time.

2. I see things in a product's design that other people tend to pass over.

3. I have the ability to imagine how a product will fit in with designs of other things I already own.

4. I have a pretty good idea of what makes one product look better than its competitors.

Response

1. Sometimes the way a product looks seems to reach out and grab me.

2. If a product's design really "speaks" to me, I feel that I must buy it.

3. When I see a product that has a really great design, I feel a strong urge to buy it.

Notes: Although the items are provided based on the dimensions above, results showed that empirically, these dimensions cannot be distinguished from one another. Responses were scored on a 5-point Likert scale where 1 = *strongly disagree* and 5 = *strongly agree.*

Consumers' Emotional Attachments to Brands

(Thomson, MacInnis, and Park 2005)

Construct: Consumers' Emotional Attachment to Brands assesses the emotional bond between a consumer and a specific brand. Based on general attachment theory, Consumers' Emotional Attachment to Brands is expected to predict such things as their attitudes toward and satisfaction with the brand, their involvement with the brand, their commitment and loyalty to the brand, as well as their investment in or willingness to pay more for that brand. The construct was found to have three dimensions, including affection, passion, and connection, which are all related to the higher-order dimension of emotional attachment.

Description: The Consumers' Emotional Attachment to Brands Scale is based on emotion that reflects consumers' attachment to brands. Respondents used a 7-point rating scale, ranging from 1 (*describes poorly*) to 7 (*describes very well*). The final scale consists of 10 single adjective items that represent three dimensions including affection, passion, and connection. High internal consistency and the correlation among the dimensions suggest that the scale can be used as a single index averaged across the 10 items.

Development: A list of 39 adjectives was composed based on a review of relevant research. Study 1 participants were asked to identify a brand to which they were strongly emotionally attached. They then completed the 39 adjectives and were also asked to provide any other emotions that characterized their attachment to the brand that had not been listed. Based on these responses, 10 more adjectives were added to the list. From the list of 49, items were eliminated for redundancy, for having means of less than 4.0 on a 7-point scale, and for not containing emotional content. This process resulted in 35 items that were tested in Study 2, and further items were eliminated that were confusing or rated low on the 7-point scale. A final set of 10 survey items with loadings of at least 0.5 on one of the three factors (Affection, Passion, and Connection) were retained for the final scale. Three additional studies were used to further assess the reliability and the validity of the scale.

Samples: Studies 1 through 4 involve the use of student participants, with sample sizes of 68, 120, 65, and 184, respectively. Study 5 used 179 nonstudent respondents solicited outside a museum.

Validity: In Study 2, exploratory factor analysis suggested a three-factor solution with factor loadings ranging from 0.68 to 0.85 on the appropriate factor. The three factors were all correlated, with Affection and Connection having the strongest correlation at 0.48, and both Affection-Passion and Passion-Connection having correlations of 0.24. The overall scale (all 10 items) had a coefficient alpha of 0.77. Using the data from Study 2 and confirmatory factor analysis, the three factors were determined to be nonorthogonal first-order factors that correspond to a higher-order emotional attachment construct. This factor structure was confirmed in Study 3. Study 4 was used to provide evidence of convergent validity, testing differences between loved and disliked brands. Study 5 examined predictive and discriminant validity by assessing commitment to the brand and willingness to pay a premium for the brand while distinguishing results from the related constructs of attitude favorability, satisfaction and involvement. Additional evidence of reliability was provided in Studies 3 to 5. Specifically, the coefficient alphas were 0.88 in Study 3, 0.87 in Study 4, and 0.93 in Study 5.

Scores: When asked to think of a brand to which they had some degree of emotional attachment in Study 3, mean scores ranged from 4.00 to 5.10 and standard deviations ranged from 1.54 to 1.74 for the set of 10 items. In Study 5, means for the overall scale were 3.04 for weak attachment brands, 4.03 for moderate attachment brands, and 5.18 for strong attachment brands.

Source: Thomson, Matthew, Deborah J. MacInnis, and C. Whan Park (2005), "The Ties That Bind: Measuring the Strength of Consumers' Emotional Attachments to Brands," *Journal of Consumer Psychology,* 15 (January), Pages 77–91.

Consumers' Emotional Attachments to Brands

(Thomson, MacInnis, and Park 2005)

Instructions

Think of a brand with which you have a strong/moderate/weak emotional attachment [alternatively, provide a specific brand]. Please indicate how well each of the following words describes your feelings about this brand.

Affection Items

Affectionate

Friendly

Loved

Peaceful

Passion Items

Passionate

Delighted

Captivated

Connection Items

Connected

Bonded

Attached

Notes: 1 = *describes poorly*, 7 = *describes very well*; three dimensions may all be combined for a single-score indicator of emotional attachment.

Hedonic Shopping Motivations

(Arnold and Reynolds 2003)

Construct: Hedonic Shopping Motivation is intended to capture the hedonic fulfillment experienced through shopping, including fun, fantasy, and sensory stimulation.

Description: The hedonic shopping motivations scale consists of 18 items, 3 items each for 6 different motivations: adventure shopping, gratification shopping, role shopping, value shopping, social shopping, and idea shopping. The items are based on a 7-point Likert scale where 1 = *strongly disagree* and 7 = *strongly agree*. Item scores are summed for each of the six motivations, and these sums range from 7 to 21. The six motivations are shown to be distinct from one another and can be used to help cluster consumers into groups based on their varying levels for each of the motivations. Specifically, five clusters were identified based on responses to the hedonic shopping motivations scales, including Minimalists, Gatherers, Providers, Enthusiasts, and Traditionalists.

Development: Qualitative interviews of 33 men and 65 women provided the basis for item generation. Each interviewee was asked to give detailed descriptions of his or her shopping motivations. These comments were divided into six different categories and then used to generate 140 items across the six motivations. Input from expert judges was used to reduce the set of items to 48. Next, the measure was refined through a calibration sample using a series of both exploratory and confirmatory factor analyses. This iterative process led to the final 18-item scale with six subdimensions. The measure was further validated in a separate sample.

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 adults. In both main samples, respondents were recruited by students.

Validity: Coefficient alphas and composite reliabilities are reported for each of the six subdimensions for both Studies 1 and 2. Alphas ranged from 0.77 (gratification shopping) to 0.87 (value and idea shopping), while composite reliability estimates ranged from 0.80 (gratification shopping) to 0.90 (value and idea shopping). Confirmatory factor analysis suggested that the six subdimension measures are empirically distinct from one another and can be used to form the basis for identifying various consumer segments. For the validation sample, a variety of variables was included to be used for nomological and predictive validity tests, including flow, time distortion, aesthetic appeal, and product innovativeness. In addition, the validation sample provided independent evidence of the factor structure and unidimensionality of each of the six shopping motivations.

Scores: Mean scores are reported for individual items and for each of the six different motivations indices for both studies. For example, in Study 1, the mean scores are as follows: adventure, 9.09; gratification, 11.92; role, 14.79; value, 14.32; social, 10.47; idea, 10.87.

Source: Arnold, Mark J. and Kristy E. Reynolds (2003), "Hedonic Shopping Motivations," *Journal of Retailing,* 79 (Summer), 77–95.

Hedonic Shopping Motivations

(Arnold and Reynolds 2003)

Adventure Shopping

1. To me, shopping is an adventure.

2. I find shopping stimulating.

3. Shopping makes me feel like I am in my own universe.

Gratification Shopping

1. When I'm in a down mood, I go shopping to make me feel better.

2. To me, shopping is a way to relieve stress.

3. I go shopping when I want to treat myself to something special.

Role Shopping

1. I like shopping for others because when they feel good I feel good.

2. I enjoy shopping for my friends and family

3. I enjoy shopping around to find the perfect gift for someone.

Value Shopping

1. For the most part, I go shopping when there are sales.

2. I enjoy looking for discounts when I shop.

3. I enjoy hunting for bargains when I shop.

Social Shopping

1. I go shopping with my friends or family to socialize.

2. I enjoy socializing with others when I shop.

3. Shopping with others is a bonding experience.

Idea Shopping

1. I go shopping to keep up with the trends.

2. I go shopping to keep up with the new fashions.

3. I go shopping to see what new products are available.

Note: Measurement based on a 7-point Likert scale where 1 = *strongly disagree* and 7 = *strongly agree*.

Hedonic and Utilitarian Consumer Attitudes

(Batra and Ahtola 1991)

Construct: The premise that consumer attitudes are inherently bidimensional is the basis for the utilitarian and hedonic conceptualization used by Batra and Ahtola (1991). "Utilitarian" attitudes are more instrumental and concerned with the expectations of consequences of product usage, are based on assessment of functional brand/product attributes, and are more concerned with practical usefulness or benefits derived from a brand/product. "Hedonic" attitudes are based more on affective gratification derived from sensory product/brand attributes. Hedonic attitudes are more experiential and related to how much pleasure a consumer derives from a brand/product. These two dimensions are related, yet distinct, where one dimension might be more relevant to certain products/brands than the other dimension. Still, these two dimensions are not mutually exclusive for many products/brands.

Description: The final scale contains eight semantic differential items that cover the two dimensions (four items for the utilitarian and hedonic dimensions, respectively). Items are scored on 7-point scales, and item scores can be summed within dimensions to form a utilitarian attitude score and a hedonic attitude score.

Development: Scale development used an iterative process over three studies. In the first study, 16 items were generated to reflect the two dimensions; in the second study, 9 items were initially used to reflect the two dimensions; and in the third study, 23 items were used to initially reflect the dimensions. In each study, exploratory and confirmatory factor analyses were used to derive and verify a two-dimensional (i.e., utilitarian and hedonic) attitude structure over numerous products and brands as stimuli. From these studies, four-item scales were derived and further tested for dimensionality, reliability, and validity.

Samples: The three samples used in the three studies were $n = 59$, $n = 180$ (college students), and $n = 93$ (college students).

Validity: In the first two studies, confirmatory factor models using three items each for the utilitarian and hedonic components were estimated that showed adequate fit, discriminant validity, and internal consistency. However, given that the authors recommend four items each, the discussion of validity will be restricted to their four-item scales. In the third study, the two-factor structure showed adequate levels of fit and discriminant validity (via confirmatory factor analysis). For example, over 18 product/brand-related behaviors, discriminant validity was achieved in 13 of 18 comparisons. Coefficient alpha estimates of internal consistently exceeded 0.75 for the utilitarian dimension for 14 of the 18 behaviors, and they exceeded 0.80 for the hedonic dimension for 15 of the 18 behaviors. Average variance extracted estimates exceeded 0.52 for both components over all 18 product/brand-related behaviors. Both dimensions also showed evidence of predictive validity for attitudes hypothesized as primarily utilitarian product/brand-oriented, or primarily hedonic product/brand-oriented in structural equation models.

Scores: Neither mean nor percentage scores were reported.

Source: Batra, Rajeev and O. Ahtola (1991), "Measuring the Hedonic and Utilitarian Sources of Consumer Attitudes," *Marketing Letters,* 2 (2), 159–70.

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Other evidence: Crowley, Spangenberg, and Hughes (1992) found mixed results for the factor structure supported by Batra and Ahtola (1991). Using a sample of $n = 151$ college students across 24 product categories, Crowley et al. found that for some products a two-factor (i.e., utilitarian and hedonic) structure adequately fit the data, but for other products, one- or three-factor models were better representations. They also found that the correlation between the four-item hedonic and utilitarian dimensions averaged 0.81 over the 24 products. However, they did report high levels of internal consistency for the four-item utilitarian and hedonic dimensions. Pooled across product categories, coefficient alpha estimates of internal consistency were 0.85 and 0.89 for the hedonic and utilitarian dimensions, respectively.

Other source: Crowley, Ayn E., Eric R. Spangenberg, and Kevin Hughes (1992), "Measuring the Hedonic and Utilitarian Dimensions of Attitudes Toward Product Categories," *Marketing Letters,* 3 (3), 239–49.

Hedonic and Utilitarian Consumer Attitudes *(Batra and Ahtola 1991)*	
Utilitarian Items	*Hedonic Items*
useful—useless	pleasant—unpleasant
valuable—worthless	nice—awful
beneficial—harmful	agreeable—disagreeable
wise—foolish	happy—sad

Note: Items are scored on 7-point scales.

Hedonic and Utilitarian Consumer Attitudes

(Spangenberg, Voss, and Crowley 1997)

Construct: Building on the conceptual work of Holbrook and Hirschman (1982), Batra and Ahtola (1991), and others, Spangenberg et al. (1997) developed measures of utilitarian and hedonic consumer attitudes. Similar to other authors, Spangenberg et al. (1997) view utilitarian attitudes as more instrumental and concerned with the more functional consequences of product usage. Hedonic attitudes are based more on affective/emotive gratification derived from sensory product/brand attributes, are more experiential, and are related to how much pleasure a consumer derives from a brand/product. However, Spangenberg et al. suggest that hedonic attitudes are experienced at both cognitive and affective levels, but utilitarian attitudes are dominated by cognition. They also posit that the affective/cognitive nature of hedonic attitudes gives rise to emotional desires that compete with utilitarian motives of product purchase.

Description: The utilitarian and hedonic dimensions are composed of 12 items each. All items are 7-point semantic differential scales. Item scores are summed within each dimension to form overall attitude scores for utilitarian and hedonic dimensions.

Development: Via a literature review and pretest, 27 items were generated to reflect the two dimensions. With a large sample, using both exploratory and confirmatory factor analyses, item-to-total correlations, and reliability analyses, the final 12-item forms of the two dimensions were derived. Estimates of dimensionality, internal consistency, and validity were reported.

Sample: The sample for the main study was composed of $n = 608$ undergraduate students.

Validity: Over numerous brands/products, factor analyses showed evidence for a two-dimensional structure (i.e., the hypothesized utilitarian and hedonic dimensions). Construct reliability was 0.91 or greater for both dimensions, average variance extracted estimates were 0.47 or above for both dimensions, item-to-total correlations ranged from 0.57 to 0.86 over the two dimensions, and factor loading ranged from 0.58 to 0.90 over the two dimensions (for analyses involving brand names and product categories). Evidence of validity was offered via ANCOVA and regression-based tests of the hedonic and utilitarian dimensions' relationships with measures of need for cognition, sensation seeking, and involvement (pp. 238–39).

Scores: Neither mean nor percentage scores were reported.

Source: Spangenberg, Eric R., Kevin E. Voss, and Ayn E. Crowley (1997), "Measuring the Hedonic and Utilitarian Dimensions of Attitude: A Generally Applicable Scale," in *Advances in Consumer Research*, Vol. 24, eds. Merrie Brucks and Deborah J. MacInnis, Provo, UT: Association for Consumer Research, pp. 235–41.

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References: Batra, Rajeev and O. Ahtola (1991), "Measuring the Hedonic and Utilitarian Sources of Consumer Attitudes," *Marketing Letters,* 2 (2), 159–70.

Holbrook, Morris B. and Elizabeth C. Hirschman (1982), "The Experiential Aspects of Consumption: Consumer Fantasies, Feelings, and Fun," *Journal of Consumer Research,* 9, 132–40.

Hedonic and Utilitarian Consumer Attitudes

(Spangenberg, Voss, and Crowley 1997)

Utilitarian Items	*Hedonic Items*
useful/useless	dull/exciting
practical/impractical	not delightful/delightful
necessary/unnecessary	not sensuous/sensuous
functional/not functional	not fun/fun
sensible/not sensible	unpleasant/pleasant
helpful/unhelpful	not funny/funny
efficient/inefficient	not thrilling/thrilling
beneficial/harmful	not happy/happy
handy/not handy	not playful/playful
unproductive/productive	enjoyable/unenjoyable
problem solving/not problem solving	cheerful/not cheerful
effective/ineffective	amusing/not amusing

Note: Items scored on 7-point semantic differential scales.

Hedonic/Utilitarian Attitudes: HED/UT

(Voss, Spangenberg, and Grohmann 2003)

Construct: Building on the conceptual work of Holbrook and Hirschman (1992), Batra and Ahtola (1991), and others, Voss et al. (2003) developed measures of utilitarian and hedonic consumer attitudes (HED/UT). Similar to other authors, Voss et al. (2003) view utilitarian attitudes as more instrumental and concerned with the more functional consequences of product usage. Hedonic attitudes are based more on affective/emotive gratification derived from sensory product/brand attributes, are more experiential, and are related to how much pleasure a consumer derives from a brand/product. However, Voss et al. suggest that hedonic attitudes are experienced at both cognitive and affective levels, but utilitarian attitudes are dominated by cognition. They also posit that the affective/cognitive nature of hedonic attitudes gives rise to emotional desires that compete with utilitarian motives of product purchase.

Description: The HED/UT comprises 10 semantic differential pairs rated on a 7-point scale. Five of these pairs capture hedonic attitudes, and five capture utilitarian attitudes. A longer version of the HED/UT scale was reported earlier by Spangenburg, Voss, and Crawley (1997).

Development: An initial pool of adjective pairs was derived from published research and a pretest of students and professionals who were given the definitions of both hedonic and utilitarian and asked to list adjectives and opposites to capture each. Then half of 608 student subjects were asked to rate one of a selection of brands on a collection of 27 seven-point scale items, while the other half were asked to rate product categories. These 27 items were further narrowed down to 24 through exploratory factor analysis—12 each for utilitarian and hedonic. A subsequent study narrowed the number of adjective pairs down to five each for hedonic and utilitarian using confirmatory factor analysis in order to reduce the length of the scale while maintaining its reliability and validity. Second-order analyses confirmed that although hedonic and utilitarian attitudes are unique dimensions, they both represent a higher-order factor.

Samples: Two undergraduate student samples were used for development: $n = 608$ undergraduate students in the initial development study and $n = 400$ from the same university participated in the scale reduction study.

Validity: The coefficient alpha estimates were hedonic = 0.95 (0.95) and utilitarian = 0.95 (0.92), for the development (reduction) study. Item-to-total correlations ranged from 0.82 to 0.98 for the development study and 0.74 to 0.87 in the reduction study. Second-order analyses using Fornell and Larcker (1981) discriminant validity tests confirmed that although hedonic and utilitarian attitudes are unique dimensions, they both represent a higher-order factor. Study 2B provided discrimination between HED/UT and three different measures of involvement, and the evidence suggests that HED/UT captures different information than affective and cognitive components of involvement. Many additional tests were conducted to assess the predictive validity as well as nomological validity of the construct.

Scores: Mean scores are not particularly meaningful for this measure, given that the measures are in response to an attitude object and differ significantly among products, brands, and individuals.

Source: Voss, Kevin E., Eric R. Spangenberg, and Bianca Grohmann (2003), "Measuring the Hedonic and Utilitarian Dimensions of Consumer Attitude," *Journal of Marketing Research*, 40 (August), 310–20.

References: Batra, Rajeev and O. Ahtola (1991), "Measuring the Hedonic and Utilitarian Sources of Consumer Attitudes," *Marketing Letters,* 2 (2), 159–70.

Fornell, Claes and David F. Larcker (1981), "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research,* 18 (February), 39–50.

Holbrook, Morris B. and Elizabeth C. Hirschman (1982), "the Experiential Aspects of Consumption: Consumer Fantasies, Feelings, and Fun," *Journal of Consumer Research,* 9, 132–40.

Spangenberg, Eric R., Kevin E. Voss, and Ayn E. Crowley (1997), "Measuring the Hedonic and Utilitarian Dimensions of Attitude: A Generally Applicable Scale," in *Advances in Consumer Research,* Vol. 24, eds. Merrie Brucks and Deborah J. MacInnis, Provo, UT: Association for Consumer Research, pp. 235–41.

Hedonic/Utilitarian Attitudes: HED/UT

(Voss, Spangenberg, and Grohmann 2003)

Utilitarian

Effective/ineffective

Helpful/unhelpful

Functional/not functional

Necessary/unnecessary

Practical/impractical

Hedonic

Not fun/fun

Dull/exciting

Not delightful/delightful

Not thrilling/thrilling

Enjoyable/unenjoyable

Longer scale reported by Spangenberg et al. (1997):

Utilitarian Items	Hedonic Items
Useful/useless	Dull/exciting
Practical/impractical	Not delightful/delightful
Necessary/unnecessary	Not sensuous/sensuous
Functional/not functional	Not fun/fun
Sensible/not sensible	Unpleasant/pleasant
Helpful/unhelpful	Not funny/funny
Efficient/inefficient	Not thrilling/thrilling
Beneficial/harmful	Not happy/happy
Handy/not handy	Not playful/playful
Unproductive/productive	Enjoyable/unenjoyable
Problem solving/not problem solving	Cheerful/not cheerful
Effective/ineffective	Amusing/not amusing

Note: 7-point scales with endpoints indicated above.

Hedonic and Utilitarian Shopping Values

(Babin, Darden, and Griffin 1994)

Construct: Drawing on previous literature that examined utilitarian and hedonic attitudes/motives for shopping (e.g., Batra and Ahtola 1991; Holbrook and Hirschman 1982), Babin et al. (1994) describe utilitarian and hedonic shopping value. Utilitarian shopping value is based on the premise that shopping is task-related and rational, reflecting a work mentality. Utilitarian shopping is viewed more as an "errand" or "work" where shopping is functional, and the shopper successfully completes his/her shopping task. Hedonic shopping value is more festive, playful, and fun. It reflects the entertainment value and emotional worth derived from shopping as a pleasurable experience. Hedonic shopping is viewed as enjoyable and as an "escape" or adventure. The scales developed by Babin et al. (1994) reflect the degree to which consumers derived hedonic and/or utilitarian value from a shopping trip.

Description: The utilitarian shopping value scale is composed of 4 items, and the hedonic shopping value scale is composed of 11 items. All items are scored on 5-point Likert-type scales. Item scores can be summed within each scale to create composite scores for the two scales.

Development: Several recommended procedures were used to derive the final 4- and 11-item forms of the scales. Based on focus group interviews and a literature review, 71 items were initially generated to reflect utilitarian and hedonic shopping value. After item judging, 53 items were retained for the first study. Via principal components, confirmatory factor, and item and reliability analysis, a 20-item, two-factor structure corresponding to the utilitarian/hedonic scale dimensions was derived. A second study reduced these 20 items to the final 4- and 11-item scales using confirmatory factor analysis and reliability analysis. Estimates of dimensionality, internal consistency, and validity were offered. A third study examined the psychometric properties of the scales.

Samples: The sample for the first study was composed on $n = 125$ college students. The sample for the second study was composed of $n = 404$ adult consumers. The sample for the third study was composed of $n = 485$ mall shoppers.

Validity: A two-factor structure representing the hypothesized dimensionality of the 4-item utilitarian and 11-item hedonic shopping value scales fit the data well in the second study. The correlation between the two scales was 0.16; coefficient alpha estimates of internal consistency were 0.80 and 0.93 for the utilitarian and hedonic scales, respectively. Factor loadings ranged from 0.56 to 0.83 (in absolute value), and item-to-total correlations ranged from 0.54 to 0.80 (in absolute value). Hypothesized correlations with related constructs provided evidence of scale validity. For example, the hedonic shopping value scale had correlations of 0.56, 0.34, 0.47, and 0.61 *(p < 0.01)* with measures of experiential shopping motives, compulsive buying, pleasure, and arousal, respectively. Corresponding correlations of these measures with the utilitarian scale were –0.02 (ns), –0.08 (ns), 0.31, and 0.26. (Other correlational estimates are also reported in Table 3, p. 651.) The third study also showed support for the hypothesized two-factor utilitarian/hedonic shopping value structure via confirmatory analysis with a correlation of 0.25 between the scales.

Scores: Neither mean nor percentage scores were reported.

Source: Babin, Barry J., William R. Darden, and Mitch Griffin (1994), "Work and/or Fun: Measuring Hedonic and Utilitarian Shopping Value," *Journal of Consumer Research,* 20, 644–56.

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References: Batra, Rajeev and O. Ahtola (1991), "Measuring the Hedonic and Utilitarian Sources of Consumer Attitudes," *Marketing Letters*, 2 (2), 159–70.

Holbrook, Morris B. and Elizabeth C. Hirschman (1982), "The Experiential Aspects of Consumption: Consumer Fantasies, Feelings, and Fun," *Journal of Consumer Research*, 9, 132–40.

Hedonic and Utilitarian Shopping Values

(Babin, Darden, and Griffin 1994)

Hedonic Items

1. This shopping trip was truly a joy.

2. I continued to shop, not because I had to, but because I wanted to.

3. This shopping trip truly felt like an escape.

4. Compared to other things I could have done, the time spent shopping was truly enjoyable.

5. I enjoyed being emerged in exciting new products.

6. I enjoyed this shopping trip for its own sake, not just for the items I may have purchased.

7. I had a good time because I was able to act on "the spur-of-the-moment."

8. During the trip, I felt the excitement of the hunt.

9. While shopping, I was able to forget my problems.

10. While shopping, I felt a sense of adventure.

11. This shopping trip was not a very nice time out.

Utilitarian Items

1. I accomplished just what I wanted to on this shopping trip.

2. I couldn't buy what I really needed.

3. While shopping, I found just the items(s) I was looking for.

4. I was disappointed because I had to go to another store(s) to complete my shopping trip.

Note: Item 11 of the hedonic scale and Items 2 and 4 of the utilitarian scale require reverse scoring. Items scored on 5-point Likert-type scales.

Attitude Toward Private Label Products Scale

(Burton et al. 1998)

Construct: Attitude toward private label products is defined as "a predisposition to respond in a favorable or unfavorable manner due to product evaluations, purchase evaluations, and/or self-evaluations associated with private label grocery products" (Burton et al. 1998, p. 298). Attitude toward private label products is viewed as a relatively enduring construct that is sufficiently broad to be of use in a general sense across grocery product categories.

Description: The attitude toward private label products scale is a 6-item scale in which items are scored on 7-point *strongly disagree* to *strongly agree* scales. The scale is unidimensional, and item scores are summed across items for an attitude toward private label products score ranging from 6 to 42.

Development: Using recommended scaling procedures, the authors conducted two studies to develop and validate the final form of the attitude toward private label products scale. In the first study, 12 potential items were factor analyzed to derive the final 6-item form of the scale. The second study was used to further confirm the 6-item unidimensional structure and assess reliability and validity.

Samples: Study 1, $n = 140$ adults who did the primary grocery shopping for their household; Study 2, $n = 333$ adults who did the primary grocery shopping for their household.

Validity: Several estimates of dimensionality, reliability, and validity were assessed. The first study showed that a one-factor, unidimensional scale fit the six items well, with a coefficient alpha estimate of 0.89.

The second study showed that a one-factor, unidimensional scale also fit the six items well, with a coefficient alpha estimate of 0.87 and an average variance extracted estimate of 0.56. As predicted, the scale showed discriminant validity from value consciousness ($r = 0.29$) and price consciousness ($r = 0.26$). The attitude toward private label products scale was also correlated with a number of other constructs in the predicted manner, such as brand loyalty ($r = -0.27$), impulsiveness ($r = -0.20$), price-quality perception ($r = -0.25$), general deal proneness ($r = 0.18$), smart shopping ($r = 0.27$), and price-related deals ($r = 0.30$). The attitude toward private label products scale also predicted actual private label purchasing beyond the effects of impulsiveness and price-quality perceptions.

Scores: The mean score on the scale in the second study was reported to be 25.7 ($SD = 7.5$); the median score was 26.

Source: Burton, Scot, Donald R. Lichtenstein, Richard G. Netemeyer, and Judith A. Garretson (1998), "A Scale for Measuring Attitude Toward Private Label Products and an Examination of Its Psychological and Behavioral Correlates," *Journal of the Academy of Marketing Science*, 26 (4), 293–306.

Attitude Toward Private Label Products Scale

(Burton et al. 1998)

1. Buying private label brands makes me feel good.

2. I love it when private label brands are available for the product categories I purchase.

3. For most product categories, the best buy is usually the private label brand.

4. In general, private label brands are poor-quality products.*

5. Considering the value for the money, I prefer private label brands to national brands.

6. When I buy a private label brand, I always feel that I am getting a good deal.

Notes: Items are scored on 7-point *strongly disagree* to *strongly agree* scales. * denotes item that is reverse scored.

Self-Brand Connection

(Escalas and Bettman 2003)

Construct: Self-brand connection is defined as the extent to which individuals have incorporated brands into their self-concept at an aggregate level. Brands used by member groups and aspiration groups can become connected to consumers' mental representation of self as they use these brands to define and create their self-concepts. Some effects of self-branding include self-enhancement/impression management, self-verification, reconciling self-enhancement, and self-verification goals.

Description: The self-brand connection scale is composed of seven items assessed on varying 7-point scales. Item scores are averaged to form an overall self-brand connection score. In Experiment 2, only three of the seven items were assessed, this time on a 1- to 100-point scale. It would appear that the three-item version sufficiently captures self-brand connection.

Development: In Experiment 1, self-brand connections were assessed using the seven-item scale. In Experiment 2, the three items with the highest item-to-total correlations from Study 1 were used.

Samples: Forty-five undergraduate marketing students participated in Experiment 1. Experiment 2 included 171 undergraduate students.

Validity: Coefficient alpha reported from Experiment 1 was 0.90. The three items used in Experiment 2 had an alpha of 0.93.

Scores: None reported.

Source: Escalas, Jennifer E. and James R. Bettman (2003), "You Are What They Eat: The Influence of Reference Groups on Consumers' Connections to Brands," *Journal of Consumer Psychology*, 13 (3), 339–48.

Self-Brand Connection

(Escalas and Bettman 2003)

1. Brand X reflects who I am (*not at all/extremely well*).*

2. I can identify with Brand X (*not at all/extremely well*).*

3. I feel a personal connection to Brand X (*not at all/very much so*).*

4. I (can) use Brand X to communicate who I am to other people (*not at all/extremely well*).

5. I think Brand X (could) help(s) me become the type of person I want to be (*not at all/extremely well*).

6. I consider Brand X to be "me" (it reflects who I consider myself to be or the way that I want to present myself to others) (*not "me"/"me"*).

7. Brand X suits me well (*not at all/extremely well*).

Notes: Items in parentheses are scale anchors. Asterisks indicate the three items used in Experiment 2, which we recommend for future use. Items were assessed both on a 7-point scale (Experiment 1) and a 100-point scale (Experiment 2).

Shopping Styles: Consumer Styles Inventory: CSI

(Sproles and Kendall 1986; Sproles and Sproles 1990)

Construct: The authors identify eight consumer shopping/decision-making styles with the following characteristics (Sproles and Sproles 1990, p. 137):

Perfectionist/High Quality Conscious: the degree to which a consumer searches carefully and systematically for the best quality in products.

Brand Consciousness/Price Equals Quality: a consumer's orientation toward buying the more expensive, well-known national brands.

Novelty and Fashion Conscious: consumers who appear to like new and innovative products and gain excitement from seeking out new things.

Recreational and Shopping Conscious: the extent to which a consumer finds shopping a pleasant activity and shops just for the fun of it.

Price Conscious/Value for the Money: a consumer with a particularly high consciousness of sale prices and lower prices in general.

Impulsiveness/Careless: one who tends to buy on the spur of the moment and to appear unconcerned about how much he or she spends (or getting "best buys").

Confused by Overchoice: a person perceiving too many brands and stores from which to choose and who likely experiences information overload in the market.

Habitual/Brand Loyal: a characteristic indicating a consumer who repetitively chooses the same favorite brands and stores.

Description: The Consumer Styles Inventory (CSI) is composed of 39 items that cover the eight styles described above. Also, for each style, a three-item short form of the scale is available (i.e., 24 items in total). All items are scored on 5-point Likert-type scales ranging from *strongly disagree* to *strongly agree*. Item scores are summed within each style separately to create composite scores for each style.

Development: Originally, 48 items seemed to have been generated to reflect the eight styles (i.e., six items per each style). Via principal components analysis with a large sample, the final-item form of the eight styles was derived. Estimates of reliability and validity (relationships with other constructs) were offered.

Sample: One sample of $n = 482$ usable responses was obtained. the subjects were all high school students in home economics classes.

Validity: Coefficient alpha estimates for the longer and three-item versions of the style scales ranged from 0.41 to 0.76 (see actual scale items). Factor loadings across the eight styles ranged from 0.41 to 0.75 (in absolute magnitude). Correlations among the eight styles (from an oblique factor rotation) ranged from 0.14 to 0.29. The eight styles were correlated with measures of "learning style" and were used as dependent variables with different learning styles as predictors. Multiple Rs for five of the eight styles as dependent variables ranged from 0.25 to 0.36. Canonical correlations also provided estimates of validity for the eight styles.

Scores: Mean scores for the three-item versions of the scales are reported in Table 3 (Sproles and Kendall 1986, p. 275). These mean scores ranged from 8.7 for "brand consciousness" to 11.8 for "recreational shopping conscious."

Sources: Sproles, George B. and Elizabeth Kendall (1986), "A Methodology for Profiling Consumers' Decision-Making Styles," *Journal of Consumer Affairs,* 20, 267–79.

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Sproles, Elizabeth Kendall and George B. Sproles (1990), "Consumer Decision-Making Styles as a Function of Individual Learning Styles," *Journal of Consumer Affairs,* 24, 134–47.

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Shopping Styles: Consumer Styles Inventory: CSI

(Sproles and Kendall 1986; Sproles and Sproles 1990)

Perfectionist/High Quality Conscious (seven-item alpha = 0.74, three-item alpha = 0.69)

1. Getting very good quality is very important to me.

2. When it comes to purchasing products, I try to get the very best or perfect choice.

3. In general, I usually try to buy the best overall quality.

4. I make a special effort to choose the very best quality products.

5. I really don't give my purchases much thought or care.*

6. My standards and expectations for products I buy are very high.

7. I shop quickly, buying the first product or brand I find that seems good enough.*

Brand Consciousness/Price Equals Quality (six-item alpha = 0.75, three-item alpha = 0.63)

1. The well-known national brands are for me.

2. The more expensive brands are usually my choices.

3. The higher the price of the product, the better the quality.

4. Nice department and specialty stores offer me the best products.

5. I prefer buying the best selling brands.

6. The most advertised brands are usually very good choices.

Novelty and Fashion Conscious (five-item alpha = 0.74, three-item alpha = 0.76)

1. I usually have one or more outfits of the very newest style.

2. I keep my wardrobe up-to-date with the changing fashions.

3. Fashionable, attractive styling is very important to me.

4. To get variety, I shop different stores and choose different brands.

5. It's fun to buy something new and exciting.

Recreational and Shopping Conscious (five-item alpha = 0.76, three-item alpha = 0.71)

1. Shopping is not a pleasant activity to me.*

2. Going shopping is one of the enjoyable activities of my life.

3. Shopping the stores wastes my time.*

4. I enjoy shopping just for the fun of it.

5. I make shopping trips fast.*

Price Conscious/Value for the Money (alpha = 0.48)

1. I buy as much as possible at sale prices.

2. The lowest price products are usually my choice.

3. I look carefully to find the best value for the money.

Impulsiveness/Careless (five-item alpha = 0.48, three-item alpha = 0.41)

1. I should plan my shopping more carefully than I do.

2. I am impulsive when purchasing.

3. Often I make careless purchases I later wish I had not.

4. I take the time to shop carefully for best buys.*

5. I carefully watch how much I spend.*

Confused by Overchoice (four-item alpha = 0.55, three-item alpha = 0.51)

1. There are so many brands to choose from that I often feel confused.

2. Sometimes it's hard to choose which stores to shop.

3. The more I learn about products, the harder it seems to choose the best.

4. All the information I get on different products confuses me.

Habitual/Brand Loyal (four-item alpha = 0.53, three-item alpha = 0.54)

1. I have favorite brands I buy over and over.

2. Once I find a product or brand I like, I stick with it.

3. I go to the same stores each time I shop.

4. I change brands I buy regularly.*

Notes: * denotes items that require reverse scoring. The first three items (i.e., 1, 2, and 3) of every style represent the three-item versions. Items scored on 5-point Likert-type scales from *strongly disagree* to *strongly agree.*

Measures Related to Pricing Responses

Price Perception Scales

(Lichtenstein, Ridgway, and Netemeyer 1993)

Negative Role of Price Scales

Value Consciousness

1. I am very concerned about low prices, but I am equally concerned about product quality.

2. When grocery shopping, I compare the prices of different brands to be sure I get the best value for the money.

3. When purchasing a product, I always try to maximize the quality I get for the money I spend.

4. When I buy products, I like to be sure that I am getting my money's worth.

5. I generally shop around for lower prices on products, but they still must meet certain quality requirements before I will buy them.

6. When I shop, I usually compare the "price per ounce" information for brands I normally buy.

7. I always check prices at the grocery store to be sure I get the best value for the money I spend.

Price Consciousness

1. I am not willing to go to extra effort to find lower prices.

2. I will grocery shop at more than one store to take advantage of low prices.

3. The money saved by finding lower prices is usually not worth the time and effort.

4. I would never shop at more than one store to find low prices.

5. The time it takes to find low prices is usually not worth the effort.

Coupon Proneness

1. Redeeming coupons makes me feel good.

2. I enjoy clipping coupons out of the newspaper.

3. When I use coupons, I feel that I am getting a good deal.

4. I enjoy using coupons regardless of the amount I save by doing so.

5. Beyond the money I save, redeeming coupons gives me a sense of joy.

Sale Proneness

1. If a product is on sale, that can be a reason for me to buy it.

2. When I buy a brand that's on sale, I feel that I am getting a good deal.

3. I have favorite brands, but most of the time I buy the brand that's on sale.

4. I am more likely to buy brands that are on sale.

5. Compared to most people, I am more likely to buy brands that are on special.

Price Mavenism

1. People ask me for information about prices for different types of products.

2. I'm considered somewhat of an expert when it comes to knowing the prices of products.

3. For many kinds of products, I would be better able than most people to tell someone where to shop to get the best buy.

4. I like helping people by providing them with price information about many types of products.

5. My friends think of me as a good source of price information.

6. I enjoy telling people how much they might expect to pay for different kinds of products.

Positive Role of Price Scales

Price-Quality Schema

1. Generally speaking, the higher the price of the product, the higher the quality.

2. The old saying "you get what you pay for" is generally true.

3. The price of a product is a good indicator of its quality.

4. You always have to pay a bit more for the best.

Prestige Sensitivity

1. People notice when you buy the most expensive brand of a product.

2. Buying a high price brand makes me feel good about myself.

3. Buying the most expensive brand of a product makes me feel classy.

4. I enjoy the prestige of buying a high priced product.

5. It says something to people when you buy the high priced version of a product.

6. Your friends will think you are cheap if you consistently buy the lowest priced version of a product.

7. I think others make judgments about me by the kinds of products and brands I buy.

8. Even for a relatively inexpensive product, I think that buying a costly brand is impressive.

Notes: Items 1, 3, 4, and 5 of the price consciousness scale require reverse scoring. The price mavenism scale was adapted from the "market maven" scale of Feick and Price (1987). Items scored on 7-point Likert-type scales from *strongly disagree* to *strongly agree.*

Pricing Tactic Persuasion Knowledge: PTPK

(Hardesty, Bearden, and Carlson 2007)

Construct: A subdomain of overall consumer persuasion knowledge (Friestad and Wright 1994), pricing tactic persuasion knowledge (PTPK) is defined as knowledge of pricing tactics used by sellers to generate favorable price perceptions regarding their brands, stores, and/or offerings (Carlson, Bearden, and Hardesty 2007, p. 118). The concept reflects domain-specific knowledge gained through experience with pricing tactics, which include a range of holistic message themes (e.g., everyday-low-pricing), specific message elements (e.g., external reference prices), and/or abstract configurations of message elements (e.g., image pricing; Hardesty et al. 2007, p. 200; cf. Friestad and Wright 1994, p. 4)

Description: PTPK is a formative measure consisting of 17 true-false items. For each pricing tactic item, participants were given the name of a pricing tactic, a marketplace exemplar of this pricing tactic, and then a statement regarding how marketers use the pricing tactic to be persuasive. The concluding statements are true for some items but false in other items. Participants responded to items with *True*, *False*, or *Do Not Know*. Items 1, 2, 4, 6, 7, 11, 13, 14, 15, 16, and 17 are TRUE. Items 3, 5, 8, 9, 10, and 12 are FALSE.

Development: An initial pool of 26 items was generated from (1) reviewing relevant academic and trade literature and (2) an open-ended elicitation task from a convenience sample of 441 adults. Judges screened the items for item representativeness and suggested different tactics to include, resulting in two deletions and one addition. Using the remaining 25 formative items, measure purification was completed via index of discrimination and point biserial correlation analyses. These analyses reduced the number of items to 17. Test-retest reliability was 0.72; PRL estimates ranged from 0.77 to 0.96 (Rust and Cooil 1994). Minimal multicollinearity was observed across the 17 formative items (in all studies, VIFs ≤ 3.03), suggesting the absence of significant redundancy within the measure.

Samples: In addition to the item generation sample of 441 adults, seven additional samples were reported. Measure purification and test-retest reliability samples both contained adults numbering 42 and 71, respectively. Known-group validity analysis primarily utilized 44 tenth-graders but also referenced a supplemental sample of 69 adults. Three application studies employed 252 undergraduate students, 176 undergraduate students, and 241 undergraduate students.

Validity: Evidence of validity was presented in a number of ways by Hardesty et al. (2007). First, face validity was suggested by all 17 items, ultimately retained being rated, on average, as somewhat representative or completely representative of pricing tactics employed by marketers by 5 retail managers and 12 marketing PhDs. Second, test-retest reliability was 0.72. Third, PRL reliability estimates for the formative PTPK measure ranged from 0.77 to 0.96 across the samples reported (Rust and Cooil 1994). Fourth, the correlation between PTPK and the related construct advertising persuasion knowledge provided evidence of discriminant validity. Fifth, known group validity was established by comparing (1) adults and tenth-graders and (2) adults with retail experience and adults with no retail experience. Sixth, another sample showed that open-ended pricing tactic knowledge thoughts were correlated with PTPK. Last, two additional studies showed the relative predictive validity of PTPK versus competing measures such as need for cognition and sale proneness in moderating consumer responses to offers containing marketplace pricing tactics.

Scores: Mean scores were reported as follows: 11.14 in measure purification study, 11.54 in Time Period 1 of test-retest study, 11.85 in Time Period 2 of test-retest study, 8.61 for tenth-graders in known group study, 12.24 for people having retail experience footnoted in known group study, and 10.60 for people having no retail experience footnoted in known group study.

Source: Hardesty, David M., William O. Bearden, and Jay P. Carlson (2007), "Persuasion Knowledge and Consumer Reactions to Pricing Tactics," *Journal of Retailing,* 83 (April), 199–210.

References: Carlson, Jay P., William O. Bearden, and David M. Hardesty (2007), "Influences on What Consumer Know and What They Think They Know Regarding Marketer Pricing Tactics," *Psychology & Marketing,* 24 (2), 117–42.

Friestad, Marian and Peter Wright (1994), "The Persuasion Knowledge Model: How People Cope With Persuasion Attempts," *Journal of Consumer Research,* 21 (June), 1–31.

Rust, Roland T. and Bruce Cooil (1994), "Reliability Measures for Qualitative Data: Theory and Implications," *Journal of Marketing Research,* 31 (February), 1–14.

Zaichkowsky, Judith Lynne (1985), "Measuring the Involvement Construct," *Journal of Consumer Research,* 12 (December), 341–52.

Pricing Tactic Persuasion Knowledge: PTPK

(Hardesty, Bearden, and Carlson 2007)

1. *Captive pricing*—"$3.00 for a nondisposable, easy-grip razor, and $10.00 for a package of eight replacement razor blades." *Captive pricing* is used by marketers in order to take advantage of the fact that, eventually, consumers will need to purchase the high-priced replacement components if they want to continue using the product.

2. *Customer value pricing*—"$0.79 for a hamburger on the value menu at a fast-food restaurant chain." *Customer value pricing* is used by marketers to attract consumers who seek low prices to the marketer's store.

3. *Everyday-low-pricing*—"Always low prices at Store XYZ." *Everyday-low-pricing* is used by marketers so that they will be perceived as having really low prices on some items and higher prices on others.

4. *Image pricing*—"$100.00 for a brand of wine ('Brand X'). the same wine is currently sold for $20.00 a bottle under the name 'Brand Z.'" *Image pricing* is used by marketers in order to have a higher-priced version of a product available for consumers who view higher-priced goods as having higher quality and a lower-priced version of the same product available for consumers who strongly desire lower prices.

5. *Invoice external reference prices*—"2002 automobile—$500 over invoice." *Invoice external reference prices* are used by marketers to persuade consumers to seek out complete price information for a product.

6. *Loss leader pricing*—"Box of a dozen 'Grade A' eggs for $0.80." *Loss leader pricing* is used by marketers to get consumers to not only purchase the low-priced item but also other regularly priced items within the store.

7. *MSRPs (Manufacturer's Suggested Retail Prices)*—"A new 19-in. color television (with remote control): MSRP $300, Sale Price $200." *MSRPs* are used by marketers in efforts to cause consumers to perceive that the sale price looks attractive.

8. *No haggle pricing*—"All automobiles for sale at the lowest price possible—no haggling!" *No haggle pricing* is used by marketers in order to convince buyers that negotiations will be fair.

9. *No interest pricing offers*—"Buy a dining room set today and pay no interest for 12 months." *No interest pricing offers* are used by marketers to persuade consumers that the price has been reduced.

10. *Partitioned pricing*—"$30.00 for a button-up, 100% cotton long-sleeve shirt, plus $5.00 shipping and handling." *Partitioned pricing* is used by marketers to persuade consumers that the marketer is offering an attractive shipping and handling rate.

11. *Penetration pricing*—"A four-pack of a new brand of batteries—$2.00." *Penetration pricing* is used by marketers so that, by setting prices low, consumers will be encouraged to try the product.

12. *Pennies-a-day or XXX-per-day*—"Just $1.00 per issue for a 1-year subscription to sports magazine XYZ." *Pennies-a-day or XXX-per-day* is used by marketers to provide price information in the most understandable format to consumers.

13. *Price bundling*—"Computer having a 1.1 GHz processor and 128MB memory *and* laserjet printer for $1,100." *Price bundling* is used by marketers in order to increase revenue over what would have been obtained had the products been priced separately.

14. *Price signaling*—"A new pair of running shoes—$140.00." *Price signaling* is used by marketers since consumers may make quality judgments for products or services based on price (i.e., high price = high quality, low price = low quality).

15. *Price skimming*—"Brand new product—videophone $500." *Price skimming* is used by marketers to appeal to consumers who are willing to pay a high price for a new product.

16. *Random discounting*—"A brand of orange juice's (64 oz. or 1/2 gallon) price over a 4-week time period was as follows: Week 1 $2.50, Week 2 $2.50, Week 3 $1.50, Week 4 $2.50." *Random discounting* is used to obtain sales from both consumers who carefully search for low prices and consumers who do not check prices carefully.

17. *Tensile price claims*—"Products X, Y, and Z: Up to 50% off." *Tensile price claims* are used by marketers in order to take advantage of consumers who may inadvertently perceive most or all products to be discounted by the stated amount (i.e., 50% off).

Notes: Participants responded to items with *True*, *False*, or *Do Not Know*. Items 1, 2, 4, 6, 7, 11, 13, 14, 15, 16, and 17 are TRUE. Items 3, 5, 8, 9, 10, and 12 are FALSE.

Value Consciousness and Coupon Proneness: VC and CP

(Lichtenstein, Netemeyer, and Burton 1990)

Construct: Value consciousness is defined as a concern for paying lower prices, subject to some quality constraint, and coupon proneness is defined as an increased propensity to respond to a purchase offer because the coupon form of the purchase offer positively affects purchase evaluations (Lichtenstein et al. 1990). Based on these two conceptual definitions and a distinction between the two constructs grounded in transaction utility theory, the VC and CP scales were developed.

Description: The VC and CP scales are composed of seven and eight Likert-type items, respectively *(strongly agree* to *strongly disagree)*. All the items are scored on a 7-point basis. Scores on the items are summed within each scale to form overall VC and CP scores.

Development: Consistent with the psychometric scaling literature, a pool of 66 items (33 for each construct) was generated based on the definitions of VC and CP and existing literature. Two expert judge panels were used to screen ambiguous and redundant items and to check for content validity. This trimmed the initial pool of items to 15 for VC and 25 for CP. Factor analysis and various estimates of reliability were then used to further purify the scales and assess the dimensionality and internal consistency of the scales. This resulted in the final seven-item VC and eight-item CP scales.

Samples: Two samples were used in the scale development process. The first consisted of 263 students. The second sample consisted of 350 nonstudent adults from a southeastern SMSA.

Validity: Based on the student sample, the composite reliability estimates for the VC and CP scales were 0.80 and 0.88, respectively. Via confirmatory factor analysis, tests of discriminant validity revealed that VC and CP measures were related yet distinct measures. The correlation between VC and CP was 0.36 for the student sample.

With the nonstudent sample, composite reliability estimates again were 0.80 and 0.88 for the VC and CP scales, and tests of discriminant validity revealed that the two measures were distinct, supporting the scale's discriminant validity. The VC-CP correlation was 0.24 for the nonstudent sample. In addition, the VC and CP measures were correlated with a number of cognitive and behavioral measures theoretically related to VC and CP. The pattern of correlations suggest that the VC and CP measures exhibited nomological validity (Lichtenstein et al. 1990). For example, CP explained between 15.5% and 24.4% of the variance in measures of coupon redemption. VC was significantly correlated with measures of enduring product involvement (0.26), product knowledge (0.43), price knowledge (0.41), and information from *Consumer Reports* (0.20).

Scores: No mean or percentage scores were reported.

Source: Lichtenstein, Donald R., Richard G. Netemeyer, and Scot Burton (1990), "Distinguishing Coupon Proneness From Value Consciousness: An Acquisition-Transaction Utility Theory Perspective," *Journal of Marketing*, 54, 54–67.

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Other evidence: Lichtenstein, Ridgway, and Netemeyer (1993) used a five-item version of CP and the seven-item version of VC. One-factor confirmatory models offered support for the unidimensionality of the two scales, and coefficient alpha estimates of internal consistency

were 0.78 or above for the two scales. These two scales were further correlated (in the predicted direction) with measures of price mavenism, price consciousness, sale proneness, price-quality schema, and prestige sensitivity. These correlations ranged from –0.03 to 0.58. Furthermore, both CP and VC were significant predictors of several marketplace behavior variables including readership of *Consumer Reports,* price recall accuracy and ability, sales responsiveness, and coupon redemption, across several regression equations.

Other source: Lichtenstein, Donald R., Nancy M. Ridgway, and Richard G. Netemeyer (1993), "Price Perceptions and Consumer Shopping Behavior: A Field Study," *Journal of Marketing Research,* 30, 234–45.

Value Consciousness and Coupon Proneness: VC and CP

(Lichtenstein, Netemeyer, and Burton 1990)

Value Consciousness (VC)

1. I am very concerned about low prices, but I am equally concerned about product quality.

2. When grocery shopping, I compare the prices of different brands to be sure I get the best value for the money.

3. When purchasing a product, I always try to maximize the quality I get for the money I spend.

4. When I buy products, I like to be sure that I am getting my money's worth.

5. I generally shop around for lower prices on products, but they still must meet certain quality requirements before I will buy them.

6. When I shop, I usually compare the "price per ounce" information for brands I normally buy.

7. I always check prices at the grocery store to be sure I get the best value for the money I spend.

Coupon Proneness (CP)

1. Redeeming coupons makes me feel good.

2. I enjoy clipping coupons out of the newspaper.

3. When I use coupons, I feel that I am getting a good deal.

4. I enjoy using coupons regardless of the amount I save by doing so.

5. I have favorite brands, but most of the time I buy the brand I have a coupon for.

6. I am more likely to buy brands for which I have a coupon.

7. Coupons have caused me to buy products I normally would not buy.

8. Beyond the money I save, redeeming coupons gives me a sense of joy.

Note: Items 1 to 4 and 8 constitute the reduced version form of coupon proneness (Lichtenstein et al. 1993). Items scored on a 7-point Likert-type scale from *strongly agree* to *strongly disagree*.

6

Attitudes About the Performance of Business Firms, Satisfaction and Post-Purchase Behavior, Social Agencies, and the Marketplace

Consumer Attitudes Toward Business Practices and Marketing

Consumer Attitudes Toward Marketing and Consumerism

(Barksdale and Darden 1972)

Construct: Barksdale and Darden (1972) present a battery of items that assess consumer reactions to business policies and practices. As evidenced by the citations listed below, various forms of the items have been adapted and used by a number of other consumer and marketing researchers. The topics addressed include philosophy of business, product quality, advertising, other marketing activities, consumer responsibilities, consumerism, and government regulation.

Description: Forty items grouped into seven categories (i.e., philosophy of business, product quality, advertising, other marketing activities, consumer responsibilities, consumerism, and government regulation) were used to assess consumer attitudes toward marketing and

business. Each item was operationalized using a Likert-type 5-point response format (i.e., *strongly agree, agree, uncertain, disagree,* and *strongly disagree*).

Development: The 40 items were chosen after a pretest of 67 items using a sample of 160 adults in three cities (Barksdale and Darden 1972, p. 29). Barksdale and Darden (1972) summarize responses from a nationwide sample of 354 adult consumers for each of the 40 items. Tests of relationships with most individual characteristics revealed that attitudes were generally consistent across most consumer groups (e.g., gender, occupation). However, a number of differences in opinions were noted for younger consumers. Moreover, and as expected, more liberal respondents were generally more critical of marketing and business practices.

Sample: The data were collected by mail survey from an original national sample of 785 consumers randomly selected from telephone directories in each state. Of the 354 complete responses obtained, 61% of the sample was male, 67% described themselves as conservative, 35% were over the age of 55, and 83% were married. A more complete description is offered by Barksdale, Darden, and Perreault (1976, p. 119).

Validity: Direct evidence of validity for the items was not reported for this exploratory study. However, the extensions of this research described below do offer some additional supportive evidence of validity.

Scores: Percentage responses for each of the five agreement categories for all 40 items are reported in Tables 1 through 7. Means and standard deviations can be computed from these frequency distributions.

Source: Barksdale, Hiram C. and William R. Darden (1972), "Consumer Attitudes Toward Marketing and Consumerism," *Journal of Marketing,* 36, 28–35.

© 1972 by the American Marketing Association. Scale items and responses taken from Tables 1–7 (pp. 29–33). Reprinted with permission.

Other evidence: A number of authors have used all or parts of the items included in the Barksdale and Darden (1972) battery. A number of these follow-up applications are cited below. In some instances, the results of these studies offer additional support for the usefulness of the Barksdale and Darden (1972) inventory of consumer attitude items.

Barksdale et al. (1976) assessed trends in consumer attitudes by examining changes in item scores across samples taken in 1971, 1973, and 1975. Some of the items were used by LaBarbera and Lazer (1980) in their study of differences between consumers in general and participants in FTC rule making. Darley and Johnson (1993) used adapted versions of some of the items in their study of attitudes toward consumerism in four developing countries.

Varadarajan, Bharadwaj, and Thirunarayana (1994) provide evidence of factor reliabilities and corrected item-to-total correlations within factors. The survey used in their research is an adaptation of the questionnaire originally used by Barksdale and Darden (1972) and those used in follow-ups to the Barksdale and Darden research. For example, coefficient alpha estimates of internal consistency reliability for factors employing the original seven labels range from 0.53 to 0.72. Moreover, average factor scores are reported for clusters of Indian marketing and nonmarketing executives. Support for several hypotheses regarding differences in opinions between marketing and nonmarketing executives provides additional support for the items as well.

Other sources: Darley, William K. and Denise M. Johnson (1993), "Cross-National Comparison of Consumer Attitudes Toward Consumerism in Four Developing Countries," *Journal of Consumer Affairs,* 27, 37–65.

Dickinson, Virginia H. and James P. Shaver (1982), "A Test of Consumer Awareness for Adults," *Journal of Consumer Affairs,* 16, 241–59.

LaBarbera, Priscilla and William Lazer (1980), "Characteristics of Consumer Participants in Federal Trade Commission Rule Making," *Journal of Consumer Affairs,* 14, 405–17.

Varadarajan, P. Rajan, Sundar G. Bharadwaj, and P. N. Thirunarayana (1994), "Executive Attitudes Toward Consumerism and Marketing: An Exploration of Theoretical and Empirical Linkages in an Industrializing Country," *Journal of Business Research*, 29, 83–100.

Reference: Barksdale, Hiram C., William R. Darden, and William D. Perreault, Jr. (1976), "Changes in Consumer Attitudes Toward Marketing, Consumerism, and Government Regulation: 1971–75," *Journal of Consumer Affairs,* 10, 117–35.

Consumer Attitudes Toward Marketing and Consumerism

(Barksdale and Darden 1972)

Philosophy of Business

1. Most manufacturers operate on the philosophy that the "consumer" is always right.

2. Despite what is frequently said, "Let the buyer beware" is the guiding philosophy of most manufacturers.

3. Competition ensures that consumers pay fair prices.

4. Manufacturers seldom shirk their responsibility to the consumer.

5. Most manufacturers are more interested in making profits than in serving consumers.

Product Quality

6. In general, manufacturers make an effort to design products to fit the needs of consumers.

7. Over the past several years, the quality of most products has not improved.

8. From the consumer's point of view, style changes are not as important as improvements in product quality.

9. Manufacturers do not deliberately design products which will wear out as quickly as possible.

10. Manufacturers often withhold important product improvements from the market in order to protect their own interests.

11. The wide variety of competing products makes intelligent buying decisions more difficult.

12. For most types of products, the differences among competing brands are insignificant and unimportant to consumers.

Advertising

13. Most product advertising is believable.

14. Manufacturers' advertisements are reliable sources of information about the quality and performance of products.

15. Generally, advertised products are more dependable than unadvertised ones.

16. Manufacturers' advertisements usually present a true picture of the products advertised.

Other Marketing Activities

17. Generally speaking, the products required by the average family are easily available at convenient places.

18. In general, the quality of repair and maintenance service provided by manufacturers and dealers is getting better.

19. Generally, product guarantees are backed by the manufacturers who make them.

20. The games and contests that manufacturers sponsor to encourage people to buy their products are usually dishonest.

21. The American marketing system operates more efficiently than those of other countries.

Consumer Responsibilities

22. The problems of consumers are less serious now than in the past.

23. The information needed to become a well-informed consumer is readily available to most people.

24. The average consumer is willing to pay higher prices for products that will cause less environmental pollution.

25. The problems of the consumer are relatively unimportant when compared with the other questions and issues faced by the average family.

26. Many of the mistakes that consumers make in buying products are the result of their own carelessness or ignorance.

27. Consumers often try to take advantage of manufacturers and dealers by making claims that are not justified.

28. For most types of products, consumers do not find it worthwhile to shop around to find the best buy.

29. Concern for the environment does not influence the product choices made by most consumers.

Consumerism

30. Manufacturers seem to be more sensitive to consumer complaints now than they were in the past.

31. When consumers have problems with products they have purchased, it is usually easy to get them corrected.

32. Most business firms make a sincere effort to adjust complaints fairly.

33. From the consumer's viewpoint, the procedures followed by most manufacturers in handling complaints and settling grievances of consumers are not satisfactory.

34. Consumerism or the consumer crusade has not been an important factor in changing business practices and procedures.

35. Ralph Nader and the work he has done on behalf of consumers has been an important force in changing the practices of business.

36. The exploitation of consumers by business firms deserves more attention than it receives.

Government Regulation

37. The government should test competing brands of products and make the results of these tests available to consumers.

38. The government should set minimum standards of quality for all products sold to consumers.

39. The government should exercise more responsibility for regulating the advertising, sales and marketing activities of manufacturers.

40. A Federal Department of Consumer Protection is not needed to protect and promote the interests of consumers.

Note: Though not specified by the authors, it would seem that items 2, 5, 7, 10, 11, 12, 20, 26, 27, 29, 33, 34, and 40 require reverse scoring to reflect a more positive attitude toward marketing and consumerism. Items scored on 5-point Likert-type scales from *strongly agree* to *strongly disagree*.

Consumer Attitudes Toward Marketplace Globalization

(Alden, Steenkamp, and Batra 2006)

Construct: Global consumption orientation (GCO) is defined as an attitude set composed of four sets of attitudinal responses regarding global diffusion and consumption choices. Four sets of attitudinal responses to global diffusion are hypothesized: 1) assimilation/homogenization/convergence, 2) separation/polarization, 3) hybridization/creolization/glocalization, and 4) lack of interest/marginalization (Alden et al. 2006, p. 228).

Description: The measure consists of 16 items with 4 items for each of four consumption-related domains: lifestyle, entertainment, furnishing, and clothing. Respondents are asked to check which statement they most agree with from each set of four items. All questions are framed as contrasts to a global consumption alternative. For each category, respondents select the statement that most closely matches their relative preference for a global alternative, a localized alternative, or a hybrid alternative or disinterest in either of the three alternative statements or the consumption category as a whole.

Development: The 16 statements were apparently developed by the authors to reflect relative preferences for global, hybrid, and local alternatives for the four consumption domains (e.g., clothing, entertainment). Other details regarding development were not offered in Alden et al. (2006). However, care was reported in back-translation of the survey for the varying countries.

Samples: The measures were tested on samples from three countries varying significantly on the five Hofstede (2001) dimensions. Respondents for each sample reported being responsible for at least half of the shopping for their households. The initial assessment of the measure was based on analysis of 370 adult South Korean women. A second U.S. sample, which consisted of 247 adult women, was obtained by mail survey from a professional sampling service. Empirical validation was obtained from a third sample comprising 419 Chinese respondents, using mall intercept procedures.

Validity: For the Korean sample, structure results from multiple correspondence analysis supported the hypothesized four dimensions. Analysis of the second U.S. sample revealed structure stability and predicted correlations with measures of cosmopolitanism ($r = 0.52$) and admiration of foreign lifestyles ($r = 0.62$). The structure was again substantiated using the third Chinese sample and across five consumption domains (with food added to the initial four domains).

The original South Korean sample ($n = 370$) was used to test a hypothesized nomological network involving a series of antecedents and outcomes of GCO. Briefly, and as predicted, GCO was correlated with the following antecedents: foreign mass media exposure, mass migration exposure, materialism, and susceptibility to normative influence. In turn, significant path coefficients were reported between GCO and two outcomes—attitudes toward global brands and consumer ethnocentrism.

Scores: A mean score and standard deviation of –0.01 and 1.00 are presented in Table 1 of Alden et al. 2006 (p. 234).

Source: Alden, Dana L., Jan-Benedict E. M. Steenkamp, and Rajeev Batra (2006), "Consumer Attitudes Toward Marketplace Globalization: Structure, Antecedents, and Consequences," *International Journal of Research in Marketing,* 23 (September), 227–39.

Reference: Hofstede, G. (2001), *Culture's Consequences,* 2nd edition, Thousand Oaks, CA: Sage.

Consumer Attitudes Toward Marketplace Globalization

(Alden, Steenkamp, and Batra 2006)

Global Consumption Orientation (GCO)

Lifestyle

1. ___ It is important for me to have a lifestyle that I think is similar to the lifestyle of consumers in many countries around the world rather than one that is more unique to or traditional in Korea.

2. ___ I try to blend a lifestyle that is considered unique to or traditional in Korea with one that I think is similar to the lifestyle of consumers in many countries around the world.

3. ___ It is more important for me to have a lifestyle that is unique to or traditional in Korea rather than one that I think is similar to the lifestyle of consumers in many countries around the world.

4. ___ To be honest, I do not find the typical lifestyle in Korea or the lifestyles of consumers in other countries very interesting.

Entertainment

1. ___ I enjoy entertainment that I think is popular in many countries around the world more than traditional forms of entertainment that are popular in my own country.

2. ___While I like entertainment that I think is popular in many countries around the world, I also enjoy traditional forms of entertainment that are popular in my own country.

3. ___ Entertainment that is traditional in my own country is more enjoyable to me than entertainment that I think is popular in many countries around the world.

4. ___ To be honest, most entertainment, whether from my own traditional culture or from other countries, is boring to me.

Furnishings

1. ___ I prefer to have home furnishings that I think are popular in many countries around the world rather than furnishings that are considered traditional in my own country.

2. ___ I do not mind mixing home furnishings that are traditional in my country with those that I think are popular in many countries around the world.

3. ___ I like to furnish my home with traditional items from my culture more than with furnishings that I think are popular in many countries around the world.

4. ___ I am not sure that I like my country's traditional furnishings or furnishings that I think are popular in many countries around the world.

Clothing

1. ___ I prefer to wear clothing that I think is popular in many countries around the world rather than clothing traditionally worn in my own country.

2. ___ It is not difficult for me to alternate or mix clothing choices so that I wear clothing that is traditionally popular in my own country as well as clothing that I think is popular in many countries around the world.

3. ___ I would rather wear clothing that is traditionally popular in my own country than clothing that I think is popular with consumers in many countries around the world.

4. ___ It doesn't matter whether you're talking about traditional clothing from my country or clothing that is preferred by consumers in other countries, I am not interested in clothing.

Notes: Respondents were asked to check in front of the statement that best described their feelings. For each domain, statements 1 through 4 indicate global, hybrid, local consumption preference, and disinterest, respectively.

Customer-Based Reputation of a Service Firm: CBR Scale

(Walsh and Beatty 2007)

Construct: Walsh and Beatty (2007, p. 129) define customer-based reputation (CBR) as "the customer's overall evaluation of a firm based on his or her reactions to the firm's goods, services, communication activities, interactions with the firm and/or its representatives or constituencies (such as employees, management, or other customers) and/or known corporate activities." As such, CBR is a customer judgment that may result from either or both personal interaction with a service firm, as well as from reputation-relevant information received about the firm.

Description: The final form of CBR scale is a five-dimensional (factor), 28-item measure. The five dimensions are Customer Orientation, Good Employer, Reliable and Financially Strong Company, Product and Service Quality, and Social and Environmental Responsibility. Items appear to be 7-point *strongly disagree* to *strongly agree* scales. Item scores can be summed and averaged within dimension to form dimension scores ranging from 1 to 7 or can be summed and averaged across all 28 items to form an overall CBR scale score ranging from 1 to 7.

Development: Using recommended scaling procedures, the authors conducted two studies, plus several item development/screening procedures to develop and validate the final form of the CBR scale. Depth interviews with students ($n = 30$) and nonstudents ($n = 18$) generated 40 initial CBR items. These 40 were added to 20 items from the Fombrun, Gardberg, and Sever (2000) corporate reputation scale for a total pool of 60 items. Several rounds of item judging by marketing academics (PhDs and doctoral students) and marketing managers reduced this pool to 39 items for the two studies. Using both exploratory (EFA) and confirmatory (CFA) factor analysis, the CBR 28-item, five-factor structure was derived.

Samples: Study 1, $n > 500$ customers of their current service providers for banking services, retailing, and fast-food restaurants; Study 2, $n = 698$ customers of their current service providers.

Validity: Numerous estimates of dimensionality, reliability, and validity were assessed. In both Studies 1 and 2, EFA and CFA were used to finalize the dimensionality and number of items in the CBR scale. CFA eventually showed that a five-factor (dimension), 28-item scale fit the data well. In Study 1, correlations among the dimensions ranged from 0.31 to 0.61 with evidence of discriminant validity among dimensions. Composite reliability for the dimensions ranged from 0.70 to 0.87, and average variance extracted estimates (AVE) ranged from 0.53 to 0.67, supporting the internal consistency of the scale. Predictive validity was supported by regressing a measure of overall reputation on the five dimensions. Beta coefficients for the five dimensions were all significant ($p < 0.05$), ranging from 0.22 to 0.68, explaining 62% of the variance in overall reputation.

In Study 2, the correlations among the five dimensions ranged from 0.30 to 0.61, again with evidence of discriminant validity. Coefficient alpha reliability estimates for the dimensions ranged from 0.80 to 0.93, and average variance extracted estimates ranged from 0.53 to 0.67, supporting the internal consistency of the scale. Predictive validity was again supported by regressing a measure of overall reputation on the five dimensions. Beta coefficients for the five dimensions were all significant ($p < 0.05$), ranging from 0.19 to 0.65, explaining 66% of the variance in overall reputation. Finally, nomological validity was supported by correlating the five CBR dimensions with customer satisfaction, loyalty, trust, and word-of-mouth for a firm. Seventeen of

twenty of these correlations were significant in the predicted direction, supporting CBR nomological validity.

In another study Walsh, Beatty, and Shiu (2009) developed a 15-item short-form version of the scale using a sample of U.K. adults ($n = 533$), a sample of German adults ($n = 401$), and samples from their original study (Walsh et al. 2007). Across numerous contexts (e.g., banking, retailing, and fast food), Walsh et al. (2009) show that a 15-item, five-dimension version (3 items per dimension) of their scale fit the data well. Coefficient alpha estimates across the five dimensions ranged from 0.63 to 0.84 across all samples. AVE ranged from 0.61 to 0.89 across dimensions and samples. Thus, the short-form CBR showed strong evidence of internal consistency. The short form also showed evidence of nomological validity using the U.K. and German samples of Walsh et al. (2009). Table 6 of Walsh et al. (2009, p. 929) shows that all five short-form dimensions of the CBR were positively correlated with measures of company customer loyalty (correlations ranging from 0.35 to 0.57), company trust (correlations ranging from 0.33 to 0.66), and company repatronage intentions (correlations ranging from 0.12 to 0.51). These estimates support the nomological validity of the short-form version of CBR.

Scores: Mean scores (SDs) for each dimension were reported for Walsh and Beatty (2007) Study 2 as follows:

Dimension	Mean	SD
Customer orientation	3.75	0.63
Good employer	3.66	0.58
Reliable and financially strong company	3.69	0.54
Product and service quality	3.70	0.53
Social and environmental responsibility	3.41	0.41

Source: Walsh, Gianfranco and Sharon E. Beatty (2007), "Customer-Based Corporate Reputation of a Service Firm: Scale Development and Validation," *Journal of the Academy of Marketing Science,* 35, 127–43.

References: Fombrun, C. J., N. A. Gardberg, and J. W. Sever (2000), "The Reputation Quotient: A Multi-Stakeholder Measure of Corporate Reputation," *Journal of Brand Management,* 7 (4), 241–55.

Walsh, Gianfranco, Sharon E. Beatty, and Edward M. K. Shiu (2009), "The Customer-Based Corporate Reputation Scale: Replication and Short-Form," *Journal of Business Research,* 62, 924–30.

Customer-Based Reputation of a Service Firm: CBR Scale

(Walsh and Beatty 2007)

Factor 1: Customer Orientation
1. Has employees who are concerned about customer needs
2. Has employees who treat customers courteously
3. Is concerned about its customers
4. Treats its customers fairly
5. Takes customer rights seriously
6. Seems to care about all of its customers regardless of how much money they spend with them
Factor 2: Good Employer
7. Looks like a good company to work for
8. Seems to treat its people well
9. Seems to have excellent leadership
10. Has management who seems to pay attention to the needs of its employees
11. Seems to have good employees
12. Seems to maintain high standards in the way that it treats people
13. Seems to be well-managed
Factor 3: Reliable and Financially Strong Company
14. Tends to outperform competitors
15. Seems to recognize and take advantage of market opportunities
16. Looks like it has strong prospects for future growth
17. Looks like it would be a good investment
18. Appears to make financially sound decisions
19. Is doing well financially
20. Seems to have a clear vision of its future
Factor 4: Product and Service Quality
21. Offers high quality products and services
22. Is a strong, reliable company
23. Stands behind the services that it offers
24. Develops innovative services
Factor 5: Social and Environmental Responsibility
25. Seems to make an effort to create new jobs
26. Would reduce its profits to ensure a clean environment
27. Seems to be environmentally responsible
28. Appears to support good causes

Notes: Items appear to be 7-point *strongly disagree* to *strongly agree* scales. Items are preceded with the following wording: "This corporation . . . ."

The 15-item short-form version of the scale includes items 1, 2, 3, 7, 8, 9, 14, 15, 16, 21, 22, 24, 25, 26, and 27.

Experiential Value Scale: EVS

(Mathwick, Malhotra, and Rigdon 2001)

Construct: Experiential value is conceptualized as a hierarchical structure including four dimensions: consumer return on investment, service excellence, playfulness, and aesthetic appeal (Mathwick et al. 2001, p. 41). The experiential value scale (EVS) reflects the benefits derived from perceptions related to the four dimensions. The four dimensions represent a typology of experiential value formed by crossing intrinsic/extrinsic value with active/reactive value (Holbrook 1994). Aesthetics is reflected in two subdimensions—visual appeal and entertainment. Playfulness is reflected by two subdimensions—escapism and enjoyment. Likewise, customer return on investment is reflected by two subdimensions—efficiency and economic value.

Description: The scale is comprised of 19 Likert items. Two items reflect the higher-order factor—service excellence. The remaining 17 items address the six first-order factors—visual appeal, entertainment, escapism, enjoyment, efficiency, and economic value. See Figure 2 in Mathwick et al. (2001, p. 43). Five of the seven subdimensions are assessed using three reflective indicators each.

Development: A large pool of items was generated using a mix of industry sources, various samples, and a review of existing measures. For example, samples of home shoppers and subject matter experts were employed to refine the set of items. Faculty and doctoral students provided additional comments. Another sample of home shoppers was surveyed. Data were then collected by mail from 515 members of a national sample of catalog and Internet customers from a direct retailer specializing in women's apparel and housewares (Mathwick et al. 2001, p. 46). The sample comprised 302 catalog and 213 Internet shoppers. The hierarchical structure, reliability, and validity of the scale were examined in both contexts.

The EVS was first calibrated using the Internet shoppers and then cross-validated using the catalog data (Mathwick et al. 2001). Coefficient alpha estimates exceeded 0.70; construct reliability estimates were acceptable based on the item loadings. The strong factor loadings were provided as evidence of convergent validity. Tests of correlations surrounding the factor loadings were offered as evidence of discriminant validity (Anderson and Gerbing 1988).

Samples: First, ten home shoppers were used to assign items to the first-order dimensions. Eleven consumers experienced with home shopping services completed a sort task to further reduce the number of items. Pretest administrations were then conducted using 5 marketing colleagues and 44 self-described home shoppers. Two samples of 302 and 213 catalog and Internet shoppers, respectively, were then used in subsequent analyses.

Validity: Evidence of nomological validity was presented from a series of tests in which the higher-order dimensions were used as predictors of retail preference and patronage intent. The structural equation models for both data sets demonstrated acceptable model fit and supported the ability of the factors to predict outcomes as intended.

Scores: Means and standard deviations for the items or factors were not reported.

Source: Mathwick, Charla, Naresh Malhotra, and Edward Rigdon (2001), "Experiential Value: Conceptualization, Measurement, and Application in the Catalog and Internet Shopping Environment," *Journal of Retailing,* 77 (Spring), 39–56.

References: Anderson, James C. and David W. Gerbing (1988), "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach," *Psychological Bulletin,* 103 (3), 411–23.

Holbrook, Morris B. (1994), "The Nature of Customer Value: An Axiology of Services in the Consumption Experience," in *Service Quality: New Directions in Theory and Practice,* eds. Roland T. Rust and Richard L. Oliver, Newbury Park, CA: Sage, pp. 31–57.

Experiential Value Scale: EVS

(Mathwick, Malhotra, and Rigdon 2001)

Visual Appeal

Y1. The way XYZ displays its products is attractive.

Y2. XYZ's Internet site is aesthetically appealing.

Y3. I like the way XYZ's Internet site looks.

Entertainment Value

Y4. I think XYZ's Internet site is very entertaining.

Y5. The enthusiasm of XYZ's Internet site is catching, it picks me up.

Y6. XYZ doesn't just sell products—it entertains me.

Escapism

Y7. Shopping from XYZ's Internet site "gets me away from it all."

Y8. Shopping from XYZ makes me feel like I am in another world.

Y9. I get so involved when I shop from XYZ that I forget everything else.

Intrinsic Enjoyment

Y10. I enjoy shopping from XYZ's Internet site for its own sake, not just for the items I may have purchased.

Y11. I shop from XYZ's Internet site for the pure enjoyment of it.

Efficiency

Y12. Shopping from XYZ is an efficient way to manage my time.

Y13. Shopping from XYZ's Internet site makes my life easier.

Y14. Shopping from XYZ's Internet site fits with my schedule.

Economic Value

Y15. XYZ products are a good economic value.

Y16. Overall, I am happy with XYZ's prices.

Y17. The prices of the product(s) I purchased from XYZ's Internet site are too high, given the quality of the merchandise.*

Service Excellence

X1. When I think of XYZ, I think of excellence.

X2. I think of XYZ as an expert in the merchandise it offers.

Notes: Items are scored on a 7-point *strongly disagree* to *strongly agree* scale.

*Item requires reverse scoring.

Sentiment: The Index of Consumer Sentiment Toward Marketing

(Gaski and Etzel 1986)

Construct: This measure represents an index of consumer sentiment toward marketing practices. The measure is designed to provide a continuing "barometer of how marketing is doing in the eyes of the consumer public" (Gaski and Etzel 1986, p. 72). The index is offered for several reasons: (a) It may sensitize marketers to consumers' perceptions, (b) it would serve to identify the nature of public relations tasks facing marketing, (c) it should assist in gauging whatever progress is or is not being made, and (d) it may demonstrate marketer concern for public opinion. The measure is designed to reflect composite opinion about four aspects of marketing corresponding roughly to the four elements of the marketing mix: (a) product quality, (b) the prices of products, (c) advertising, and (d) retailing or selling.

Description: Each of the four factors is represented by five Likert-type agree–disagree items which range from –2 to +2. The scale positions are labeled as follows: (1) *agree strongly,* (2) *agree somewhat,* (3) *neither agree nor disagree,* (4) *disagree somewhat,* and (5) *disagree strongly.* After recoding the items such that higher scores reflect more positive opinions, items from each factor are summed and then weighted from 1 (*not at all important*) to 5 (*extremely important*). The range of the index is –200 to +200. The index is computed as the sum[w(j) x sumx(ij)] where j represents one of the four categories and w(j) represents the weight for that category. Thus, though multidimensional, an overall index is derived.

Development: An initial pool of items was developed by the authors in consultation with Market Facts, Inc. personnel. Two items from each factor with low item-to-total correlations were deleted. Data from 50 pretest subjects were used in these purification efforts. The scale was further tested via factor analysis, coefficient alpha, and validity. (Pretest versions of the scale are reported in Gaski and Etzel 1985.)

Samples: The original pool of items (see Gaski and Etzel 1986) was purified using a pretest sample of 50 subjects from the Consumer Mail Panel of Market Facts, Inc. Data are now being collected annually from a sample of 2,000 members of the Market Facts Panel (*n* = 200,000). The first survey reported in Gaski and Etzel (1986) involved responses from 1,428 individuals to the initial mailing. The panel is designed to reflect U.S. Census data in terms of geographic region, annual income, population density, age, sex, and family size.

Validity: A series of tests was performed in efforts to examine the validity of the index using the responses to the first panel mailing (*n* = 1,428). Estimates of internal consistency reliability ranged from 0.76 to 0.82. All within-factor item-to-total correlations exceeded 0.48. Evidence of discriminant validity was provided by comparisons of the reliability estimates with the factor correlations. The results from principal axis factor analysis with oblique rotation revealed a factor structure consistent with the item content for each of the four factors. Significant evidence of convergent validation was provided by a series of correlations of the Consumer Sentiment Index with overall global impressions (*r* = 0.63), satisfaction (*r* = 0.73), and problems (*r* = 0.63). (These items are also shown in the Appendix in Gaski and Etzel 1986.)

Scores: The mean consumer sentiment score for the first national sample was –14.85 (i.e., slightly in the unfavorable range). The mean attitude score was –12.36 for women and –17.71 for men, $t = 2.08$, $p < 0.05$.

Source: Gaski, John E. and Michael J. Etzel (1986), "The Index of Consumer Sentiment Toward Marketing," *Journal of Marketing,* 50, 71–81.

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Reference: Gaski, John F. and Michael J. Etzel (1985), "A Proposal for a Global, Longitudinal Measures of National Consumer Sentiment Toward Marketing Practice," in *Advances in Consumer Research,* Vol. 12, eds. Elizabeth C. Hirschman and Morris B. Holbrook, Provo, UT: Association for Consumer Research, pp. 65–70.

Sentiment: The Index of Consumer Sentiment Toward Marketing

(Gaski and Etzel 1986)

Product Scale

1. I am satisfied with most of the products I buy.

2. Most products I buy wear out too quickly.*

3. Too many of the products I buy are defective in some way.*

4. The companies that make products I buy don't care enough about how well they perform.*

5. The quality of products I buy has consistently improved over the years.

Advertising Scale

1. Most advertising is very annoying.*

2. Most advertising makes false claims.*

3. If most advertising were eliminated, consumers would be better off.*

4. I enjoy most ads.

5. Most advertising is intended to deceive rather than inform.*

Price Scale

1. Most products I buy are overpriced.*

2. Businesses could charge lower prices and still be profitable.*

3. Most prices are reasonable given the high cost of doing business.

4. Most prices are fair.

5. In general, I am satisfied with the prices I pay.

Retailing/Selling Scale

1. Most retail stores serve their customers well.

2. Because of the way retailers treat me, most of my shopping is unpleasant.*

3. I find most retail salespeople to be very helpful.

4. When I need assistance in a store, I am usually *not* able to get it.*

5. Most retailers provide adequate service.

Note: Items scored on 5-point Likert-type scales from *agree strongly* to *disagree strongly.* * denotes items that require reverse coding to reflect a more favorable sentiment toward marketing practices.

Service Quality: SERVQUAL

(Parasuraman, Zeithaml, and Berry 1986, 1988)

Construct: The construct of quality as measured by this scale involves perceived quality (as opposed to objective quality). Perceived quality is the consumer's judgment of an entity's overall excellence or superiority, similar to an overall attitude. Perceived service quality is defined as the degree and direction of discrepancy between a consumer's perceptions and expectations (Parasuraman et al. 1986, 1988). Quality is distinguished from satisfaction in that the latter is assumed to involve specific transactions. As part of the conceptualization, expectations are viewed as desires or wants of consumers (not predictions of what will be provided).

Description: The scale is composed of two matched sets of 22 items, each describing expectations for a particular service category and then perceptions of a particular service provider. Both sets of items are operationalized using 7-place bipolar scales labeled *Strongly Agree* (7) to *Strongly Disagree* (1). Approximately half the items are worded negatively, with negative wording indicated by (–) below. Scores for the total scale and each factor range from –6 to +6, with positive scores reflecting perceptions exceeding expectations. Difference scores for the 1-to-7 scales are computed and then averaged over the number of items either in the total scale or for each subscale. Furthermore, five factors constitute the two subscales: tangibility, reliability, responsiveness, assurance, and empathy.

The ensuing scale was developed to contain items appropriate for the multiple service categories used in the construction of the present scale. "Therefore, while SERVQUAL can be used in its present form to assess and compare quality across a wide variety of firms, appropriate adaptation of the instrument may be desirable when only a single service is investigated" (Parasuraman et al. 1988, pp. 27–8).

Development: Ninety-seven items were originally developed to represent 10 dimensions of service quality. Each was cast as an expectation and a perception statement. Responses ($n = 200$) were pooled across five service categories; difference scores were then used as input into "within-dimension" coefficient alpha analyses. These tests resulted in a reduced set of 54 items after deleting those statements with low corrected item-to-total correlations. Oblique factor analysis resulted in further reductions in the number of items and a revision in the dimensionality of the anticipated scale (i.e., 34 items reflecting seven dimensions). Analysis of this initial data then revealed a seven-factor measure comprising 34 items.

Data from the second developmental sample were used to reevaluate the dimensionality and reliability of the 34-item measure. Analysis of the factor loadings (both the pattern and the loading values) in addition to examination of corrected item-to-total correlations resulted in further revisions to the scale. Specifically, two pairs of factors were combined, and several additional items were deleted. These analyses resulted in the final 22-item (actually pairs of items), five-factor scale as described above. Estimates of internal consistency and validity were gathered.

Samples: Initial purification was based on the responses of a quota sample of 200 adults surveyed by a market research firm in a large southwestern metropolitan mall. Respondents were all above 25 years of age and were equally divided among males and females. Forty recent users (i.e., within 3 months) of five service categories were surveyed. The reduced set of 34 items was reexamined using the responses of 200 recent users of four service providers ($n = 800$).

Validity: The estimates of internal consistency reliability for both the factors and the total scale for the four service companies in the second study were consistently high. The total scale estimates of internal consistency reliability for a linear combination ranged from 0.87 to 0.90. Factor analysis of the second phase data and reanalysis of the first wave

data supported the dimensionality and expected item loadings for both data sets. Additional evidence of the validity of the scale was provided by mean difference tests across subject groups formed by overall quality ratings (collected in Phase 2) for the individual firms. As expected, higher average SERVQUAL scores were obtained for subjects providing more positive responses to the overall rating. Relationships with questions about "recommendations to friends" and "reports of problems" also provided some evidence of the scale's validity. Further supportive evidence was provided by the ability of the subscales to predict overall quality judgments (i.e., R^2 estimates ranged from 0.27 to 0.52).

Scores: A series of mean scores is provided in Table 5 of Parasuraman et al. (1988) for the second sample. Across the four categories of services considered, the means are generally slightly negative, suggesting that service expectations generally exceed consumer perceptions. As an example, for the combined scale and across three categories of banking firms (i.e., excellent, good, and fair/poor), the corresponding mean scores were –0.22, –0.92, and –1.61, respectively.

Source: Parasuraman, A., Valerie Zeithaml, and Leonard L. Berry (1986), *SERVQUAL: A Multiple-Item Scale for Measuring Customer Perceptions of Service Quality* (Report No. 86–108). Cambridge, MA: Marketing Science Institute.

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Parasuraman, A., Valerie A. Zeithaml, and Leonard L. Berry (1988), "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality," *Journal of Retailing,* 64, 12–40.

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Other evidence: Carmen (1990) tested SERVQUAL in four different service settings, including a business school placement center, a tire store, a dental school patient clinic, and an acute care hospital. The results provide corroborating evidence for the reliability of the scale. Some evidence regarding the need to vary item wording across settings and several questions regarding the uniqueness or structure of the original 10 dimensions were raised.

The overall fit statistics from a confirmatory factor analysis study by Finn and Lamb (1991) using the responses from a telephone survey involving retail shopping experiences did not provide support for the multidimensional (i.e., five correlated factors) measurement model implied by the SERVQUAL scale. However, individual factor reliabilities ranged from 0.59 to 0.83.

Cronin and Taylor (1992) found support for a unidimensional measure of a subscale of the SERVQUAL scale they called "SERVPERF." Essentially, SERVPERF represents the 22 items of the PERCEPTIONS aspect of SERVQUAL and can be used as a measure of service quality. (See items listed on the following pages and the Appendix to SERVQUAL.)

Other sources: Carmen, James M. (1990), "Consumer Perceptions of Service Quality: An Assessment of the SERVQUAL Dimensions," *Journal of Retailing,* 66, 33–55.

Cronin, J. Joseph, Jr., and Steven A. Taylor (1992), "Measuring Service Quality: A Reexamination and Extension," *Journal of Marketing,* 56, 55–68.

Finn, David W. and Charles W. Lamb (1991), "An Evaluation of the SERVQUAL Scales in a Retail Setting," in *Advances in Consumer Research,* Vol. 18, eds. Rebecca H. Holman and Michael R. Solomon, Provo, UT: Association for Consumer Research, pp. 483–90.

Service Quality: SERVQUAL

(Parasuraman, Zeithaml, and Berry 1986, 1988)

Expectations

Directions: This survey deals with your opinions of _____ services. Please show the extent to which you think firms offering _____ services should possess the features described by each statement. Do this by picking one of the seven numbers next to each statement. If you strongly agree that these firms should possess a feature, circle the number 7. If you strongly disagree that these firms should possess a feature, circle 1. If your feelings are not strong, circle one of the numbers in the middle. There are no right or wrong answers. All we are interested in is a number that best shows your expectations about firms offering _____ services.

E1. They should have up-to-date equipment.

E2. Their physical facilities should be visually appealing.

E3. Their employees should be well dressed and appear neat.

E4. The appearance of the physical facilities of these firms should be in keeping with the type of services provided.

E5. When these firms promise to do something by a certain time, they should do so.

E6. When customers have problems, these firms should be sympathetic and reassuring.

E7. These firms should be dependable.

E8. They should provide their services at the time they promise to do so.

E9. They should keep their records accurately.

E10. They shouldn't be expected to tell customers exactly when services will be performed. (−)

E11. It is not realistic for customers to expect prompt service from employees of these firms. (−)

E12. Their employees don't always have to be willing to help customers. (−)

E13. It is okay if they are too busy to respond to customer requests promptly. (−)

E14. Customers should be able to trust employees of these firms.

E15. Customers should be able to feel safe in their transactions with these firms' employees.

E16. Their employees should be polite.

E17. Their employees should get adequate support from these firms to do their jobs well.

E18. These firms should not be expected to give customers individual attention. (−)

E19. Employees of these firms cannot be expected to give customers personal attention. (−)

E20. It is unrealistic to expect employees to know what the needs of their customers are. (−)

E21. It is unrealistic to expect these firms to have their customers' best interests at heart. (−)

E22. They shouldn't be expected to have operating hours convenient to all their customers. (−)

Notes: The items are distributed among the five dimensions of Tangibility (items E1 to E4), Reliability (E5 to E9), Responsiveness (items E10 to E13), Assurance (items E14 to E17), and Empathy (items E18 to E22). (−) denotes reverse-coded items.

Perceptions

Directions: The following set of statements relates to your feelings about XYZ. For each statement, please show the extent to which you believe XYZ has the feature described by the statement. Once again, circling a 7 means that you strongly agree that XYZ has that feature, and circling a 1 means that you strongly disagree. You may circle any of the numbers in the middle that show how strong your feelings are. There are no right or wrong answers. All we are interested in is a number that best shows your perceptions about XYZ.

P1. XYZ has up-to-date equipment.

P2. XYZ's physical facilities are visually appealing.

P3. XYZ's employees are well dressed and appear neat.

P4. The appearance of the physical facilities of XYZ is in keeping with the type of services provided.

P5. When XYZ promises to do something by a certain time, it does so.

P6. When you have problems, XYZ is sympathetic and reassuring.

P7. XYZ is dependable.

P8. XYZ provides its services at the time it promises to do so.

P9. XYZ keeps its records accurately.

P10. XYZ does not tell customers exactly when services will be performed. (−)

P11. You do not receive prompt service from XYZ's employees. (−)

P12. Employees of XYZ are not always willing to help customers.

P13. Employees of XYZ are too busy to respond to customer requests promptly. (−)

P14. You can trust the employees of XYZ.

P15. You feel safe in your transactions with XYZ's employees.

P16. Employees of XYZ are polite.

P17. Employees get adequate support from XYZ to do their jobs well.

P18. XYZ does not give you individual attention. (−)

P19. Employees of XYZ do not give you personal attention. (−)

P20. Employees of XYZ do not know what your needs are. (−)

P21. XYZ does not have your best interests at heart. (−)

P22. XYZ does not have operating hours convenient to all their customers. (−)

Notes: The items are distributed among the five dimensions of Tangibility (items P1 to P4), Reliability (P5 to P9), Responsiveness (items P10 to P13), Assurance (P14 to P17), and Empathy (items P18 to P22). The 22 PERCEPTION items constitute SERVPERF (Cronin and Taylor 1992). (−) denotes reverse-coded items. Items scored on 7-point scales from *strongly agree* to *strongly disagree.*

Service Quality of Retail Stores

(Dabholkar, Thorpe, and Rentz 1996)

Construct: This retail service quality scale development effort represents another extension of the original SERVQUAL measure (Parasuraman, Zeithaml, and Berry 1988). Initially, retail service quality is proposed as a hierarchical factor structure comprising five dimensions (physical aspects, reliability, personal interaction, problem solving, and policy), with three of the five dimensions having two subdimensions (Dabholkar et al. 1996, p. 8). The scale is designed for use in studying retail businesses that offer a mix of goods and services, for assessing levels of service quality, and for detecting needed changes in services provided.

Description: The scale consists of 28 items and five dimensions: physical aspects (6 items), reliability (5), personal interaction (9), problem solving (3), and policy (5). The first three dimensions have subdimensions: physical aspects (i.e., appearance and convenience), reliability (i.e., promises and doing it right), and personal interactions (i.e., inspiring confidence and courteousness/helpfulness). The items corresponding to each subdimension are shown below. Both expectations and perceptions are assessed using 5-place *strongly disagree* (1) to *strongly agree* (5) response formats. To create expectation items, the statements substitute "excellent retail stores" for "this store."

Development: Seventeen of the original 22 SERVQUAL items were selected. Based on a review of the extant literature and the authors' own qualitative research, an additional 11 items were developed. Justification for the assignment of items to dimensions and subdimensions is described by Dabholkar et al. (1996, p. 8). The subsequent analyses used to validate the scale's structure are based on the perceptions measures only.

Confirmatory factor analysis with partial aggregation (i.e., individual indicators are randomly combined into composite indicators) was used to test the proposed scale structure. Adequate fit was obtained using both samples for the subdimension models, as well as the basic five-dimension models. Details of these analyses are presented by Dabholkar et al. (1996). Support was provided for both the basic dimension model and a second-order model. Construct reliability for the total scale was 0.74. Reliability estimates for the dimensions and subdimensions ranged from 0.81 to 0.92. Some evidence of discriminant validity was offered based on tests of the covariation between the generally highly correlated dimensions.

Samples: An initial sample of 227 retail department store patrons was obtained using university student interviewers. Questionnaires were self-administered and reflected opinions about the store being patronized. Opinions were obtained for seven stores from two department store chains. Of the respondents, 197 were female. A cross-validation sample of 149 patrons from two stores of one of the chains was also surveyed in-store.

Validity: Evidence of predictive validity was offered by correlations ranging from 0.51 to 0.70 between the overall scale and its components and measures of intentions to shop and intentions to recommend.

Scores: Item means and standard deviations are depicted in the Appendix (Dabholkar et al. 1996, pp. 14–15). All means were above 4.12 on the 5-place scales.

Source: Dabholkar, Pratibha A., Dayle I. Thorpe, and Joseph O. Rentz (1996), "A Measure of Service Quality for Retail Stores: Scale Development and Validation," *Journal of the Academy of Marketing Science*, 24 (1), 3–16.

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Reference: Parasuraman, A., Valerie A. Zeithaml, and Leonard L. Berry (1988), "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality," *Journal of Retailing*, 64, 12–40.

Service Quality of Retail Stores

(Dabholkar, Thorpe, and Rentz 1996)

Physical Aspects

P1. This store has modern-looking equipment and fixtures.

P2. The physical facilities at this store are visually appealing.

P3. Materials associated with this store's service (such as shopping bags, catalogs, or statements) are visually appealing.

P4. This store has clean, attractive, and convenient public areas (restrooms, fitting rooms).

P5. The store layout at this store makes it easy for customers to find what they need.

P6. The store layout at this store makes it easy for customers to move around in the store.

Reliability

P7. When this store promises to do something by a certain time, it will do so.

P8. This store provides its services at the time it promises to do so.

P9. This store performs the service right the first time.

P10. This store has merchandise available when the customers want it.

P11. This store insists on error-free sales transactions and records.

Personal Interaction

P12. Employees in this store have the knowledge to answer customers' questions.

P13. The behavior of employees in this store instill [*sic*] confidence in customers.

P14. Customers feel safe in their transactions with this store.

P15. Employees in this store give prompt service to customers.

P16. Employees in this store tell customers exactly when services will be performed.

P17. Employees in this store are never too busy to respond to customers' requests.

P18. This store gives customers individual attention.

P19. Employees in this store are consistently courteous with customers.

P20. Employees in this store treat customers courteously on the telephone.

Problem Solving

P21. This store willingly handles returns and exchanges.

P22. When a customer has a problem, this store shows a sincere interest in solving it.

P23. Employees in this store are able to handle customer complaints directly and immediately.

Policy

P24. This store offers high quality merchandise.

P25. This store provides plenty of convenient parking for customers.

P26. This store has operating hours convenient to all their customers.

P27. This store accepts most major credit cards.

P28. This store offers its own credit card.

Notes: Items are distributed across subdimensions as follows: P1-P4, Appearance; P5-P6, Convenience; P7-P8, Promises; P9-P11, Doing It Right; P12-P14, Inspiring Confidence; and P15-P2O, Courteousness/Helpfulness. Items scored on 5-point scales from *strongly disagree* to *strongly agree.*

Electronic Service Quality: E-S-QUAL

(Parasuraman, Zeithaml, and Malhotra 2005)

Construct: The proposed construct involves the service quality delivered by websites on which consumers shop. Electronic service quality (E-S-Q) is defined broadly to encompass all phases of a customer's interactions with a website—the extent to which a website facilitates efficient and effective shopping, purchasing, and delivery (Parasuraman et al. 2005, p. 217). Two scales are developed: 1) a 22-item, four dimensional E-S-QUAL scale and 2) an 11-item, three-dimensional E-RecS-Qual scale. The E-S-QUAL consists of four factors: efficiency, fulfillment, system availability, and privacy; E-RecS-Qual contains three dimensions: responsiveness, compensation, and contact. The latter measure is appropriate for use with customers who have had nonroutine site experiences.

Description: Two scales are proposed: 1) a 22-item, four-dimensional E-S-QUAL scale and 2) an 11-item, three-dimensional E-RecS-Qual scale. Again, the E-S-QUAL consists of four factors: efficiency (eight items), fulfillment (seven items), system availability (four items), and privacy (three items). E-RecS-QUAL contains three dimensions: responsiveness (five items), compensation (three items), and contact (three items). Again, the second measure is appropriate for customers who have had nonroutine encounters with the sites. The items were assessed with 5-point scales bounded by 1 (*strongly disagree*) to 5 (*strongly agree*).

Development: The development and validation work involving the proposed measures is extensive. As summarized in Figure 1 (Parasuraman et al. 2005, p. 215), an initial set of 121 items was developed to represent 11 e-service quality dimensions identified from the literature. Using a sample of 549 respondents, the two measures were developed from a series of analyses, including estimates of coefficient alpha, examination of corrected item-to-total correlations, and exploratory factor analyses. The coefficient alpha estimates ranged from 0.83 to 0.94 and from 0.77 to 0.88 for the final versions of E-S-QUAL and the E-RecS-QUAL measure dimensions, respectively. The corresponding intercorrelations among the factors were from 0.67 to 0.83 and 0.68 to 0.73. Overall confirmatory factor analyses supported the model fit for both measures, as well as item and factor reliabilities for both the 22-item set and the 11-item set for E-S-QUAL and the E-RecS-QUAL measures.

Samples: The initial developmental stages were based on the responses of 549 Internet users (i.e., individuals with at least 12 online shopping experiences in the past 3 months) to an online survey regarding a variety of different product sites. Focal sites were selected to differ in terms of favorability to the respondent. The final measures were reexamined using two separate online surveys from samples of customers of Amazon (*n* = 653, 74% female) and Wal-Mart (*n* = 205, 78% female).

Validity: Additional evidence of validity was also offered. Specifically, the two measures were reexamined using the data from the Amazon and Wal-Mart samples. As reported by Parasuraman et al. (2005), the coefficient alpha estimates based on both samples and for all seven factor measures exceeded 0.70. Confirmatory factor analyses using the two follow-up samples again supported measurement structure and validity. Structural equation modeling provided evidence of nomological validity in a series of tests involving relationships between the proposed E-S-QUAL measures and measures of perceived value and loyalty intentions. The relative importance of the E-S-QUAL dimensions was also investigated (Parasuraman et al. 2005, pp. 226–29). Briefly, and using factor scores

as predictors for the four E-S-QUAL dimensions, strong and significant relationships were reported between the four factors (i.e., efficiency, fulfillment, system availability, and privacy) and measures regarding perceptions of quality, perceived value, and loyalty.

Scores: Means and standard deviations were not reported. However, and as explained in the validity notes above, the relative importance of the various factors were examined.

Source: Parasuraman, A., Valerie A. Zeithaml, and Naresh Malhotra (2005), "E-S-QUAL: A Multiple-Item Scale for Assessing Electronic Service Quality," *Journal of Service Research,* 7 (February), 213–33.

Electronic Service Quality: E-S-QUAL

(Parasuraman, Zeithaml, and Malhotra 2005)

Efficiency (EFF)

1. This site makes it easy to find what I need.

2. It makes it easy to get anywhere on the site.

3. It enables me to complete a transaction quickly.

4. Information at this site is well organized.

5. It loads its pages fast.

6. This site is simple to use.

7. This site enables me to get on to it quickly.

8. This site is well organized.

System Availability (SYS)

1. This site is always available for business.

2. This site launches and runs right away.

3. This site does not crash.

4. Pages at this site do not freeze after I enter my order information.

Fulfillment (FUL)

1. It delivers orders when promised.

2. This site makes items available for delivery within a suitable time frame.

3. It quickly delivers what I order.

4. It sends out the items ordered.

5. It has in stock the items the company claims to have.

6. It is truthful about its offerings.

7. It makes accurate promises about delivery of products.

Privacy (PRI)

1. It protects information about my web-shopping behavior.

2. It does not share my personal information with other sites.

3. This site protects information about my credit card.

Notes: Respondents are instructed to rate a website's performance on each item using a 5-point scale, where 1 = *strongly disagree* and 5 = *strongly agree*.

The eTail Quality Scale: eTailQ

(Wolfinbarger and Gilly 2003)

Construct: The concept of eTail quality assesses customer judgments of the online shopping experience that are strongly predictive of customer satisfaction, loyalty, and attitude toward the website. ETail quality has four dimensions as follows (Wolfinbarger and Gilly 2003, p. 193): 1) *Fulfillment/reliability* is (a) the accurate display and description of a product so that what customers receive is what they thought they ordered and (b) delivery of the right product within the time frame promised; 2) *Website design* includes all elements of the consumer's experience at the website (except for customer service), including navigation, information search, order processing, appropriate personalization, and product selection; 3) *Customer service* is responsive, helpful, willing service that responds to customer inquiries quickly; and 4) *Security/privacy* is security of credit card payments and privacy of shared information.

Description: The eTailQ is a four-factor (dimension), 14-item scale. Items are scored on 7-point *strongly disagree* to *strongly agree* scales. Item scores can be summed and then averaged within dimension to form dimension scores ranging from 1 to 7. The authors also note the four dimensions can be modeled as four separate but correlated first-order factors or can be modeled as first-order factors of a second-order construct (Wolfinbarger and Gilly 2003, pp. 192–93).

Development: The authors conducted three studies to develop and validate the eTailQ scale. Study 1 used nine focus groups (64 online consumers) to derive the possible content and dimensions of the online shopping quality construct. A pool of 397 items (which included 22 items from the SERVQUAL scale; Parasuraman et al. 1988) were drafted from the focus group transcripts. The authors trimmed this pool to 100 items and then, in Study 2, had 90 students categorize the 100 items based on the similarity of the theme (dimension) of the items tapped. Cluster analyses were further used to trim this pool to 40 items covering the themes (dimensions) of *fulfillment/reliability, website design, customer service,* and s*ecurity/privacy*. Study 3 finalized and validated the eTailQ scale.

Samples: Study 1, nine focus groups encompassing 64 online shoppers; Study 2, *n* = 90 undergraduate and graduate students; Study 3, *n* = 1,013 online shoppers (members of the Harris Poll Online Panel).

Validity: Using an iterative procedure, both exploratory (EFA) and confirmatory (CFA) factor analyses were used to derive the final form of the eTailQ scale in Study 3.

The authors also concluded that a four-factor (dimension) model fit the data well and that these four factors can be modeled as four separate but correlated first-order factors, or modeled as first-order factors of a second-order construct (Wolfinbarger and Gilly 2003, pp. 192–93; see also Figure 1, p. 193). Squared correlations among the four dimensions ranged from 0.37 to 0.62, and all these correlations showed evidence of discriminant validity for the eTailQ dimensions. Coefficient alpha estimates ranged from 0.79 to 0.88 across the dimensions for the Study 3 sample as a whole, and average variance extracted estimates ranged from 0.50 to 0.72, supporting the internal consistency of the eTailQ dimensions. Subsample estimates in which shoppers were classified into six different groups (i.e., browsers, goal-oriented, frequent buyers, books/music, auctions, and eTail) showed similar internal consistency results.

As evidence of nomological validity, the four eTailQ dimensions were related to respondent's judgment of the overall quality of the e-tailer, as well as satisfaction, loyalty, and attitude toward the website. Table 7 (Wolfinbarger and Gilly 2003, p. 194) shows

that for the sample overall and the six different shopper groups, the eTailQ dimensions explained between 63% and 81% of the variance in overall quality. Table 8 (p. 195) shows that all four eTailQ dimensions were predictive of overall quality (beta coefficients ranging from 0.04 to 0.41); that website design (beta = 0.30) and fulfillment/reliability (beta = 0.45) were predictive of satisfaction; that website design (beta = 0.46), fulfillment/ reliability (beta = 0.15), and customer service (beta = 0.15) were predictive of loyalty; and that website design (beta = 0.50), fulfillment/reliability (beta = 0.18), and customer service (beta = 0.11) were predictive of attitude toward the website. In sum, nomological validity was demonstrated.

Scores: Item mean scores for Study 3 are shown in Table 4 (Wolfinbarger and Gilly 2003, p. 191), ranging from 5.7 to 6.6 for the overall sample.

Source: Wolfinbarger, Mary and Mary C. Gilly (2003), "eTailQ: Dimensionalizing, Measuring, and Predicting eTail Quality," *Journal of Retailing,* 79, 183–98

Reference: Parasuraman, A., Valarie A. Zeithaml, and Leonard L. Berry (1988), "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality," *Journal of Retailing,* 64, 12–40.

The eTail Quality Scale: eTailQ

(Wolfinbarger and Gilly 2003)

Website Design

1. The website provides in-depth information.

2. The site doesn't waste my time.

3. It is quick and easy to complete a transaction at this website.

4. The level of personalization at this site is about right, not too much or too little.

5. This website has good selection.

Fulfillment/Reliability

6. The product that came was represented accurately by the website.

7. You get what you ordered from this site.

8. The product is delivered by the time promised by the company.

Security/Privacy

9. I feel like my privacy is protected at this site.

10. I feel safe in my transactions with this website.

11. The website has adequate security features.

Customer Service

12. The company is willing and ready to respond to customer needs.

13. When you have a problem, the website shows a sincere interest in solving it.

14. Inquiries are answered promptly.

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

Service Convenience: SERVCON

(Seiders et al. 2007)

Construct: Seiders et al. (2007, p. 145) view service convenience as a second-order, formative construct composed of five first-order constructs (or dimensions) that are salient at different stages of the consumption process and reflect different types of consumer effort. They propose that customers perceive time and effort costs associated with service purchase or use decisions (decision convenience), initiating service delivery (access convenience), experiencing the core benefits of the offering (benefit convenience), finalizing the transaction (transaction convenience), and reestablishing subsequent contact with the firm (post benefit convenience) as distinct aspects of service convenience.

Description: As stated above, service convenience is a second-order, formative construct composed of five first-order dimensions. Seventeen items, assessed with 5-point Likert scales ranging from *strongly disagree* to *strongly agree*, are used for scale scoring. Item scores can be summed within dimension to form dimension scores, and a five-item short SERVCON scale measure can also be derived (see items below).

Development: Using recommended scaling procedures for formative constructs (Diamantopoulos and Winklhofer 2001), the authors first conducted exploratory interviews with undergraduate and graduate students to help clarify the content domain of SERVCON. They then conducted two formal pretests and a main study with two samples to derive and validate the SERVCON scale. The authors first generated 39 items and had a panel of academic experts judge the items for initial content validity. Thirty-eight items were retained for the first formal pretest using a panel of 20 professionals, trimming the pool to 17 items. The second formal pretest surveyed 119 students, and via exploratory factor analyses (EFA), initial scale structure was assessed. The main study used confirmatory factor analyses (CFA) to assess SERVCON dimensionality and reliability. Various validity tests were also conducted in the main study.

Samples: Formal Pretest Sample 1, $n = 20$ service professionals in an auto repair context; Formal Pretest Sample 2, $n = 119$ undergraduate business students using a specialty retail store context; Main Study Sample, $n = 981$ customers of a specialty retail store.

Validity: Numerous estimates of dimensionality, reliability, and validity were assessed in the main study. CFA supported the five-dimensional SERVCON structure. Construct reliability estimates per dimension were all greater than 0.75, and average variance extracted (AVE) estimates were all greater than 0.50, supporting SERVCON internal consistency. (Construct reliability estimates and AVE are shown with the items below). Correlations among the SERVCON dimensions ranged from 0.20 to 0.54, and all correlations showed evidence of discriminant validity. Regression equations with potential antecedents and consequences of the SERVCON dimensions supported the nomological validity of the scale. For example, as hypothesized, shopping enjoyment was positively related to all dimensions of SERVCON (beta coefficients ranging from 0.16 to 0.40, $p < 0.05$). Controlling for overall store satisfaction, decision convenience, benefit convenience, transaction convenience, and post benefit convenience were positively related to behavioral intentions (beta coefficients ranging from 0.07 to 0.36, $p < 0.05$). Known-groups validity was also shown as long-term customers (5 years or more) had higher mean scores on all SERVCON dimensions (with the exception of transaction convenience) than did short-term customers (1 year or less). Finally, the five-item reduced version (see scale items) showed a correlation of 0.94 with the full 17 items, suggesting the five-item SERVCON scale is a viable alternative to its longer multidimensional measure.

Scores: Mean scores (SDs) were reported as follows in Table 2 (Seiders et al. 2007, p. 149):

Dimension	Mean	SD
Decision convenience	3.65	0.75
Access convenience	3.71	0.81
Benefit convenience	4.05	0.66
Transaction convenience	4.14	0.71
Post-benefit convenience	3.95	0.98

Source: Seiders, Kathleen, Glenn B. Voss, Andrea L. Godfrey, and Dhruv Grewal (2007), "SERV-CON: Development and Validation of a Multidimensional Service Convenience Scale," *Journal of the Academy of Marketing Science,* 35 (4), 144–56.

Reference: Diamantopoulos, Adamantios and Winklhofer, Heidi M. (2001), "Index Construction With Formative Indicators: An Alternative to Scale Development," *Journal of Marketing Research,* 38 (May), 269–77.

Service Convenience: SERVCON

(Seiders et al. 2007)

Items	Construct Reliability	Average Variance Extracted
Decision convenience	0.76	0.53
I can easily determine prior to shopping whether SR will offer what I need.*		
Deciding to shop at SR is quick and easy.		
I can quickly find information before I shop to decide if SR has what I'm looking for.		
Access convenience	0.83	0.55
I am able to get to SR quickly and easily.*		
SR offers convenient parking.		
SR offers convenient locations.		
SR offers convenient store hours.		
Benefit convenience	0.84	0.57
The merchandise I want at SR can be located quickly.*		
It is easy to find the products I am looking for at SR.		
I can easily get product advice at SR.		
It is easy to evaluate the merchandise at SR.		
Transaction convenience	0.89	0.73
SR makes it easy for me to conclude my transaction.*		
I am able to complete my purchase quickly at SR.		
It takes little time to pay for my purchase at SR.		
Post-benefit convenience	0.95	0.86
It is easy to take care of returns and exchanges at SR.*		
SR takes care of product exchanges and returns promptly.		
Any after-purchase problems I experience are quickly resolved at SR.		

Notes: All items are 7-point Likert scales (*disagree* to *agree*). * denotes the five-item reduced version SERVCON scale.

Organizational Service Orientation: SERV*OR

(Lytle, Hom, and Mokwa 1998)

Construct: Organizational service orientation (OSO), viewed from management's perspective, is defined as "an organization-wide embrace of a basic set of relatively enduring organizational policies, practices, and procedures intended to support and reward service-giving behaviors that create and deliver "service excellence" (Lytle et al. 1998, p. 459). OSO is also considered a 10-dimensional construct and the resulting SERV*OR scale operationalizes the 10 dimensions.

Description: SERV*OR is a 10-dimension (factors) scale encompassing 35 items. The 10 dimensions (# of items per dimension) are customer treatment (4), employee empowerment (2), service technology (3), service failure prevention (3), service failure recovery (4), service standards communications (5), service vision (3), servant leadership (6), service rewards (2), and service training (3). All items are 7-point Likert scales (*disagree* to *agree*) and item scores are summed and then averaged within dimension to form dimension scores ranging from 1 to 7. Dimension scores can then be averaged to create one overall SERV*OR score ranging from 1 to 7.

Development: Via a literature review and in-depth interviews and focus groups with managing practitioners and executives, the authors developed an initial pool of more than 200 items to tap the OSO dimensions. Via exploratory factor analyses (EFA), two pretest samples were then used to trim the initial pool to 86 items. Two more main study samples trimmed this pool to 41 items via EFA, and confirmatory factor analyses (CFA) finalized the scale to its 10-dimension, 35-item form.

Samples: Pretest 1 Sample, $n = 11$ expert judges (11 academics, 4 business executives); Pretest 2 Sample, $n = 142$ branch bank employees; Main Study Sample 1, $n = 694$ employees of a retail bank covering 43 SBUs; and Main Study Sample 2, $n = 648$ employees of a major retail home improvement chain covering 110 different stores.

Validity: Estimates of dimensionality and validity were assessed. CFA across both main study samples, individual and multigroup analyses, showed that the hypothesized 10-dimension structure fit the data adequately, with evidence of discriminant validity among dimensions. Across the two main study samples, correlations among dimensions ranged from 0.20 to 0.90. Average standardized loadings within dimension across the two main study samples was 0.78. High performing home improvement stores had higher mean-level scores than did low performing home improvement stores across 6 of the 10 dimensions and on the overall SERV*OR score, offering some support for the predictive validity SERV*OR.

Scores: Numerous mean scores were reported in Tables 7 and 8 (Lytle et al. 1998, pp. 481–82). The overall company mean scores for the home improvement stores were as follows:

Dimension	Mean Score
Service vision	5.40
Servant leadership	5.56
Customer treatment	5.41

(Continued)

(Continued)

Dimension	Mean Score
Employee empowerment	4.52
Service training	3.96
Service rewards	3.74
Service failure prevention	3.81
Service failure recovery	3.87
Service technology	3.46
Service standards communication	4.73
Overall SERV*OR score	4.66

Source: Lytle, Richard S., Peter W. Hom, and Michael Mokwa (1998), "SERV*OR: A Managerial Measure of Organizational Service-Orientation," *Journal of Retailing*, 74 (4), 455–89.

Organizational Service Orientation: SERV*OR

(Lytle, Hom, and Mokwa 1998)

Customer Treatment

- Employees care for customers as they would like to be cared for.
- Employees go the "extra mile" for customers.
- We are noticeably more friendly and courteous than our competitors.
- Employees go out of their way to reduce inconveniences for customers.

Employee Empowerment

- Decisions are made "close to the customer." In other words, employees often make important customer decisions without seeking management approval.
- Employees have freedom and authority to act independently in order to provide excellent service.

Service Technology

- We enhance our service capabilities through the use of "state of the art" technology.
- Technology is used to build and develop higher levels of service quality.
- We use high levels of technology to support the efforts of men and women on the front line.

Service Failure Prevention

- We go out of our way to prevent customer problems.
- We go out of our way to "head off" or prevent customer problems rather than reacting to problems once they occur.
- We actively listen to our customers.

Service Failure Recovery

- We have an excellent customer complaint handling system for service follow-up.
- We have established problem-solving groups to enhance our ability to resolve service breakdowns.
- We provide follow-up service calls to confirm that our services are being provided properly.
- We provide every customer with an explicit service guarantee.

Service Standards Communication

- We do not wait for customers to complain, we use internal standards to pinpoint failures before we receive customer complaints.
- Every effort is made to explain the results of customer research to every employee in understandable terms.
- Every employee understands all of the service standards that have been instituted by all departments.
- We have a developed chain of objectives linking together every branch in support of the corporate vision.
- Service performance measures are communicated openly with all employees regardless of position or function.

Service Vision

- There is a true commitment to service, not just lip service.
- Customers are viewed as opportunities to serve rather than as sources of revenue.
- It is believed that fundamentally, the organization exists to serve the needs of its customers.

Servant Leadership

- Management constantly communicates the importance of service.
- Management regularly spends time "in the field" or "on the floor" with customers and front-line employees.
- Management is constantly measuring service quality.
- Management shows that they care about service by constantly giving of themselves.
- Management provides resources, not just "lip service" to enhance employee ability to provide excellent service.
- Managers give personal input and leadership into creating quality service.

Service Rewards

- Management provides excellent incentives and rewards at all levels for service quality, not just productivity.
- This organization noticeably celebrates excellent service.

Service Training

- Every employee receives personal skills training that enhances his/her ability to deliver high-quality service.
- We spend much time and effort in simulated training activities that help us provide higher levels of service when actually encountering the customer.
- During training sessions, we work through exercises to identify and improve attitudes toward customers.

Note: All items are 7-point Likert scales (*disagree* to *agree*).

Service Quality: Physical Distribution Service Quality

(Bienstock, Mentzer, and Bird 1997)

Construct: The research by Bienstock et al. (1997) is another extension of the SERVQUAL measurement approach (Parasuraman, Zeithaml, and Berry 1988). In the present effort, expectations and performance measures are offered as a reliable scale for measuring industrial customer (e.g., manufacturers, wholesalers, retailers, government organizations) perceptions of the physical distribution service quality (PDSQ) received from suppliers. Physical distribution is described as the outbound side of the logistics process. The initial dimensions proposed to underlie PDSQ were timeliness, availability, and conditions (Bienstock et al. 1997, p. 32).

Description: The final scale consists of 15 expectations and performance items. Each statement is operationalized using 7-place scales ranging from strongly disagree (1) to *neutral* (4) to *strongly agree* (7). There are six, five, and four items for the timeliness, availability, and conditions dimensions, respectively. Gap scores are formed by subtracting the expectations from the performance scores.

Development: An initial set of 45 items was developed from a review of prior research related to the physical distribution literature and from the results of eight experience interviews. These items were edited and judged by academic colleagues and members of the experience survey pretest ($n = 8$). A second pretest survey of 33 purchasing managers was used to reduce the number of items to 36. Item-to-total correlations, face validity, and frequency of mention in the experience surveys were the criteria used to delete or retain items. Following a random split of the larger follow-up survey, the first portion of the data was used to develop the final 15-item scale. These analyses included an examination of corrected item-to-total correlations, exploratory factor analyses, and confirmatory factory analysis. Items with low reliability were deleted. The structure of the scale was replicated using the second portion of the sample. These efforts resulted in PDSQ being conceptualized as a second-order construct with three dimensions (Bienstock et al. 1997).

Samples: Pretest interviews were first conducted with eight purchasing managers. A second pretest survey of 33 purchasing managers was used to delete items. Subsequent analyses were conducted on the responses of 446 purchasing managers. All participants in the research were members of the National Association of Purchasing Managers.

Validity: A substantial amount of evidence is provided in support of the PDSQ scale and the final set of measures proposed to compose the scale. This evidence is summarized for both halves of the larger survey. These data include reliability estimates for the three dimensions and the overall scale, tests of discriminant and convergent validity, and correlations with measures of global quality and purchase intent. Moreover, supportive results are suggested for both the performance items and the gap difference scores.

Briefly, the estimates of internal consistency reliability ranged from 0.83 to 0.97 across dimensions and the total scale for both samples. AH indicators had significant *t* values in the confirmatory factor analyses. The overall model fit statistics for the second half of the data included the following statistics: GFI, 0.90; CFI, 0.97; and RMSR, 0.10. Analysis of the squared multiple correlations from structural equation tests indicated that 27% (gap) and 34% (performance) of the variance in global quality was accounted for by the dimensions of PDSQ.

Scores: Dimension mean scores, standard deviations, and intercorrelations are shown in Table 4 (Bienstock et al. 1997, p. 37) for both performance measures and gap difference scores. The same estimates are provided for overall PDSQ scores.

Source: Bienstock, Carol C, John T. Mentzer, and Monroe Murphy Bird (1997), "Measuring Physical Distribution Service Quality," *Journal of the Academy of Marketing Science,* 25 (1), 31–44.

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Reference: Parasuraman, A., Valerie A. Zeithaml, and Leonard L. Berry (1988), "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality," *Journal of Retailing,* 64, 12–40.

Service Quality: Physical Distribution Service Quality

(Bienstock, Mentzer, and Bird 1997)

Expectations Items

Timeliness

    T1. The time between placing and receiving an order should be short.

    T2. Delivery should be rapid.

    T3. The time between placing and receiving an order should be consistent.

    T4. The time it takes my supplier to put my order together should be consistent.

    T5. The time between my supplier receiving and shipping my order should be short.

    T6. The time it takes my supplier to put my order together should be short.

Availability

    A1. Orders should be available in inventory when ordered.

    A2. Suppliers should have inventory available near my facility.

    A3. If suppliers are notified of possible increases in upcoming orders, they should maintain extra inventory.

    A4. Products ordered should be available in inventory.

    A5. Products should consistently be available in inventory.

Condition

    C1. All orders should be delivered undamaged.

    C2. All orders should be accurate (i.e., items should arrive, not unordered items).

    C3. All products should be delivered undamaged.

    C4. Orders should be packaged conveniently.

Performance Items

Timeliness Items

    T1. The time between placing and receiving an order should be short.

    T2. Delivery should be rapid.

    T3. The time between placing and receiving an order should be consistent.

    T4. The time it takes my supplier to put my order together should be consistent.

    T5. The time between my supplier receiving and shipping my order should be short.

    T6. The time it takes my supplier to put my order together should be short.

Availability Items

   A1. Orders should be available in inventory when ordered.

   A2. Suppliers should have inventory available near my facility.

   A3. If suppliers are notified of possible increases in upcoming orders, they should maintain extra inventory.

   A4. Products ordered should be available in inventory.

   A5. Products should consistently be available in inventory.

Condition Items

   C1. All orders should be delivered undamaged.

   C2. All orders should be accurate (i.e., items should arrive, not unordered items).

   C3. All products should be delivered undamaged.

   C4. Orders should be packaged conveniently.

Note: Items scored on 7-point scales from *strongly disagree* to *strongly agree.*

Appendix to SERVQUAL: Review and Sources of SERVQUAL Use

The contribution of Parasuraman, Zeithaml, and Berry (1986, 1988) and the many extensions of the SERVQUAL measurement approach to the study and understanding of service quality are noteworthy. One outcome from their research has been the number of articles that have reevaluated the SERVQUAL conceptualization of service quality. Interested authors are encouraged to read the additional sources cited below and, if needed, to conduct their own literature review. We summarize only some of the published critiques here. Users of SERVQUAL or one of its variations should consider carefully all the possible different models and operationalizations, as well as the assumptions that underlie the SERVQUAL framework. Criticisms regarding the use of difference scores should be considered as well (Brown, Churchill, and Peter 1993).

Cronin and Taylor (1992) test several service quality models, as well as the relationships among service quality, satisfaction, attitude, and purchase intentions. Their research supports measuring service quality as a unidimensional, performance-based construct called SERVPERF, which is equivalent to the 22 PERCEPTION items of the original SERVQUAL measure. Teas (1993) also raises issues related to the use of difference scores (i.e., perceptions-expectations), alternative model configurations, and varying definitions of expectations. Evidence of problems with the P-E service quality framework was found, and the need for additional research is recommended (Teas 1993, p. 28).

Parasuraman, Zeithaml, and Berry (1994) propose three alternative questionnaire formats. Their research suggests that there are psychometric and practical trade-offs in choosing the most appropriate scaling approach. Briefly, the three methods are (a) three-column format in which desired, adequate, and perceived service are assessed with three identical, side-by-side scales; (b) two-column format that generates direct ratings of service-superiority and service-adequacy gaps with identical side-by-side scales; and (c) one-column format in which the previous two gap measures are split into two parts (Parasuraman et al. 1994, pp. 204–5).

Zeithaml, Berry, and Parasuraman (1996) used weighted average performance scores for their five dimensions to operationalize service quality. The scores were then compared to weighted adequate and desired average scores in tests of the effects of performance being above and below the consumer's zone of tolerance. The results of these analyses supported predictions regarding whether customers may remain or defect. Other investigations of service quality that rely on the SERVQUAL framework to some degree include the following: Boulding et al. (1993), Parasuraman, Zeithaml, and Berry (1991), Spreng, MacKenzie, and Olshavsky (1996), and Zeithaml, Berry, and Parasuraman (1993). As such, in measuring service quality, the reader is strongly urged to consult the sources listed below.

Sources: Boulding, William, Ajay Kalra, Richard Staelin, and Valerie A. Zeithaml (1993), "A Dynamic Process Model of Service Quality: From Expectations to Behavioral Intentions," *Journal of Marketing Research,* 30, 7–27.

Brown, Tom J., Gilbert A. Churchill, Jr., and J. Paul Peter (1993), "Improving the Measurement of Service Quality," *Journal of Retailing,* 69, 127–39.

Cronin, J. Joseph, Jr., and Steven A. Taylor (1992), "Measuring Service Quality: A Reexamination and Extension," *Journal of Marketing,* 56, 55–68.

Parasuraman, A., Valerie A. Zeithaml, and Leonard L. Berry (1986), *SERVQUAL: A Multiple-Item Scale for Measuring Customer Perceptions of Service Quality* (Report No. 86–108). Cambridge, MA: Marketing Science Institute.

Parasuraman, A., Valerie A. Zeithaml, and Leonard L. Berry (1988), "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality," *Journal of Retailing,* 64, 12–40.

Parasuraman, A., Valerie A. Zeithaml, and Leonard L. Berry (1991), "Refinement and Reassessment of the SERVQUAL Scale," *Journal of Retailing,* 67 (4), 420–50.

Parasuraman, A., Valerie A. Zeithaml, and Leonard L. Berry (1994), "Alternative Scales for Measuring Service Quality: A Comparative Assessment Based on Psychometric and Diagnostic Criteria," *Journal of Retailing,* 70 (3), 201–30.

Spreng, Richard A., Scott B. MacKenzie, and Richard W. Olshavsky (1996), "A Reexamination of the Determinants of Consumer Satisfaction," *Journal of Marketing,* 60, 15–32.

Teas, R. Kenneth (1993), "Expectations, Performance, and Consumers' Perceptions of Quality," *Journal of Marketing,* 57, 18–34.

Zeithaml, Valerie A., Leonard L. Berry, and A. Parasuraman (1993), "The Nature and Determinants of Customer Expectations of Service," *Journal of the Academy of Marketing Science,* 21 (1), 1–12.

Zeithaml, Valerie A., Leonard L. Berry, and A. Parasuraman (1996), "The Behavioral Consequences of Service Quality," *Journal of Marketing,* 60 (2), 31–46.

Scales Related to Post-Purchase Behavior: Consumer Discontent

Alienation: Consumer Alienation From the Marketplace

(Allison 1978)

Construct: Consumer alienation from the marketplace was defined as feelings of separation from the norms and values of the marketplace. Such a state was said to include a lack of acceptance of or identification with market institutions, practices, and outputs as well as feelings of separation from the self when one is involved in the consumption role. The marketplace was defined to include the entire spectrum of channels of distribution from the producer to the seller, as well as any support services such as advertising or credit (Allison 1978, p. 570). Alienation from the marketplace was also conceptualized using consumer-adapted definitions for the four sociological constructs of powerlessness, normlessness, social isolation, and self-estrangement. Powerlessness was defined as feelings held by consumers that they are unable to help determine market practices and had an inability to control the market environment or events within the marketplace. Normlessness within the market system is represented by a distrust of business and market practices, often manifested in unclear standards for buyer behavior. Social isolation is characterized by feelings of estrangement from the practices and outputs of market systems, and feelings of self-estrangement arise from an inability to identify with behavior traditionally associated with the consumption role (Allison 1978).

Description: The scale consists of 35 statements, each operationalized using 5-place Likert-type scale response formats ranging from *strongly agree* to *strongly disagree*. Four of the items are positively worded and require reverse scoring. The range of the summed scores is from 35 to 175.

Development: The four sociological constructs of alienation were used to develop a set of 115 attitudinal statements. Approximately half the items were worded positively. This pool of items was reduced to 50 by a panel of 35 undergraduate student judges. These remaining items satisfied two criteria: (a) 75% or more of the judges agreed that the item would differentiate between alienated and nonalienated consumers, and (b) 60% attributed the item to the same alienation dimension. Several pretest interviews in neighborhoods varying in socioeconomic class were used to revise and clarify the wording of the remaining 50 items.

Factor analysis of the data ($n = 368$) revealed that a four-factor solution was most meaningful; however, the factor loadings did not support the validity of the theoretical structure as anticipated (Allison 1978, p. 568). Subsequent coefficient alpha estimates were interpreted as support for a unidimensional scale. Consequently, the original theoretical definition was revised to the definition provided above (i.e., at the beginning of this summary). Additional item-to-total correlation and internal consistency estimates were used to reduce the number of items to the final set composing the 35-item scale.

Samples: Personal interviews were conducted with 400 respondents selected as part of a stratified-by-area sampling procedure. Of these, 386 were usable (Allison 1978). These procedures provided a random sample that was representative of the local population (i.e., Austin, Texas) in terms of gender, age, income, and ethnic origin. The 50 items were, however, self-administered. A convenience sample of 123 graduate business students participated in the test-retest study.

Validity: The 3-week test-retest reliability correlation was 0.75 ($p < 0.05$). A series of correlation and mean difference tests was used to examine the validity of the scale. The correlation between the 35-item consumer alienation scale and a general measure of social alienation was 0.61 ($p < 0.01$). The correlation between the consumer alienation scale and a measure of belief in government intervention was 0.45 ($p < 0.01$). A series of mean difference tests across ethnic and income groups also supported the validity of the scale. Responses of the 386 survey respondents showed that lower-income groups and minority segments were associated with higher average alienation scores, as predicted.

Scores: An analysis of covariance test for the effects of ethnic origin on alienation scores controlling for income resulted in the following adjusted mean scores across groups: white, 108.67; Black 112.20; and Mexican American, 116.84. Similar analyses across income groups controlling for ethnic origin resulted in adjusted mean scores ranging from 115.45 for individuals with incomes below $4,000 to 104.51 for individuals with incomes over $16,000.

Source: Allison, Neil K. (1978), "A Psychometric Development of a Test for Consumer Alienation From the Marketplace," *Journal of Marketing Research,* 15, 565–75.

© 1978 by the American Marketing Association. Scale items taken from Appendix (pp. 573–74). Reprinted with permission.

Other evidence: The dimensionality, internal consistency, and nomological validity of the scale were evaluated in a follow-up study by Bearden, Lichtenstein, and Teel (1983). Factor analysis of mail survey responses to 748 members of a two-state university consumer panel revealed a three-factor solution for 22 of the 35 items. These factors were subsequently labeled as business ethics, informed choice, and personal norm. Construct reliability estimates for these factors were 0.83, 0.67, and 0.61, respectively. The estimate of internal consistency for the total scale (i.e., for the reduced set of 22 items), allowing for multiple dimensions, was 0.84. A series of correlations between each of the three factors and measures of life satisfaction, general consumer satisfaction, powerlessness, and satisfaction with four services (e.g., electric and gas) provided modest support for the validity of the three revised consumer alienation factors (Bearden et al. 1983, p. 38).

Other source: Bearden, William O., Donald R. Lichtenstein, and Jesse E. Teel (1983), "Reassessment of the Dimensionality, Internal Consistency, and Validity of the Consumer Alienation Scale," in *American Marketing Association Summer Educators' Conference Proceedings,* eds. Patrick E. Murphy et al. 1985, Chicago: American Marketing Association, pp. 35–40.

Alienation: Consumer Alienation From the Marketplace

(Allison 1978)

1. Most companies are responsive to the demands of the consumer.*
2. It seems wasteful for so many companies to produce the same basic products.
3. Unethical practices are widespread throughout business.*
4. Stores do not care why people buy their products just as long as they make a profit.
5. Shopping is usually a pleasant experience.
6. People are unable to help determine what products will be sold in the stores.
7. Advertising and promotional costs unnecessarily raise the price the consumer has to pay for a product.
8. What a product claims to do and what it actually does are two different things.
9. Mass production has done away with unique products.
10. Misrepresentation of product features is just something we have to deal with.
11. Harmful characteristics of a product are often kept from the consumer.*
12. It is embarrassing to bring a purchase back to the store.
13. I tend to spend more than I should just to impress my friends with how much I have.*
14. Even with so much advertising, it is difficult to know what brand is best.*
15. A sale is not really a bargain but a way to draw people into the store.
16. It is difficult to identify with current trends and fads in fashion.*
17. I often feel sad for buying so many unnecessary products.*
18. Most brands are the same with just different names and labels.
19. A product will usually break down as soon as the warranty is up.*
20. Business is responsible for unnecessarily depleting our natural resources.*
21. It is difficult to identify with business practices today.*
22. One must be willing to tolerate poor service from most stores.*
23. It is difficult to know what store has the best buy.*
24. Business's prime objective is to make money rather than satisfy the consumer.*
25. I often feel frustrated when I fail to find what I want in the store.
26. After making a purchase, I often find myself wondering "why."*
27. It is hard to understand why some brands are twice as expensive as others.*
28. It is not unusual to find out that business has lied to the public.*
29. Buying beyond one's means is justifiable through the use of credit.*
30. It is often difficult to understand the real meaning of most advertisements.
31. Products are designed to wear out long before they are sold.*
32. Most claims of product quality are true.*
33. I am often dissatisfied with a recent purchase.
34. The wide variety of competing products makes intelligent buying decisions more difficult.
35. Advertisements usually present a true picture of the product.*

Notes: * denotes the 22 items identified by Bearden et al. (1983) as possessing stability and simple structure. Items 1, 5, 32, and 35 require reverse coding. In addition, items 1, 3, 4, 11, 19, 20, 21, 24, 28, 31, 32, and 35 compose the "business ethics" factor. Items 14, 16, 23, 27, and 34 compose the "informed choice" factor, and items 13, 17, 22, 26, and 29 compose the "personal norm" factor of the Bearden et al. (1983) three-factor structure. Items scored on 5-point Likert-type scales from *strongly agree* to *strongly disagree.*

Assertiveness and Aggressiveness

(Richins 1983)

Construct: Assertiveness and aggressiveness represent two consumer interaction styles in the market-place—behaviors to maintain one's rights in the marketplace. Interaction style refers to relatively consistent behavior patterns that individuals employ in interpersonal interactions with retail employees (Richins 1983, p. 73). Assertiveness involves standing up for one's rights without infringing on those of others, whereas aggression involves the use of verbal and nonverbal noxious stimuli to maintain rights (Richins 1983). The research by Richins develops two validated measures, one for each construct. In her research, three interaction situations (i.e., requesting information or assistance, resisting requests for compliance, and seeking remedy for dissatisfaction) and four interaction styles were identified: assertive, nonassertive, aggressive, and resort-to-aggressive. These interaction styles or strategies were based on both a review of existing measures and a series of in-depth personal interviews.

Description: The assertiveness scale consists of three subscales, each containing five items. These subscales are labeled as follows: resisting requests for compliance, requesting information or assistance, and seeking redress. The aggressiveness scale consists of six items. The response format for each item was a 5-point Likert-type scale, where *strongly agree* was scored 5 and *strongly disagree* was scored 1 (Richins 1983, p. 81). Nine of the assertiveness items require reverse coding. Hence, higher scores represent greater assertiveness or aggressiveness. Item scores are summed within subscales (15 items for assertiveness and 6 items for aggressiveness) to form subscale indices.

Development: Seventy-nine items reflecting aggressive and assertive behaviors across the three situations were developed. Initial editing of redundant and ambiguous items in addition to those with strong potential for social desirability bias were deleted. Analysis for each factor separately using item-to-total correlations and principal components resulted in the final 15-item assertiveness scale and the 6-item aggressiveness measure.

Samples: An initial administration for the edited pool of 59 items was given to 118 undergraduate and graduate students. Validation data were collected from a general population mailing and two consumer active groups (i.e., members of a consumer protection group and complainers to a government agency). These efforts resulted in a usable set of 356 respondents.

Validity: Estimates of coefficient alpha (adjusted for dimensionality) for the two measures were 0.73 for the aggression scale and 0.87 for the assertiveness measure. Corresponding test-retest estimates were 0.82 and 0.83 for the student sample of $n = 112$. Using the responses of 83 college students to the present scales and a series of general assertion and aggression measures, evidence of convergent and discriminant validity were provided from a multitrait-multimethod matrix analysis. For example, correlations of 0.68 and 0.42 were provided as evidence of convergent validity for the assertiveness and aggressiveness measures, respectively. Based on the responses of 93 college students to the present measures and a shortened form of the Crowne-Marlowe Social Desirability Scale, corresponding correlations of 0.13 and –0.28 were cited as evidence of limited social desirability bias. Estimates of internal consistency reliability based on the adult validation sample were 0.80 and 0.89 for the assertiveness and aggressiveness items, respectively.

Extensive additional evidence was provided by Richins (1983, pp. 77–80). Only some of those results are cited here. More aggressive individuals had more negative

attitudes toward business and were more likely to report enjoying making a complaint than nonaggressive individuals, as predicted; the resort-to-aggression group reported the greatest number of complaints; and individuals lowest in both variables took the longest to get off the phone in a follow-up solicitation involving the telephone purchase of craft kits. The assertiveness scale was correlated (modestly) with education and income. Aggressive individuals tended to be younger and male.

Scores: Mean scores were provided for both scales as part of a known group validation. For the mail survey sample, the general population sample was significantly different in terms of assertiveness from the rest of the sample. Mean scores for the general population, consumer protection, and third-party complainer sub samples were 56.5, 58.9, and 58.1, respectively. The means also differed for the aggressiveness factor: third-party complainers, 16.5; general population, 14.5; and consumer protection group, 14.7.

Source: Richins, Marsha L. (1983), "An Analysis of Consumer Interaction Styles in the Marketplace," *Journal of Consumer Research,* 10, 73–82.

© 1983 by University of Chicago Press. Scale items taken from Appendix (p. 81). Reprinted with permission.

Other evidence: Data were collected in a follow-up validation research effort from two American samples (i.e., 122 general respondents and 234 consumer active respondents) and 304 residents of the Netherlands. (See Richins and Verhage 1987 for details.) Briefly, for the Dutch sample, the estimates of internal consistency reliability were 0.72 and 0.77 for the aggressiveness and assertiveness scales, respectively. Corresponding estimates for the American sample were 0.76 and 0.80. Confirmatory factor analysis generally supported the factor structure, using the data for both countries. However, the factor analysis results were somewhat stronger in support of the measures for the American data. Scalar equivalence was examined using a series of regression equations in which the scales were used to predict a series of dependent variables and/or behaviors (i.e., seeking redress) for each country. An acceptable level of equivalence was obtained for the aggressiveness measure.

Other source: Richins, Marsha L. and Bronislaw J. Verhage (1987), "Assertiveness and Aggression in Marketplace Exchanges," *Journal of Cross-Cultural Psychology,* 18 (1), 93–105.

Assertiveness and Aggressiveness

(Richins 1983)

Assertiveness Items

Resisting Requests for Compliance

1. I have no trouble getting off the phone when called by a person selling something I don't want.

2. I really don't know how to deal with aggressive salespeople. (*)

3. More often than I would like, I end up buying something I don't want because I have a hard time saying no to the salesperson. (*)

4. If a salesperson comes to my door selling something I don't want, I have no trouble ending the conversation.

5. If a salesperson has gone to a lot of trouble to find an item for me, I would be embarrassed not to buy it even if it isn't exactly right. (*)

Requesting Information or Assistance

6. I sometimes don't get all the information I need about a product because I am uncomfortable bothering salespeople with questions. (*)

7. I am uncomfortable asking store employees where products are located in the store. (*)

8. In signing a sales contract or credit agreement, I am reluctant to ask for an explanation of everything I don't understand. (*)

9. If a store doesn't have the size or color of an item I need, I don't mind asking the salesperson to check for the item at other store locations.

10. If a cashier is talking with friends while I am waiting to be waited on, it would not bother me to interrupt the conversation and ask for assistance.

Seeking Redress

11. If a defective product is inexpensive, I usually keep it rather than put up a fuss or complain. (*)

12. I'd rather do almost anything than return a product to the store. (*)

13. I am probably more likely to return an unsatisfactory product than most people I know.

14. I often procrastinate when I know I should return a defective product to the store. (*)

15. I would attempt to notify store management if I thought service in a store was particularly bad.

Aggressiveness Items

16. I have on occasion told salespeople I thought they were too rude.

17. On occasion, I have tried to get a complaint taken care of by causing a stir which attracts the attention of customers.

18. I get a certain amount of satisfaction from putting a discourteous salesperson in his/her place.

19. Sometimes being nasty is the best way to get a complaint taken care of.

20. I'll make a scene at the store if necessary to get a complaint handled to my satisfaction.

21. Salespeople need to be told off when they are rude.

Note: Items scored on 5-point Likert-type scales from *strongly agree* to *strongly disagree*. * denotes items requiring reverse coding.

Coping

(Duhachek 2005)

Construct: Coping includes the various ways in which consumers attempt to deal with stress and negative emotion. It is defined as "the set of cognitive and behavioral processes initiated by consumers in response to emotionally arousing, stress inducing interactions with the environment aimed at bringing forth more desirable emotional states and reduced levels of stress" (p. 42). As such, key characteristics of coping include that it is a dynamic process as a consequence of emotion that involves emotional, cognitive, and behavioral responses of consumers. Further, eight dimensions of coping are presented, including action, rational thinking, emotional support, instrumental support, emotional venting, avoidance, positive thinking, and denial. Distinct conceptual definitions were provided for each of the eight dimensions. The construct is specifically intended for relevance to consumer responses.

Description: The final scale consists of 36 items comprised of the eight dimensions listed above. Respondents are first given instructions (provided with scale items), and then asked to respond to the Coping items based on the extent to which they used each of the coping mechanisms in a recent service failure scenario. The scale is anchor by 1 *not at all like me* and 7 *very much like me*. The number of items used to assess each dimension of coping ranged from 3 for instrumental support to 7 for action. The eight dimensions are further classified into three higher-order dimensions: active coping, expressive support-seeking, and avoidance factors. It is suggested that the entire scale can be used or subdimensions individually used per the needs of the researchers.

Development: Previous measurement instruments to assess coping were reviewed and combined to create a set of 250 initial items. These items were reduced by the author to a set of 53 using content analysis and the deletion of redundant items. The 53 items were collected and analyzed using exploratory factor analysis in order to examine the underlying factor structure. Through factors analysis, various dimensional structures were examined and an eight-dimension model was selected as the best fit for the data. Items from Study 1 were retained that had a loading of at least 0.5 on the corresponding factor. The resulting 36 items were assessed for reliability and validity using confirmatory factor analysis, and the hierarchical structure was examined. Study 2 provided additional support for the validity of the Coping scale.

Samples: Study 1 contained 176 undergraduate student participants. Study 2 included 276 undergraduate participants.

Validity: Exploratory factor analysis suggested and confirmatory factor analysis confirmed that the eight-dimensional factor structure provided the best fitting model of the data. Reliabilities from Study 1 for each dimension were as follows: action = 0.87, rational thinking = 0.81, emotional support = 0.84, instrumental support = 0.83, emotional venting = 0.78, avoidance = 0.83, positive thinking = 0.85, and denial = 0.67. Then intercorrelations among the dimensions were examined for discriminant validity. The average intercorrelation was 0.16, indicating distinction among the factors, yet the pattern of results suggested the potential for grouping some of the dimensions together. Therefore, a hierarchical conceptualization and analysis was conducted testing several models against one another. This process resulted in a three-factor higher-order model including active coping, expressive support-seeking, and avoidance factors. The eight subfactors were subsumed under these three higher-order factors as shown with the actual measure presented on the next page.

Study 2 provided additional support for the validity of the Coping scale by confirming the eight-dimensional factor structure. Further, Study 2 examined the emotional and cognitive antecedents as well as the consequences of coping in terms of the emotional and cognitive perceptions, as well as stress reduction in order to provide evidence of the usefulness of the proposed coping framework.

Scores: Mean scores were not reported.

Source: Duhachek, Adam (2005), "Coping: A Multidimensional, Hierarchical Framework of Responses to Stressful Consumption Episodes," *Journal of Consumer Research*, 32 (June), 41–53.

Coping

(Duhachek 2005)

Instructions

Imagine that you just had a stressful encounter with a service company. It could be a distressing event related to your bank, phone/cellular service, hotel, airlines, car/appliance repair, medical care provider, etc. The event could be related to poor handling of a complaint, a lapse in service, rude or negligent treatment by a service employee or any other event that caused you to feel stress. Think about this event and respond to the following questions.

Please record the extent to which you would cope with this stress each of the following ways:

Higher-Order Factor 1: Active Coping

Action

1. Concentrate on ways the problem could be solved.

2. Try to make a plan of action.

3. Generate potential solutions.

4. Think about the best way to handle things.

5. Concentrate my efforts on doing something about it.

6. Do what has to be done.

7. Follow a plan to make things better—more satisfying.

Rational Thinking

8. Analyze the problem before reacting.

9. Try to step back from the situation and be objective.

10. Try to control my emotions.

11. Try to keep my feelings from controlling my actions.

12. Would use restraint to avoid acting rashly.

Positive Thinking

13. Try to look at the bright side of things.

14. Focus on the positive aspects of the problem.

15. Look for the good in what happened.

16. Try to make the best of the situation.

Higher-Order Factor 2: Expressive Support Seeking

Emotional Venting

17. Have a friend assist me in fixing the problem.

18. Take time to express my emotions.

19. Let my feelings out somehow.

20. Delve into my feelings to understand them.

21. Would take time to figure out what I am feeling.

22. Would realize that my feelings are valid and justified.

23. Would acknowledge my emotions.

Instrumental Support

24. Share my feelings with others I trusted and respected.

25. Ask friends with similar experiences what they did.

26. Try to get advice from someone about what to do.

Emotional Support

27. Seek out others for comfort.

28. Tell others how I feel.

29. Rely on others to make me feel better.

Higher-Order Factor 3: Avoidance

Avoidance

30. Try to take my mind off of it by doing other things.

31. Distract myself to avoid thinking about it.

32. Avoid thinking about it.

33. Find satisfaction in other things.

Denial

34. Deny that the event happened.

35. Refuse to believe that the problem had occurred.

36. Pretend that this never happened.

Notes: Scored on a 1- to 7-point *not at all like me* to *very much like me* scale.

Discontent: Consumer Discontent Scale

(Lundstrom and Lamont 1976)

Construct: The scale is designed to measure consumers' attitudes toward marketing and marketing-related practices of the business system. Consumer discontent is defined to include the collection of attitudes held by consumers toward (a) the product strategies of business, (b) business communications and information, (c) the impersonal nature of business and retail institutions, and (d) the broader socioeconomic forces that are linked with the business system (Lundstrom and Lamont 1976, p. 374).

Description: The final scale consists of 82 statements operationalized using 6-point scales of *strongly agree, agree, agree a little, disagree a little, disagree,* and *strongly disagree.* Individual scores for each statement are summed to form an aggregate measure. Twenty-five of the items are worded as "pro-business." The range of the scale is from 82 to 492.

Development: A beginning pool of 173 items was generated from the literature underlying the four aspects of the construct definition (i.e., product strategies of business, business communications and information, the impersonal nature of business and retail institutions, and socioeconomic and political forces). This initial pool was edited to eliminate ambiguous and redundant items. Ten judges then evaluated the remaining 118 items in an effort to classify the items as either pro- or anti-business. This process eliminated an additional 19 items.

   The remaining 99 items were administered to a sample of 309 Denver, Colorado, residents. The set of 99 items was reduced to 84 by deleting those items that did differ significantly *(p < 0.10)* between the high and low quartiles determined by the total scores on the preliminary set of 99 items. A student sample of 226 students was used to evaluate the reliability of the remaining 84 items and test-retest reliability.

   Two additional items were deleted from the scale based on item-to-total correlations using the responses to 280 subjects constituting a third sample. In addition, this sample was split into two groups hypothesized to differ in discontent (i.e., a discontented group and a contented group).

Samples: Four samples were used in various stages of the development. Initial item analysis was conducted on a sample of 309 Denver residents (from an initial sample of 600). A convenience sample of 226 university students was used in a series of reliability tests. From this group, 154 participated in a test-retest administration. A contented group of 100 business members of Rotary and Kiwanis clubs and a discontented group of 180 consumers were involved in the known group test validation. The latter group was selected from members of the Arizona Consumers Council and complainers to the Denver Better Business Bureau.

Validity: The split-half reliability coefficient for the 84-item version was 0.94 (corrected for scale length). The results of a 6-week test-retest ($n = 154$) revealed a coefficient of reliability of 0.79. In addition, correlations with measures of agreement response tendency and social desirability bias were not significant. For example, the Spearman rank order correlation between a measure of social desirability bias and the combined scale was –0.03. As described above, cited evidence of validity was provided by the face validity of the items, the multiple estimates of reliability, and the known group analyses (Lundstrom and Lamont 1976).

Scores: The mean for a contented group ($n = 100$) was 247, and the mean for a discontented group *($n = 180$)* was 354 *($z = 28.2$, $p < 0.01$).*

Source: Lundstrom, William L. and Lawrence M. Lamont (1976), "The Development of a Scale to Measure Consumer Discontent," *Journal of Marketing Research,* 13, 373–81.

Discontent: Consumer Discontent Scale

(Lundstrom and Lamont 1976)

This is a survey to find out what the consumer thinks about business. Below are some statements regarding consumer issues. Please give your own opinion about these statements, i.e., whether you agree or disagree. A simple checkmark in the space provided is all that is necessary.

1. The business community has been a large influence in raising a country's standard of living. (P)

2. Business profits are too high. (A)

3. Styles change so rapidly a person can't afford to keep up. (A)

4. People who sell things over the telephone are always trying to gyp you. (A)

5. Advertising is a good source of information. (P)

6. Credit makes things too easy to buy. (A)

7. Many times I need assistance in a store and I'm just not able to get it. (A)

8. Warranties would not be necessary if the manufacturer made the product right in the first place. (A)

9. Salesmen really take an interest in the consumer and make sure he finds what he wants. (P)

10. Products that last a long time are a thing of the past. (A)

11. Business takes a real interest in the environment and is trying to improve it. (P)

12. Food which is not nutritious is another example of business trying to make a buck and not caring about the consumer. (A)

13. People rate other people by the value of their possessions. (A)

14. Business firms usually stand behind their products and guarantees. (P)

15. When a product is advertised as "new" or "improved" it is the same old thing only in a different package. (A)

16. Industry has an obligation to clean up the waste they have been dumping but they aren't doing it. (A)

17. Chain stores are getting so big that they really don't treat the customer personally. (A)

18. Permanent price controls are the only way to end inflation. (A)

19. The quality of goods has consistently improved over the years. (P)

20. Many times the salesman says one thing to the shopper but he knows it's just the opposite. (A)

21. Many times it's easier to buy a new product rather than trying to fix the old one. (A)

22. The only person who cares about the consumer is the consumer himself. (A)

23. The actual product I buy is usually the same as advertised. (P)

24. It is hard to make a buying decision because of all the products to choose from. (A)

25. The small business has to do what big business says, or else! (A)

26. Most companies have a complaint department which backs up their products and handles consumer problems. (P)

27. Business is the one using up our natural resources (oil, gas, trees, etc.) but it does nothing to replace what has been taken. (A)

28. Many companies listen to consumer complaints but they don't do anything about them. (A)

29. Generally speaking, products work as good as they look. (P)

30. Products fall apart before they have had much use. (A)

31. Products are only as safe as required by government standards, but no more. (A)

32. Stores advertise "special deals" just to get the shopper into the store to buy something else. (A)

33. Companies are helping minorities and the underprivileged by providing them with jobs. (P)

34. The information on most packages is enough to make a good decision. (P)

35. Most salesmen who call at home try to force the consumer into buying something. (A)

36. All business really wants to do is to make the most money it can. (A)

37. The business community is actively involved in solving social problems. (P)

38. Most people know that advertising lies a "little." (A)

39. Companies encourage the consumer to buy more than he really needs. (A)

40. The government should enforce ethical business practices. (A)

41. The consumer knows exactly what he is buying with food products because the ingredients are on the package. (P)

42. Companies aren't willing to listen or do anything about consumer gripes. (A)

43. Recycling of products is one way business is cleaning up the environment. (P)

44. Business does not help local residents because it's not profitable. (A)

45. When the consumer is unsure of how good a product is, he can get the correct information from the salesman. (P)

46. The consumer is usually the least important consideration to most companies. (A)

47. Salesmen are "pushy" just so they can make a sale. (A)

48. If all advertising were stopped, the consumer would be better off. (A)

49. Sales clerks in stores just don't care about the consumer anymore. (A)

50. Most products are safe when they are used right. (P)

51. Advertised "specials" aren't usually in the store when the shopper goes there. (A)

52. Service departments "pad" the bill by charging for unneeded work. (A)

53. The price I pay is about the same as the quality I receive. (P)

54. Companies try to take a personal interest in each consumer rather than treating him as a number. (P).

55. As soon as they make the sale, most businesses forget about the buyer. (A)

56. Commercials make a person unhappy with himself because he can't have everything he sees. (A)

57. Health and safety warnings on packages are not adequate enough to inform the consumer of possible danger. (P)

58. Service manuals aren't provided for products because the company wants to make money servicing products as well as selling them. (A)

59. What is seen on the outside of a package is many times not what you get on the inside. (A)

60. There are too many of the same types of products, which is a waste of money. (A)

61. In general, companies are honest in their dealings with the consumer. (P)

62. Prices of products are going up faster than the incomes of the ordinary consumer. (A)

63. Advertising tempts people to spend their money foolishly. (A)

64. Business profits are high yet they keep on raising their prices. (A)

65. Companies generally offer what the consumer wants. (P)

66. Business has commercialized many meaningful holidays, such as Christmas. (A)

67. The main reason a company does things for society is to make more sales. (A)

68. An attractive package many times influences a purchase that isn't necessary. (A)

69. A large variety of products allow the consumer to choose the one that he really wants. (P)

70. Self-service stores leave the consumer at the mercy of how the product looks. (A)

71. Companies "jazz up" a product with no real improvement, just to get a higher price or sell more. (A)

72. Most of the things I buy are overpriced. (A)

73. Prices are reasonable given the high cost of business. (P)

74. Promotional or "junk" mail is just a waste. (A)

75. Repairs take too long because the right part is not in stock. (A)

76. Advertising tells the shopper about things he would not ordinarily hear about. (P)

77. A warranty or guarantee may be a good one but the service department is often unable to do the work correctly. (A)

78. Repair work is usually done right the first time. (P)

79. Business takes advantage of poor people or minorities by charging higher than normal prices. (A)

80. The stock market is controlled by big financial institutions. (A)

81. Consumer activists, like Ralph Nader, do more harm than good to business. (P)

82. Companies try to influence the government just to better themselves. (A)

Notes: Items scored on a 6-point Likert-type scale from *strongly disagree* to *strongly agree*. (P) indicates a pro-business statement, (A) an anti-business statement.

Regret Experience Measure: REM

(Creyer and Ross 1999)

Construct: Regret Experience is designed to capture the actual, rather than the anticipated, regret from the decision-making process by assessing the effects of regret on the consumer. Specifically, consumers often evaluate a decision after the outcome is known and may experience negative affect toward the decision that they made. Regret involves both wishing one had chosen differently and believing that the decision was wrong at the time it was made. As such, regret has both a dimension of pure regret as well as a recrimination dimension.

Description: Regret Experience Measure (REM) assesses actual regret experienced through the consideration of outcome feedback and regret resulting from that feedback or lack of feedback. The REM consists of eight items, with four items each representing regret and self-recrimination. Items are scored using a 1 *disagree completely* to 7 *agree completely* scale that includes both positively and negatively worded items. Higher scores indicate greater regret. The scale is used to assess regret with respect to a specific event or decision, not as a general measure of life regret.

Development: A pool of nine items was generated, and one item was eliminated based on a low item-to-total correlation in Study 1. The items were also assessed for factor structure and validity.

Samples: For Study 1, 86 undergraduate students composed the sample, while Study 2 consisted of 94 students.

Validity: The eight items selected in Study 1 had a coefficient alpha of 0.85, with item-to-total correlations ranging from 0.50 to 0.69. Factor analyses indicated a one-factor model, despite the two different dimensions represented conceptually (i.e., regret and recrimination). REM was shown to reliably measure regret with respect to different levels of outcome feedback, providing evidence of the scale's validity. In Study 2, the one-factor structure of REM was confirmed, and the coefficient alpha was again 0.85. Further evidence was provided suggesting the validity of REM in assessing regret in a selling scenario.

Scores: Scores varied based on experimental conditions.

Source: Creyer, Elizabeth H. and William T. Ross (1999), "The Development and Use of a Regret Experience Measure to Examine the Effects of Outcome Feedback on Regret and Subsequent Choice," *Marketing Letters,* 10 (November), 373–86.

Regret Experience Measure: REM

(Creyer and Ross 1999)

1. I regret my choice.

2. I think I made an error in judgment.

3. Before I received outcome feedback, I knew that I had made an excellent decision. (R)

4. I am confident I made the best choice based on the information I had available. (R)

5. Before I should have chosen differently.

6. I knew that I should have chosen differently.

7. I really feel good about my choice. (R)

8. I really feel that I was making an error when I made that choice.

Notes: Items are scored using a 1 *disagree completely* to 7 *agree completely* scale. (R) indicates items requiring reverse coding. Items 1, 3, 4, and 7 represent regret, and items 2, 5, 6, and 8 represent self-recrimination.

Business Ethics: Ethical Behavior in Research Organizations

(Ferrell and Skinner 1988)

Construct:	Although ethics has been defined as "inquiry into the nature and grounds of morality" (Taylor 1975), Ferrell and Skinner (1988) argue that ethics warrants a special analysis in marketing research organizations. In the case of research organizations, this focus is on honesty in reporting results to clients, including all aspects of a research project.
Description:	The ethics scale is composed of six Likert-type statements scored on 6-point scales *(definitely disagree* = 6 to *definitely agree* = 1). Item scores are summed, and the scale is unidimensional.
Development:	A pool of 70 items was generated via prestudy interviews with marketing researchers from three organizations. These items were then judged by 11 more researchers, and items were eliminated that lacked face validity. The remaining items were factor analyzed, and items with loadings less than 0.30 were eliminated. This resulted in the final six-item scale. Reliability and validity estimates were also gathered.
Samples:	A sample of 550 marketing researchers from an AMA mailing list was used in the study to develop and validate the scale. This sample was broken down into subsamples of subcontractors (30%), research firms (45%), and corporate research departments (25%).
Validity:	Construct reliability for the six-item scale was 0.71. Standardized loadings across the items ranged from 0.43 to 0.66. In terms of predictive validity, the scale was used as the dependent variable with predictor variables of formalization, centralization, and controls. Across the three subsamples, the ethics scale was positively related to formalization (betas ranged from 0.18 to 0.27). Mixed results were found for the other two independent variables.
Scores:	No mean or percentage scores were reported.
Source:	Ferrell, O. C. and Steven J. Skinner (1988), "Ethical Behavior and Bureaucratic Structure in Marketing Research Organizations," *Journal of Marketing Research,* 25, 103–9.
	© 1988 by the American Marketing Association. Scale items taken from Appendix (pp. 107–8). Reprinted with permission.
Reference:	Taylor, Paul W. (1975), *Principles of Ethics: An Introduction,* Encino, CA: Dickensen.

Ethical Behavior in Research Organizations

(Ferrell and Skinner 1988)

1. Sometimes I compromise the reliability of a study to complete the project.

2. Sometimes I only report part of the data because I know my client may not like the results.

3. I sometimes have to cover up non response and sampling error to please my clients.

4. I have continued a research project after knowing I made errors early.

5. Sometimes I have to alter the sampling design in order to obtain enough respondents.

6. Sometimes I claim to use the latest research techniques as a selling tool, even though I don't use the techniques.

Note: Items scored on 6-point Likert-type scales from *definitely disagree* to *definitely agree*.

Ethics: Improving Evaluations of Business Ethics

(Reidenbach and Robin 1990)

Construct: Business ethics is defined as individual ethical judgment in business decision contexts (Reidenbach and Robin 1990). The five major moral philosophies said to underlie the generation of items are justice, relativism, utilitarianism, egoism, and deontology.

Description: The scale comprises eight semantic differential items distributed across three factors as follows: (a) Moral Equity, four items; (b) Relativistic, two items; and (c) Contractualism, two items. Each item is operationalized using 7-place bipolar scales. Item scores can be summed within factors to form factor indices or overall for an overall measure of ethics.

Development: An initial set of 33 items was developed to reflect the five normative philosophies. The categorization was verified using a panel of three expert "ethics literature" judges. Three scenarios (with varying behaviors of questionable ethics) along with the 33 items were administered to a sample of 218 business students (i.e., the item responses reflected opinions about the behaviors in the scenarios). Four scale items were deleted at this stage (with the deletion procedures not specified). Stage 2 involved tests of the factor structure employing both Likert-type and bipolar formats. (No differences across formats were observed.) Examination of the pattern of factor loadings, the size of the loadings, and item-to-total correlations were used to reduce the number of items to 14. From this stage, three factors emerged. In the last phase, 105 small business operators evaluated the three scenarios. Using the same factor analysis and item reduction criteria, the number of items was reduced to eight. Reliability and validity estimates were also obtained.

Samples: A sample of 218 business students was surveyed in the first stage. A sample of 108 retail managers and owners participated in the second phase, and 105 small business operators were the participants in the last phase, in which the number of items was reduced to eight (i.e., the number included in the final scale). A final study involving mail survey responses from 152 business managers was used to evaluate the validity of the scale.

Validity: Factor analysis of the final survey of business managers replicated the anticipated factor structure. In addition, the three-factor solution explained an average of 79% of the variance across the three scenarios. Based on the responses from reaction to three scenarios, a multitrait-multicontext analysis provided some correlational evidence of convergent and discriminant validity. These analyses revealed that the intercorrelations among factors were generally within the 0.20 to 0.40 range. The subscale reliabilities ranged from 0.71 to 0.92.

   The subscales were also correlated with single-item measures of overall perceptions of the ethical nature of the behavior and a measure of behavioral intentions. For the former, the subscales explained an average of 72% of the variance, and for the latter, the subscales explained an average of 34% of the variance. The multiple-item scales were also found to be better predictors of intentions than the single-item, overall measure. Thus, evidence of predictive validity was found.

Scores: Mean scores for the total scale, the subscales, or the individual items were not presented.

Source: Reidenbach, R. Eric and Donald P. Robin (1990), "Toward the Development of a Multidimensional Scale for Improving Evaluations of Business Ethics," *Journal of Business Ethics,* 9, 639–53.

© 1990 by Kluwer Academic Publishers. Scale items taken from Table VI (p. 649). Reprinted with permission.

Other evidence: A series of follow-up studies was conducted in an effort to further evaluate the scale (Reidenbach, Robin, and Dawson 1991). Across four studies and 15 trials employing different contexts (i.e., eight scenarios), the factor structure and reliability of the scale were replicated. For example, in the data, there's an average of 75%. As predictors of a univariate ethics measure and a measure of ethics intention, the three factors explained between 25% and 83% of the variance in these criterion variables.

Other source: Reidenbach, R. Eric, Donald P. Robin, and Lyndon Dawson (1991), "An Application and Extension of a Multidimensional Ethics Scale to Selected Marketing Practices and Marketing Groups," *Journal of the Academy of Marketing Science,* 19, 115–22.

Ethics: Improving Evaluations of Business Ethics

(Reidenbach and Robin 1990)

Moral Equity Dimension

1. Fair/unfair

2. Just/unjust

3. Acceptable to my family/unacceptable to my family

4. Morally right/not morally right

Relativistic Dimension

5. Traditionally acceptable/traditionally unacceptable

6. Culturally acceptable/culturally unacceptable

Contractualism Dimension

7. Violates/does not violate an unspoken promise

8. Violates/does not violate an unwritten contract

Note: Items 1 through 6 require recoding to reflect a higher level of morality. Items scored on 7-point scales.

Ethics: Corporate Ethics Scale: CEP

(Hunt, Wood, and Chonko 1989)

Construct: As conceptualized by Hunt et al. (1989), corporate ethics reflects three broad based perceptions: (a) the extent to which employees perceive that managers are acting ethically in their organizations, (b) the extent to which employees perceive that managers are concerned about the issues of ethics in their organization, and (c) the extent to which employees perceive that ethical (unethical) behavior is rewarded (punished) in their organization.

Description: The CEP is a five-item scale that is summed and then divided by five to form an overall index of corporate ethics. All items are scored on 7-point strongly disagree–strongly agree scales. Thus, scores on the scale can range from 1 to 7. The scale is considered unidimensional.

Development: From two studies (Hunt, Chonko, and Wilcox 1984; Hunt et al. 1989), five items from a larger pool of items were chosen for the CEP. Factor analysis and coefficient alpha were used to assess the dimensionality and reliability of the scale.

Sample: A total of 1,246 respondents (499 marketing managers, 417 marketing researchers, and 330 advertising agency managers) were used as the sample in deriving the scale.

Validity: Coefficient alpha for the scale was 0.78, and factor analysis revealed a unidimensional structure. Furthermore, the CEP was found to be a significant predictor of organizational commitment (i.e., numerous regression coefficients are offered on p. 86), providing evidence of criterion validity for the scale. For example, beta coefficients for the scale ranged from 0.17 to 0.58 across four subsamples of the data.

Scores: Mean scores (std. dev.) for the three subsample groups were 5.3 (1.12), 5.08 (1.17), and 5.88 (1.22) for the marketing managers, marketing researchers, and ad agency managers, respectively.

Source: Hunt, Shelby D., Van R. Wood, and Lawrence B. Chonko (1989), "Corporate Ethical Values and Organizational Commitment in Marketing," *Journal of Marketing,* 53, 79–90.

                   © 1989 by the American Marketing Association. Scale items taken from Tables 6 and 7 (p. 317). Reprinted with permission.

Reference: Hunt, Shelby D., Lawrence B. Chonko, and James B. Wilcox (1984), "Ethical Problems of Marketing Researchers," *Journal of Marketing Research,* 21, 309–24.

Ethics: Corporate Ethics Scale: CEP

(Hunt, Wood, and Chonko 1989)

1. Managers in my company often engage in behaviors that I consider to be unethical.*

2. In order to succeed in my company, it is often necessary to compromise one's ethics.*

3. Top management in my company has let it be known in no uncertain terms that unethical behaviors will not be tolerated.

4. If a manager in my company is discovered to have engaged in unethical behavior that results primarily in **personal gain** (rather than corporate gain), he or she will be promptly reprimanded.

5. If a manager in my company is discovered to have engaged in unethical behavior that results primarily in **corporate gain** (rather than personal gain), he or she will be promptly reprimanded.

Note: Items scored on 7-point scales from *strongly disagree* to *strongly agree.* * denotes items that are reverse scored.

Ethics: Marketing Norms Ethics Scale

(Vitell, Rallapalli, and Singhapakdi 1993)

Construct: The overall construct assessed by this multidimensional scale is described as the marketing-related norms of marketing practitioners. Norms are defined generally as predetermined guidelines that represent personal values or rules of behavior. Items are said to be reflective of ethical situations faced by marketers in their decision making. The American Marketing Association (AMA) code of ethics was used to drive conceptualization and item generation. Factor analysis was used to derive the factor structure (Vitell et al. 1993, pp. 331–32).

Description: The scale consists of 25 items, each operationalized using 5-place response formats (1 = *strongly disagree* to 5 = *strongly agree)*. The five dimension labels (and numbers of items per dimension) are as follows: price and distribution norms (6), information and contract norms (6), product and promotion norms (5), obligation and disclosure norms (4), and general honesty and integrity (4).

Development: Thirty items were developed reflecting specific ethical situations that marketers face in decision making. Each item was derived from specific elements in the AMA Code of Ethics. Principal components factor analysis with varimax rotation was used to condense the items to five factors and apparently as a means of deleting items.

Samples: A mail survey of a random sample of 2,000 AMA members resulted in a usable sample of 508 practicing marketers, of whom 61% worked in service industries, 52.2% were male, 64% had incomes above $40,000, and 46.3% occupied lower level management positions.

Validity: Coefficient alpha estimates of internal consistency reliability ranged across the five factors from 0.67 to 0.87. Evidence of validity was provided by correlations with idealism and relativism and with two dimensions of the Ethics Dimension Questionnaire. A series of regression analyses, in which the norm factors served as dependent variables, was argued as providing evidence of nomological validity.

Scores: Item mean scores are shown in Table 1. All mean scores were above 4.1 on the 5-place response format.

Source: Vitell, Scott J., Kumar C. Rallapalli, and Anusorn Singhapakdi (1993), "Marketing Norms: The Influence of Personal Moral Philosophies and Organizational Ethical Culture," *Journal of the Academy of Marketing Science,* 21 (4), 331–37.

Ethics: Marketing Norms Ethics Scale

(Vitell, Rallapalli, and Singhapakdi 1993)

Factor 1: Price and Distribution Norms

1. All extra-cost added features should be identified.

2. One should not manipulate the availability of a product for the purpose of exploitation.

3. Coercion should not be used within the marketing channel.

4. Undue influence should not be exerted over the resellers' choice to handle a product.

5. One should not engage in price fixing.

6. Predatory pricing should not be practiced.

Factor 2: Information and Contract Norms

1. Information regarding all substantial risks associated with product or service usage should be disclosed.

2. Any product component substitution that might materially change the product or impact on the buyer's purchase decision should be disclosed.

3. Outside clients and suppliers should be treated fairly.

4. Confidentiality and anonymity in professional relationships should be maintained with regard to privileged information.

5. Obligations and responsibilities in contracts and mutual agreements should be met in a timely manner. The practice and promotion of a professional code of ethics must be actively supported.

Factor 3: Product and Promotion Norms

1. Products and services offered should be safe and fit for their intended uses.

2. Communications about products and services offered should not be deceptive.

3. False and misleading advertising should be avoided.

4. High pressure manipulations or misleading sales tactics should be avoided.

5. Sales promotions that use deception or manipulation should be avoided.

Factor 4: Obligation and Disclosure Norms

1. One should discharge one's obligations, financial and otherwise, in good faith.

2. The full price associated with any purchase should be disclosed.

3. Selling or fund raising under the guise of conducting research should be avoided.

4. Research integrity should be maintained by avoiding the misrepresentation and omission of pertinent research data.

Factor 5: General Honesty and Integrity

1. One should always adhere to all applicable laws and regulations.

2. One should always accurately represent one's education, training and experience.

3. One must always be honest in serving consumers, clients, employees, suppliers, distributors, and the public.

4. One should not knowingly participate in a conflict of interest without prior notice to all parties involved.

Note: Items scored on 5-point scales from *strongly disagree* to *strongly agree.*

Business Attitudes Toward the Marketplace

Measure of CRM Process and Its Impact on Performance

(Reinartz, Krafft, and Hoyer 2004)

Construct: The model assumes that each of the primary dimensions of the customer relationship management (CRM) process (i.e., relationship initiation, maintenance, and termination) has distinct subdimensions. The measurement is at the customer-facing level and captures three lifetime stages of customer relationship management. Customer evaluation is the first subdimension for each of the three primary dimensions. The subsequent subdimensions for each of the primary dimensions are as follows: for the initiation stage—acquisition and recovery management; for the maintenance stage—retention, up-selling/cross-selling and referral management; and for the termination stage—exit management. The nine subdivisions are considered as formative measures. This conceptualization is intended to measure how systematic firms are in practicing the various activities of the CRM process (Reinartz et al. 2004, p. 295).

Description: All questions started with the following: "With regard to your SBU, to what extent do you agree to the following statements?" Participants answered using a 7-point Likert scale, anchored by 1 = *strongly disagree* and 7 = *strongly agree*. Again, the subdimensions are considered formative measures. The measurement approach consists of 15 items, 20 items, and 4 items for the initiation, maintenance, and termination stages, respectively.

Development: The recommendations of Diamantopoulos and Winklhofer (2001) were followed in the construction of the indices. A pretest of the measures was based on a small sample of managers and CRM experts and included a review of the 42 items. As explained below, senior executives from 211 firms in Austria, Germany, and Switzerland provided usable responses as key informants (Sample 1). In Sample 2, 95 responses from different key informants for the same firms were utilized. Objective measures of performance were also collected for 98 firms. None of the indicators exhibited serious multicollinearity problems.

Samples: Several pretests using marketing managers and CRM experts were conducted. Senior executives from 211 firms in Austria, Germany, and Switzerland provided usable responses as key informants (Sample 1). In Sample 2, 95 responses from different key informants for the same firms were utilized. Objective measures of performance were also collected for 98 firms.

Validity: Evidence of nomological validity was provided from a series of correlations between the proposed measures and independent indicators of strengths and weaknesses. As but one example, the formative index for acquisition management activities was correlated with "acquiring high value customers" ($r = 0.36$) and "implementing systematic customer acquisition" ($r = 0.34$) (Reinartz et al. 2004, p. 298). Additional support for the measures was provided in subsequent regression analyses and tests of hypothesized effects. Follow-up analyses were also reported in efforts to address concerns about common methods variance.

Scores: As shown in Table 1 (Reinhartz et al. 2004, p. 300), the means (and standard deviations) for Sample 1 were 5.1 (1.8), 7.1 (1.8), and 4.1 (2.0) for the initiation, maintenance, and termination stage measures. Similar estimates for Sample 2 were 4.9 (1.6), 6.7 (1.6), and 3.6 (1.6).

Source: Reinartz, Werner, Manfred Krafft, and Wayne D. Hoyer (2004), "The CRM Process: Its Measurement and Impact on Performance," *Journal of Marketing Research,* 41 (August), 293–305.

Reference: Diamantopoulos, Adamantios and Heidi M. Winklhofer (2001), "Index Construction With Formative Indicators: An Alternative to Scale Development," *Journal of Marketing Research,* 38 (May), 269–77.

Measure of CRM Process and Its Impact on Performance

(Reinartz, Krafft, and Hoyer 2004)

CRM Initiation (INITIATE)

Measurement at Initiating Stage (IMEASURE)

With regard to your SBU, to what extent do you agree to the following statements?

We have a formal system for identifying *potential* customers.

We have a formal system for identifying which of the *potential* customers are more *valuable*.

We use data from external sources for identifying potential high-value customers.

We have a formal system in place that facilitates the continuous evaluation of prospects.

We have a system in place to determine the cost of reestablishing a relationship with a lost customer.

We have a systematic process for assessing the value of past customers with whom we no longer have a relationship.

We have a system for determining the costs of reestablishing a relationship with inactive customers.

Activities to Acquire Customers (ACQUISIT)

With regard to your SBU, to what extent do you agree to the following statements?

We made attempts to attract prospects in order to coordinate messages across media channels.

We have a formal system in place that differentiates targeting of our communications based on the prospect's value.

We systematically present different offers to prospects based on the prospects' economic value.

We differentiate our acquisition investments based on customer value.

Activities to Regain Customers (REGAIN)

With regard to your SBU, to what extent do you agree to the following statements?

We have a systematic process/approach to reestablish relationships with valuable customers who have been lost to competitors.

We have a system in place to be able to interact with lost customers.

We have a systematic process for reestablishing a relationship with valued inactive customers.

We develop a system for interacting with inactive customers.

CRM Maintenance (MAINTAIN)

Measurement at Maintaining Stage (MMEASURE)

With regard to your SBU, to what extent do you agree to the following statements?

We have a formal system for determining which of our *current* customers are of the highest value.

We continuously track customer information in order to assess customer value.

We actively attempt to determine the costs of retaining customers.

We track the status of the relationship during the entire customer life cycle (relationship maturity).

Activities to Retain Customers (RETAIN)

> With regard to your SBU, to what extent do you agree to the following statements?
>
> We maintain an interactive two-way communication with our customers.
>
> We actively stress customer loyalty or retention programs.
>
> We integrate customer information across customer contact points (e.g., mail, telephone. web, fax, face-to-face).
>
> We are structured to optimally respond to groups of customers with different values.
>
> We systematically attempt to customize products/services based on the value of the customer.
>
> We systematically attempt to manage the expectations of high-value customers.
>
> We attempt to build long-term relationships with our high-value customers.

Activities to Manage Up-Selling and Cross-Selling (CROSS_UP)

> With regard to your SBU, to what extent do you agree to the following statements?
>
> We have formalized procedures for cross-selling to valuable customers.
>
> We have formalized procedures for up-selling to valuable customers.
>
> We try to systematically extend our "share of customer" with high-value customers.
>
> We have systematic approaches to mature relationships with high-value customers in order to be able to cross-sell or up-sell earlier.
>
> We provide individualized incentives for valuable customers if they intensify their business with us.

Activities to Manage Customer Referrals (REFERRAL)

> With regard to your SBU, to what extent do you agree to the following statements?
>
> We systematically track referrals.
>
> We try to actively manage the customer referral process.
>
> We provide current customers with incentives for acquiring new potential customers.
>
> We offer different incentives for referral generation based on the value of acquired customers.

CRM Termination (TERMINATE)

Measurement at Termination Stage (TMEASURE)

> With regard to your SBU, to what extent do you agree to the following statement?
>
> We have a formal system for identifying nonprofitable or lower-value customers.

Activities to Demarket Customers Actively (EXIT)

> With regard to your SBU, to what extent do you agree to the following statements?
>
> We have a formal policy or procedure for actively discontinuing relationships with low-value or problem customers (e.g., canceling customer accounts).
>
> We try to passively discontinue relationships with low-value or problem customers (e.g., raising basic service fees).
>
> We offer disincentives to low-value customers for terminating their relationships (e.g., offering poorer service).

Notes: All questions started with the following: "With regard to your SBU, to what extent do you agree to the following statements?" Participants answered using a 7-point Likert scale, anchored by 1 = *strongly disagree* and 7 = *strongly agree.*

Culture: Organizational Culture

(Deshpande, Farley, and Webster 1993)

Construct: Deshpande and Webster (1989, p. 4) defined organizational culture as the pattern of shared values and beliefs that help individuals understand organizational functioning and thus provide them with the norms for behavior in the organization. Subsequently, Deshpande et al. (1993, pp. 25–6) used two dimensions to identify four culture types. The two dimensions describe the continua that range from organic to mechanistic processes and from internal maintenance to external positioning. The four culture types are (a) market culture that emphasizes competitiveness and goal achievement, (b) adhocracy culture that emphasizes entrepreneurship and creativity, (c) clan culture that emphasizes teamwork and cooperation, and (d) hierarchy culture that emphasizes order and regulations.

Description: Complete instructions are provided by Deshpande et al. (1993, p. 34). Briefly, respondents are asked to distribute 100 points across four descriptions (i.e., A, B, C, D) regarding four different issues: (a) kind of organization, (b) leadership, (c) what holds the organization together, and (d) what is important. The four culture scores are computed by adding the four A items for clan, the four B items for adhocracy, the four C items for hierarchy, and the four D items for market. As such, the culture measures represent four different four-item scales that could range from 0 to more than 100.

Development: The culture scale was adapted from Campbell and Freeman (1991) and Quinn (1988). Coefficient alpha estimates of internal consistency reliability were as follow: market, 0.82; adhocracy, 0.66; clan, 0.42; and hierarchy, 0.71.

Samples: The research is based on 50 sets of four interviews (i.e., 50 quadrads), each representing two interviews from a supplier and two from a customer firm of that supplier (Deshpande et al. 1993, p. 28). These quadrads represent 50 Japanese firms randomly selected from those firms traded on the Nikkei stock exchange in Tokyo.

Validity: Like the evidence cited earlier for the authors' customer orientation measure, evidence in support of validity is provided by the empirical support for the theoretical propositions. For example, market cultures were associated with the best performance, whereas hierarchical cultures were associated with the poorest performance, as predicted.

Scores: Means (std. dev.) pooled across low and high performers were reported as follow: market 106.1 (37.4); adhocracy, 78.9 (26.4); clan, 117.0 (28.8); and hierarchy, 100.9 (31.4).

Source: Deshpande, Rohit, John U. Farley, and Frederick E. Webster, Jr. (1993), "Corporate Culture, Customer Orientation, and Innovativeness in Japanese Firms: A Quadrad Analysis," *Journal of Marketing,* 57, 23–37.

References: Campbell, J. P. and Sarah J. Freeman (1991), "Cultural Congruence, Strength, and Type: Relationships to Effectiveness," in *Research in Organizational Change and Development,* Vol. 5, eds. R. W. Woodman and W. A. Passmore, Greenwich, CT: JAI.

Deshpande, Rohit and Frederick E. Webster, Jr. (1989), "Organizational Culture and Marketing: Defining the Research Agenda," *Journal of Marketing,* 53, 3–15.

Quinn, Robert E. (1988), *Beyond Rational Management,* San Francisco: Jossey-Bass.

Culture: Organizational Culture

(Deshpande, Farley, and Webster 1993)

Kind of Organization (Please distribute 100 points)

_____Points for A

My organization is a very personal place. It is like extended family. People seem to share a lot of themselves.

_____Points for B

My organization is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks.

_____Points for C

My organization is a very formalized and structural place. Established procedures generally govern what people do.

_____Points for D

My organization is very production oriented. A major concern is with getting the job done without much personal involvement.

Leadership (Please distribute 100 points)

_____Points for A

The head of my organization is generally considered to be a mentor, sage, or a father or mother figure.

_____Points for B

The head of my organization is generally considered to be an entrepreneur, an innovator, or a risk taker.

_____Points for C

The head of my organization is generally considered to be a coordinator, an organizer, or an administrator.

_____Points for D

The head of my organization is generally considered to be a producer, a technician, or a hard-driver.

What Holds the Organization Together (Please distribute 100 points)

_____Points for A

The glue that holds my organization together is loyalty and tradition. Commitment to this firm runs high.

_____Points for B

The glue that holds my organization together is commitment to innovation and development. There is an emphasis on being first.

_____Points for C

The glue that holds my organization together is formal rules and policies. Maintaining a smooth-running institution is important here.

_____Points for D

The glue that holds my organization together is the emphasis on **tasks and goal accomplishment.** A production orientation is commonly shared.

What Is Important (Please distribute 100 points)

_____Points for A

My organization emphasizes **human resources.** High cohesion and morale in the firm are important.

_____Points for B

My organization emphasizes **growth and acquiring new resources.** Readiness to meet new challenges is important.

_____Points for C

My organization emphasizes **permanence and stability.** Efficient, smooth operations are important.

_____Points for D

My organization emphasizes **competitive actions and achievement.** Measurable goals are important.

Note: The four culture scores are computed by adding the four A items for clan, the four B items for adhocracy, the four C items for hierarchy, and the four D items for market.

Customer Orientation

(Deshpande, Farley, and Webster 1993)

Construct: Customer orientation is defined as the set of beliefs that puts the customer's interests first, while not excluding those of all other stakeholders such as owners, managers, and employees, in order to develop a long-term profitable enterprise (Deshpande et al. 1993, p. 27). This perspective includes the more deeply rooted values and beliefs that the organization consistently reinforce a customer focus.

Description: Customer orientation is assessed as the sum of nine positively worded items operationalized using a 5-place Likert-type agreement response format. Respondents are requested to answer within the context of a particular market business. Items are constructed such that they can be used for both customers and suppliers.

Development: The customer orientation scale was developed on the basis of extensive qualitative interviewing, a detailed survey of available literature, and pretesting in a small sample of firms (Deshpande et al. 1993, p. 29). Corrected item-to-total correlations and coefficient alpha were used to delete items. Internal consistency estimates of reliability, as evaluated by the suppliers and customers, were 0.69 and 0.83, respectively.

Samples: The research is based on 50 sets of four interviews (i.e., 50 quadrads), each representing two interviews from a supplier and two from a customer firm of that supplier (Deshpande et al. 1993, p. 28). These quadrads represent 50 Japanese firms randomly selected from those firms traded on the Nikkei stock exchange in Tokyo.

Validity: Some evidence of validity is provided by the mixed results from the authors' tests of hypotheses. For example, marketers' customer orientation is related positively to business performance, and these effects remained after controlling for organizational culture. However, Japanese managers' reports of their company's customer orientation were not related to performance.

Scores: Overall means (std. dev.) were 32.5 (3.3) and 32.1 (3.2) as evaluated by the supplier and the customer, respectively. Similar estimates were found for both suppliers and customers for low and high performers.

Source: Deshpande, Rohit, John U. Farley, and Frederick E. Webster, Jr. (1993), "Corporate Culture, Customer Orientation, and Innovativeness in Japanese Firms: A Quadrad Analysis," *Journal of Marketing,* 57, 23–37.

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Other evidence: Other evidence of reliability and validity is summarized in the meta-analysis market orientation scale development effort reported by Deshpande and Farley (1996) based on their survey of 82 marketing executives. For example, the estimate of reliability was reported to be 0.72. The correlation with a validity check measure of market orientation was 0.66. Evidence of predictive validity was provided by correlations of 0.28 and 0.66 with two measures of firm performance. Evidence of discriminant validity was provided by low correlations with measures of organizational climate.

Other source: Deshpande, Rohit and John U. Farley (1996, December), *Understanding Market Orientation: A Prospectively Designed Meta-Analysis of Three Market Orientation Scales* (Working Paper Report No. 96–125), Cambridge, MA: Marketing Science Institute.

Customer Orientation

(Deshpande, Farley, and Webster 1993)

We have routine or regular measures of customer service.

Our product and service development is based on good market and customer information.

We know our competitors well.

We have a good sense of how our customers value our products and services.

We are more customer focused than our competitors.

We compete primarily based on product or service differentiation.

The customer's interest should always come first, ahead of the owners.

Our products/services are the best in the business.

I believe this business exists primarily to serve customers.

Note: Items are scored on 5-point Likert-type scales.

Interaction Orientation

(Ramani and Kumar 2008)

Construct: An interaction orientation (INTOR) reflects a firm's ability to interact with its individual customers and to take advantage of information obtained from them through successive interactions to achieve profitable customer relationships. Considered as a second-order model, the construct is viewed as a composite concept that captures (1) a firm's belief in the customer concept, (2) a firm's interaction response capacity that reflects its ability to use dynamic database systems and processes, (3) a firm's customer empowerment practices that help shape customer-firm interactions and customer-customer interactions, and (4) a firm's customer value management practices that guide its marketing resource allocation decisions (Ramini and Kumar 2008, p. 28).

Description: The measure consists of 13 items distributed as follows: belief in customer concept (3 items; CC), interaction response capacity (4 items; IRC), customer empowerment (3 items; CE), and customer value management (3 items; CVM). Questions were answered on a 5-point scale, where 1 = *strongly agree* and 5 = *strongly disagree*. The aggregated scale consisted of the average scores of the four dimensions of INTOR as indicators of INTOR. The units of analysis were the firms. When there were multiple respondents per firm, the average scale item across the multiple respondents per firm was used.

Development: A pool of items was developed from a review of the market orientation (Kohli, Jaworski, and Kumar 1993) and customer relationship management literature (Jayachandran et al. 2005). Six senior marketing executives and four academic experts were used to pretest and assess face validity. Factor analysis on the responses of 51 senior marketing executives and estimates of coefficient alpha, as well as corrected item-to-total correlations, were used to purify the scales. The focal study respondent data were first used to assess measurement validity. The second-order confirmatory factor model analysis resulted in acceptable overall model fit. The construct reliability and average variance extracted estimates for INTOR were 0.96 and 0.86, respectively, based on the loadings using the four factors as indicators of INTOR (Ramani and Kumar 2008, p. 36). The authors also state the constructs in their research exhibited both convergent and divergent validity and that common method bias was not a threat.

Samples: Items were pretested on six senior executives and four academic experts in customer relationship management. The responses of 51 senior marketing executives were used for exploratory factor analyses. The authors used 211 responses from 107 firms from an online survey of senior and top-level marketing executives. The average sales volume for the firms was $5 billion. Seventy-four of the firms were from business-to-business industries.

Validity: Evidence from structural equation analyses offered additional evidence of validity for the INTOR measure. Specifically, INTOR was found positively correlated with customer-based relational performance and customer-based profit performance as hypothesized. In addition, the interaction orientation scale was also found associated as predicted with outsourcing expertise, employee rewards systems, dependence on patents, and the extent of normative institutional pressure to adopt interactive technologies. Overall, support for nomological validity was demonstrated for INTOR in its role as a mediator between hypothesized consequences and consequences. In addition, INTOR was significant in a moderated and hypothesized relationship involving the level of customer-initiated contacts and customer-based profit performance.

Scores: Means (and standard deviations) provided by the authors for the four components of INTOR were as follows: CC, 3.56 (1.08); IRC, 3.36 (1.16); CE, 3.42 (1.42); and CVM, 3.12 (1.49).

Source: Ramani, Girish and V. Kumar (2008), "Interaction Orientation and Firm Performance," *Journal of Marketing,* 72 (January), 27–45.

References: Jayachandran, Satish, Subhash Sharma, Peter Kaufman, and Pushkala Raman (2005), "The Role of Relational Information Processes and Technology Use in Customer Relationship Management," *Journal of Marketing,* 60 (October), 177–92.

Kohli, Ajay, Bernard J. Jaworski, and Ajith Kumar (1993), "MARKOR: A Measure of Market Orientation," *Journal of Marketing Research,* 30 (November), 467–77.

Interaction Orientation

(Ramani and Kumar 2008)

Belief in the Customer Concept (CC)

This firm believes that each customer cannot be satisfied with the same set of products and services.

This firm consciously seeks to identify and acquire new customers individually.

This firm believes that customers' reactions to marketing action should be observed at the individual customer level.

Interaction Response Capacity (IRC)

This firm has systems in place that record each customer's transactions.

This firm can identify all transactions pertaining to each individual customer.

This firm analyzes previous consumer transactions at the individual customer level to predict future transactions from that customer.

In this firm, all customer interfaces possess transaction information on individual customers at all times.

Customer Empowerment (CE)

This firm encourages customers to share opinions of its products or services with the firm.

This firm encourages customers to share opinions of its products or services with other customers.

This firm encourages customers to participate interactively in designing products and services.

Customer Value Management (CVM)

This firm has an excellent idea of what each individual customer has been contributing to its profits.

This firm predicts what each individual customer will contribute to its profits in the future.

This firm computes the revenue generated as a result of every marketing action directed at an individual customer.

Note: Participants were told the following: "The word 'customer' refers to direct institutional customers for business-to-business firms, to end consumers for business-to-consumer firms, and to retailers for business-to-retail firms." Questions were answered on a 5-point scale, where 1 = *strongly agree* and 5 = *strongly disagree*.

Market Orientation

(Narver and Slater 1990)

Construct: Market orientation is the organizational culture that most effectively and efficiently creates the necessary behaviors for the creation of superior value for buyers and thus continuous superior performance for the business (Narver and Slater 1990, p. 21). Furthermore, market orientation consists of three behavioral components (i.e., customer orientation, competitor orientation, and interfunctional coordination) and two decision criteria (i.e., long-term focus and profitability). Each of these is described below.

Customer orientation is the sufficient understanding of one's target buyers to be able to create superior value for them continuously. It requires that the seller know the buyer's entire value chain.

Competitor orientation means that a seller understands the short-term strengths and weaknesses and long-term capabilities and strategies of both the key current and the key potential competitors.

Interfunctional coordination is the coordinated utilization of company resources in creating superior value for target customers at any and all points in the buyer's value chain.

Long-term focus in relation to profits and in implementing each of the three behavioral components is required to be market oriented.

Profitability means that the creation of economic wealth is an overriding objective in market orientation.

Description: The authors describe their scale as a one-dimensional construct but develop multiple-item measures for each of the above facets. The final scale is composed of 15 Likert-type items scored on 7-point scales ranging from *the business unit does not engage in the practice at all* (1) to *the business unit engages in the practice to a very great extent* (7). Indices for the first three components are derived by summing the item scores within components and dividing by the number of items in the component. An overall market orientation index is derived by averaging the item scores across all the items of the three behavioral components. The other two components (i.e., long-term focus and profitability) were not included in calculating the market orientation index because of their low levels of reliability.

Development: Based on a literature review, several items were generated by the authors to tap the domain of the construct. Two expert panels reviewed and judged the items for face validity, and several items were deleted. The remaining items were further examined by six SBU (strategic business unit) managers, and based on their evaluation, items were refined that reflect the final instrument. In a separate study, a number of reliability and validity checks were performed.

Samples: As stated above, two panels of academicians (three in each group) and six SBU managers were used in item generation and face validity analysis. A sample of 371 managers from various SBUs responded to the final form of the scale.

Validity: Coefficient alpha estimates for the six-item customer orientation facet were 0.85 and 0.87 (the sample of 371 was split into two groups of 190 and 175). Corresponding estimates for the four-item competitor orientation and five-item interfunctional coordination facets were 0.72 and 0.73, and 0.71 and 0.73, respectively. For the overall sample, the correlations among these three components ranged from 0.66 to 0.73, and alpha for the 15-item scale (i.e., items from the three components as one overall scale) was 0.88. Thus, these three components exhibited satisfactory levels of reliability.

The three-item long-term focus and three-item profit emphasis components exhibited low levels of internal consistency (i.e., 0.47 and 0.48 for the former and 0.14 and 0.00 for the latter). Subsequently, they were excluded from further analyses.

Discriminant and concurrent validity of the scale were also assessed. Discriminant validity was examined by correlating the 15-item market orientation measure with a measure of human resource management policy. The correlations between the three components of market orientation and the human resource measure ranged from 0.45 to 0.53 and were significantly less than the correlations among the three components of market orientation. This was taken as evidence of discriminant validity. The correlations of the overall scale and the three components with measures for return on assets (ROA), low cost advantage, and the use of a differentiation strategy were used to assess concurrent validity. For ROA, correlations with the overall scale and its three components ranged from 0.23 to 0.39. For low cost advantage, corresponding correlations ranged from 0.18 to 0.23, and for differentiation strategy, the correlations ranged from 0.33 to 0.45. This supports the marketing orientation scale's concurrent validity.

Scores: Mean scores were reported for the overall scale and its components across four different business typologies. For the overall scale, grand mean scores (Narver and Slater 1990, Table 5, p. 28) ranged from 4.28 to 4.77. The grand mean ranges for the customer orientation, competitor orientation, and interfunctional coordination components ranged from 4.53 to 5.05, 4.06 to 5.71, and 4.25 to 4.53, respectively.

Source: Narver, John C. and Stanley F. Slater (1990), "The Effect of Market Orientation on Business Profitability," *Journal of Marketing,* 54, 20–35.

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Other evidence: Other evidence of reliability and validity is summarized in the meta-analysis market orientation scale development effort reported by Deshpande and Farley (1996) based on their survey of 82 marketing executives. For example, the estimate of reliability was reported to be 0.90. The correlation with a validity check measure of market orientation was 0.46. Evidence of predictive validity was provided by correlations of 0.40 and 0.51 with two measures of firm performance. Evidence of discriminant validity was provided by low correlations with measures of organizational climate.

Other source: Deshpande, Rohit and John U. Farley (1996, December), *Understanding Market Orientation: A Prospectively Designed Meta-Analysis of Three Market Orientation Scales* (Working Paper Report No. 96–125), Cambridge, MA: Marketing Science Institute.

Market Orientation

(Narver and Slater 1990)

In our business unit—

1. Our salespeople regularly share information within our business concerning competitors' strategies.

2. Our business objectives are driven primarily by customer satisfaction.

3. We rapidly respond to competitive actions that threaten us.

4. We constantly monitor our level of commitment and orientation to serving customer's needs.

5. Our top managers from every function regularly visit our current and prospective customers.

6. We freely communicate information about our successful and unsuccessful customer experiences across all business functions.

7. Our strategy for competitive advantage is based on our understanding of customers' needs.

8. All of our business functions (e.g. marketing/sales, manufacturing, R & D, finance/accounting, etc.) are integrated in serving the needs of our target markets.

9. Our business strategies are driven by our beliefs about how we can create greater value for customers.

10. We measure customer satisfaction systematically and frequently.

11. We give close attention to after-sales service.

12. Top management regularly discusses competitors' strengths and strategies.

13. All of our managers understand how everyone in our business can contribute to creating customer value.

14. We target customers where we have an opportunity for competitive advantage.

15. We share resources with other business units.

Notes: Seven-place response format labeled as follows: 1 = *not at all*, 2 = *to a very slight extent*, 3 = *to a small extent*, 4 = *to a moderate extent*, 5 = *to a considerable extent*, 6 = *to a great extent*, and 7 = *to an extreme extent*. Items 2, 4, 7, 9, 10, and 11 reflect "customer orientation." Items 1, 3, 12, and 14 reflect "competitor orientation." Items 5, 6, 8, 13, and 15 reflect "interfunctional coordination."

Market Orientation: MARKOR

(Kohli, Jaworski, and Kumar 1993)

Construct: Market orientation is defined as the organization-wide generation of market intelligence pertaining to current and future needs of customers, dissemination of intelligence within the organization, and responsiveness to it (Jaworski and Kohli 1993, p. 54; Kohli and Jaworski 1990; Kohli et al. 1993, p. 468). This view emphasizes an expanded focus that emphasizes the market, interfunctional coordination with respect to market intelligence, and intelligence processing.

Description: The MARKOR scale consists of 20 items distributed across three factors as follows: intelligence generation, six items; intelligence dissemination, five items; and responsiveness, nine items. Seven of the items require reverse scoring. Items are operationalized using a 5-place response format bounded by *strongly disagree* (1) and *strongly agree* (5) (Deshpande and Farley 1996, p. 16). The authors suggest that, based on their multi-informant data, the 20-item MARKOR scale might best be represented by a factor structure that consists of one general market orientation factor, one factor for intelligence generation, one factor for dissemination and responsiveness, one marketing informant factor, and one nonmarketing informant factor.

Development: An initial set of 25 items was developed by the authors from a series of personal interviews. These field interviews were instrumental in the identification of the three basic components of market orientation. The first pretest reduced the number of items to 21. The second pretest expanded the set of items to 32 (see Appendix A, p. 476). The third pretest resulted in several minor modifications to item wording. The single informant sample reduced the items to the 20 statements composing the final scale. Decisions to delete 12 items were based on low reliability, cross loadings, and high residual covariation. The final model consisted of one general factor and three correlated factors.

Substantial evidence from the extensive confirmatory factor analyses for both the single- and multi-informant analyses are reported by Kohli et al. (1993). These results are too voluminous to be reviewed here. However, for competing models, the following fit statistics are typically reported: chi-square, GFI, NCP, RNI, TLI, and NSNR.

Again, the authors suggest that, based on their multi-informant data, the 20-item MARKOR scale might best be represented by a factor structure that consists of one general market orientation factor, one factor for intelligence generation, one factor for dissemination and responsiveness, one marketing informant factor, and one nonmarketing informant factor. This conclusion is based on the finding that the dissemination and responsiveness factors lacked discriminant validity. Overall, the model fit statistics were modest, yet the complexity of the model is considerable and run across two separate disparate samples. For example, the GFI and RNI statistics for MOD25 (i.e., the recommended configuration; Kohli et al. 1993, p. 472) were 0.68 and 0.74, respectively.

Samples: Three pretest samples comprised 27 marketing and nonmarketing executives, 7 academic experts, and 7 managers, respectively. The single informant sample comprised 230 members of the American Marketing Association. The multi-informant sample consisted of matched samples of senior marketing and nonmarketing executives from 229 strategic business units from 102 firms (Kohli et al. 1993, p. 469).

Validity: The market orientation factors for the multi-informant data were all correlated with six additional constructs: a global measure of market orientation, top management emphasis on market orientation, interfunctional conflict, market-based rewards, employees' commitment, and subjective performance (see Table 4, p. 475). Overall, these findings

were concluded to be moderately supportive of the validity of the market orientation construct (Kohli et al. 1993, p. 473).

Scores: Item means and standard deviations for marketing and nonmarketing executives are shown in Appendix A (Kohli et al. 1993, p. 476).

Source: Kohli, Ajay K., Bernard J. Jaworski, and Ajith Kumar (1993), "MARKOR: A Measure of Market Orientation," *Journal of Marketing Research,* 30, 467–77.

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Other evidence: Other evidence of reliability and validity is summarized in the meta-analysis market orientation scale development effort reported by Deshpande and Farley (1996) based on their survey of 82 marketing executives. For example, the estimate of reliability was reported to be 0.51. The correlation with a validity check measure of market orientation was 0.45. Evidence of predictive validity was provided by correlations of 0.42 and 0.33 with two measures of firm performance. Evidence of discriminant validity was provided by low correlations with measures of organizational climate.

References: Deshpande, Rohit and John U. Farley (1996, December), *Understanding Market Orientation: A Prospectively Designed Meta-Analysis of Three Market Orientation Scales* (Working Paper Report No. 96–125), Cambridge, MA: Marketing Science Institute.

Jaworski, Bernard J. and Ajay K. Kohli (1993), "Market Orientation: Antecedents and Consequences," *Journal of Marketing,* 57, 53–70.

Kohli, Ajay K. and Bernard J. Jaworski (1990), "Market Orientation: The Construct, Research Propositions, and Managerial Implications," *Journal of Marketing,* 54, 1–18.

Market Orientation: MARKOR

(Kohli, Jaworski, and Kumar 1993)

Intelligence Generation

In this business unit, we meet with customers at least once a year to find out what products or services they will need in the future.

In this business unit, we do a lot of in-house market research.

We are slow to detect changes in our customers' product preferences. (R)

We poll end-users at least once a year to assess the quality of our products and services.

We are slow to detect fundamental shifts in our industry (e.g., competition, technology, regulation). (R)

We periodically review the likely effect of changes in our business environment (e.g., regulation) on customers.

Intelligence Dissemination

We have interdepartmental meetings at least once a quarter to discuss market trends and developments.

Marketing personnel in our business unit spend time discussing customers' future needs with other functional departments.

When something important happens to a major customer or market, the whole business unit knows about it in a short period.

Data on customer satisfaction are disseminated at all levels in this business unit on a regular basis.

When one department finds out something important about our competitors, it is slow to alert other departments. (R)

Responsiveness

It takes us forever to decide how to respond to our competitors' price changes. (R)

For one reason or another, we tend to ignore changes in our customers' product or service needs. (R)

We periodically review our product development efforts to ensure that they are in line with what customers want.

Several departments get together periodically to plan a response to changes taking place in our business environment.

If a major competitor were to launch an intensive campaign targeted at our customers, we would implement a response immediately.

The activities of the different departments in this business unit are well coordinated.

Customer complaints fall on deaf ears in this business unit. (R)

Even if we came up with a great marketing plan, we probably would not be able to implement it in a timely fashion. (R)

When we find that customers would like us to modify a product or service, the departments involved make concerted efforts to do so.

Note: (R) denotes items that are reverse scored. Items scored on 5-point scales from *strongly disagree* to *strongly agree.*

Marketing Research: Trust and Use of Market Research

(Moorman, Zaltman, and Deshpande 1992)

Construct: Moorman et al. (1992) describe the results of their research regarding the relationships between providers and users of marketing research across four different types of user-provider dyads. As part of their study, hypotheses are offered that describe the role of trust as a determinant of the use of marketing research. Measures are described for five key concepts: (a) user trust in researcher, (b) perceived quality of interaction, (c) researcher involvement, (d) commitment to relationship, and (e) research utilization. The first four measures were developed specifically for the study described by Moorman et al. (1992) and are described here. Research utilization was adapted from Deshpande and Zaltman (1982).

Briefly, the following definitions were used to guide measurement development. Trust is defined as a willingness to rely on an exchange partner in whom one has confidence. This definition was adapted to apply to user trust in a researcher. Researcher involvement refers to the extent to which users feel it is important to involve researchers in the design, production, and use of market information. Perceived quality of interactions is the degree to which users view user-researcher interactions as productive. Commitment to the relationship is defined as an enduring desire to maintain a valued relationship (Moorman et al. 1992, p. 316).

Description: User trust in researcher, perceived quality of interaction, and commitment to relationship were operationalized as the average of five, five, and three 7-place, *strongly disagree* to *strongly agree* items, respectively. Researcher involvement assessed the respondent's perceived importance of the researcher's involvement in each of five project activities using 7-place scales bounded by *very unimportant* and *very important*. Instructions asked respondents to reply regarding their most recently completed research project.

Development: A first pretest involving 10 academic colleagues and 10 practitioners was used to judge the appropriateness of items as construct indicators. A second pretest using the responses from 27 researcher users was employed to verify that trust could be differentiated from related concepts such as quality of interaction and commitment. After data collection, the measures were improved by deleting items with low corrected item-to-total correlations. Subsequent factor analyses revealed that items for each variable loaded on a single factor. Coefficient alpha estimates for the four new variables were as follow: TRUST, 0.84; INTERACT, 0.86; INVOLVE, 0.79; and COMMIT, 0.78 (Moorman et al. 1992, p. 320).

Sample: A total of 779 research users responded to mail surveys from an original eligible sample of 1,719. The sample was generated by calls to 200 top advertising firms. The sample comprised individuals responding to one of four dyads: internal marketing manager-internal marketing researcher ($n = 192$), internal marketing manager-external marketing researcher ($n = 172$), internal marketing researcher-external marketing researcher ($n = 331$), and internal nonmarketing manager-internal marketing researcher $(n = 84)$.

Validity: Evidence of validity is offered from use of the measures in subsequent model and hypothesis tests. The ability of the variables to operate generally as expected within their theoretical framework offers support for measurement validity. Moreover, this conclusion is supported by a number of predicted main and interaction effects. Modest intercorrelations among the five construct measures provide some additional evidence of discriminant validity.

Scores: Means, standard deviations, and variable intercorrelations are presented in Table 2 (Moorman et al. 1992, p. 320).

Source: Moorman, Christine, Gerald Zaltman, and Rohit Deshpande (1992), "Relationships Between Providers and Users of Market Research: The Dynamics of Trust Within and Between Organizations," *Journal of Marketing Research,* 29, 314–28.

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Reference: Deshpande, Rohit and Gerald Zaltman (1982), "Factors Affecting the Use of Market Research Information: A Path Analysis," *Journal of Marketing Research,* 19, 14–31.

Marketing Research: Trust and Use of Market Research

(Moorman, Zaltman, and Deshpande 1992)

User Trust in Researcher

If I or someone from my department could not be reached by our researcher, I would be willing to let my researcher make important research decisions without my involvement.

If I or someone from my department were unable to monitor my researcher's activities, I would be willing to trust my researcher to get the job done right.

I trust my researcher to do things I can't do myself.

I trust my researcher to do things my department can't do itself.

I generally do not trust my researcher. (R)

Perceived Quality of Interaction

Disagreements between my researcher and me tend to be handled productively. My meetings with my researcher produce novel insights.

My researcher displays a sound strategic understanding of my business in his/her interactions with me.

My researcher is very customer-oriented in his/her interactions with us.

My interactions with my researcher are productive.

Researcher Involvement

For this project, how important was the involvement of your internal researcher in each of the following five activities?

- –Problem definition
- –Research design
- –Data analysis
- –Development of recommendations
- –Implementation of recommendations

Commitment to Relationship

I am committed to my relationship with my researcher.

I consider my researcher to be a part of my department.

I really care about the fate of my working relationship with my researcher.

Research Utilization (adapted from Deshpande and Zaltman 1982)

Without this research information, the decisions would have been very different.

No decision would have been made without this research information.

The majority of the research information from this project was not used.

In your opinion, what proportion of this particular study need not have been done (for whatever reason):_____%

Note: (R) denotes reverse-scored item. Items scored on 7-point scales.

7

Sales, Sales Management, Organizational Behavior, and Interfirm-Intrafirm Issues

Job Satisfaction Measures

Agents' Socially Desirable Responding: ASDR Scale

(Manning, Bearden, and Tian 2009)

Construct: Agents' socially desirable responding (ASDR) is defined as organizational informants' tendencies to present the firm favorably with respect to norms and standards (Manning, Bearden, and Tian 2009, p. 33). The ASDR scale is designed to assist in survey research using key informants and the assessment of response biases. Specifically, the scale is intended for use in detecting social desirability bias in managers' responses to subjective performance measures. As such, ASDR acts as an effective control variable for social desirability response bias in organizational settings.

Description: The unidimensional scale comprises eight items anchored by *not true* (1) and *very true* (7). Four of the items require reverse coding (i.e., 2, 4, 5, and 8). The scale includes a mix of statements that reflect thoughts and behaviors that are undesirable yet universally enacted/experienced or desirable yet universally not enacted/experienced (Manning et al. 2009, p. 35).

Development: Statements (i.e., 316) were generated from a review of the organizational justice literature and an open-ended elicitation survey from 85 MBA students. After deleting redundant

statements, the set was reduced to 75 items. Based on the responses of 66 managers and an examination of median scores, the item pool was reduced to 26 items by selecting those items that most reflected desirable yet universally not enacted/experienced thoughts and behaviors and undesirable yet prevalent thoughts and behaviors. An additional 12 items were deleted due to confusing wording and/or domain-specific content. The remaining 14-item set was reduced to the final 8-item scale based on a series of confirmatory factor analyses using data from a combined sample of 213 executives. Using this sample, the coefficient alpha estimate of reliability was 0.78. The CFA loadings revealed a construct reliability estimate of 0.82.

Samples: The item generation process was based in part on the responses of 85 MBA students. A sample of 66 executives responded to a mail survey that was used to screen the appropriateness of the items. Two convenience samples of executives ($n = 101$ and $n = 91$), as well as 21 professional MBAs, were used as the basis for a series of confirmatory factor analyses. Additional tests of validity were based on the responses of 127 MBAs. Forty-four executives participated in a study of the relationship between ASDR and subjective measures of performance. Last, 181 executives participated in a two-group mail survey experiment.

Validity: Follow-up confirmatory factor analysis (based on the sample of 127 current and former MBAs) revealed acceptable fit and a single dimension scale. The coefficient alpha and construct reliability estimates were 0.76 and 0.81, respectively. Using this same sample, the ASDR measure was found correlated with shortened versions of the Paulhus (1993) impression management ($r = 0.33$) and self-deceptive enhancement ($r = 0.30$) factors as predicted.

Additional evidence of validity was provided from investigating relationships involving subjective measures of company performance and a sample of 44 executives. Specifically, ASDR was found positively correlated to difference scores based on performance relative to competition ($r = 0.43$) as predicted but not significantly related to difference scores based on performance relative to expectations ($r = 0.10$), also as predicted. Support for the measure's nomological validity and usefulness was demonstrated in tests of the scale's ability to act as a control variable in an examination of relationships between subjective performance measures of market orientation (Kirca, Jayachandran, and Bearden 2005) and firm performance relative to competition. The results are based on a survey of 181 senior executives in which separate groups were formed on the basis of different instructions designed to manipulate the conditions under which social desirability bias might well impact the associations between ASDR and the performance measures. These findings demonstrated the ability of ASDR to reflect social desirability bias and not the Marlowe-Crowne and BIDR measures.

Scores: The mean and standard deviation for the ASDR scale using the first large sample of 213 were 26.50 and 8.49, respectively. For the sample of 127 current and former MBAs, the corresponding estimates were 26.45 and 8.21.

Source: Manning, Kenneth C., William O. Bearden, and Kelly Tian (2009), "Development and Validation of the Agents' Socially Desirable Responding (ASDR) Scale," *Marketing Letters,* 20 (March), 31–44.

References: Kirca, Ahmet, Satish Jayachandran, and William O. Bearden (2005), "Market Orientation: A Meta-Analytic Review and Assessment of Its Antecedents and Impact on Performance," *Journal of Marketing,* 69, 24–41.

Paulhus, D. L. (1993), *The Balanced Inventory of Desirable Responding: Reference Manual for BIDR Version 6* (Unpublished manuscript), University of British Columbia.

Agents' Socially Desirable Responding: ASDR Scale

(Manning, Bearden, and Tian 2009)

1. None of the managers at my firm feel dissatisfied with their jobs.

2. Different functional areas within my firm, such as marketing and production, sometimes lack cohesion or unity.*

3. At my company, all of the employees are outstanding performers.

4. Sometimes my firm fails to exercise good judgment.*

5. Managers at my firm are sometimes afraid to voice their disagreement with a higher level manager's ideas.*

6. Employees at my company are always trustworthy.

7. At my company, hiring decisions have always been based only on qualifications.

8. My firm has downplayed an event that customers might view as negative.*

Notes: Participants chose responses on a 7-item scale anchored by *not true* (1) and *very true* (7). *denotes items that are reverse coded.

Job Characteristic Inventory: JCI

(Sims, Szilagyi, and Keller 1979)

Construct: The Job Characteristic Inventory (JCI) measures characteristics of job satisfaction and performance for six areas of the job. These areas, originally described by Turner and Lawrence (1965), are as follow (Sims et al. 1979):

Variety is the degree to which a job requires employees to perform a wide range of operations in their work and/or the degree to which employees must use a variety of equipment and procedures in their work.

Autonomy is the extent to which employees have a major say in scheduling their work, selecting the equipment they will use, and deciding on procedures to be followed.

Task identity is the extent to which employees do an entire or whole piece of work and can clearly identify the results of their efforts.

Feedback is the degree to which employees receive information as they are working which reveals how well they are performing on the job.

Dealing with others is the degree to which a job requires employees to deal with other people to complete the work.

Friendship opportunities is the degree to which a job allows employees to talk with one another on the job and to establish informal relationships with other employees at work.

Description: Thirty items compose the final JCI (Sims et al. 1979, p. 200). Responses for each question were made on 5-point Likert-type scales, some with scale points from *very little =* 1, to *a moderate amount = 3*, to *very much = 5*, and others with scale points from *minimum amount = 1*, to *a moderate amount = 3*, to *a maximum amount = 5*. Scores are averaged across items within each subscale to form subscale indices.

Development: After a review of the literature, a questionnaire was administered to a medical center sample that contained 23 items. Many of the items were taken from the Hackman-Lawler (1971) research which investigated employee reactions to job characteristics. In order to improve reliability other questions which appeared to have face validity were added to the item pool. Based on the results of the validity and reliability analysis of this sample, certain items were deleted from the scale and 14 new items were developed and administered to the manufacturing firm. This resulted in 37 items retained. These 37 items were administered to subjects in a manufacturing firm sample, and based on factor and reliability analyses, the final 30-item JCI was derived. Several estimates of validity were reported.

Samples: The JCI was administered to two highly dissimilar samples. The first sample consisted of 1,161 medical center personnel (containing several subsamples), and the second sample was 192 managers and supervisors employed by a manufacturing organization.

Validity: The range of reliabilities coefficients for the final scale (after a subsequent item analysis) was 0.72 to 0.86 across subscales. Factor analysis results confirmed the a priori dimensionality of the JCI across samples, and the scale's validity was also assessed. Multiple discriminant analysis showed that the JCI successfully discriminated among satisfied and dissatisfied employees, offering evidence of predictive validity. Furthermore, correlations of the JCI subscales with measures of task complexity, role ambiguity, adequacy of authority, and warmth showed evidence of discriminant validity in a multitrait-multimethod format. For example, correlations between the JCI subscales and task complexity ranged from 0.11 to 0.53, and correlations between the JCI subscales and role ambiguity ranged from −0.10 to −0.41.

Scores: Mean scores and standard deviations for each subdimension are reported for the two sample groups in Tables 2 and 7 (Sims et al. 1979, pp. 203, 207). For example, the mean scores for the manufacturing sample with respect to the six factors were as follow: variety, 3.46; autonomy, 3.76; feedback, 3.33; task identity, 3.66; dealing with others, 3.68; and friendship, 3.77.

Source: Sims, Henry P., Jr., Andrew D. Szilagyi, and Robert T. Keller (1979), "The Measurement of Job Characteristics," *Academy of Management Journal,* 19, 195–212.

© 1979 by *Academy of Management Journal.* Scale items taken from Figure 1 (p. 200). Reprinted with permission.

Other evidence: In a marketing application, Hunt, Chonko, and Wood (1985) used a version of the JCI for four *a priori* job dimensions of variety, autonomy, identity, and feedback. The sample used was 916 marketing management personnel and marketing researchers. A confirmatory factor analysis was performed. The results indicated a high degree of reliability for all four job dimensions, with reliabilities ranging from 0.79 to 0.89, and average variance explained ranging from 0.48 to 0.69.

Other source: Hunt, Shelby D., Lawrence B. Chonko, and Van R. Wood (1985), "Organizational Commitment and Marketing," *Journal of Marketing,* 49, 112–26.

References: Hackman, J. R. and E. E. Lawler (1971), "Employee Reactions to Job Characteristics," *Journal of Applied Psychology, 55,* 259–86.

Turner, A. N. and P. R. Lawrence (1965), *Industrial Jobs and the Worker,* Boston: Harvard University Graduate School of Business Administration.

Job Characteristic Inventory: JCI

(Sims, Szilagyi, and Keller 1979)

1. To what extent do you start work that is finished by another employee?

2. How much variety is there in your job?

3. How much are you left on your own to do your own work?

4. How often do you see projects or jobs through to completion?

5. To what extent do you find out how well you are doing on the job as you are working?

6. How much opportunity is there to meet individuals whom you would like to develop friendships with?

7. How much of your job depends upon your ability to work with others?

8. How repetitious are your duties?

9. To what extent are you able to act independently of your supervisor in performing your job function?

10. To what extent do you complete work that has been started by another employee?

11. To what extent do you receive information from your superior on your job performance?

12. To what extent do you have the opportunity to talk informally with other employees while at work?

13. To what extent is dealing with other people a part of your job?

14. How similar are the tasks you perform in a typical work day?

15. To what extent are you able to do your job independently of others?

16. To what extent is your job equivalent to being one small cog in a big machine?

17. To what extent are the results of your work clearly evident?

18. The feedback from my supervisor on how well I'm doing.

19. Friendship from my co-workers.

20. The opportunity to talk to others on my job.

21. The opportunity to do a number of different things.

22. The freedom to do pretty much what I want on my job.

23. The degree to which the work I'm involved with is handled from beginning to end by myself.

24. The opportunity to find out how well I am doing on my job.

25. The opportunity in my job to get to know other people.

26. Working pretty much by myself.

27. The amount of variety in my job.

28. The opportunity for independent thought and action.

29. The opportunity to complete work I start.

30. The feeling that I know whether I am performing my job well or poorly.

31. The opportunity to develop close friendships in my job.

32. Meeting with others in my work.

33. The control I have over the pace of my work.

34. The opportunity to do a job from the beginning to end (i.e., the chance to do a whole job).

35. The extent of feedback you receive from individuals other than your supervisor.

36. To what extent do you do a "whole" piece of work (as opposed to doing part of a job which is finished by some other employee?)

37. The opportunity, in my job, to give help to other people.

Notes: All 37 items examined are listed above. The final version of the scale is composed of items 2 through 9, 11 through 15, and 18 through 35. The item numbers composing each factor are as follow: variety—2, 8, 14, 21, and 27; autonomy—3, 9, 15, 22, 28, and 33; feedback—5, 11, 18, 24, and 30; dealing with others—7, 13, and 35; task identity—4, 23, 29, and 34; and friendship—6, 12, 19, 20, 25, 31, and 32. Items scored on 5-point Likert-type scales.

Items 1 through 17 and 36 are scored on the *very little* to *very much* format, and the remaining items are scored on the *minimum amount* to *maximum amount* format.

Job Satisfaction of Industrial Salesperson: INDSALES

(Churchill, Ford, and Walker 1974)

Construct: This scale was designed to measure the job satisfaction construct as it applies to the industrial salesperson. Differences in occupational requirements and work settings make generalizations about satisfaction quite tenuous, and the unique character of the industrial salesperson's role provided the rationale for the development of this scale. Although the construct's domain was originally defined on eight dimensions, seven determinants of job satisfaction were retained: (a) the job itself, (b) fellow workers, (c) supervisors, (d) company policy and support, (e) pay, (f) promotion and advancement, and (g) customers.

Description: The final version of the instrument consisted of 95 items which represent the seven components listed above. A 5-point Likert-type scale format ranging from *strongly disagree* to *strongly agree* was used for each item. Numerical scores for negatively stated items were reversed so that a higher numerical value on any item always indicated more satisfaction. Item scores can be summed within each dimension to form indices for each dimension, or overall to form an overall INDSALES score.

Development: Initially, the construct's domain was defined as consisting of eight determinants of job satisfaction. Through an extensive literature review and open-ended questions with salespeople and a work psychologist, items were generated for each determinant. The initial pool consisted of 185 items. The first purification study reduced the pool to 117 items through several item analytic procedures ($n = 183$). Via factor and reliability analysis of the data from the second purification study ($n = 265$), 95 items that consistently demonstrated satisfactory reliability were retained for the final scale. Furthermore, though the *a priori* specification of the component structure posited eight dimensions, seven dimensions for the 95 items were retained in the final version. Several other reliability and validity checks were also reported.

Samples: Following open-ended interviews with salespersons in a variety of industries and an experienced psychologist who had worked with industrial salespersons, two purification studies were conducted to develop the final form of the scale. In the first study, the respondents consisted of 183 salespersons randomly selected from the commercial division of a large manufacturer of heating and cooling equipment. In the second study, a more heterogeneous sample consisting of 265 salespersons was drawn from 10 firms in seven different industries ranging from machine tools and computers to cleaning supplies.

Validity: Alpha estimates of internal consistency reliability for the overall scale and each of its components ranged from 0.82 to 0.96.

  Also, split-half correlations for the total scale were above the 0.80 level for five of the seven components. Only the fellow worker and the customer component had split-half correlations below 0.80. An assessment of construct validity was made by examining whether the measure behaves as expected with respect to other related constructs. Specifically, there is a substantial amount of empirical support to suggest that dissatisfied employees tend to quit their jobs more frequently than satisfied employees. The measures obtained were related to turnover in the sample of respondents. Approximately 5 months after the instrument was administered, all the salespersons of the participating firms who had subsequently quit their jobs were contacted. Twelve salespersons had completed both forms of the instrument. The total mean INDSALES score for these salespersons was 47.35, as compared with an average of 50.13 for all

other respondents from the same firms. While the difference in test scores was not statistically significant, it was in the predicted direction, $z = 1.10$, $p < 0.28$.

Scores: The distribution of raw scores obtained in the final administration of the job satisfaction scale was normalized employing the method of "base-line units of unequal size." The normalized scores were then standardized so as to have a mean of 50 and a standard deviation of 10. Table 4 on page 260 presents a sample of the normalized scores for each component as well as the total scale.

Source: Churchill, Gilbert, Neil M. Ford, and Orville C. Walker, Jr. (1974), "Measuring the Job Satisfaction of Industrial Salesmen," *Journal of Marketing Research,* 11, 254–60.

© 1974 by the American Marketing Association. Scale items taken from Table 2 (p. 258). Reprinted with permission.

Other evidence: The satisfaction scales for work, coworkers, supervision, pay, and promotion of the INDSALES and the JDI (Smith, Kendall, and Hulin 1969) were compared from a national sample of 209 salesmen in the health care industry (Futrell 1979). The seven satisfaction scales in INDSALES showed high internal reliability, ranging from 0.85 to 0.96. The five satisfaction scales common to INDSALES and the JDI showed evidence of convergent and discriminant validity for INDSALES, as correlations ranged from 0.36 to 0.75 across the corresponding INDSALES and JDI facets.

Childers et al. (1980) designed a study to replicate and refine the INDSALES instrument. A mail survey of 113 industrial salespeople was used in the study. A systematic purification process was used to reduce the length of the scale to 61 items with respect to the seven components of job satisfaction. Results showed that the scale reduction was accomplished without compromising its desirable reliability and validity properties. The reliability of the overall scale was 0.97. The coefficient alphas for the seven facets ranged from 0.80 to 0.94. This revised INDSALES measure was also correlated with measures of role conflict and ambiguity. These correlations were –0.25 and –0.32 for the overall INDSALES score and role ambiguity and conflict, respectively. These correlations offer evidence of nomological validity.

Comer, Machleit, and Lagace (1989) conducted a psychometric assessment of the reduced version of INDSALES (Childers et al. 1980). With the use of a split sample of 295 sales representatives, qualitative techniques were coupled with factor, item, and reliability analyses (via LISREL) to further reduce INDSALES to a balanced 28-item scale with respect to the seven determinants of job satisfaction. The reliabilities of the reduced scale dimensions ranged from 0.77 to 0.87, and correlations among the seven facets ranged from 0.07 to 0.68, offering evidence of discriminant validity among the facets. Nomological validity was also confirmed. For example, the total score on the 28-item scale was correlated with role ambiguity (–0.38), with reward power (0.59), with closeness of supervision (0.37), and with propensity to leave (–0.38). These correlations offer evidence of nomological validity.

A 28-item shortened version of INDSALES was examined by Lagace, Goolsby, and Gassenheimer (1993) on a sample of 311 insurance salespersons. The results of this replication were compared to earlier results reported by Comer et al. (1989), who analyzed the responses of an industrial sample. Overall, the findings support the seven-factor revised scale in which four indicators per factor are employed. For the Lagace et al. (1993) total sample, GFI and AGFI estimates for a seven-factor correlated model were 0.85 and 0.82, respectively. Factor reliabilities ranged from 0.76 to 0.92, and RMSR was 0.07. Item indicators and factor intercorrelations are summarized as well. Similar support for the revised scale was provided by the analysis of psychometric properties described earlier by Comer et al. (1989).

Other sources: Childers, Terry L., Gilbert A. Churchill, Neil M. Ford, and Orville C. Walker, Jr. (1980), "Towards a More Parsimonious Measurement of Job Satisfaction for the Industrial Salesforce," in *AMA Educator's Conference Proceedings,* eds. Richard P. Bagozzi et al., Chicago: American Marketing Association, pp. 344–49.

Comer, James M., Karen A. Machleit, and Rosemary R. Lagace (1989), "Psychometric Assessment of a Reduced Version of INDSALES," *Journal of Business Research,* 18, 291–302.

Futrell, Charles M. (1979), "Measurement of Salespeople's Job Satisfaction: Convergent and Discriminant Validity of Corresponding INDSALES and Job Description Index Scales," *Journal of Marketing Research,* 16, 594–97.

Lagace, Rosemary R., Jerry R. Goolsby, and Jule B. Gassenheimer (1993), "Scaling and Measurement: A Quasi-Replicative Assessment of a Revised Version of INDSALES," *Journal of Personal Selling and Sales Management,* 13, 65–72.

Reference: Smith, Patricia C., Loring M. Kendall, and Charles L. Hulin (1969), *The Measurement of Satisfaction in Work and Retirement: A Strategy for the Study of Attitudes.* Chicago: Rand McNally.

Job Satisfaction of Industrial Salesperson: INDSALES

(Churchill, Ford, and Walker 1974)

The "Overall" Job

1. My work is creative.

2. My work is valuable.

3. I have plenty of freedom on my job to use my own judgment.

4. My job is exciting.

5. My work is satisfying.

6. I'm really doing something worthwhile in my job.

7. I am unproductive in my work.*

8. My work is useless.*

9. My job is interesting.

10. My work is challenging.

11. My job is often dull and monotonous.*

12. My work gives me a sense of accomplishment.

Coworkers

1. My fellow workers are stimulating.

2. The people I work with help each other out when someone falls behind or gets in a tight spot.

3. My fellow workers are boring.*

4. My fellow workers are sociable.

5. My fellow workers are pleasant.

6. My fellow workers are obstructive.*

7. The people I work with are very friendly.

8. My fellow workers are loyal.

9. The people I work with get along well together.

10. My fellow workers are selfish.*

11. My fellow workers are intelligent.

12. My fellow workers are responsible.

Supervision

1. My supervisor is up-to-date.

2. My boss has taught me a lot about sales.

3. My sales manager has the work well organized.

4. My boss does a good job of helping sales representatives develop their own potential.

5. My sales manager has always been fair in his dealings with me.

6. My boss really takes the lead in stimulating sales efforts.

7. My supervisor is intelligent.

8. My sales manager is too interested in his own success to care about the needs of employees.*

9. My sales manager gives credit and praise for work well done.

10. My sales manager lives up to his promises.

11. My sales manager knows very little about his job.*

12. My sales manager is tactful.

13. My sales manager really tries to get our ideas about things.

14. My sales manager doesn't seem to try too hard to get our problems across to management.*

15. My sales manager sees that we have the things we need to do our jobs.

16. My sales manager gets the sales personnel to work together as a team.

Company Policy and Support

1. Compared with other companies, employee benefits here are good.

2. Sometimes when I learn of management's plans I wonder if they know the territory situation at all.*

3. The company's sales training is not carried out in a well-planned program.*

4. I feel that the company is highly aggressive in its sales promotion efforts.

5. Management is progressive.

6. Management keeps us in the dark about things we ought to know.*

7. Management ignores our suggestions and complaints.*

8. Our sales goals are set by the higher-ups without considering market conditions.*

9. Management really know its job.

10. This company operates efficiently and smoothly.

11. Our home office isn't always cooperative in servicing our customers.*

12. I'm satisfied with the way employee benefits are handled around here.

13. We have a real competitive advantage in selling because of the quality of our products.

14. Management is weak.*

15. I have confidence in the fairness and honesty of management.

16. Management here is really interested in the welfare of employees.

17. The company has satisfactory profit sharing.

18. Sales representatives in this company receive good support from the home office.

19. Management here sees to it that there is cooperation between departments.

20. There isn't enough training for sales representatives who have been on the job for a while.*

21. Management fails to give clear-cut orders and instructions.*

Pay

 1. My pay is high in comparison with what others get for similar work in other companies.

 2. My pay doesn't give me much incentive to increase my sales.*

 3. My selling ability largely determines my earnings in this company.

 4. My income provides for luxuries.

 5. My pay is low in comparison with what others get for similar work in other companies.*

 6. In my opinion the pay here is lower than in other companies.*

 7. I'm paid fairly compared with other employees in this company.

 8. I am very much underpaid for the work that I do.*

 9. My income is adequate for normal expenses.

10. I can barely live on my income.*

11. I am highly paid.

Promotion and Advancement

1. My opportunities for advancement are limited.*

2. Promotion here is based on ability.

3. I have a good chance for promotion.

4. Regular promotions are the rule in this company.

5. The company has an unfair promotion policy.*

6. There are plenty of good jobs here for those who want to get ahead.

7. This is a dead-end job.*

8. My opportunities for advancement are reasonable.

Customers

 1. My customers are fair.

 2. My customers blame me for problems that I have no control over.*

 3. My customers respect my judgment.

 4. I seldom know who really makes the purchase decisions in the companies I call upon.*

 5. My customers are unreasonable.*

 6. My customers are friendly.

 7. My customers are loyal.

 8. My customers are understanding.

9. My customers are inaccessible.*

10. My customers are well organized.

11. My customers expect too much from me.*

12. My customers are trustworthy.

13. My customers are intelligent.

14. My customers are interested in what I have to say.

15. My customers live up to their promises.

Notes: In their original paper, Churchill et al. (1974) offered a sample of items. A complete enumeration of items for each INDSALES facet is offered above. * denotes items that require reverse scoring. The Childers et al. (1980) 61-item version as well as the Comer et al. (1989) 28-item version of INDSALES are offered below.

The "Overall" Job

1. My work is challenging.

2. My job is often dull and monotonous.*

3. My work gives me a sense of accomplishment.

4. My job is exciting.

5. My job does not provide me with a sense of worthwhile accomplishment.*

6. My work is satisfying.

7. I'm really doing something worthwhile in my job.

8. My job is routine.*

9. My job is interesting.

Fellow Workers

10. My fellow workers are selfish.*

11. My fellow workers are intelligent.

12. My fellow workers are responsible.

13. The people I work with are very friendly.

14. My fellow workers are loyal.

15. My fellow workers are stimulating.

16. The people I work with help each other out when someone falls behind or gets in a tight spot.

17. My fellow workers are obstructive.*

18. My fellow workers are pleasant.

Supervision

19. My regional sales manager is tactful.

20. My regional sales manager really tries to get our ideas about things.

21. My regional sales manager is up-to-date.

22. My regional sales manager does a good job of helping salespersons develop their own potential.

23. My regional sales manager has always been fair in dealings with me.

24. My regional sales manager is intelligent.

25. My regional sales manager gets the salesforce to work together as a team.

26. My regional sales manager gives us credit and praise for work well done.

27. My regional sales manager lives up to his/her promises.

28. My regional sales manager knows very little about his/her job.*

Company Policy and Support

29. Management is progressive.

30. Top management really knows its job.

31. This company operates efficiently and smoothly.

32. The formal recognition programs in this company don't give me much incentive to work harden.*

33. I am satisfied with the way our formal recognition programs are administered.

34. Salespersons in my company receive good support form the home office.

35. Management ignores our suggestions and complaints.*

36. Formal recognition programs in our company compare favorably with those of other companies.

37. I do not get enough formal recognition for the work I do.*

38. Recognition awards are based on ability.

39. I have confidence in the fairness and honesty of management.

Pay

40. My pay is high in comparison with what others get for similar work in other companies.

41. My income provides for luxuries.

42. My pay is low in comparison with what others get for similar work in other companies.*

43. In my opinion, the pay here is lower than in other companies.*

44. I am highly paid.

45. I'm paid fairly compared with other employees in this company.

46. My income is adequate for normal expenses.

47. I'm very much underpaid for the work I do.*

Promotion

48. My opportunities for advancement are limited.*

49. Promotion here is based on ability.

50. I have a good chance for promotion.

51. The company has an unfair promotion policy.*

52. There are plenty of good jobs here for those who want to get ahead.

53. This is a dead-end job.*

54. My opportunities for advancement are reasonable.

Customers

55. My customers are fair.

56. My customers are intelligent.

57. My customers are interested in what I have to say.

58. My customers live up to their promises.

59. My customers are trustworthy.

60. My customers are loyal.

61. My customers are understanding.

Notes: Items 3, 4, 6, and 7 compose Comer et al.'s (1989) job factor; items 10, 13, 16, and 18 compose their fellow workers factor; items 20, 23, 26, and 27 compose their supervision factor; items 29, 30, 31, and 34 compose their policy factor; items 42, 43, 45, and 46 compose their pay factor; items 48, 50, 51, and 52 compose their promotion factor; and items 58 through 61 compose their customer factor. Items scored on a 5-point Likert-type scales from *strongly disagree* to *strongly agree.*

*denotes items requiring reverse scoring.

Appendix to Job Satisfaction

Probably the most commonly used measure of job satisfaction in both the organizational behavior and sales management literature is the JDI: the Job Descriptive Index (Smith, Kendall, and Hulin 1969). The JDI is a copyrighted proprietary measure, and therefore the JDI items are not reproduced here. The potential user of the JDI should contact Professor Patricia Smith, Department of Psychology, Bowling Green State University, Bowling Green, OH 43403. Below, we offer a summary of the JDI.

Job Description Index: JDI

(Smith, Kendall, and Hulin 1969)

Construct: The Job Description Index (JDI) measures employee satisfaction with five dimensions of a job: the type of work, the pay, the opportunities for promotion, the supervision, and the coworkers on the job (Smith et al. 1969, p. 69).

Description: For each of the five job-related categories stated above, there is a corresponding list of adjectives or short phrases. The respondent is instructed to indicate whether each word or phrase is descriptive with respect to the particular facet of his/her job. The respondent is asked to write "Y" (for Yes) if the word applies to a facet of his or her work, "N" (for No) if the word does not apply, and "?" if the respondent is undecided. A score of 3 is given to a "Y" answer for a positive item and "N" for a negative item. A score of 2 is given for a "?," and a score of 1 is given to a "Y" for a negative item and "N" for a positive item. An alternative scoring system is also tenable where a score of 0 is given for a "Y" to a negative item and "N" for a positive item. (It is this alternative scoring system that is more widely used.) Thirty-seven of the items were positively worded, and 35 were negatively worded. Thus, the final version of the JDI included a total of 72 scale items. Eighteen items were written for each of the following three job-related areas: work, supervision, and coworkers. Nine scale items were associated with both the pay and promotion categories. Item scores are summed within categories to form indices for each facet, and can be summed overall to derive an overall satisfaction score. Recently, a revised version of the JDI has been proposed (Smith, Kendall, and Hulin 1985, 1987).

Development: The original item pool was developed by selecting items from other job-satisfaction indices and from available lists of adjectives and short phrases which the authors felt tapped various aspects of job satisfaction. This original search generated from 30 to 40 items per category. Initial item analysis discarded items that failed to show significant differences in response frequency between best and worst jobs. After further item analysis and several purification studies, the final 72-item JDI was derived. A number of reliability and validity checks were performed over several samples.

Samples: Using subjects from a wide range of occupational and educational groups, preliminary JDI scales were administered to 17 janitors, 25 secretaries, and 16 cafeteria workers at Cornell University. The first large-scale study used a convenience sample of 317 Cornell University students and Ithaca residents. Based on the results from the group, the scale was revised and administered to 81 randomly selected employees of a New York Farmers' Cooperative. The next sample of subjects included 163 men and 73 women randomly chosen from three companies. In the final item-development study, the JDI was administered to 192 male employees randomly selected from two plants of an electronics firm. Various tests were performed on the scale after the final item-development study. These studies tested a large sample of approximately 2,600 subjects with varying backgrounds.

Validity: Numerous studies were conducted to assess the discriminant and convergent validity of several aspects of job satisfaction.

Specifically, preliminary studies with small groups of janitors, secretaries, and cafeteria workers showed that the JDI score correlated significantly with supervisory ratings and rankings of job satisfaction. The second study was a more extensive attempt to compare two JDI scoring methods and more direct measures of satisfaction involving global ratings and ratings focused on critical incidents. The study also evaluated effects of item selection on validity. A third study was developed to evaluate the validity and soundness of these final JDI scales and the "Faces" rating scale. This study served as the crucial field test of the measures finally selected. A fourth study was performed that showed not only that the discriminability obtained for the several areas applies to total scores cumulated for each area, but also that adequate discriminability exists at the level of specific items which make up the content of total scales. In sum, the original scale development procedures showed evidence of validity for the JDI. For a more extensive review of validation procedures, the interested reader is referred to the original Smith et al. (1969) book.

A variety of data was provided by Smith et al. (1969) on scale reliability. For example, they report random split-half estimates of reliability ranging from 0.67 to 0.78 across subscales, and Spearman-Brown reliabilities between 0.80 and 0.88 for the $n = 80$ sample. In addition, factor intercorrelations ranged from 0.28 to 0.42 for the sample of 980 males, and 0.16 to 0.52 for 627 females.

Scores: Mean scores for the five JDI scales are based on a sample of nearly 2,000 male and more than 600 female workers. The samples were obtained by pooling employees across a total of 21 plants, which represented 19 different companies and 16 different Standard Metropolitan Statistical Areas. For the male sample, means (std. dev.) were 36.57 (10.54), 29.90 (14.53), 22.06 (15.77), 41.10 (10.58), and 43.49 (10.02) for work, pay, promotion, supervisor, and coworkers, respectively. Corresponding means for the female sample were 35.74 (9.88), 27.90 (13.65), 17.77 (13.28), 41.13 (10.05), and 42.09 (10.51). A more comprehensive presentation of means and standard deviations can be found in Smith et al. (1969, p. 80).

Sources: Smith, Patricia C., Loring M. Kendall, and Charles L. Hulin (1969), *The Measurement of Satisfaction in Work and Retirement: A Strategy for the Study of Attitudes,* Chicago: Rand McNally.

Smith, Patricia C., Loring M. Kendall, and Charles L. Hulin (1985), *The Job Descriptive Index* (Rev. ed.), Bowling Green, OH: Department of Psychology, Bowling Green State University.

Smith, Patricia C., Loring M. Kendall, and Charles L. Hulin (1987), "The Revised JDI: A Facelift for an Old Friend," *Industrial Organizational Psychologist,* 24 (4), 31–3.

Other evidence: The JDI has been extensively used in the work and organizational behavior literature. For an excellent critical review of the JDI, see Kinicki, Carson, and Schriesheim (1990). There have been several applications of the JDI in the marketing literature as well. Two of these are briefly discussed here.

The satisfaction scales for work, coworkers, supervision, pay, and promotion of the IND-SALES (Churchill, Ford, and Walker 1974) and the JDI were compared on a national sample of 209 salesmen in the health care industry (Futrell 1979). Alpha estimates for the JDI facets of work, coworkers, supervisor, pay, and promotion were 0.85, 0.93, 0.91, 0.67, and 0.88, respectively. Correlations among facets ranged from 0.19 to 0.62. Furthermore, the five satisfaction scales common to INDSALES and the JDI show

both convergent and discriminant validity, as correlations for the corresponding JDI and INDSALES dimensions ranged from 0.36 to 0.75. Mean scores (std. dev.) for the JDI facets of work, coworkers, supervisor, pay, and promotion were 38.80 (10.54), 45.27 (11.68), 40.72 (13.54), 16.99 (5.70), and 12.86 (8.61), respectively.

Over two time periods, Johnston et al. (1990) reported construct reliabilities for the overall JDI of 0.85 and 0.92. In addition, correlations of the JDI with measures of role conflict, role ambiguity, organizational commitment, propensity to leave an organization, and turnover were –0.55, –0.36, 0.58, –0.59, and –0.33, respectively, offering evidence of nomological validity.

Other sources: Futrell, Charles M. (1979), "Measurement of Salespeople's Job Satisfaction: Convergent and Discriminant Validity of Corresponding INDSALES and Job Description Index Scales," *Journal of Marketing Research,* 16, 594–97.

Johnston, Mark W., A. Parasuraman, Charles M. Futrell, and William C. Black (1990), "A Longitudinal Assessment of the Impact of Selected Organizational Influences on Salespeople's Organizational Commitment During Early Employment," *Journal of Marketing Research,* 27, 333–44.

References: Churchill, Gilbert, Neil M. Ford, and Orville C. Walker, Jr. (1974), "Measuring the Job Satisfaction of Industrial Salesmen," *Journal of Marketing Research,* 11, 254–60.

Hackman, J. Richard and Greg Oldham (1980), *Work Redesign,* Reading, MA: Addison-Wesley.

Kinicki, Angelo, Kenneth A. Carson, and Chester Schriesheim (1990), *The Construct Validity of the Job Descriptive Index (JDI): Review, Critique, and Analysis,* Working Paper, Arizona State University.

Another job-related measure is the Job Diagnostic Survey: the JDS (Hackman and Oldham 1975). Given its length (more than 10 pages) and that it has seen only limited application in the marketing literature, the JDS items and measures were not included in this volume. However, we do offer a summary of the JDS below. The entire JDS and scoring procedures can be found in Hackman and Oldham (1980, Appendix A, pp. 275–94).

Various estimates of validity were also offered, including correlations among facet scores and mean differences via ANOVA. For example, the MPS showed a median correlation of -.25 with absenteeism and 0.24 with performance effectiveness. Correlations among all subdimensions of the JDS ranged from –0.01 to 0.67. Mean differences (Table 3, p. 163) are also reported that support the validity of the JDS (see also Hackman and Oldham 1980).

Scores: Mean scores for each subdimension are reported in Table 3, p. 165 of Hackman and Oldham (1975).

Sources: Hackman, J. Richard and Greg Oldham (1975), "Development of the Job Diagnostic Survey," *Journal of Applied Psychology,* 60, 159–70.

Hackman, J. Richard and Greg Oldham (1980), *Work Redesign,* Reading, MA: Addison-Wesley.

Other evidence: The JDS has seen extensive use in the organizational behavior literature (Hackman and Oldham 1980). Our discussion of other evidence will be limited to one marketing application of the JDS. Using a sample of 211 industrial salespeople, Becherer, Morgan, and Richard (1982) reported numerous correlations and regression coefficients pertaining to the subdimensions of the JDS. For example, five of the subdimensions of the objective job dimensions facet (i.e., skill variety, task identity, task significance, autonomy, and feedback) showed correlations ranging from 0.23 to 0.36 with internal motivation, 0.14 to 0.33 with general satisfaction, and 0.28 to 0.48 with growth satisfaction. Similar results were reported for the subdimensions of the psychological states facet. For example, meaningfulness of work showed correlations of 0.52, 0.69, and 0.69 with internal motivation, general satisfaction, and growth satisfaction, respectively.

Other source: Becherer, Richard C., Fred W. Morgan, and Lawrence M. Richard (1982), "The Job Characteristics of Industrial Salespeople: Relationships to Motivation and Satisfaction," *Journal of Marketing,* 46, 125–35.

Reference: Hackman, J. Richard and E. E. Lawler III (1971), "Employee Reactions to Job Characteristics," *Journal of Applied Psychology Monograph,* 55, 259–86.

Role Perceptions/Conflict

Role Ambiguity: Multifaceted, Multidimensional Role Ambiguity: MULTIRAM

(Singh and Rhoads 1991a, 1991b)

Construct: Singh and Rhoads (1991a, pp. 330–31) define role ambiguity as the following: "Perceived role ambiguity is a multidimensional, multifaceted evaluation about the lack of salient information needed to perform a role effectively. Specifically, this evaluation may include ambiguity about role definition, expectations, responsibilities, tasks, and behaviors in one or more facets of the task environment. These facets, in turn, reflect one or more members of the boundary spanner's role set (e.g., customer, boss) and/or activities required to perform a role (e.g., ethical conduct). Finally, each facet may be viewed as a multidimensional evaluation of the ambiguity about that facet." Thus, role ambiguity reflects the salient uncertainties faced by boundary spanners in performing their roles and embraces the entire domain of ambiguity as defined in the literature (e.g., Kahn et al. 1964; King and King 1990).

Description: MULTIRAM contains 45 items, scored on 5-point scales from *very certain* to *very uncertain,* reflecting seven facets of role ambiguity. The seven facets are company, boss, customer, ethical conduct, other managers, coworkers, and family. Furthermore, the first four facets listed are considered multidimensional, and thus, MULTIRAM can be estimated as a second-order factor model. Item scores can be summed within facets and within facet dimensions to form indices of each facet or indices of each dimension within the facets.

Development: A number of procedures were used in scale development and validation. From an extensive literature review and six focus groups from an office equipment supplies firm, the definition and domain of the construct were established. From this, 55 items were developed to reflect the constructs domain. Fifty of these items were retained based on responses from a two-group sample of salespeople and service representatives. These 50 items were administered to a large sample, and both first- and second-order factor analysis (using stringent retainment rules) produced the final form of the seven-facet, 13-dimension MULTIRAM. (Estimates of reliability and factor structure were also performed.) The final version of the scale was then administered to another large sample, and the MULTIRAM's factor structure, reliability, and validity were further assessed.

Samples: Several samples were used in scale construction and validation. First, six focus groups consisting of six to eight people (i.e., salespeople and customer representatives) were used to refine the construct and help generate items. Two more samples (*n* unspecified) were used in item trimming. A sample of 472 from the Association of Sales and Marketing Executives was used in the derivation of the final scale, and a sample of 216 of U.S.-based *Fortune* 500 industrial manufacturer personnel was used in the validation study.

Validity: With the two large samples (*n* = 472 and 216), a number of reliability estimates were gathered. The discussion here though will focus on the second large sample. First, the results of the factor analyses with the first sample were largely replicated by the second sample in that the seven-facet, 13-dimension second-order factor structure was validated, offering support for MULTIRAM's dimensionality and structure. Second, internal consistency and variance extracted estimates were high across dimensions and facets. Composite reliability for the "company" facet was 0.77 with a variance

extracted estimate of 0.53. The "flexibility," "work," and "promotion" dimensions of the company facet had coefficient alphas of 0.70, 0.84, and 0.75, respectively. The "boss" facet had a composite reliability of 0.87 and a variance extracted estimate of 0.77. Its dimensions of "support" and "demands" both had alphas of 0.86. The "customer" facet had a composite reliability estimate of 0.81 and a variance extracted estimate of 0.59. The dimensions of "interaction," "objection," and "presentation" had alphas of 0.78, 0.81, and 0.81, respectively. The "ethical conduct" facet had a composite reliability estimate of 0.86 with a variance extracted estimate of 0.55. The "external" and "internal" dimensions of this facet had alphas of 0.90 and 0.83, respectively. The "other managers," "coworkers," and "family" facets had composite reliability estimates of 0.83, 0.85, and 0.86, and variance extracted estimates of 0.71, 0.74, and 0.75, respectively. Corresponding coefficient alphas estimates for these facets were 0.88, 0.87, and 0.88.

Convergent and discriminant validity checks were also obtained by correlating the MULTIRAM's facets with the Rizzo, House, and Lirtzman (1970) measure of role conflict and ambiguity ($n = 472$). The correlations of the MULTIRAM facets were consistently higher with role ambiguity (ranging from 0.18 to 0.69) than role conflict (ranging from 0.10 to 0.50), offering evidence of convergent and discriminant validity. (These results were also replicated with the sample of 216.) Finally, the MULTIRAM facets were also correlated with a number of job-related variables. The pattern of these correlations strongly suggests nomological validity. For example, the MULTIRAM facets' range of correlations with "job satisfaction" was –0.23 to –0.64, with "job performance" –0.21 to –0.43, with "job tension" 0.19 to 0.51, and with "turnover intentions" 0.10 to 0.52. Other correlational estimates also supported MULTIRAM's validity.

Scores: For the two large samples, means were reported for each facet. These mean values were computed by obtaining an equally weighted composite of the dimensions corresponding to the individual facets. For the first large sample, the means (std. dev.) were 2.28 (0.72) for company, 2.42 (0.85) for boss, 1.71 (0.54) for customers, 1.98 (0.78) for ethical conduct, 2.32 (0.79) for other managers, 2.96 (0.68) for coworkers, and 1.98 (0.73) for family. For the second large sample, the means (std. dev.) were 2.55 (0.66) for company, 2.46 (0.86) for boss, 1.92 (0.60) for customers, 2.17 (0.76) for ethical conduct, 2.93 (0.87) for other managers, 2.22 (0.64) for coworkers, and 1.97 (0.68) for family (Singh and Rhoads 1991b).

Sources: Singh, Jagdip and Gary K. Rhoads (1991a), "Boundary Role Ambiguity in Marketing-Oriented Positions: A Multidimensional, Multifaceted Operationalization," *Journal of Marketing Research*, 28, 328–38.

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Singh, Jagdip and Gary K. Rhoads (1991b, June), *Boundary Role Ambiguity in Marketing Positions: Scale Development and Validation* (Marketing Science Institute Technical Working Paper, Report #91–115), Cambridge, MA: Marketing Science Institute.

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Other evidence: The 45-item MULTIRAM scale was used by Singh (1993) in his study of the organizational determinants of role ambiguity. Estimates of factor reliability are provided for the Sales and Marketing Executive (SME) sample *(n = 472)*. Across the seven multi-item factors, reliabilities ranged from 0.68 to 0.87. Parameter estimates for the measurement

model are provided in Table 3 for the SME sample and an industrial sample *(n = 216)* (Singh 1993, p. 22). Additional evidence regarding the validity of MULTIRAM was provided from tests of structural equation models in which the boundary role facets were correlated as predicted with antecedents (e.g., autonomy, feedback) and outcomes (e.g., performance, job satisfaction) of role ambiguity.

Challagalla and Shervani (1996) also used MULTIRAM in their research on supervisory control. Reliability estimates for supervisor role ambiguity and customer role ambiguity were 0.91 and 0.89, respectively. In addition, these measures predicted performance and satisfaction with supervisor as hypothesized.

Other sources: Challagalla, Goutam N. and Tasadduq A. Shervani (1996), "Dimensions and Types of Supervisory Control: Effects on Salesperson Performance and Satisfaction," *Journal of Marketing,* 60, 89–105.

Singh, Jagdip (1993), "Boundary Role Ambiguity: Facets, Determinants, and Impacts," *Journal of Marketing,* 57, 11–31.

References: Kahn, R. L., D. M. Wolfe, R. P. Quinn, and J. D. Snoek (1964), *Organizational Stress: Studies in Role Conflict and Ambiguity,* New York: John Wiley & Sons.

King, L. A. and D. W. King (1990), "Role Conflict and Role Ambiguity: A Critical Assessment of Construct Validity," *Psychological Bulletin,* 107, 48–64.

Rizzo, J. R., R. J. House, and S. I. Lirtzman (1970), "Role Conflict and Ambiguity in Complex Organizations," *Administrative Science Quarterly,* 15, 150–63.

Role Conflict and Role Ambiguity

(Rizzo, House, and Lirtzman 1970)

Construct: Both role conflict (RC) and role ambiguity (RA) are important intervening variables that mediate the effects of various organizational practices on individual and organizational outcomes. Role conflict was defined in terms of dimensions of congruency-incongruency or compatibility-incompatibility in the requirements of the role, where congruency or compatibility is judged relative to a set of standards or conditions that impinge on role performance. RC components were stated as follows:

1. Conflict between the focal person's internal standards or values and the defined role behavior

2. Conflict between the time, resources, or capabilities of the focal person and defined role behavior

3. Conflict between several roles for the same person that require different or incompatible behaviors, or changes in behavior as a function of the situation (i.e., role overload)

4. Conflicting expectations and organizational demands in the form of incompatible policies, conflicting requests from others, and incompatible standards of evaluation.

Role ambiguity is defined in terms of (a) the predictability of the outcome or responses to one's behavior, and (b) the existence or clarity of behavioral requirements, often in terms of input from the environment, which would serve to guide behavior and provide knowledge that the behavior is appropriate (Rizzo et al. 1970).

Description: The original RC/RA questionnaire consisted of 30 items, 15 for RA (even numbers) and 15 for RC (odd numbers). It is the reduced 6-item RA and 8-item RC measures, however, that are commonly employed for research purposes. Subjects are requested to respond to the items by indicating the degree to which the condition the item describes existed for him/her on a 7-point scale ranging from *very false* to *very true*. Item scores are summed within the RC and RA scales and then divided by the number of items in each scale to form RC and RA scores.

Development: Approximately 350 items were contained in the original pool of items. Based on the results of factor and item analysis, 30 items reflecting role conflict and role ambiguity emerged as separate dimensions, accounting for 56% of the variance in the data. Factor 1 was named role conflict. Of the 15 role conflict items, 9 with loadings greater than or equal to 0.30 were retained. Factor 2, role ambiguity, also retained 9 items with loadings greater than or equal to 0.30. Examination of the items revealed that the two factors strongly parallel the theoretical concepts of role conflict and role ambiguity. Reliability analysis was then used to derive the final 6- and 8-item RA and RC scales. A number of validity checks followed.

Samples: The questionnaire was administered to a 35% random sample of the employees in central offices and main plant of a firm and to a 100% sample of the research and engineering division. The total pool of respondents was treated as two separate samples. There were 199 respondents in the first sample and 91 respondents in the second sample. The instrument was administered to groups ranging in size from 10 to 50. Anonymity was assured, and participation was voluntary.

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Validity: Coefficient alpha estimates of internal consistency for the 8-item RC scale were 0.82 and 0.82 for Samples 1 and 2. Corresponding estimates for the 6-item RA scale were 0.78 and 0.81. The correlations between the two scales were 0.25 and 0.01 for the two samples, offering evidence of discriminant validity between RC and RA. Nomological validity was assessed by correlating RC and RA with 41 different work-related attitudes and outcomes. The overall pattern of these correlations showed evidence of nomological validity for RC and RA. For example, the correlations between RA and personal recognition were –0.43 and –0.56 for the two studies. For RC, corresponding correlations were –0.22 and –0.11. Correlations between RA and job-induced tension were 0.12 and 0.22, and the correlations between RC and tension were 0.20 and 0.12. RC and RA were also positively correlated with a measure of propensity to leave the organization.

Scores: The composite means (std. dev.) for role conflict were 4.19 (1.21) and 3.86 (1.21) for the two samples. With respect to role ambiguity, the means were 3.79 (1.08) and 4.03 (1.15) for the two samples.

Source: Rizzo, John R., Robert J. House, and Sidney I. Lirtzman (1970), "Role Conflict and Ambiguity in Complex Organizations," *Administrative Science Quarterly,* 15, 150–64.

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Other evidence: The RC and RA scales have been extensively used and examined in the organizational behavior literature. For two meta-analytic reviews of role conflict and role ambiguity, see Fisher and Gitelson (1983) and Jackson and Schuler (1985). The scales have also seen wide application in the sales literature. Two of these applications are briefly reviewed here.

In a study of industrial salespeople's job satisfaction, Teas (1983) reported alpha estimates of 0.88 and 0.82 for RC and RA. Correlations of RC with job satisfaction, employee feedback, and leadership consideration were –0.51, –0.31, and –0.44, respectively. Corresponding correlations of these variables with RA were –0.42, –0.40, and –0.48.

In another study, Johnston et al. (1990) reported internal consistency estimates via LISREL of 0.807 and 0.846 for the eight-item role conflict measure, and 0.81 and 0.82 for the six-item role ambiguity measure. Furthermore, these scales were found related to a number of organizational variables including satisfactory commitment and leadership, offering support for the scales' nomological validity. For example, the correlation of RC with job satisfaction, commitment, and propensity to leave were –0.53, –0.49, and 0.45, respectively. Corresponding correlations of these variables with RA were –0.36, –0.45, and 0.47.

Other sources: Johnston, Mark, A. Parasuraman, Charles M. Futrell, and William C. Black (1990), "A Longitudinal Assessment of the Impact of Selected Organizational Influences on Salespeople's Organizational Commitment During Early Employment," *Journal of Marketing Research,* 27, 333–44.

Teas, R. Kenneth (1983), "Supervisory Behavior, Role Stress, and the Job Satisfaction of Industrial Salespeople," *Journal of Marketing Research,* 20, 84–93.

References: Fisher, C. D. and R. Gitelson (1983), "A Meta-Analysis and Conceptual Critique of Role Conflict and Ambiguity," *Journal of Applied Psychology,* 68, 320–33.

Jackson, S. E. and R. S. Schuler (1985), "A Meta-Analysis and Conceptual Critique of Role Ambiguity and Role Conflict in Work Settings," *Organizational Behavior and Human Decision Processes,* 36, 16–78.

Role Conflict and Role Ambiguity

(Rizzo, House, and Lirtzman 1970)

1. I have enough time to complete my work.

2. I feel certain about how much authority I have.

3. I perform tasks that are too easy or boring.

4. Clear, planned goals and objectives for my job.

5. I have to do things that should be done differently.

6. Lack of policies and guidelines to help me.

7. I am able to act the same regardless of the group I am with.

8. I am corrected or rewarded when I really don't expect it.

9. I work under incompatible policies and guidelines.

10. I know that I have divided my time properly.

11. I receive an assignment without the manpower to complete it.

12. I know what my responsibilities are.

13. I have to buck a rule or policy in order to carry out an assignment.

14. I have to "feel my way" in performing my duties.

15. I receive assignments that are within my training and capability.

16. I feel certain how I will be evaluated for a raise or promotion.

17. I have just the right amount of work to do.

18. I know that I have divided my time properly.

19. I work with two or more groups who operate quite differently.

20. I know exactly what is expected of me.

21. I receive incompatible requests from two or more people.

22. I am uncertain as to how my job is linked.

23. I do things that are apt to be accepted by one person and not accepted by another.

24. I am told how well I am doing my job.

25. I receive an assignment without adequate resources and materials to execute it.

26. Explanation is clear of what has to be done.

27. I work on unnecessary things.

28. I have to work under vague directives or orders.

29. I perform work that suits my values.

30. I do not know if my work will be acceptable to my boss.

Notes: All the original 30 items are listed above. Items 2, 4, 10, 12, 20, and 26 compose the six-item RA scale and items 5, 11, 13, 19, 21, 23, 25, and 27 compose the eight-item RC scale. Items 2, 4, 10, 12, 20, and 26 require reverse coding to reflect higher levels of RC and RA. Items scored on 7-point scales from *very false* to *very true*.

Work-Family Conflict and Family-Work Conflict Scales

(Netemeyer, Boles, and McMurrian 1996)

Construct: The following definitions were used to guide the scale development efforts of Netemeyer et al. (1996). Work-family conflict (WFC) is a form of interrole conflict in which the general demands of, time devoted to, and strain created by the job interfere with performing family-related responsibilities. Conversely, family-work conflict (FWC) is a form of interrole conflict in which the general demands of, time devoted to, and strain created by the family interfere with performing work-related responsibilities (Netemeyer et al. 1996, p. 401). The assumption is made that WFC and FWC are distinct but interrelated forms of interrole conflict. This conflict is associated with the pressures stemming from membership in multiple groups.

Description: Both the work-family conflict scale and family-work conflict scale are composed of five items each. Item responses are operationalized using a 7-place *strongly disagree-strongly agree* response format. Items are summed to reflect individual scores for the WFC and FWC measures.

Development: An initial pool of 110 items was generated from a review of related measures used in previously published literature. Faculty judges and further exploratory analyses were used to reduce the pool to 43 items (22 for WFC and 21 for FWC). An exhaustive iterative confirmatory procedure was used to derive the final five-item scales. Items were deleted across the three samples from 43 to 24 to 13 to 10 (i.e., the final 5 WFC and 5 FWC item scales). The heuristics used in item deletion included deleting items with high redundancy, items contributing to within- and across-factor measurement error, and items with extremely high or low factor loadings. Tests of one-factor and two-factor correlated models were used to provide evidence of dimensionality, discriminant validity, and internal consistency. These results are summarized in Table 1 (Netemeyer et al. 1996, p. 404). Briefly, the following average fit statistics (i.e., across the three samples) from the two-factor correlated model estimations were offered: GFI = 0.91, AGFI = 0.86, CFI = 0.95, and TLI = 0.93. The average construct reliability estimates for WFC and FWC were 0.88 and 0.86, respectively. The corresponding averages for average variance extracted were 0.60 and 0.57, Subsequent tests of discriminant validity and measurement invariance also supported the validity of the two five-item scales.

Samples: Three samples were used in scale validation. In each case, mail surveys were used to collect the WFC and FWC measures as well as a large number of on- and off-job measures subsequently used in scale validation. Sample 1 comprised 182 elementary and high school teachers and administrators. The median age was 43, and 128 were women. The second sample comprised 162 small business owners. The median age was 45, and 96 were men. The third sample consisted of 186 real estate salespeople. The median age was 48, and 142 were women (Netemeyer et al. 1996, pp. 402–3).

Validity: Correlations with 17 other variables were used to provide further evidence of validity. These correlations are described in Table 3 (Netemeyer et al. 1996, p. 406). Across the samples, 44 of the correlations were significant as predicted. For example, 15 of the 16 correlations related to life satisfaction, relationship satisfaction, and relationship agreement were negative and significant as predicted. Tests of correlation differences between WFC and FWC and related constructs supported expectations as well. For example, WFC was more strongly correlated with the number of hours worked than FWC in all three samples. Last, and as predicted, WFC had a higher mean score than the FWC scale across all three samples.

Scores: Mean level difference tests between the two scales were used in scale validation. The means for the WFC scale across the three samples were 15.42, 17.16, and 17.49. The corresponding means for FWC were 9.99, 10.30, and 11.75.

Source: Netemeyer, Richard G., James S. Boles, and Robert McMurrian (1996), "Development and Validation of Work-Family and Family-Work Conflict Scales," *Journal of Applied Psychology*, 81 (4), 400–10.

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Work-Family Conflict and Family-Work Conflict Scales

(Netemeyer, Boles, and McMurrian 1996)

Work-Family Conflict Scale

1. The demands of my work interfere with my home and family life.

2. The amount of time my job takes up makes it difficult to fulfill family responsibilities.

3. Things I want to do at home do not get done because of the demands my job puts on me.

4. My job produces strain that makes it difficult to fulfill family duties.

5. Due to work-related duties, I have to make changes to my plans for family activities.

Family-Work Conflict Scale

1. The demands of my family or spouse/partner interfere with work-related activities.

2. I have to put off doing things at work because of demands on my time at home.

3. Things I want to do at work don't get done because of the demands of my family or spouse/partner.

4. My home life interferes with my responsibilities at work such as getting to work on time, accomplishing daily tasks, and working overtime.

5. Family-related strain interferes with my ability to perform job-related duties.

Note: Items scored on 7-point scales from *strongly disagree* to *strongly agree.*

Job Burnout/Tension

Burnout in Customer Service Representatives

(Singh, Goolsby, and Rhoads 1994)

Construct: Burnout is defined by Maslach and Jackson (1981) as a psychological syndrome or condition that is characterized by three distinct but related dimensions: emotional exhaustion (EE), reduced personal accomplishment (RPA), and depersonalization (DP). EE reflects feelings of being depleted of energy and drained due to excessive psychological demands. RPA is characterized by attributions of inefficacy, reduced motivation, and low self-esteem. DP manifests itself as an uncaring and negative attitude toward others. It is these definitions that guided the scale modifications of Singh et al. (1994, p. 559). Burnout is depicted as a result of role "stressors" and an antecedent of psychological and behavioral job outcomes.

Description: Boundary spanning burnout is assessed by 24 items (i.e., 8 per dimension). These items reflect adaptations of the original measures of Maslach and Jackson (1981). Items for each dimension are summed and averaged to generate three burnout dimension measures. Items are operationalized using a 6-point scale response format anchored by 1 = *is very much UNLIKE me* to 7 = *is very much LIKE me*. The remaining positions are labeled as well (Singh et al. 1994, p. 568). Within each dimension, there are two items for each of four roles: customers, boss, coworkers, and top management. The three dimension average scores summed across the four roles were used as three indicators of overall burnout in subsequent tests of mediation.

Development: The 24 items were drawn from the scale developed by Maslach and Jackson (1981). The items were modified to include statements about boss, top management, customers, and coworkers. These four role members were identified as being relevant boundary role personnel in preliminary focus group discussions (Singh et al. 1994, p. 562).

Sample: Customer representatives in telemarketing positions for a large multinational firm were surveyed. Of the 351 usable responses, almost 70% were from females. The median age was 31 to 35 years, and 47% of the sample had been with the company less than 2 years.

Validity: Confirmatory factor analyses revealed that a three-dimensional model provided an acceptable fit to the data. The correlations among the three factors ranged from 0.30 to 0.52. The composite reliabilities for the three factors were 0.80, 0.81, and 0.82 for EE, RPA, and DP, respectively (Singh et al. 1994, p. 563). The composite reliability for the second-order burnout construct was 0.66. Additional supportive evidence for the burnout measures' validity was provided by subsequent structural equation model tests of hypotheses. Specifically, role stressors had a significant positive effect on burnout (0.64), while burnout was inversely related as predicted with psychological (–0.77) and behavioral outcomes (–0.46). Moreover, burnout also partially mediated the direct effects of role stress on important job outcomes.

Scores: The means (std. dev.) for the three factors were as follows: EE, 2.71 (0.87); RPA, 2.34 (0.82); and DP, 2.64 (0.92). These means are compared to other professions in Figure 2 (Singh et al. 1994, p. 564).

Source: Singh, Jagdip, Jerry R. Goolsby, and Gary K, Rhoads (1994), "Behavioral and Psychological Consequences of Boundary Spanning Burnout for Customer Service Representatives," *Journal of Marketing Research*, 31, 558–69.

© 1994 by the American Marketing Association. Scale items taken from Appendix A (p. 568). Reprinted with permission.

Reference: Maslach, Christina and Susan E. Jackson (1981), "The Measurement of Experienced Burnout," *Journal of Occupational Behavior*, 2, 99–113.

Burnout in Customer Service Representatives

(Singh, Goolsby, and Rhoads 1994)

Depersonalization

1. I feel I treat some customers as if they were impersonal "objects."

2. I feel indifferent toward some of my customers.

3. I feel a lack of personal concern for my boss.

4. I feel I'm becoming more hardened toward my supervisor.

5. I feel I have become callous toward my coworkers.

6. I feel insensitive toward my coworkers.

7. I feel I am becoming less sympathetic toward top management.

8. 1 feel alienated from top management.

Reduced Personal Accomplishment

1. I feel I perform effectively to meet the needs of my customers.

2. I feel effective in solving the problems of my customers.

3. I feel I am an important asset to my supervisor.

4. I feel my supervisor values my contribution to the firm.

5. I feel my coworkers truly value my assistance.

6. I feel I am a positive influence on my coworkers.

7. I feel I satisfy many of the demands set by top management.

8. I feel I make a positive contribution toward top management goals.

Emotional Exhaustion

1. Working with customers is really a strain for me.

2. I feel I am working too hard for my customers.

3. Working with my boss directly puts too much stress on me.

4. I feel emotionally drained by the pressure my boss puts on me.

5. I feel frustrated because of working directly with coworkers.

6. I feel I work too hard trying to satisfy coworkers.

7. I feel dismayed by the actions of top management.

8. I feel burned out from trying to meet top management's expectations.

Note: All items in the Reduced Personal Accomplishment scale are reverse coded. Items scored on 6-point scales from 1 = *is very much UNLIKE me* to 7 = *is very much LIKE me.*

Tension: Job-Induced Tension

(House and Rizzo 1972)

Construct: Job-induced tension is viewed as "the existence of tension and pressures growing out of job requirements, including possible outcomes in terms of feelings or physical symptoms (e.g., tiredness, stiffness, weakness, irritation, digestive problems)" (House and Rizzo 1972, pp. 481–82). The corresponding job-induced tension measure has been used extensively in organizational behavior and sales research.

Description: The job-induced tension scale is composed of seven items originally scored on a *true* = 2, *false* = 1 format. Scores on items are summed and then divided by 7 to form an overall index. The scale is considered unidimensional.

Development: From the description provided by House and Rizzo (1972), 26 items were generated to tap the domain of the construct. Through image covariance factor analysis, item analysis, and Kuder-Richardson reliability analysis, the final seven-item job induced tension scale was derived with a sample of 200 respondents. Numerous estimates of nomological validity were also reported.

Sample: The questionnaire that contained the scale was administered to a sample of the staff, research, development, and engineering personnel at an undisclosed firm. The sample size was $n = 200$.

Validity: The scale had a KR-20 estimate of internal consistency of 0.83. The scale also showed evidence of nomological validity. For example, the correlations between the job induced tension scale and measures of role conflict and role ambiguity were 0.20 and 0.12.

Scores: A mean score of 1.24 *(SD =* 0.28) was reported for the scale (House and Rizzo 1972, p. 484).

Source: House, Robert L. and John R. Rizzo (1972), "Role Conflict and Ambiguity as Critical Variables in a Model of Organizational Behavior," *Organizational Behavior and Human Performance,* 7, 467–505. Scale items taken from Figure 3 (pp. 480–81).

Other evidence: Although the scale has been used on numerous occasions in the organizational behavior literature with evidence of reliability and validity, our discussion of other evidence will be limited to a few marketing applications. Using a sample of 216 pharmaceutical salespeople, Fry, Futrell, Parasuraman, and Chmielewski (1986) reported an internal consistency estimate of 0.88 for the job-induced tension scale. Evidence of nomological validity was also offered. For example, as an independent variable for the prediction of satisfaction with company support and satisfaction with customers, the job-induced tension scale showed path coefficients of –0.14 and –0.18 *(p < 0.05),* respectively. As a dependent variable, role conflict showed a path coefficient of 0.39 *(p < 0.01)* for predicting job-induced tension.

In another application using a sample of 183 salespeople, Netemeyer, Johnston, and Burton (1990) reported a composite reliability estimate of 0.82 for the job-induced tension scale (using 5-point items). Furthermore, the scale was significantly correlated with role conflict (0.43), role ambiguity (0.28), job satisfaction (–0.42), and propensity to leave an organization (0.30).

Other sources: Fry, Louis W., Charles M. Futrell, A. Parasuraman, and Margaret A. Chmielewski (1986), "An Analysis of Alternative Causal Models of Salesperson Role Perceptions and Work-Related Attitudes," *Journal of Marketing Research,* 23, 153–63.

Netemeyer, Richard G., Mark W. Johnston, and Scot Burton (1990), "Analysis of Role Conflict and Role Ambiguity in a Structural Equations Framework," *Journal of Applied Psychology,* 75, 148–57.

Tension: Job-Induced Tension

(House and Rizzo 1972)

1. I feel fidgety or nervous because of my job.

2. Problems associated with work have kept me awake at night.

3. My job tends to directly affect my health.

4. If I had a different job, my health would probably improve.

5. I often "take my job home with me" in the sense that I think about it when doing other things.

6. I feel nervous before attending meetings in the organization.

7. I sometimes feel weak all over.

Note: These items reflect wording used in marketing applications of the scale. Items scored as either *true* = 2 or *false* = 1.

Performance Measures

Organizational Citizenship Behaviors: OCBs

(MacKenzie, Podsakoff, and Fetter 1993)

Construct: Organizational citizenship behaviors (OCBs) are discretionary behaviors on the part of a salesperson that directly promote the effective functioning of an organization, without necessarily influencing a salesperson's objective sales productivity (MacKenzie et al. 1993, p. 71). According to Organ (1988), OCBs include altruism, sportsmanship, civic virtue, and conscientiousness. Briefly, altruism is discretionary behavior that has the effect of helping a specific other person with an organizationally relevant task. Sportsmanship is the willingness on the part of a salesperson to tolerate less than ideal circumstances without complaining. Civic virtue is behavior indicating that the salesperson responsibly participates in and is concerned about the life of the company. Conscientiousness is behavior that goes well beyond the minimum role requirements of the organization (MacKenzie et al. 1993, p. 71).

Description: OCBs have been studied in multiple contexts. Interested users of these measures are encouraged to conduct a more complete review than is provided here (cf. MacKenzie, Podsakoff, and Fetter 1991; MacKenzie et al. 1993; Podsakoff and MacKenzie 1994). Sample items are shown in Table 1 (MacKenzie et al. 1993, p. 74). Items are operationalized using 7-point Likert-type scales ranging from *strongly disagree* to *strongly agree*. The number and apparent content of items varies across the context involved in each study. The items have been summed and averaged to reflect the different behaviors and have been used in causal models as separate indicators of one of the OCB domains (e.g., sportsmanship, civic virtue).

Development: Standard scale development procedures were used in scale construction. This process is summarized by Podsakoff and MacKenzie (1994, p. 351) and MacKenzie et al. (1991). Briefly, items were developed to reflect the various OCB constructs. Items were then judged by knowledgeable colleagues and company representatives. The remaining items were subsequently subjected to measurement evaluation based largely on the results of extensive confirmatory factor analyses.

Samples: The samples used in Studies 1, 2, and 3 of MacKenzie et al. (1993) were as follows. Study 1 was based on the complete ratings of 261 multiline insurance agents provided by their managers; 82% were male, and their average age was 38 years. Study 2 involved the ratings of 204 chemical product salespersons. Their average job tenure was 5.6 years, and 93% were male. The data for Study 3 consisted of the evaluations of 108 district sales managers provided by 32 national sales managers working for an international pharmaceutical company.

Validity: Overall, there is substantial support offered for the measures in the three articles cited below. Based on Study 2 in MacKenzie et al. (1993), which included the four sets of OCBs for which example items are provided, the following evidence of measurement validity was described. (Similar support can be gleaned from the results of Study 1 and Study 3 as well as the related research reported elsewhere.) First, the internal consistency reliability for the four constructs ranged from 0.78 to 0.88. The construct reliability estimates ranged from 0.79 to 0.85. Evidence of discriminant validity was provided from tests of the intercorrelations among the OCB constructs and comparisons of these correlations with shared variance estimates. Overall measurement fit

statistics for a six-factor correlated model incorporating sales productivity and overall performance included the following: CFI = 0.93, TLI = 0.91, GFI = 0.89, and chi-square = 230.3 (105 df). Subsequent results across the multiple studies revealed that OCBs have an important impact on managers' evaluations and that OCBs have significant effects beyond direct measures of employee performance (MacKenzie et al. 1993, p. 77).

Scores: Means and standard deviations are not reported by MacKenzie et al. (1993).

Source: MacKenzie, Scott B., Philip M. Podsakoff, and Richard Fetter (1993), "The Impact of Organizational Citizenship Behavior on Evaluations of Salesperson Performance," *Journal of Marketing,* 57, 70–80.

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Other evidence: Podsakoff and MacKenzie (1994) describe follow-up research using another mix of OCB items. Again, the scale development procedures are extensive, and substantial evidence of measurement validity is offered from confirmatory factor analysis results. Evidence of predictive validity is provided by the ability of three sets of OCBs to predict overall performance evaluations, as well as unit performance, for samples of insurance agents.

References: MacKenzie, Scott B., Philip M. Podsakoff, and Richard Fetter (1991), "Organizational Citizenship Behavior and Objective Productivity as Determinants of Managerial Evaluations of Salespersons' Performance," *Organizational Behavior and Human Decision Processes,* 50 (1), 1–28.

Organ, Dennis W. (1988), *Organization Citizenship Behavior: The Good Soldier Syndrome,* Lexington, MA: Lexington Books.

Podsakoff, Philip M. and Scott B. MacKenzie (1994), "Organizational Citizenship Behaviors and Sales Unit Effectiveness," *Journal of Marketing Research,* 31, 351–63.

Organizational Citizenship Behaviors: OCBS

(MacKenzie, Podsakoff, and Fetter 1993)

Civic Virtue

1. "Keeps up" with developments in the company.

2. Attends functions that are not required but that help the company image.

3. Is willing to risk disapproval in order to express his/her beliefs about what's best for the company.

Sportsmanship

1. Consumes a lot of time complaining about trivial matters.

2. Tends to make "mountains out of molehills" (makes problems bigger that they are).

3. Always focuses on what's wrong with his/her situation, rather than the positive side of it.

Altruism

1. Helps orient new agents even though it is not required.

2. Is always ready to help or to lend a helping hand to those around him/her.

3. Willingly gives of his/her time to help others.

Conscientiousness

1. Conscientiously follows company regulations and procedures.

2. Turns in budgets, sales projections, expense reports, etc. earlier than is required.

3. Returns phone calls and responds to other messages and requests for information promptly.

Notes: Items in the Sportsmanship scale are all reverse coded. Sample items are shown in MacKenzie et al. (1993, p. 74, Table 1). Items scored on 7-point Likert-type scales from *strongly disagree* to *strongly agree*.

Sales Force Theory-of-Mind Scale (SToM)

(Dietvorst et al. 2009)

Construct: Sales force Theory-of-Mind (SToM) is a domain-specific scale designed to gauge sales-people's ability to engage in interactions with customers based on how well they take into account the intentions and other mental states and events of customers (Dietvorst et al. 2009, p. 654). SToM is assumed to be related to the deliberative phenomena of adaptive selling. Evidence suggests that the dimensions reflect more personal dispositions than learned behavior.

Description: The scale consists of 13 items allocated across four dimensions (i.e., rapport building, detecting nonverbal cues, taking a bird's-eye view, and shaping the interaction) that can be organized as distinct, concrete representations of a single, abstract concept of sales theory-of-mind thinking (i.e., the automatic process of interpersonal mentalizing; Dietvorst et al. 2009, p. 658). In Study 3, items were answered on both *does not describe me/describes me completely* and *disagree/agree* scales, both in a 7-point Likert format. Throughout the other studies, *does not describe me/describes me completely* was used. The four SToM factors are assumed to be reflective of a single higher-order abstract representation of SToM with four dimensions. Dimension scores are used as indicators of overall SToM.

Development: A search of the extant literature in neuroscience and sales force behavior was conducted to identify candidate items. The content analysis of this literature identified 33 items. The items were administered to the 132 respondents involved in Study 1. A pruning of the items and an examination of item intercorrelations resulted in the identification of 14 items. Factor analysis resulted in the deletion of one additional item. The coefficient alpha reliability coefficients for the four factors were as follows: rapport building, 0.69; detecting nonverbal cues, 0.76; taking a bird's-eye view, 0.66; and shaping the interaction, 0.79.

Samples: Study 1 was based on 132 completed questionnaires obtained by sales managers sending questionnaires to their salespeople. Study 2 participants were 127 salespeople who were students at an executive education program. Study 3 involved 132 salespeople collected using similar methods employed in Study 2. Study 4 (the fMRI study) was based on data collected from 20 right-handed men from the salespeople investigated in Study 1. Demographic descriptions for the samples are presented by Dietvorst et al. (2009).

Validity: Analysis of the Study 1 data using confirmatory factor analysis and a review of the second-order and first-order factor loadings supported the structure of the scale. In addition, the measures of sales specific SToM scale factors achieved criterion-related validity with general measures of ToM scale factors (Dietvorst et al. 2009). Moreover, the factors demonstrated evidence of discriminant validity as well. Similar evidence is provided from the Study 2 salesperson data. Again, the SToM measures consisted of four distinct dimensions and were loaded on one second-order factor. Using two different measurement methods, evidence of construct validity is provided from multitrait-multimethod matrix analysis and the salesperson data analyzed in Study 3. Support for predictive and nomological validity was also demonstrated in Study 3 through tests of relationships with adaptiveness, perspective taking, social anxiety, and performance. Last, and using procedures from neuroscience in Study 4, the researchers demonstrated that different patterns of brain activity occurred between salespeople scoring high and low on interpersonal-mentalizing tasks.

Scores: Overall and dimension mean scores for 10 low and 10 high SToM Study 4 participants are summarized in Table 5 (Dietvorst et al. 2009, p. 662). The overall means (and standard deviations) for the low and high groups of 10 individuals were 5.18 (0.40) and 6.45 (0.33), respectively. The four dimension scores for the low (high) groups were as follows: rapport building, 4.67 (6.53); detecting nonverbal cues, 5.37 (6.43); taking a bird's-eye view, 5.47 (6.45); and shaping the interaction, 5.10 (6.37).

Source: Dietvorst, Roeland C., Willem J. M. I. Verbeke, Richard P. Bagozzi, Carolyn Yoon, Marion Smits, and Aad van der Lugt (2009), "A Sales Force-Specific Theory-of-Mind Scale: Tests of Its Validity by Classical Methods and Functional Magnetic Resonance Imaging," *Journal of Marketing Research,* 46 (October), 653–68.

Sales Force Theory-of-Mind Scale (SToM)

(Dietvorst et al. 2009)

Rapport Building

1. When I am with a customer (e.g., in the elevator before a sales meeting), I can easily kindle a small conversation.

2. I find it difficult to talk to a customer about topics that are not business-related. (R)

3. When at a business meeting or a reception, I can easily start off a conversation on a general topic such as the weather.

Detecting Nonverbal Cues

4. I find it difficult to discern the nonverbal cues of customers during a conversation. (R)

5. At times, I realize that I do not pick up the hints in sales conversations; after the meeting, colleagues explain to me what happened during the conversations. Only then do I realize what happened during the conversation. (R)

6. During a sales conversation, if customers hint of something, I do take that into consideration as we are speaking together.

Taking a Bird's-Eye View

7. When I realize that someone does not possess the right amount of knowledge in or during a sales conversation, I can easily add some information to bring focus to the conversation, thus making it easier for people to understand what I want to say.

8. When I realize that people do not understand what I'm saying, I put what I want to say in a broader perspective in order to explain what I mean.

9. I always try to understand the industry context in which a customer operates, and by using examples from that context, I add any missing information.

10. Sometimes I summarize for customers what has been said up to that point in the meeting; this makes for a smoother conversation!

Shaping the Interaction

11. I make sure that I positively influence the atmosphere in a sales conversation.

12. I can easily act in ways that gives a sales conversation a positive twist.

13. I can easily make people feel more comfortable during a sales conversation.

Notes: R = reverse coded. Items were answered on both *does not describe me/describes me completely* and *disagree/agree* scales, both in a 7-point Likert format.

Sales Performance Scale

(Behrman and Perreault 1982)

Construct: This scale was designed to measure the job performance construct as it relates to the industrial salesperson. Differences in such variables as sales territories, product lines, customer accounts, and length of selling cycles can make generalizations about performance quite tenuous. Because quantitative sales data may be deceptive as performance indicators due to factors beyond the control of the individual, a performance evaluation based on self-report was constructed as one possible measurement of performance. The construct's domain was defined as consisting of the following five categories: (a) sales presentation, (b) providing information, (c) technical knowledge, (d) sales objective, and (e) controlling expenses.

Description: The finalized version of the instrument consisted of 31 items that represent the five components listed above. A 7-cue rating scale format was used, with possible responses ranging from *outstanding* to *needs improvement*. Item scores are summed within factors to form factor indices, or they can be summed over all items to form an overall performance measure.

Development: A review of the literature and an analysis of the job of industrial salespersons served as stimuli in developing the initial set of statements, resulting in seven categories of items. A panel of judges reviewed the statements, and 65 items remained for the seven performance areas. Data were collected from the salespersons and their sales managers using self-administered questionnaires. The purification study, which used item and factor analysis, reduced the set of items to 31 that represented five aspects of industrial sales performance. Reliability and validity estimates followed.

Samples: Five noncompeting industrial companies were selected to participate in the study. Across these five firms, 219 salespersons and 43 managers were invited to participate. Of these subjects, 200 (91%) salespersons and 42 (98%) managers returned completed questionnaires.

Validity: Alpha coefficients ranged from 0.81 to 0.90 across the facets and was 0.93 for the overall scale. Test-retest estimates across the facets ranged from 0.54 to 0.77, and the estimate was 0.70 for the overall scale. The scale was significantly correlated with manager's evaluation (0.26 for the total sample), profitability data (0.21), and a need for achievement measure (0.25). Individually, these relationships were not strong, but in combination they suggest that the self-report captured some common variance with other surrogate indicators of sales performance. The 31 items were also factor analyzed with a holdout sample, and the five extracted factors were consistent with the expected structure.

Scores: The means (std. dev.) for the subcomponents were as follows: sales presentation 33.46 (4.69), providing information 26.52 (4.48), technical knowledge 32.41 (5.52), sales objectives 38.15 (5.82), and controlling expenses 39.96 (5.05). The overall scale mean and standard deviation were 170.51 and 19.46, respectively.

Source: Behrman, Douglas and William D. Perreault, Jr. (1982), "Measuring the Performance of Industrial Salespersons," *Journal of Business Research,* 10, 355–70.

Sales Performance Scale

(Behrman and Perreault 1982)

1. Producing a high market share for your company in your territory

2. Making sales of those products with the highest profit margins

3. Generating a high level of dollar sales

4. Quickly generating sales of new company products

5. Identifying and selling major accounts in your territory

6. Producing sales or blanket contracts with long-term profitability

7. Exceeding all sales targets and objectives for your territory during the year

8. Knowing the design and specifications of company products

9. Knowing the applications and functions of company products

10. Being able to detect causes of operating failure of company products

11. Acting as a special resource to other departments that need your assistance

12. Keeping abreast of your company's production and technological developments

13. When possible, troubleshooting system problems and conducting minor field service to correct product misapplications and/or product failures

14. Carrying out company policies, procedures, and programs for providing information

15. Providing accurate and complete paperwork related to order, expenses, and other routine reports

16. Recommending on your own initiative how company operations and procedures can be improved

17. Submitting required reports on time

18. Maintaining company specified records that are accurate, complete, and up to date

19. Operating within the budgets set by the company

20. Using expense accounts with integrity

21. Using business gift and promotional allowances responsibly

22. Spending travel and lodging money carefully

23. Arranging sales call patterns and frequency to cover your territory economically

24. Entertaining only when it is clearly in the best interest of the company to do so

25. Controlling costs in other areas of the company (order processing and preparation, delivery, etc.) when taking sales orders

26. Listening attentively to identify and understand the real concerns of your customer

27. Convincing customers that you understand their unique problems and concerns

28. Using established contacts to develop new customers

29. Communicating your sales presentation clearly and concisely

30. Making effective use of audiovisual aids (charts, tables, and the like) to improve your sales presentation

31. Working out solutions to a customer's questions or objections

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Note: The factors and item numbers are as follows: (a) sales objectives 1 to 7, (b) technical knowledge 8 to 13, (c) providing information 14 to 18, (d) controlling expenses 19 to 25, and (e) sales presentations 26 to 31. Items scored on 7-point scales from *outstanding* to *needs improvement.*

Salesperson Performance

(Sujan, Weitz, and Kumar 1994)

Construct: This measure is used to assess salesperson self-evaluations of their own performance relative to other salespersons working for their company (Sujan et al. 1994, p. 42).

Description: The measure consists of seven items, each operationalized using a scale ranging from *Much Worse* (–5) to *Average* (0) to *Much Better* (+5). Item scores are apparently summed (cf. Table Al, Sujan et al. 1994, p. 47).

Development: Five of the seven items were taken from Behrman and Perreault (1982). The items for identifying attractive prospects and assisting the sales supervisor to meet his or her goals were added.

Samples: Participants in the research were 190 salespersons from eight different firms in diverse industries (Sujan et al. 1994, p. 41). The respondents were predominantly male (78%). On average, they were 35 years of age and had 9 years of sales experience.

Validity: All measures, including performance, demonstrated acceptable levels of unidimensionality, reliability, and convergent and discriminant validity (Sujan et al. 1994, p. 42). Based on a series of confirmatory factor analysis models, the following results were reported regarding the performance measure. The reliability for the seven-item scale was 0.91 (all t values > 6.50). The phi loadings between performance and working hard, positive feedback, and negative feedback were 0.50, 0.29, and 0.15, respectively. Evidence for discriminant validity was provided because each of these phi values plus or minus twice their standard error did not include 1. Additional evidence of validity is offered from the results that supported hypotheses in which theoretical antecedents (e.g., working smart and working hard) were predictive of performance, as expected.

Scores: The mean and standard deviation for the scale were 7.93 and 1.36, respectively.

Source: Sujan, Harish, Barton A. Weitz, and Nirmalya Kumar (1994), "Learning Orientation, Working Smart, and Effective Selling," *Journal of Marketing,* 58, 39–52.

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Other evidence: The seven-item scale was also used by Challagalla and Shervani (1996) in their study of supervisory control. Tests of measurement validation were said to support the validity of all measures, including the performance scale. A number of antecedents of performance were correlated as predicted. Example correlations with performance included the following: supervisor role ambiguity (–0.32), customer role ambiguity (–0.34), and satisfaction with supervisor (0.17).

Other source: Challagalla, Goutam N. and Tasadduq A. Shervani (1996), "Dimensions and Types of Supervisory Control: Effects on Salesperson Performance and Satisfaction," *Journal of Marketing,* 60, 89–105.

Reference: Behrman, Douglas N. and William D. Perreault, Jr. (1982), "Measuring the Performance of Industrial Salespersons," *Journal of Business Research,* 10, 355–70.

Salesperson Performance

(Sujan, Weitz, and Kumar 1994)

1. Contributing to your company's acquiring a good market share

2. Selling high profit-margin products

3. Generating a high level of dollar sales

4. Quickly generating sales of new company products

5. Identifying major accounts in your territory and selling to them

6. Exceeding sales targets

7. Helping your sales supervisor meet his or her goals

Note: The scale for Performance went from *Much Worse* (–5) to *Average* (0) to *Much Better* (+5).

Control and Leadership

Control: Supervisory Control

(Challagalla and Shervani 1996)

Construct: The model that guided the scale development efforts of Challagalla and Shervani (1996) consisted of nine facets, with three types of control (i.e., output, activity, and capability control) and three facets for each type of control (i.e., information, rewards, and punishments). Two of the control types reflect behavior control—activity control and capability control. Activity control refers to the specification of the activities a person is expected to perform on a regular basis, the monitoring of actual behavior, and the administration of rewards and punishments on the basis of specified activities. Capability control involves setting goals for the level of skills and abilities people must possess, monitoring their skills and abilities, providing guidance for improvement if needed, and rewarding and punishing persons on the basis of their skills and abilities (Challagalla and Shervani 1996, p. 90). Information control involves goal setting, monitoring, and feedback.

Description: A total of 34 items are used as indicators of the nine output, activity, and capability control variables. All items are operationalized using 5-point Likert-type scales anchored by *strongly disagree* and *strongly agree*. Items for the different facets are summed to represent independent variable predictors.

Development: As indicated in Appendix A, the output information items, the activity information items, and the capability information items were based on Jaworski and MacInnis (1989). The remaining facets were based on Podsakoff et al. (1984). Pretesting was done in four stages. These efforts included protocol interviews with salespersons and academic experts, as well as reactions to firm managers from the participating firms. These responses resulted in the addition and deletion of several items. Last, survey responses from 32 industrial salespersons were used to make several final scale refinements. Initial exploratory factor analyses reduced the final set of items to 34 (Challagalla and Shervani 1996, p. 101).

Sample: Usable responses were obtained from 270 salespersons employed in one of five industrial product divisions of two *Fortune* 500 companies. In all five divisions, the salespersons acted independently (Challagalla and Shervani 1996, p. 95).

Validity: The measures for the nine facets of control were evaluated using confirmatory factor analysis. The measures were said to demonstrate adequate levels of unidimensionality, reliability, and convergent and discriminant validity (Challagalla and Shervani 1996, pp. 95, 103). The coefficient alpha reliabilities for the nine facets ranged from 0.72 to 0.90. A nine-factor correlated model provided the best fit to the data. The following fit statistics were offered: chi-square = 995 (491 *df),* GFI = 0.80, RNI = 0.88, TLI = 0.87, and CFI = 0.88. The composite reliabilities all exceeded 0.70; the variance extracted estimates were above 0.50 with only two exceptions. For each pair of constructs, the average variance extracted exceeded the squared structural link between each pair, and all indicator *t* values were greater than 2.0. Last, the nomological validity of the measures is supported by the ability of the measures to predict outcomes as hypothesized.

Scores: Item and scale means and standard deviations are not reported. Factor intercorrelations are shown in Table B1 (Challagalla and Shervani 1996, p. 103).

Source: Challagalla, Goutam N. and Tasadduq A. Shervani (1996), "Dimensions and Types of Supervisory Control: Effects on Salesperson Performance and Satisfaction," *Journal of Marketing,* 60, 89–105.

© 1996 by the American Marketing Association. Scale items taken from Appendix A (pp. 100–101). Reprinted with permission.

References: Jaworski, Bernard J. and Deborah J. MacInnis (1989), "Marketing Jobs and Management Controls: Toward a Framework," *Journal of Marketing,* 26, 406–19.

Podsakoff, Philip M., William D. Tudor, Richard A. Grover, and Vandra L. Huber (1984), "Situational Moderators of Leader Reward and Punishment Behaviors: Fact or Fiction?" *Organizational Behavior and Human Performance,* 34, 21–63.

Control: Supervisory Control

(Challagalla and Shervani 1996)

Output Control

Output Information

1. My manager tells me about the level of achievement expected on sales volume or market share targets.

2. I receive feedback on whether I am meeting expectations on sales volume or market share targets.

3. My manager monitors my progress on achieving sales volume or market share goals.

4. My manager ensures I am aware of the extent to which I attain sales volume or market share goals.

Output Rewards

1. I would get bonuses if I exceed my sales volume or market share targets.

2. Promotion opportunities depend on how well I perform on sales volume or market share targets.

3. I would be recognized by my company if I perform well on sales volume or market share targets.

4. There are pay increases if I do well on sales volume or market share targets.

Output Punishments

1. I would receive an informal warning if sales volume or market share targets were not achieved.

2. I would receive a formal warning if sales volume or market share targets were not achieved.

3. I would be put on probation if sales volume or market share targets are not achieved with some consistency.

4. My pay increases would suffer if sales volume or market share targets are not met.

Activity Control

Activity Information

1. My manager informs me about the sales activities I am expected to perform.

2. My manager monitors my sales activities.

3. My manager informs me on whether I meet his/her expectations on sales activities.

4. If my manager feels I need to adjust my sales activities, he/she tells me about it.

5. My manager evaluates my sales activities.

Activity Rewards

1. How well I perform specified sales activities would be considered when awarding bonuses/financial rewards.

2. If I perform sales activities well my supervisor would commend me.

3. I would be recognized by my supervisor if s/he were pleased with how well I perform sales activities.

Activity Punishments

1. I would receive an informal warning if my manager is not pleased with how I perform sales activities.

2. I would receive a formal reprimand if my supervisor were unhappy with how I perform sales activities.

3. I would be put on probation if my manager is unhappy with how I perform specified sales activities.

Capability Control

Capability Information

1. My manager has standards by which my selling skills are evaluated.

2. My supervisor periodically evaluates the selling skills I use to accomplish a task (e.g., how I negotiate).

3. My manager provides guidance on ways to improve selling skills and abilities.

4. My supervisor evaluates how I make sales presentations and communicate with customers.

5. My manager assists by suggesting why using a particular sales approach may be useful.

Capability Rewards

1. Assignment to better territories or accounts depends on how good my selling skills are.

2. I would be commended if I improved my selling skills.

3. Promotion opportunities depend on how good my selling skills and abilities are.

Capability Punishments

1. I would receive an informal warning if my manager is not pleased with my selling abilities.

2. I would receive a formal reprimand if my supervisor is not pleased with my selling skills and abilities.

3. I would be put on probation if my manager is not happy with my selling abilities.

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

Leadership: Transactional and Transformational Leadership

(Bycio, Hackett, and Allen 1995)

Construct: Bass (1985) originally applied the concepts of transactional and transformational leadership to business. In an extension, Bycio et al. (1995) report the results of a confirmatory factor analysis of the Bass (1985) conceptualization. Transactional leaders are described as those leaders who identify the needs of their followers and exchange rewards for appropriate levels of effort and performance. Transformational leaders try to increase the level of followers' awareness for valued outcomes by expanding and elevating their needs and encouraging them to transcend their self-interests (Bycio et al. 1995, p. 468). Three factors are seen as being transformational: charismatic leadership, individualized consideration, and intellectual stimulation. Two factors are seen as being transactional: contingent reward and management-by-exception.

Description: Bycio et al. (1995) used the subset of items that defined the factors in the original Bass (1985) exploratory analysis. The five factors and the number of items per factor that were studied by Bycio et al. (1995) are as follows: charismatic leadership, 17; individualized consideration, 7; intellectual stimulation, 3; contingent reward, 7; and management-by-exception, 6. Each item is rated on the following 5-point scale: 0 (*not at all*), 1 (*once in a while*), 2 (*sometimes*), 3 (*fairly often*), and 4 (*frequently*). The items composing this scale are shown in Table 2 of Bycio et al. (1995). Because the measures are copyrighted, they are not reproduced here.

Development: Coefficient alpha estimates of reliability ranged from 0.71 to 0.97 across the five factors. Confirmatory factor analysis was used to test a series of factor models. Although the five-factor correlated model provided the best fit to the data, a two-factor Active-Passive model also provided a reasonable representation of the data. In this model, examination of relative model fit and correlations among the five factors revealed that, except for the management-by-exceptions factor, the remaining factors were highly correlated. For the two-factor model, the following fit statistics were reported: chi-square = 4,683 (730 *df*), NNFI = 0.89, CFI = 0.90, GFI = 0.82, and RSMR = 0.10. Item loadings and error variances for the five-factor model and two-factor Active-Passive model are shown in Table 2 (Bycio et al. 1995, p. 473).

Sample: The analyses are based on the complete responses of 1,376 registered nurses to a mail questionnaire. Responses showed that 97% of the respondents were female, with a mean age of 37 years and mean length of organizational tenure of 9 years (Bycio et al. 1995, p. 470).

Validity: A series of hierarchical regressions was run to test if the transformational scales added to the prediction of the outcome variables. The transformational scales had strong positive relationships with extra effort, satisfaction with leader, and subordinate-rated leader effectiveness (Bycio et al. 1995, p. 472). The contingent rewards factor was somewhat less correlated. Overall, charismatic leadership was found to be the dominant predictor. A number of other correlational tests provided supportive evidence of the scales' validity. However, concerns were raised about the high item error variances and the discriminant validity of the transformational factors, given the large phi coefficients. In addition, an expected strong relationship between contingent reward and continuance commitment did not materialize. These and a large number of other correlational tests are described in detail by Bycio et al. (1995).

Scores:	Item means and standard deviations are presented in Table 2 (Bycio et al. 1995, p. 473). The five factor means (std. dev.) were as follows: charismatic leadership, 1.62 (1.06); individualized consideration, 2.08 (0.93); intellectual stimulation, 1.32 (1.06); contingent reward, 1.05 (0.78); and management-by-exception, 1.87 (0.80).
Source:	Bycio, Peter, Rick D. Hackett, and Joyce S. Allen (1995), "Further Assessments of Bass's (1985) Conceptualization of Transactional and Transformational Leadership," *Journal of Applied Psychology,* 80 (4), 468–78.
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Reference:	Bass, B. M. (1985), *Leadership and Performance Beyond Expectations,* New York: Free Press.

Perceived Leader Behavior Scales

(House and Dessler 1974)

Construct: The perceived leadership construct has its conceptual base in the path-goal theory of leadership (House 1971; House and Dessler 1974). Leader behavior is conceived as an explanatory variable that directly affects the psychological states and performance of subordinates. Furthermore, this leadership focuses on subordinates' *perceptions* of their leader with respect to the following three aspects of leadership (House and Dessler 1974, pp. 40–3).

Instrumental leadership: leader behavior directed at clarifying expectations, assigning specific tasks, and specifying procedures to be followed. (Also referred to as initiating structure.)

Supportive leadership: the degree to which leader behavior can be characterized as friendly and approachable, and considerate of the needs of subordinates. (Also referred to as leadership consideration.)

Participative leadership: a nondirective form of role clarifying behavior analogous to the more directive instrumental leadership. It considers the degree to which leaders allow subordinates to influence decisions by asking subordinates for input and suggestions. (Also referred to as leadership participation.)

Description: The perceived leadership behavior scale is a three-factor scale comprising the three aspects of perceived leadership described above. Across factors, items have been scored on a 5-point format of *always = 5*, *often = 4*, *occasionally = 3*, *seldom = 2*, and *never = 1*. Item scores can be summed within each factor to form indices for each of the three aspects of leadership. Thus, the scale is considered multidimensional.

Development: Based on path-goal theory and an extensive literature review, a pool of 35 items was generated to reflect the aspects of perceived leadership. Several of these items were taken from earlier research on leadership theory (Fleishman 1957; Stogdill 1963). Via factor and reliability analyses over two samples, the number of items was trimmed and the final scales were derived. Numerous tests of validity were also assessed.

Samples: Two samples of 206 and 96 were used in scale development and validation. These samples were employees from two electronics firms and consisted of managers, professionals, foremen, blue-collar workers, technicians, and others.

Validity: Principal components factor analysis revealed three factors corresponding to the three aspects of perceived leadership. Estimates of internal consistency reliability for subsets of the two samples were reported to be 0.72 and 0.76 for instrumental leadership (also referred to as initiating structure), 0.81 and 0.79 for supportive leadership (also referred to as leader consideration), and 0.67 and 0.68 for participative leadership (also referred to as leadership participation). These three factors were significantly intercorrelated (the actual correlations were not specified). Thus, partial correlations were used to examine the nomological validity of the leadership factors. To examine validity, the two samples were split into high, medium, and low task structure groups. Then, partial correlations of the three factors with a number of dependent variables were reported that offered evidence for the validity of the perceived leadership scales. For example, correlations of instrumental leadership with a measure of intrinsic job satisfaction for the low task structure group were 0.26 and 0.40 for the two samples. Correlations of supportive leadership with intrinsic job satisfaction for the high task structure group were 0.52 and 0.36 for the two samples. Numerous other estimates of validity were offered.

Scores:	Neither mean nor percentage scores were reported by House and Dessler (1974).
Source:	House, Robert J. and Gary Dessler (1974), "The Path-Goal Theory of Leadership: Some Post Hoc and A Priori Tests," in *Contingency Approaches to Leadership,* eds. James G. Hunt and Lars L. Larson, Carbondale: Southern Illinois University Press.
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Other evidence:	Although the scales have been used on many occasions in the organizational behavior literature, our discussion of other evidence will be restricted to marketing applications of the perceived leadership behavior scales. Teas (1981), with a sample of 171 industrial salespeople, examined the relationship of the leadership behavior scales (modified versions) with various job-related attitudes and outcomes. He reported coefficient alpha estimates of 0.84, 0.51, and 0.82 for supportive leadership (i.e., leadership consideration), instrumental leadership (i.e., initiation of structure), and participative leadership (i.e., participation), respectively. For these three scales as dependent variables, R^2 estimates ranged from 0.24 to 0.44 with predictor variables that included job self-esteem, experience, and company feedback, among others. Thus, some evidence for the nomological validity of the perceived leadership measures was found.
	In another marketing application of 114 salespeople, Kohli (1989) used the modified initiation structure and leadership consideration measures of Teas (1981). Reliability estimates were reported to between 0.64 and 0.84 (across all measures in the study). The initiation of structure and leadership consideration scales were used as independent variables across high and low group splits of several moderator variables. With job satisfaction and role clarity as dependent variables, regression coefficients ranged from 0.51 to 1.08 for initiation of structure and 0.30 to 0.79 for leadership consideration, offering evidence of predictive validity.
Other sources:	Kohli, Ajay (1989), "Effects of Supervisory Behavior: The Role of Individual Differences Among Salespeople," *Journal of Marketing,* 53, 40–50.
	Teas, R. Kenneth (1981), "An Empirical Test of Models of Salespersons' Job Expectancy and Instrumentality Perceptions," *Journal of Marketing Research,* 18, 209–26.
References:	Fleishman, E. A. (1957), "A Leader Behavior Description for Industry," in *Leader Behavior: Its Description and Measurement,* eds. R. M. Stogdill and A. E. Coons, Columbus: Ohio State University Bureau of Business Research, pp. 103–19.
	House, Robert J. (1971), "A Path-Goal Theory of Leader Effectiveness," *Administrative Science Quarterly,* 16, 321–38.
	Stogdill, R. M. (1963), *Manual for Leadership Behavior Description Questionnaire Form XII,* Columbus: Ohio State University Bureau of Business Research.

Perceived Leader Behavior Scales

(House and Dessler 1974)

Instrumental Leadership (Initiating Structure)

1. He lets group members know what is expected of them.

2. He decides what shall be done and how it shall be done.

3. He makes sure that his part in the group is understood.

4. He schedules the work to be done.

5. He maintains definite standards of performance.

6. He asks that the group members follow standard rules and regulations.

7. He explains the way any task should be carried out.

Supportive Leadership (Leadership Consideration)

1. He is friendly and polite.

2. He does little things to make it pleasant to be a member of the group.

3. He puts suggestions made by the group into operation.

4. He treats all group members as his equals.

5. He gives advance notice of changes.

6. He keeps to himself.

7. He looks out for the personal welfare of group members.

8. He is willing to make changes.

9. He helps me overcome problems which stop me from carrying out my task.

10. He helps me make working on my tasks more pleasant.

Participative Leadership (Leadership Participation)

1. When faced with a problem, he consults with his subordinates.

2. Before making decisions, he gives serious consideration to what his subordinates have to say.

3. He asks subordinates for their suggestions concerning how to carry out assignments.

4. Before taking action he consults with his subordinates.

5. He asks subordinates for suggestions on what assignments should be made.

Notes: Although not specified by the authors, it seems that item 6 of the supportive leadership factor requires reverse scoring. Items 2, 4, 5, 6, and 7 compose Teas's (1981) version of instrumental leadership. Items 1, 2, 4, 5, 7, and 10 compose Teas's supportive leadership items. Teas used the entire leadership participation scale. Also, the Teas items used a slightly modified wording format to better fit the industrial salespeople sample, and they used a *very true* (5) to *very false* (1) scoring format. Items scored on 5-point scales from *always* to *never*.

Organizational Commitment

Occupational and Organizational Commitment

(Meyer, Allen, and Smith 1993)

Construct: Organizational commitment refers to employees' commitment to their employers. Occupational commitment refers to commitment to a particular line of work (Meyer et al. 1993, pp. 538–40). Both types are assumed to consist of three dimensions. This conceptualization is based on the three themes identified by Meyer and Allen (1991): affective commitment, continuance commitment, and normative commitment. Briefly, employees with a strong affective commitment remain with the organization because they want to, those with a strong continuance commitment remain because they need to, and those with a strong normative commitment remain because they feel they ought to do so (Meyer et al. 1993, p. 539).

Description: The measures consist of six factors and a total of 36 items evenly distributed across the six factors (i.e., six items per factor). Responses are operationalized using 7-point scales ranging from *strongly disagree* to *strongly agree.* The items are averaged to yield composite commitment scores for both occupational and organizational commitment (Meyer et al. 1993, pp. 541–42).

Development: Thirty items designed to assess commitment to nursing were administered to student nurses. These data were used to select the best six items for each occupational commitment dimension. Examination of item loadings from principal components analysis was used to select the 18 occupational commitment items. Confirmatory factor analyses involving different factor structures for all three samples were used to support the three-factor correlated structure for the occupational commitment scales. The corresponding organizational commitment items administered to the registered nurse sample were taken from earlier research and modified to reflect the three-dimension model of organizational commitment. Additional confirmatory factor analyses revealed that a six-factor correlated model provided the best fit for the registered nurse sample data (Meyer et al. 1993, pp. 542–43). Overall fit statistics for the six-factor model were as follows: chi-square = 1,588 (579 *df*), RNI = 0.97, and PNFI = 0.89.

Samples: Two student nurse samples *(n = 312 and n = 275)* and a sample of 530 registered nurses were used in scale development and validation (see Table 1, p. 543). The latter sample was randomly chosen from the membership of the College of Nurses of Ontario. For the registered nurses, the average tenure in the nursing profession was 15 years. Of the respondents, 98% were female and 56% worked full-time. Most were staff nurses in general hospitals (Meyer et al. 1993, p. 541).

Validity: A substantial amount of supportive evidence is described by Meyer et al. (1993). For the registered nurse sample, some of that evidence included the following. First, the reliabilities for the six factors ranged from 0.74 to 0.83. For both organizational and occupational commitment, the affective and normative dimensions were positively correlated with job satisfaction and a measure of loyalty. The two measures of continuance commitment were negatively correlated with satisfaction and loyalty. Supportive correlations with neglect and exit were reported as well (Meyer et al. 1993, p. 548). Propensity to leave the organization and the occupation were negatively correlated as well. Evidence of discriminant validity was offered by the modest factor correlations across all measures and samples.

Scores: Mean scores and standard deviations for the six facets are presented in Table 7 (Meyer et al. 1993, p. 547) for the registered nurses. Mean scores ranged from 5.38 for affective occupational commitment to 3.04 for both organizational and occupational normative scales.

Source: Meyer, John P., Natalie J. Allen, and Catherine A. Smith (1993), "Commitment to Organizations and Occupations: Extension and Test of a Three-Component Conceptualization," *Journal of Applied Psychology,* 78 (4), 538–51.

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Other evidence: The validity of the three-component model of occupational commitment was further investigated in detail by Irving, Coleman, and Cooper (1997). Their research revealed evidence of discriminant validity for the three components, adequate measures of overall model fit, and significant correlations with related constructs as predicted. For example, the three-factor correlated model fit statistics included the following: RNI = 0.96, NFI = 0.93, and CF1 = 0.95. The correlation of the affective component with job satisfaction was stronger than the correlation between the normative occupational component and satisfaction, as predicted. Occupational differences were also reported, along with a number of other correlations with the three occupational commitment dimensions.

Other source: Irving, P. Gregory, Daniel F. Coleman, and Christine L. Cooper (1997), "Further Assessments of a Three-Component Model of Organizational Commitment: Generalizability and Differences Across Occupations," *Journal of Applied Psychology,* 82 (3), 444–52.

Reference: Meyer, John P. and Natalie J. Allen (1991), "A Three-Component Conceptualization of Organizational Commitment," *Human Resource Management,* 1, 61–98.

Occupational and Organizational Commitment

(Meyer, Allen, and Smith 1993)

Factor 1: Affective Occupational

1. Nursing is important to my self-image.

2. I regret having entered the nursing profession. (R)

3. I am proud to be in the nursing profession.

4. I dislike being a nurse. (R)

5. I do not identify with the nursing profession. (R)

6. I am enthusiastic about nursing.

Factor 2: Continuance Occupational

1. I have put too much into the nursing profession to consider changing now.

2. Changing professions now would be difficult for me to do.

3. Too much of my life would be disrupted if I were to change my profession.

4. It would be costly for me to change my profession now.

5. There are no pressures to keep me from changing professions. (R)

6. Changing professions now would require considerable personal sacrifice.

Factor 3: Normative Occupational

1. I believe people who have been trained in a profession have a responsibility to stay in that profession for a reasonable amount of time.

2. I do not feel any obligation to remain in the nursing profession.

3. I feel a responsibility to the nursing profession to continue in it.

4. Even if it were to my advantage, I do not feel that it would be right to leave nursing now.

5. I would be guilty if I left nursing.

6. I am in nursing because of a sense of loyalty to it.

Factor 4: Affective Organizational

1. I would be very happy to spend the rest of my career with this organization.

2. I really feel as if this organization's problems are my own.

3. I do not feel a strong sense of "belonging" to my organization. (R)

4. I do not feel "emotionally attached" to this organization.

5. I do not feel like "part of the family" at my organization.

6. This organization has a great deal of personal meaning for me.

Factor 5: Continuance Organizational

1. Right now, staying with my organization is a matter of necessity as much as desire.

2. It would be very hard for me to leave my organization right now, even if I wanted to.

3. Too much of my life would be disrupted if I decided I wanted to leave my organization.

4. I feel that I have too few options to consider leaving this organization.

5. If I had not already put so much of myself into this organization, I might consider working elsewhere.

6. One of the few negative consequences of leaving this organization would be the scarcity of available alternatives.

Factor 6: Normative Organizational

1. I do not feel any obligation to remain with my current employer.

2. Even if it were to my advantage, I do not feel it would be right to leave my organization now.

3. I would feel guilty if I left my organization now.

4. This organization deserves my loyalty.

5. I would not leave my organization right now because I have a sense of obligation to the people in it.

6. I owe a great deal to my organization.

Note: (R) denotes items requiring reverse scoring to reflect higher levels of commitment. Items scored on 7-point scales from *strongly disagree* to *strongly agree*.

Organizational Commitment: OCQ

(Mowday, Steers, and Porter 1979)

Construct: Organizational commitment (OC) is defined as the relative strength of an individual's identification with and involvement in a particular organization. OC can be characterized by three related factors: (a) a strong belief in and acceptance of the organization's goals and values, (b) a willingness to exert considerable effort on behalf of the organization, and (c) a strong desire to maintain membership in the organization (Mowday et al. 1979, p. 226). For an expanded discussion of OC, see Mowday, Porter, and Steers (1982).

Description: The OCQ is composed of 15 Likert-type items scored on scales from *strongly disagree* (1) to *strongly agree* (7). Although the scale was originally designed to tap the aforementioned three factors, item scores are summed and divided by 15 to form an overall OC index. A reduced, nine-item version of the scale is also tenable in which item scores are summed and divided by nine to form an index.

Development: The approach to developing the scale was to identify 15 items that tapped the three factors of commitment. Thus, 15 items were generated by the authors and then checked for factor structure, reliability, and validity over numerous samples.

Samples: Nine samples totaling 2,563 subjects were used to examine the reliability and validity of the OCQ. These samples were 569 public employees, 243 university employees, 382 hospital employees, 411 bank employees, 119 scientists and engineers, 115 auto company managers, 60 psychiatric technicians, 59 retail management trainees, and 605 telephone company employees.

Validity: Coefficient alpha across the samples ranged from 0.88 to 0.90 for the 15-item version and 0.82 to 0.93 for the 9-item version. Item-to-total correlations ranged from 0.36 to 0.72 across samples. Factor analyses generally supported a single dimension, as the general factor (first factor) explained from 83.2% to 92.6% of the variance in the data. Test-retest reliabilities for the psychiatric technician sample were 0.53, 0.63, and 0.75 over periods of 2, 3, and 4 months, respectively. Test-retest reliabilities for the retail management employees were 0.72 and 0.62 over 2- and 3-month periods.

Convergent validity with a measure of organizational attachment ranged from 0.63 to 0.74 (for six of the samples). OCQ also had a correlation of 0.60 with an independent commitment rating measure for the retail trainees sample. Evidence of discriminant validity was found by correlations ranging from 0.30 to 0.56 (for four of the samples) between OCQ and job involvement, and correlations ranging from 0.01 to 0.68 (over five of the samples) between OCQ and the JDI. OCQ was also correlated with a measure of career satisfaction for two of the samples. These correlations of 0.39 and 0.40 also offered evidence of discriminant validity.

Predictive validity of the OCQ was also supported. Across nine data points, OCQ was significantly correlated with turnover eight times. The significant correlations ranged from −0.17 to −0.43. Similar correlations were found between OCQ and measures of tenure (0.23 and 0.26), absenteeism (0.08 to −0.28), and performance (0.05 to 0.36).

Scores: Mean scores and (std. dev.) were reported for each sample. The mean scores ranged from 4.2 (0.90) to 5.3 (1.05) for eight of the samples. For the psychiatric technician sample, mean scores were reported for "stayers" and "leavers" across four time periods. For "stayers," the mean score across the four time periods ranged from 4.0 (3.0) to 4.3 (3.5). For "leavers," corresponding scores ranged from 3.0 (0.98) to 3.5 (1.00).

Source: Mowday, Richard T., Richard M. Steers, and Lyman W. Porter (1979), "The Measurement of Organizational Commitment," *Journal of Vocational Behavior,* 14, 224–47.

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Other evidence: In the organizational behavior literature, the OCQ has been used and examined numerous times. For an excellent review, see Mathieu and Zajac (1990). Although OCQ has been used several times in the marketing literature, our discussion here will be limited to just three marketing applications of the OCQ.

Michaels et al. (1988) reported an alpha of 0.90 for the 15-item OCQ. They also reported correlations of 0.32, –0.47, –0.48, and –0.53 between OCQ and measures of organizational formalization, role ambiguity, role conflict, and work alienation (retail sales setting where $n = 330$).

Good, Sisler, and Gentry (1988), using a sample of 595 department store employees, reported an alpha of 0.91 for the 15-item OCQ. Correlations of –0.59, –0.60, –0.41, –0.77, and –0.81 were reported between OCQ and measures of role ambiguity, role conflict, work-family conflict, job satisfaction, and intention to leave, respectively.

Johnston et al. (1990), using a sample of 102 retail salespeople, reported composite reliability estimates (via LISREL) of 0.88 and 0.93 for the 15-item OCQ over two time periods. OCQ correlations with role conflict, role ambiguity, job satisfaction, propensity to leave, and turnover were –0.49, –0.45, 0.58, –0.73, and –0.33, respectively. In sum, these three marketing studies provided evidence for the reliability and nomological validity of the OCQ.

A six-item version of the Mowday, Steers, and Porter (1979) organizational commitment (OC) scale was used by Singh, Goolsby, and Rhoads (1994) in their research on the consequences of boundary personnel burnout. A scale reliability of 0.79 was reported. The mean and standard deviation scores were 3.12 and 0.76, respectively. Correlations with other constructs also supported the validity of the measure. For example, negative correlations with the three burnout dimensions averaged 0.43. In addition, the OC scale was positively correlated with job satisfaction ($r = 0.55$).

Other sources: Good, Linda K., Grovalynn F. Sisler, and James W. Gentry (1988), "Antecedents of Turnover Intentions Among Retail Management Personnel," *Journal of Retailing,* 64, 295–314.

Johnston, Mark W., A. Parasuraman, Charles M. Futrell, and William C. Black (1990), "A Longitudinal Assessment of the Impact of Selected Organizational Influences on Salespeople's Organizational Commitment During Early Employment," *Journal of Marketing Research,* 27, 333–44.

Michaels, Ronald E., William L. Cron, Alan J. Dubinsky, and Erich A. Joachimsthaler (1988), "The Influence of Formalization on the Organizational Commitment and Work Alienation of Salespeople and Industrial Buyers," *Journal of Marketing Research,* 25, 376–83.

Singh, Jagdip, Jerry R. Goolsby, and Gary K. Rhoads (1994), "Behavioral and Psychological Consequences of Boundary Spanning Burnout for Customer Service Representatives," *Journal of Marketing Research,* 31, 558–69.

References: Mathieu, John E. and Dennis M. Zajac (1990), "A Review and Meta-Analysis of the Antecedents, Correlates, and Consequences of Organizational Commitment," *Psychological Bulletin,* 108, 17–94.

Mowday, Richard T., Lyman W. Porter, and Richard M. Steers (1982), *Employee-Organizational Linkages: The Psychology of Commitment, Absenteeism, and Turnover,* New York: Academic Press.

Organizational Commitment: OCQ

(Mowday, Steers, and Porter 1979)

1. I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.

2. I talk up this organization to my friends as a great organization to work for.

3. I feel very little loyalty to this organization.*

4. I would accept almost any type of job assignment in order to keep working for this organization.

5. I find that my values and the organization's values are very similar.

6. I am proud to tell others that I am part of this organization.

7. I could just as well be working for a different organization as long as the type of work was similar.*

8. This organization really inspires the very best in me in the way of job performance.

9. It would take very little change in my present circumstances to cause me to leave this organization.*

10. I am extremely glad that I chose this organization to work for over others I was considering at the time I joined.

11. There's not too much to be gained by sticking with this organization indefinitely.*

12. Often, I find it difficult to agree with this organization's policies on important matters relating to its employees.*

13. I really care about the fate of this organization.

14. For me, this is the best of all possible organizations for which to work.

15. Deciding to work for this organization was a definite mistake on my part.*

Notes: *denotes items that are reverse scored. The nine-item version of the OCQ is composed of those items that *are not* reverse scored. Items are scored on 7-point Likert-type scales from *strongly disagree* to *strongly agree*.

Organizational Commitment

(Hunt, Chonko, and Wood 1985)

Construct: Organizational commitment was defined as a strong desire to remain a member of a particular organization, given opportunities to change jobs (Hunt et al. 1985). The actual scale was developed to measure the degree of loyalty marketers would have to an organization, given attractive incentives to change companies. These incentives to change include higher pay, more creative freedom, more job status, and a friendlier environment.

Description: A four-item scale was designed to measure the degree of loyalty marketers would have to an organization, given attractive incentives to change companies. These incentive included higher pay, more freedom, more job status, and friendlier work environment. All items are rated using seven Likert-type response categories ranging from 1 = *strongly agree* to 7 = *strongly disagree,* and item scores are summed to form an overall score.

Development: Little detail as to scale development procedures was provided by Hunt et al. (1985), as the purpose of the study was to develop a model of the relationships among organizational commitment and various other job characteristics. Factor analysis was used to assess the scale's dimensionality, and alpha was used to assess its reliability. Checks for validity were performed by positing that commitment in marketing is a positive function of the personal attributes of income and age and a negative function of education; commitment is a positive function of the job characteristics of variety, autonomy, identity, and feedback; and satisfaction is a positive function of commitment.

Sample: A self-administered questionnaire was mailed to 4,282 marketing professionals who were members of the American Marketing Association. A total of 1,706 usable questionnaires were received.

Validity: Results of a factor analysis indicated a unidimensional factor structure accounting for 69% of the variance and having a high degree of internal consistency. The reported coefficient alpha was 0.85. An overall finding of this study was that while relationships among personal characteristics, job characteristics, and satisfaction exist, commitment is also a consistent predictor of satisfaction. Marketers who reported a high level of commitment tended to be more satisfied with their pay, job security, jobs in general, and choice of careers in marketing. This provided evidence for the validity of the scales. Furthermore, with commitment as the dependent variable and a number of demographic (i.e., age, education, income) and work-related variables (i.e., variety, autonomy, feedback) as predictors, R^2 estimates ranged from 0.02 to 0.17 over various splits of the $n = 1,706$ sample.

Scores: Table 4 (Hunt et al., p. 118) presents an ANOVA analysis of the Commitment and Job Characteristic Inventory. Means and standard deviations were reported for the total sample and for the classification of job types. The total sample mean and standard deviation for the commitment scale were 4.17 and 1.44, respectively.

Source: Hunt, Shelby D., Lawrence B. Chonko, and Van R. Wood (1985), "Organizational Commitment and Marketing," *Journal of Marketing*, 49, 112–26.

Organizational Commitment

(Hunt, Chonko, and Wood 1985)

1. I would be willing to change companies if the new job offered a 25% pay increase.

2. I would be willing to change companies if the new job offered more creative freedom.

3. I would be willing to change companies if the new job offered more status.

4. I would be willing to change companies if the new job was with people who were more friendly.

Note: Items scored on 7-point Likert-type scales from *strongly agree* to *strongly disagree.*

Organizational Justice

(Colquitt 2001)

Construct: Organization Justice includes effort to explain or examine the impact of justice on organizational functioning. The underlying question guiding judgments of justice is "was that fair?" Such fairness perceptions can be considered and evaluated among a number of dimensions, and this research examines previous models of organizational justice in terms of their dimensionality. Procedural justice involves considering whether or not the process followed was consistent with rules, representative of the appropriate informational inputs, and free of bias. Distributive justice captures the extent to which the outcome is consistent with the goals of a particular situation. Interactional justice involves the explanations and sensitivity used in interpersonal treatment during a process and as such includes a dimension of informational justice.

Description: The organizational justice scale contains four dimensions with varying number of items assessing each: procedural justice, 7 items; distributive justice, 4 items; interpersonal justice, 4 items; and informational justice, 5 items, for a total of 20 items. The items are measured on a 5-point scale where 1 = *to a small extent* and 5 = *to a large extent*. These items are averaged separately for each of the four dimensions. The scale is positioned as an indirect measure because it assesses fairness criteria such as lack of bias and consistency rather than directly assessing fairness. The items must be asked in reference to a specific situation, and therefore they are tailored to the appropriate context. For example, in Study 1, the grade students were currently receiving in the course was the outcome, whereas in Study 2, the "outcomes you receive from your job (e.g., pay, promotions, etc.)" (Colquitt 2001, p. 395) was the context.

Development: Items were generated by the authors based on a review of previous literature. Specifically, the items were based on concepts from five different sources. These 20 items were intended to represent all dimensions suggested for organizational justice including procedural justice, distributive justice, and interactional (including informational) justice and were therefore said to exhibit content validity. The items were assessed based on confirmatory factor analysis, and all 20 items were retained for the final scale.

Samples: Study 1 included 301 junior-level undergraduate business students. Study 2 included 337 employees from automobile manufacturing plants.

Validity: Coefficient alpha estimates of reliability for Study 1 (2) were as follows: 0.78 (0.93) for procedural justice, 0.79 (0.92) for interpersonal justice, 0.79 (0.90) for informational justice, and 0.92 (0.93) for distributive justice. In both Studies 1 and 2, the fit of a variety of different models was tested, including four different factor structures. Confirmatory factor analysis suggested that a four-factor model provided the best fit to the data, and a number of fit indices were provided to support this model. Four outcomes were used consistent with the university setting for predictive validity purposes in Study 1, including outcome satisfaction, leader evaluation, rule compliance, and collective esteem. Relationships were demonstrated between these outcomes and the four dimensions of organizational justice. In Study 2, four different outcome measures were used consistent with the automobile manufacturing setting, including instrumentality, group commitment, helping behavior, and collective esteem. Again, relationships consistent with predictions demonstrated the validity of the organizational justice measure.

Scores: None were reported.

Source: Colquitt, Jason A. (2001), "On the Dimensionality of Organizational Justice: A Construct Validation of a Measure," *Journal of Applied Psychology,* 86 (3), 386–400.

Organizational Justice

(Colquitt 2001)

Procedural Justice

The following items refer to the procedures used to arrive at your (outcome). To what extent:

1. Have you been able to express your views and feelings during those procedures?

2. Have you had influence over the (outcome) arrived at by those procedures?

3. Have those procedures been applied consistently?

4. Have those procedures been free of bias?

5. Have those procedures been based on accurate information?

6. Have you been able to appeal the (outcome) arrived at by those procedures?

7. Have those procedures upheld ethical and moral standards?

Distributive Justice

The following items refer to your (outcome). To what extent:

1. Does your (outcome) reflect the effort you have put into your work?

2. Is your (outcome) appropriate for the work you have completed?

3. Does your (outcome) reflect what you have contributed to the organization?

4. Is your (outcome) justified, given your performance?

Interpersonal Justice

The following items refer to (the authority figure who enacted the procedure). To what extent:

1. Has (he/she) treated you in a polite manner?

2. Has (he/she) treated you with dignity?

3. Has (he/she) treated you with respect?

4. Has (he/she) refrained from improper remarks or comments?

Informational Justice

The following items refer to (the authority figure who enacted the procedure). To what extent:

1. Has (he/she) been candid in (his/her) communications with you?

2. Has (he/she) explained the procedures thoroughly?

3. Were (his/her) explanations regarding the procedures reasonable?

4. Has (he/she) communicated details in a timely manner?

5. Has (he/she) seemed to tailor (his/her) communications to individuals' specific needs?

Notes: Scored on 5-point Likert scales where 1 = *strongly disagree* and 5 = *strongly agree*.

Sales/Selling Approaches

Adaptive Selling: ADAPTS

(Spiro and Weitz 1990)

Construct: Adaptive selling is defined as the "degree to which salespeople alter sales behaviors during a customer interaction or across customer interactions based on perceived information about the nature of the selling situation" (Spiro and Weitz 1990, p. 62). Five facets of adaptive selling were retained: (a) recognition that different sales approaches are needed for different customers, (b) confidence in ability to use a variety of approaches, (c) confidence in ability to alter approach during an interaction, (d) collection of information to facilitate adaptation, and (e) actual use of different approaches.

Description: The final version of the instrument consisted of 16 items that represent the five facets of adaptive selling listed above. Presumably, the items are scored on 7-point disagree-agree scales. Although five facets are specified, item scores are averaged over the 16 items for an overall ADAPTS score.

Development: Initially, the constructs domain was defined as consisting of six facets to assess adaptive selling. Items were generated for each facet, and the initial instrument consisted of 42 scale items. During the purification study, these 42 items were subjected to a principal component analysis and factor analysis. The pattern of loadings did not correspond to the conceptualized facets of adaptive selling discussed before; however, items representing five of the six facets did load highly on the first component. Therefore, one scale incorporating all the facets, rather than separate scales for each facet, was developed. The final 16-item scale contained at least two items from five of the six facets described before. The original fourth facet, knowledge structure, was not represented in the final scale because the items assessing categorization of sales situations were unrelated to the 16 items forming the final scale. Additionally, Spiro and Weitz (1990) discussed antecedents and consequences of the adaptive selling construct. The nomological validity of these measures was assessed by examining relationships of the adaptive selling measure to antecedents, consequences, and general personality measures of interpersonal flexibility.

Sample: A sample of 500 salespeople in 10 divisions of a major national manufacturer of diagnostic equipment was contacted. Pretest interviews confirmed that these salespeople continually encountered a wide variety of selling situations in which the practice of adaptive selling should be beneficial. Of the 500 questionnaires distributed, 268 were returned in a usable form for a 54% response rate.

Validity: After the purification study, item-to-total correlations ranged from 0.33 to 0.61. The reliability of the 16-item scale, calculated by using Cronbach's alpha, was 0.85. However, because this scale is not unidimensional on the basis of confirmatory factor analysis, caution is warranted when using Cronbach's alpha as a reliability measure. When the 16 items were subjected to a principal component analysis, the eigenvalues of the first two components were 4.59 and 1.12. Support for the nomological validity of the scale was found by correlating it with a number of constructs. Correlations of ADAPTS with measures of performance, self-monitoring, sensitivity to others, androgyny, social self-confidence, and interpersonal control were 0.26, 0.46, 0.41, 0.45, 0.36, and 0.42, respectively.

Scores: The mean response for the total scale (sum divided by number of items) was 5.51. The standard deviation was 0.66. Individual item score are offered in Table 1 (p. 66).

Source: Spiro, Rosanne L. and Barton A. Weitz (1990), "Adaptive Selling: Conceptualization, Measurement, and Nomological Validity," *Journal of Marketing Research*, 27, 61–9.

Adaptive Selling: ADAPTS

(Spiro and Weitz 1990)

1. Each customer requires a unique approach. (1)

2. When I feel that my sales approach is not working, I can easily change to another approach. (3)

3. I like to experiment with different sales approaches. (6)

4. I am very flexible in the selling approach I use. (6)

5. I feel that most buyers can be dealt with in pretty much the same manner.* (1)

6. I don't change my approach from one customer to another.* (6)

7. I can easily use a wide variety of selling approaches. (2)

8. I use a set sales approach.* (6)

9. It is easy for me to modify my sales presentation if the situation calls for it. (3)

10. Basically I use the same approach with most customers.* (6)

11. I am very sensitive to the needs of my customers. (5)

12. I find it difficult to adapt my presentation style to certain buyers.* (2)

13. I vary my sales style from situation to situation. (6)

14. I try to understand how one customer differs from another. (5)

15. I feel confident that I can effectively change my planned presentation when necessary. (3)

16. I treat all of my buyers pretty much the same.* (6)

Notes: * denotes reverse-scored items. The original six facets' numbers are at the end of each item and correspond to the facets listed below. As previously stated, only five facets were retained (1–3 and 5–6 below). Items scored on 7-point scales from *disagree* to *agree*.

1. A recognition that different selling approaches are needed in different sales situations.

2. Confidence in the ability to use a variety of different sales approaches.

3. Confidence in the ability to alter the sales approach during a customer interaction.

4. A knowledge structure that facilitates the recognition of different sales situations and access to sales strategies appropriate for each situation.

5. The collection of information about the sales situation to facilitate adaptation.

6. The actual use of different approaches in different situations.

Customer Orientation of Salespeople: SOCO

(Saxe and Weitz 1982)

Construct: The SOCO scale (Sales Orientation-Customer Orientation) was designed to measure the degree to which a salesperson engages in customer-oriented selling (i.e., the degree to which salespeople practice the marketing concept by trying to help their customers make purchase decisions that will satisfy customer needs). Highly customer-oriented salespeople avoid actions that might result in customer dissatisfaction. Specifically, the SOCO scale measures six components: (a) a desire to help customers make good purchase decisions, (b) helping customers assess their needs, (c) offering products that will satisfy those needs, (d) describing products accurately, (e) avoiding deceptive or manipulative influence tactics, and (f) avoiding the use of high pressure.

Description: The SOCO scale consists of 24 items related to specific actions a salesperson might take when interacting with buyers. The items are scored on 9-point scales ranging from *true for none of my customers—NEVER* to *true for all my customers—ALWAYS*. Negatively stated items were reverse scored, and a total score can be derived by summing the item scores.

Development: Initially, the constructs domain was characterized as consisting of seven components that described attitudes and behaviors that distinguish high and low customer-oriented salespeople. Items were generated for each component, and the initial pool contained 104 scale items. Then, an assessment of the content validity of these items was made by surveying expert judges. After this assessment, 70 items were retained and distributed to salespersons. Based on an analysis of corrected item-to-total correlations, the 12 positively stated and 12 negatively stated items with the highest corrected item-to-total correlations were chosen for the second instrument. The 24-item scale was then distributed to the second sample, and the original conception of the components underlying customer orientation was largely supported by the data with only one exception (i.e., matching sales presentation to customer interests was not revealed as a distinct component). A second group of salespeople was used to assess scale properties and hypotheses related to validity.

Samples: Following a survey of the literature, the concept of customer orientation was investigated and scale items were generated by interviewing 25 salespeople and sales managers. Then, 11 sales managers and 13 faculty were used as expert judges to assess content validity of these items. Salespersons from 48 firms returned a total of 119 usable responses. The scale was revised for a second study and was distributed to four uniquely different sales forces, resulting in 95 usable responses. After 6 weeks, 46 salespeople in the second sample were retested to assess test-retest reliability.

Validity: The administration of the 24-item SOCO scale to the second sample resulted in a coefficient alpha estimate of 0.83. The scale was readministered to part of the second sample to assess test-retest reliability. A correlation of 0.67 *(p < 0.01, one-tailed)* indicated a reasonable degree of stability. A series of tests of nomological validity indicated that the SOCO scale was related to the ability of salespeople to help their customers and the quality of customer-salesperson satisfaction. For example, the correlation of SOCO with a measure of long- versus short-term orientation was 0.56, and correlations of the SOCO scale with Machiavellianism and social desirability were –0.47 and 0.00. (Correlations of SOCO with 18 other variables are in Table 3, p. 349.) Known group validity was examined by comparing SOCO mean score across seven different sales positions. The pattern of means ranged from 159 to 187, providing evidence of known group validity.

Scores: For the 9-point items used in the final instrument, the mean score and standard deviation for the first sample were 183 and 24, respectively. The mean score for the second sample was 186, and the standard deviation was 18. (Table 2, p. 347 presents means across seven sales positions.)

Source: Saxe, Robert and Barton A. Weitz (1982), "The SOCO Scale: A Measure of the Customer Orientation of Salespeople," *Journal of Marketing Research,* 19, 343–51.

© 1982 by the American Marketing Association. Scale items taken from Table 1 (pp. 345–46). Reprinted with permission.

Other evidence: Michaels and Day (1985) used a national sample of purchasing professionals to replicate the SOCO scale with buyers assessing the customer orientation of salespeople who made calls on them. A total of 1,005 responses were usable. The factor structure and reliability results were almost identical to those obtained when salespeople assessed their own degree of customer orientation. The internal consistency reliability for the scale was 0.91, and a unidimensional factor structure was found. The mean score and standard deviation for the salespeople were 138 and 22.

A refined version, named COVS (for customer orientation of vendor salesperson), was tested on 345 purchasing managers by Tadepalli (1995). The adapted scale consists of 21 items with a Likert-type agreement response format (Tadepalli 1995, p. 181). Reliability for the unidimensional scale was 0.94. Item-to-total and inter-item correlations are reported. A correlation of 0.31 was reported between the revised scale and a measure of similarity between the buyer and the seller.

Williams and Attaway (1996) used an 18-item version of the SOCO scale in their research involving customer orientation as a mediator of organizational culture's effects on buyer-seller relationships. Based on the responses of 153 buyers, a coefficient alpha estimate of 0.97 was reported. Although their findings were generally mixed in support of their proposed model, supportive evidence was provided for the use of customer orientation as a mediator of firm culture on relationship development.

Other sources: Michaels, Ronald E. and Ralph L. Day (1985), "Measuring Customer Orientation of Salespeople: A Replication With Industrial Buyers," *Journal of Marketing Research,* 22, 443–46.

Tadepalli, Raghu (1995), "Measuring Customer Orientation of the Salesperson," *Psychology and Marketing,* 12, 177–87.

Williams, Michael R. and Jill S. Attaway (1996), "Exploring Salespersons' Customer Orientation as a Mediator of Organizational Culture's Influence on Buyer-Seller Relationships," *Journal of Personal Selling and Sales Management,* 16, 33–52.

Customer Orientation of Salespeople: SOCO

(Saxe and Weitz 1982)

Instructions:

The statements below describe various ways a salesperson might act with a customer or prospect (for convenience, the word "customer" is used to refer to both customers and prospects). For each statement please indicate the proportion of your customers with whom you act as described in the statement. Do this by circling one of the numbers from 1 to 9. The meaning of the numbers are:

1—True for NONE of your customers—NEVER

2—True for ALMOST NONE

3—True for A FEW

4—True for SOMEWHAT LESS THAN HALF

5—True for ABOUT HALF

6—True for SOMEWHAT MORE THAN HALF

7—True for a LARGE MAJORITY

8—True for ALMOST ALL

9—True for ALL of your customers—ALWAYS

For example, if you circled 6 below, you would indicate that you ask **somewhat more than half** of your customers a lot of questions.

	Never								*Always*
I ask customers a lot of questions.	1	2	3	4	5	6	7	8	9

Stem-Positively Stated Items

  8. I try to help customers achieve their goals.

21. I try to achieve my goals by satisfying customers.

13. A good salesperson has to have the customer's best interest in mind.

  2. I try to get customers to discuss their needs with me.

  5. I try to influence a customer by information rather than by pressure.

16. I offer the product of mine that is best suited to the customer's problem.

23. I try to find out what kind of product would be most helpful to a customer.

  9. I answer a customer's questions about products as correctly as I can.

14. I try to bring a customer with a problem together with a product that helps him solve that problem.

15. I am willing to disagree with a customer in order to help him make a better decision.

  1. I try to give customers an accurate expectation of what the product will do for them.

12. I try to figure out what a customer's needs are.

Stem-Negatively Stated Items

19. I try to sell a customer all I can convince him to buy, even if I think it is more than a wise customer would buy.

6. I try to sell as much as I can rather than to satisfy a customer.

24. I keep alert for weaknesses in a customer's personality so I can use them to put pressure on him to buy.

3. If I am not sure a product is right for a customer, I will still apply pressure to get him to buy.

22. I decide what products to offer on the basis of what I can convince customers to buy, not on the basis of what will satisfy them in the long run.

20. I paint too rosy a picture of my products, to make them sound as good as possible.

7. I spend more time trying to persuade a customer to buy than I do trying to discover his needs.

17. It is necessary to stretch the truth in describing a product to a customer.

10. I pretend to agree with customers to please them.

4. I imply to a customer that something is beyond my control when it is not.

18. I begin the sales talk for a product before exploring a customer's needs with him.

11. I treat a customer as a rival.

Note: Item numbers are as they originally appeared in the Saxe and Weitz (1982) article. Negatively stated items are reverse scored.

Inter-/Intrafirm Issues of Influence and Power

Alliance Competence and Alliance Resources

(Lambe, Spekman, and Hunt 2002)

Construct: Alliance resources are "any tangible or intangible entity (e.g., physical assets and/or capabilities) available for use by a firm to compete in its marketplace" (Lambe et al. 2002, p. 141). Two types of resources are delineated: 1) idiosyncratic—resources that are developed during the life of the alliance, are unique to the alliance, and facilitate the combining of the lower-order resources contributed by the partner firm and 2) complementary—the degree to which firms in an alliance eliminate deficiencies in each other's portfolio of resources by supplying distinct capabilities, knowledge, and other entities. Alliance competence is defined as an organizational ability for finding, developing, and managing alliances (Lambe et al. 2002, p. 142). An alliance competence should enhance a firm's ability to use alliances as strategic options for pooling and deploying a partner firms' basic resources to compete in the marketplace.

Description: Alliance competence is assessed as a formative construct composite measure with three items assessing alliance experience, three items assessing alliance manager development capability, and three items assessing partner identification propensity. All these items are scored on 7-point *strongly disagree–strongly agree* scales. Item scores across these nine items are summed and then averaged to create one overall alliance competence composite score ranging from 1 to 7. Complementary resources is composed of three reflective items, and idiosyncratic resources is composed of four reflective items, all scored on 7-point *strongly disagree–strongly agree* scales. Item scores are summed and then averaged within each measure to create complementary resources and idiosyncratic resources alliance scores ranging from 1 to 7.

Development: The authors conducted a pretest and one study to develop and validate the final forms of their measures. In the pretest, 32 practicing managers knowledgeable about alliances and 3 academics who conducted research on alliances were used to help generate an initial pool of 20 items covering the alliance competence and resources measures. In the main study that followed, 145 alliance managers from 71 companies responded to the items that eventually formed the final versions of the measures.

Samples: Pretest, $n = 32$ managers and 3 academics; Study 1, $n = 145$ alliance managers.

Validity: In the main study, confirmatory factor analyses (CFA) were used to derive the final forms of the scales and provide estimates of reliability and validity. A CFA of the final forms of the scales showed good fit to the data and showed that the scales exhibited discriminant validity from one another. Coefficient alpha estimates of internal consistency were 0.83 for idiosyncratic resources, 0.74 for complementary resources, 0.84 for alliance experience, 0.90 for alliance manager development capability, and 0.77 partner identification propensity. A structural equation model showed nomological validity for these measures. For example, the alliance competence → idiosyncratic resources path = 0.45; the alliance competence → complementary resources path = 0.44; the complementary resources → idiosyncratic resources path = 0.28; the idiosyncratic resources → alliance success path = 0.37; and the alliance competence → alliance success path = 0.35. All path results were consistent with what was hypothesized.

Scores: Mean scores (SDs) were reported as follows for the main study:

	Mean	*SD*
Complementary resources	5.86	0.85
Idiosyncratic resources	5.10	1.19
Alliance competence	4.15	1.07

Source: Lambe, C. Jay, Robert E. Spekman, and Shelby Hunt (2002), "Alliance Competence, Resources, and Alliance Success: Conceptualization, Measurement, and an Initial Test," *Journal of the Academy of Marketing Science*, 30 (2), 141–58.

Alliance Competence and Alliance Resources

(Lambe, Spekman, and Hunt 2002)

Idiosyncratic Resources

1. Both of us have created capabilities that are unique to this alliance.

2. Together we have developed a lot of knowledge that is tailored to our relationship.

3. Together we have invested a great deal in building up our joint business.

4. Both of us have made a great deal of investments in this relationship.

Complementary Resources

1. We both contribute different resources to the relationship that help us achieve our mutual goals.

2. We have complementary strengths that are useful to our relationship.

3. We each have separate abilities that, when combined together, enable us to achieve goals beyond our individual reach.

Alliance Competence—Alliance Experience

1. We both have a deep base of partnership experience.

2. We each have participated in many alliances.

3. Individually, we have been partners in a substantial number of alliances.

Alliance Competence—Alliance Manager Development Capability

4. We both have programs to develop capable alliance managers.

5. We each understand how to produce effective alliance managers.

6. We both effectively train competent alliance managers.

Alliance Competence—Partner Identification Propensity

7. We each actively search for promising alliance partners.

8. Alliances that can help our business are sought out by both of us.

9. We are constantly seeking out partnering opportunities.

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

Alliance Orientation

(Kandemir, Yaprak, and Cavusgil 2006)

Construct: Alliance orientation is viewed as the firm's skills (i.e., a firm competency) in configuring and deploying portfolios of alliance-driven capabilities of partner firms (Kandemir et al. 2006, p. 326). Alliance orientation is viewed as being composed of three capabilities: (1) alliance scanning, (2) alliance coordination, and (3) alliance learning. Alliance orientation is stronger when a firm possesses higher degrees of each of these capabilities and is able to skillfully configure and deploy them.

Description: The alliance coordination measure consists of nine items, three for each of the three dimensions—scanning, coordination, and learning. The alliance orientation scale is treated as a composite measure of these three capabilities that required a second-order formative model. The three subscales are viewed as being assessed by three corresponding reflective items assumed to represent each of the three dimensions. The authors used a 5-point Likert-type scale ranging from *strongly disagree* (1) to *strongly agree* (5) to gauge responses to the nine items.

Development: An initial pool of items was developed from a review of the extant literature. A small group of academics with training in strategy and/or who have conducted research on strategic alliances offered suggestions for revisions. The subsequent measure was pretested for appropriateness and clarity on several executives who manage alliance relationships. Initial confirmatory factor analysis revealed satisfactory measurement results. For example, the composite reliabilities and coefficient alpha estimates were all above 0.77.

Samples: Key informant responses (e.g., senior executives) from 182 companies from U.S.-based companies with sales over $25 million from six NAICS codes participated in the study.

Validity: Evidence of discriminant validity was examined by comparing the correlations among pairs of measures with average variance extracted estimates for the individual measures. Evidence of convergent validity was argued from the significance of the individual item loadings. Again, the authors concluded that alliance orientation was best represented as a formative measure using the three first-order dimensions as indicators. A confirmatory factor analysis using Harman's one-factor test was used to test for common method bias.

   Last, other evidence for the scale of alliance orientation was demonstrated in a series of theoretically supported hypothesis tests and tests of mediation. Briefly, alliance orientation was found positively correlated with network performance, as was the interaction term between alliance orientation and market turbulence, which also had a positive impact on network performance. In addition, the findings of the research by Kandemir et al. (2006) revealed that alliance network performance mediated the relationship between alliance orientation and market performance as predicted.

Scores: Item mean scores and standard deviations are summarized in Table 1 (Kandemir et al. 2006, p. 332). The values range from 2.31 to 3.79. Summed or average scores were apparently used in subsequent hypothesis tests and tests of mediation.

Source: Kandemir, Destan, Attila Yaprak, and S. Tamer Cavusgil (2006), "Alliance Orientation: Conceptualization, Measurement, and Impact on Market Performance," *Journal of the Academy of Marketing Science,* 34 (June), 324–40.

Alliance Orientation

(Kandemir, Yaprak, and Cavusgil 2006)

Dimension 1: Alliance Scanning

1. We actively monitor our environment to identify partnering opportunities.

2. We routinely gather information about prospective partners from various forums (e.g., trade shows, industry conventions, databases, publications, Internet, etc.).

3. We are alert to market developments that create potential alliance opportunities.

Dimension 2: Alliance Coordination

1. Our activities across different alliances are well coordinated.

2. We systematically coordinate our strategies across different alliances.

3. We have processes to systematically transfer knowledge across alliance partners.

Dimension 3: Alliance Learning

1. We conduct periodic reviews of our alliances to understand what we are doing right and where we are going wrong.

2. We periodically collect and analyze field experiences from our alliances.

3. We modify our alliance-related procedures as we learn from experience.

Notes: The authors used a 5-point Likert-type scale with *strongly disagree* (1) and *strongly agree* (5) as endpoints.

Influence Strategies in Marketing Channels

(Boyle et al. 1992)

Construct: The following definitions are based on the taxonomy of Frazier and his colleagues (e.g., Frazier and Rody 1991). Boyle et al. (1992, p. 463) summarize these definitions as follows:

Promise: source certifies to extend specified rewards contingent on the target's compliance.

Threat: source informs the target that failure to comply will result in negative sanctions.

Legalistic plea: source contends that target compliance is required by formal agreement.

Request: source asks target to act with no mention of subsequent sanctions.

Information exchanges: source supplies information with no specific action requested or otherwise indicated.

Recommendation: source stresses that specific target action is needed for the latter to achieve desired outcomes.

Description: Twenty-nine items are used to operationalize the six influence strategies: recommendations (4 items), information exchange (4 items), promises (6 items), requests (4 items), legalistic pleas (5 items), and threats (6 items). Influence is assessed as the average of the item responses used to represent each influence type. Responses are assessed using the following 5-place response format: *always, usually, sometimes, rarely,* and *never*. To ensure a common referent, responses referred to the dealership's top volume manufacturer (Boyle et al. 1992, p. 465).

Development: Thirty-five items were originally developed to represent the six strategies. Pretest analyses using 92 MBA students were conducted to assess dimensionality and reliability, as well as comparative responsiveness to experimental treatments. These efforts resulted in the final set of 29 items. Subsequent analyses based on the main study data resulted in only 25 items actually being used to operationalize the influence strategies.

Samples: Study 1 was based on the responses of 198 automobile dealer representatives from 15 metropolitan areas. The dealerships averaged 67 employees, $32 million in sales, and 18 years in business (Boyle et al. 1992, p. 465). The second study was based on the responses of 686 automobile replacement tire dealers. The dealers were grouped according to the mode of channel governance: corporate systems, 172; franchise systems, 84; aligned systems, 206; and market systems, 224. Of the respondents in Study 2, 57% were owner/president and 38% were tire dealer managers.

Validity: LISREL analysis of the Study 1 data revealed that the indicators were reliable measures of their respective constructs. The pattern of mean scores (i.e., rank order and differences between strategy types) was offered as evidence of discriminant validity. Composite reliabilities ranged from 0.75 to 0.93. Significant negative correlations for four of the influence strategies with a measure of relationalism were reported. For the 25 items eventually used in the second study, composite reliabilities ranged from 0.85 to 0.91. All factor loadings were significant, and tests of factor correlations revealed support for discriminant validity. Overall fit statistics for a model including relationalism as a factor included the following: GFI = 0.91, AGFI = 0.89, and CFI = 0.95. Last, hypothesis tests revealed that related constructs were correlated as predicted with the six measures of influence.

Scores: Means scores for Study 1 were as follows: recommendations (3.37), information exchange (2.97), promises (2.58), requests (2.35), legalistic pleas (1.75), and threats (1.37). See also Tables 1 and 3 (Boyle et al. 1992, pp. 466, 468).

Source: Boyle, Brett, F. Robert Dwyer, Robert A. Robicheaux, and James T. Simpson (1992), "Influence Strategies in Marketing Channels: Measures and Use in Different Relationship Structures," *Journal of Marketing Research,* 29, 462–73.

© 1992 by the American Marketing Association. Scale items taken from Appendix (pp. 470–71). Reprinted with permission.

Reference: Frazier, Gary L. and Raymond C. Rody (1991), "The Use of Influence Strategies in Relationships in Industrial Product Channels," *Journal of Marketing,* 55, 52–69.

Influence Strategies in Marketing Channels

(Boyle et al. 1992)

Recommendation Items

My primary supplier . . .

RC1: Makes it clear that by following their recommendations, our business would benefit.

RC2: Makes it explicit, when making a suggestion, that it is intended for the good of our operation.

RC3: Provides a clear picture of the anticipated positive impact on our business a recommended course of action will have.

RC4: Outlines the logic and/or evidence for expecting success from the specific programs and actions suggested.

Information Exchange Items

IX1: Focuses on *general* strategies (as opposed to specific tactics) as to how to make our business more profitable.

IX2: Concentrates more on strategic, long-term issues, rather than specific courses of action our business should take.

IX3: Discusses the orientation our management personnel should take with regard to long-term planning, rather than daily activities.

IX4: Attempts to change our perspective by looking at how our business decisions affect the "big picture."

Promise Items

P1: Makes promises to give something back in return for specific actions of our dealership.

P2: Provides price breaks or other incentives for our participation in manufacturer promos, showroom design, and other programs.

P3: Emphasizes what they will offer in return for our cooperation or participation when presenting a . . .

P4: Offers specific incentives for us to make changes in marketing and/or operating procedures.

P5: Uses bonuses for meeting sales or profit quotas.

P6: Offers incentives to us when we initially had been reluctant to cooperate with a new program or policy.

Request Items

Rl: Asks for our compliance to their requests, *not* indicating any positive or negative outcome for our business contingent upon our compliance.

R2: Asks us to accept new ideas without an explanation of what effect it will have on our business.

R3: Asks our cooperation in implementing new programs *without* mentioning rewards for complying, *or* punishments for refusing.

R4: Expects that their requests do not require an incentive for us to comply.

Legalistic Plea Items

LP1: Refers to portions of our franchise agreement which favor their position to gain our compliance on a particular demand.

LP2: Makes a point to refer to any legal agreements we have when attempting to influence our actions.

LP3: "Reminds us" of any of our obligations stipulated in our sales agreement.

LP4: Uses sections of our sales agreements as a "tool" to get us to agree to their demands.

LP5: Makes biased interpretations of our selling agreement in order to gain our cooperation in following a request.

Threat Items

Tl: Makes it clear that failing to comply with their requests will result in penalties against our business.

T2: Threatens poorer service to our business should we fail to agree to their requests.

T3: Uses threats of disturbing our business, such as higher prices for supplies, slow delivery times, and lower fill rates.

T4: Communicates their ability to "make things difficult" for our business if specific demands are not met.

T5: States that specific services will be discontinued for not complying to requests.

T6: Threatens to reduce the amount of business they will do with our firm, should their demands not be met.

Note: Items scored on 5-point scales from *always* to *never*.

Power: Dependence-Based Measure of Interfirm Power in Channels

(Frazier 1983)

Construct: The role performance of a firm in its primary channel responsibilities is assumed to drive the level of the other firm's dependence in a dyad. This dependence, in turn, determines the form firm's level of power over the latter firm (Frazier 1983, p. 158). Power has been defined in the channels literature as the ability of one channel member to influence decision variables of another channel member, and a potential for influence on another firm's beliefs and behaviors However, the manner in which power has been operationalized has varied considerably in field studies. The measures proposed here assess auto dealer perceptions of manufacturer (or their boundary personnel) performance relative to industry average performance as reflecting levels of dealers' dependence on their manufacturer. The assumption is made that role performance appears to be critical in explaining the level of another firm's dependence and goal attainment.

Description: Two versions of the scale are tenable. In one version, dealers indicate how well their manufacturer or boundary personnel perform in comparison with industry average performance on each of six elements (e.g., manufacturer generated demand for the make). Two elements (items) are designed to reflect corporate center performance, and four reflect boundary personnel performance. Eleven-point scales ranging from –5 = *very poor* through 0 = *average performance* to +5 = *very good* were used to evaluate performance. Although not specified, it looks as though scores on this version are derived by summing and averaging over the items. The second version of the scale is an importance weighted measure of the first version. The importance of the six elements (i.e., the importance scores used in computing the weighted performance ratings) are operationalized using 11-point scales ranging from 0 = *not important at all* to 10 = *extremely important*. Each element is weighted (i.e., multiplied) by its importance score for the second version of the scale (importance scores are not normalized prior to weighting).

Development: Development of the six items was based largely on prior research involving channel power issues and a series of "prestudy" interviews. These interviews revealed two aspects of the manufacturer's organization where role performance is critical: the corporate strategic center and boundary personnel tactical center (Frazier 1983, p. 161). Items 1 and 4 (i.e., generation of consumer demand and high-quality assistance) were felt critical for the performance of the manufacturer's corporate center. The remaining items were found to be critical to the role of the boundary personnel of the manufacturer. Tests of reliability and validity were performed.

Sample: Data were collected from 423 automobile dealer "principals" from an original sample of 944 dealers. Follow-up mailings and comparison data revealed that the sample was generally representative. Responses were obtained for the dealership's primary make of vehicle (Frazier 1983, p. 161).

Validity: Coefficient alpha was reported to be 0.81 for the weighted measure of role performance at the boundary personnel center and 0.83 for the unweighted measure (Frazier 1983, p. 162). The weighted and unweighted split-half reliability estimates for the two-item measures of performance at the corporate level were 0.66 and 0.70, respectively.

Discriminant validity was assessed by estimating a confirmatory factor model of the role performance elements, role performance at the corporate strategy level, and role performance the boundary spanner level. The fit of this model and the variance explained (67% for the weighted version and 71% for the unweighted version) supported the discriminant validity of the power measure. The correlations between a

measure of "chances of switching" suppliers and the unweighted and weighted dimensions of role performance and boundary personnel ranged from –0.39 to –0.55, offering evidence of convergent validity. Finally, correlations of the weighted and unweighted versions of the scale with measures of dealer satisfaction ranged from 0.27 to 0.57, and for measures of manufacturer interests, corresponding correlations ranged from 0.32 to 0.50. These results offer evidence of nomological validity.

Scores: Overall means across the performance ratings for the six items were as follows: generated demand, 1.5; assistance, 2.1; car allocation and delivery, –0.3; warranty claims, –0.4; advice, –0.2; and cooperation, 1.3. For the same pattern of the six items, the mean overall performance ratings were 8.4, 6.9, 8.9, 8.5, 6. 8 and 8.0 (Frazier 1983, p 163).

Source: Frazier, Gary L. (1983), "On the Measurement of Interfirm Power in Channels of Distribution," *Journal of Marketing Research*, 20, 158–66.

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Power: Dependence-Based Measure of Interfirm Power in Channels

(Frazier 1983)

1. Manufacturer-generated demand for the make.

2. Cooperativeness of the manufacturer reps on interfirm issues.

3. Car allocation and delivery.

4. Interfirm assistance.

5. Quality of advice from the manufacturer reps.

6. Reimbursement for warranty claims and vehicle preparation.

Note: These are the six elements on which dealers rate their manufacturers. Items scored on 11-point scales from *very poor* to *very good.*

Power: Distributor, Manufacturer, and Customer Market Power

(Butaney and Wortzel 1988)

Construct: Within the channels of distribution literature, power and power types have been defined in various ways. Butaney and Wortzel (1988, pp. 54–5) define and measure three types of power operative in channels of distribution. *Distributor power (DP)* is the extent of the distributor's freedom in making marketing decisions about the manufacturer's product. Distributor power is considered a form of "exercised" power as it represents an outcome, the power successfully achieved by a channel member to alter the behavior of another channel member. *Customer market power (CMP)* is defined as those characteristics having the potential to affect the customer's power in the marketplace. *Manufacturer market power (MMP)* is defined as those industry characteristics or conditions having the potential to affect the manufacturer's power in the marketplace.

Description: The DP is composed of 17 items scored on 5-point scales (see the scale items). Item scores are summed to form an overall index of DP. CMP is a three-dimensional scale. The dimensions are knowledgeable customers (CMS), large customers (CL), and customer switching costs (NCDS). There are 2, 3, and 4 items for the dimensions. CMS, CL, and NCDS items are scored on 5-point scales and summed within dimensions to form CMS and CL indices. MMP is composed of two dimensions labeled manufacturer low concern for competition (NMI) and concentrated industry structure (MI). NMI and MI are composed of 4 and 2 items, respectively, scored on 5-point scales. Item scores are summed within dimensions to form indices for the dimensions.

Development: For the DP, an original pool of 27 items was generated. Using a panel of expert judges, this pool was trimmed to 22 items. The 22 items were then subjected to factor analysis, and items with loadings greater than 0.40 on the first factor were retained, resulting in the final 17-item DP. For CMP and MMP measures, a pool of 40 items was generated and then trimmed to 21 after expert panel judging. These items were factor analyzed and reduced to the final CMP and MMP dimensions of 2 items for CMS, 3 items for CL, 4 items for NCDS, 4 items for NMI, and 2 items for MI. For all scales, reliability and nomological validity were assessed.

Samples: The panel of experts used to trim the initial item pools was composed of members of an industrial electronic distributors association and two professors familiar with the channels literature. The main sample, with which the factor, reliability, and validity analyses were performed, was composed of 83 managers from the electronics components industry.

Validity: Coefficient alpha for the 17-item DP scale was 0.76. (Alpha based on a weighted DP scale, in which each item is also evaluated on an 11-point scale as to its importance, was 0.85.) Alphas for the CMS, CL, and NCDS dimensions of customer market power were 0.74, 0.55, and 0.57, respectively. Alphas for the NMI and MI dimensions of manufacturer market power were 0.58 and 0.56, respectively.

Using DP as the dependent variable and CMS, CL, and NCDS as independent variables in a regression equation, only NCDS had a significant beta coefficient (–0.28). With NMI and MI as predictors of DP, both variables had significant beta coefficients (–0.34 and –0.22, respectively). Thus, some evidence of nomological validity among the variables was provided.

Scores: Neither mean nor percentage scores were reported.

Source: Butaney, Gul and Lawrence H. Wortzel (1988), "Distributor Power Versus Manufacturer Power: The Customer Role," *Journal of Marketing,* 52, 52–63.

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Power: Distributor, Manufacturer, and Customer Market Power

(Butaney and Wortzel 1988)

Instructions and DP Items

To market and distribute a product, several marketing decisions have to be made. In making these decisions, a distributor may have almost complete responsibility, or freedom to make a decision may be shared with the manufacturer, or the manufacturer may have almost complete responsibility. For each of the marketing decisions and activities listed below, please indicate the level of freedom or responsibility you have as compared to the selected manufacturer (in marketing the manufacturer's brand). Please check the appropriate response category where . . .

1 = manufacturer has almost complete responsibility

2 = manufacturer has more responsibility than myself

3 = manufacturer and I share equal responsibility

4 = I have more responsibility than the manufacturer

5 = I have almost complete responsibility

Distributor Power (DP)

1. Choosing geographic territories to sell in.

2. Setting sales targets or goals.

3. Setting selling prices to customers.

4. Determining distribution policies to customers.

5. Determining the training program for your sales force to sell the product.

6. Keeping the manufacturer from selling direct in your territory.

7. Product return-related issues.

8. Choosing customers to sell to.

9. Determining pricing policies (e.g., quantity discounts to customers).

10. Deciding to join in cooperative advertising with the manufacturer.

11. Keeping the manufacturer's other distributors from selling in your territory.

12. Accommodating customer's request for product modification.

13. Margins allowed by the manufacturer.

14. Providing presale customer services (e.g., product information).

15. Attending sales meetings organized by the manufacturer.

16. Resolving customers' product-related technical problems.

17. Determining sales strategies/policies (e.g., frequency of sales calls to customers).

Customer Market Power Items (CMP)

CMS Dimension

1. The customers possess a great deal of market information.

2. The customers possess a good idea about the costs of the product to the distributor.

CL Dimension

3. Customers are able to bargain the terms of the sale.

4. 20% of my customers account for 80% of my total product sales.

5. Most of my customers can buy the product directly from manufacturers.

NCDS Dimension

6. Supplier's name and brand are not very important purchasing criteria for customers.

7. Customers' cost of finding and qualifying other suppliers is low.

8. Customers' importance for the product quality in their purchasing criteria is low.

9. The customers in the industry do not insist on buying a specific manufacturer brand.

Manufacturer Market Power Items (MMP)

NMI Dimension

1. When one manufacturer reduces the product price, the other manufacturers do not reduce their prices.

2. When the manufacturer increases price, the customers do not switch brands.

3. Competition among manufacturers in the industry is not strong.

4. The manufacturer possesses a great deal of industry information (e.g., trends, problems, competitive brands).

MI Dimension

5. Only a few manufacturers produce a large volume of the product in the industry.

6. Industry sales are not equally distributed among the manufacturers.

Notes: All CMP and MMP items are scored on 5-point scales from *strongly disagree* (1) to *strongly agree* (5). Item 4 of the NMI dimension had a negative loading on its factor.

Power and Influence in Group Settings

(Kohli 1989)

Construct:	A number of power and influence types operate in organizational buying, and purchase decisions in organizational buying are often greatly affected by these different types of influence and power. Consistent with existing literatures (e.g., French and Raven 1959; Gaski 1984; Kohli and Zaltman 1988), Kohli (1989, pp. 51–3) defines several sources of individual power and influence operating in organizational buying, as follow.
	Manifest influence refers to changes in purchase decision-related opinions and behavior of buying center members that result from the individual's participation in a buying center.
	Influence attempts refers to the amount of effort exerted by an individual to influence a purchase decision.
	Self-perceived influence is the influence an informant believes he or she exerted on a decision.
	Reinforcement power refers to the ability to mediate positive and negative reinforcements. In essence, reward and coercive power are components of reinforcement power, where *reward power* refers to an individual's ability to provide material and nonmaterial rewards to other individuals (generally in compliance to his/her requests), and *coercive power* refers to an individual's ability to mete out material and nonmaterial punishments to others.
	Referent power is the extent to which others like and identify themselves with a person and have regard for his/her personal qualities.
	Legitimate power refers to the extent to which others feel that they ought to comply with the wishes of an individual and derives from both formal and informal social norms.
	Expert power refers to the extent to which an individual is perceived by others as being knowledgeable about other issues.
	Information power refers to an individual's access to and control over relevant information. *Departmental power* is the relative importance of a department in general to an organization.
	The above definitions and their corresponding measures represent an extension of the Kohli and Zaltman (1988) manifest influence measures.
Description:	For each of the above definitions, multi-item scales were developed. Across scales, all items were scored on 5-point formats (see scale items). Item scores are summed within each scale to form an index for each power or influence type.
Development:	Through an extensive literature search and existing measures, a pool of items was generated to reflect each type of power and influence. An expert panel of academicians was used to revise the items. The items were further refined via a three-wave pretest of personal interviews with managers involved in joint purchase decisions. Then, in a large study, the items were tested for factor structure, reliability, and validity. This resulted in the elimination of several items to form the final versions of the scales.
Samples:	Fourteen managers participated in the personal interviews to refine the items. A sample of 251 from the National Association of Purchasing Management was used in the study examining the scales' factor structure, reliability, and validity.
Validity	Factor analysis revealed a six-factor structure for the power measures reflecting the six power components defined above. Coefficient alpha estimates were 0.95, 0.86, 0.80, 0.85, 0.90, and 0.88 for reinforcement power, referent power, legitimate power, expert power, information power, and departmental power, respectively. Alpha estimates for manifest influence, influence attempts, and self-perceived influence were 0.93, 0.90, and 0.86, respectively.

Using manifest influence as the dependent variable, with the six influence types and self-perceived influence as independent variables, the relationships among power and influence were examined. For the overall sample (214 of 251), 38% of the variance in manifest influence was explained by the predictor variables, with reinforcement power (beta = 0.33) and expert power (beta = 0.49) as the major contributors. The sample was also split into high and low groups across several contingency variables. R^2 estimates across the groups ranged from 0.26 to 0.56. Furthermore, the correlations among the independent variables ranged from 0.03 to 0.48, suggesting low multicollinearity. These results show predictive validity for the measures.

Scores: Various mean scores were offered. A split of the large sample based on influence versions of the questionnaire as high or low (see Table 4, p. 58) offered mean scores as shown in Table 7.1.

Table 7.1   Means and Standard Deviations for Power and Influence Factors Based on Low-High Median Splits

Scale	Low Influence		High Influence	
	Mean	SD	Mean	SD
Manifest influence	24.0	7.2	34.6	4.7
Self-perceived influence	19.0	3.7	18.5	3.7
Influence attempts	10.7	3.9	12.8	4.0
Reinforcement power	19.4	8.8	26.6	12.5
Referent power	16.2	4.1	16.4	4.7
Legitimate power	4.0	1.9	5.4	2.4
Expert power	13.8	3.6	16.6	3.5
Information power	9.8	5.2	9.8	5.1
Departmental power	12.1	4.1	13.0	4.3

Source: Kohli, Ajay (1989), "Determinants of Influence in Organizational Buying: A Contingency Approach," *Journal of Marketing*, 53, 50–65.

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References: French, John R. and Bertram H. Raven (1959), "The Bases of Social Power," in *Studies in Social Power*, ed. D. Cartwright, Ann Arbor, MI: Institute for Social Research.

Gaski, John F. (1984), "The Theory of Power and Conflict in Channels of Distribution," *Journal of Marketing*, 48, 9–29.

Kohli, Ajay and Gerald Zaltman (1988), "Measuring Multiple Buying Influences," *Industrial Marketing Management*, 17, 197–204.

Power and Influence in Group Settings

(Kohli 1989)

Manifest Influence

1. How much weight did the committee members give to his opinions?

2. How much impact did he have on the thinking of the other members?

3. To what extent did he influence the criteria used for making the final decision?

4. How much effort did his involvement in the purchase committee have on how the various options were rated?

5. To what extent did he influence others into adopting certain positions about the various options?

6. How much change did he induce in the preferences of other members?

7. To what extent did others go along with his suggestions?

8. To what extent did his participation influence the decision eventually reached?

9. To what extent did the final decision reflect his views?

Influence Attempts

Relative to others . . .

1. he spent more time to impress his views on the committee members.

2. he tried harder to shape the thinking of others.

3. he spent more energy to make sure his opinions were taken into account.

4. he exerted more effort to make sure the final decision reflected his views.

Self-Perceived Influence

1. How much weight did the committee members give to your opinions?

2. To what extent did you influence the criteria used for making the final decision?

3. How much effort did your involvement in the purchase committee have on how the various options were rated?

4. What extent did your participation influence the decision eventually reached?

5. To what extent did the final decision reflect your views?

Reinforcement Power

1. They believed he was capable of getting them pay raises.

2. They felt he could improve their standing in the organization.

3. They felt it was desirable to be approved by him.

4. They valued receiving recognition from him.

5. They felt that he could arrange desirable assignments for them.

6. They believed he was capable of getting them promoted.

7. They believed he was capable of interfering with their promotions.

8. They felt he could take them to task.

9. They felt he could make life difficult for them.

10. They thought he could block their salary increases.

11. They believed he could arrange for them to be assigned to unpleasant tasks.

Legitimate Power

1. They felt that the purchase decision should reflect his preferences because he had more at stake than others.

2. They felt they ought to comply with him because the purchase decision would affect him more than others.

Referent Power

1. They disliked him as a person.*

2. They thought highly of his personality.

3. They shared his personal values.

4. They identified with him as a person.

5. They had a high regard for his personal qualities.

Expert Power

1. They felt he was knowledgeable about the organization's needs with respect to the product.

2. They thought he was competent to make an assessment of the various options.

3. They felt he knew exactly how the product would be used.

4. They felt he had the expertise to make the best decision.

Departmental Power

1. The functions performed by this department are generally considered to be more critical than others.

2. Top management considers this department to be more important than others.

3. This department tends to dominate others in the affairs of the organization.

4. This department is generally regarded as being more influential than others.

Information Power

1. He served as a communication link between the suppliers and the committee members.

2. He was in direct contact with the suppliers.

3. He was responsible for obtaining information about suppliers for the committee members.

4. He held independent discussions with the various suppliers on behalf of the purchase committee.

Notes: The items in Manifest Influence are scored from *very small* (1) to *very large* (5). Items in Influence Attempts are scored from *strongly disagree* (1) to *strongly agree* (5). Items in Self-Perceived Influence are scored from *very small* (1) to *very large* (5). Items in Reinforcement Power are scored from *none* (1) to *all* (5); items 1 through 6 reflect the reward power component, and items 7 through 11 reflect the coercive power component. Items in Legitimate Power are scored from *none* (1) to *all* (5). Items in Referent Power are scored from *none* (1) to *all* (5), and item 1 requires reverse scoring. Items in Expert Power are scored from *none* (1) to *all* (5). Items in Departmental Power are scored from *strongly disagree* (1) to *strongly agree* (5). Items in Information Power are scored from *strongly disagree* (1) to *strongly agree* (5).

Power Sources in a Marketing Channel

(Gaski and Nevin 1985)

Construct: Gaski and Nevin (1985) examined the concepts of perceived and exercised reward/coercive power in a dealer-supplier relationship (i.e., a channels framework). Specifically, perceived reward/coercive power is viewed as the dealer's perception of the ability of the supplier to mediate rewards and punishments (i.e., considered as "sources" of power). Exercised reward/coercive power is viewed as the actual granting of rewards and imposition of punishment by the supplier (Hunt and Nevin 1974). Another power measure, based on the dealer's perception of the potential influence that a supplier has over the dealer's business, was also conceptualized. This power measure assesses the supplier's ability to get the dealer to do what he would not have done otherwise.

Description: In essence, Gaski and Nevin's power measure is composed of five separate indices: perceived reward power (a source), perceived coercive power (a source), exercised reward power, exercised coercive power, and a supplier's ability to potentially affect the dealer's business. The perceived reward power index is composed of 15 items scored from *no capability* to reward (0) to *very much capability* to reward (4). The perceived coercive power index is composed of 6 items also scored on the aforementioned 0 to 4 format. The exercised reward power index is composed of 15 items scored from *never* exercises the power (0) to *often* exercises the power (3). The exercised coercive power index is composed of 6 items also scored on the 0 to 3 format. The supplier's ability to affect the dealer's business is measured with 10 items scored from *not at all* (0) to *as much as they wanted* (3). Item scores within each index are summed to form an overall score for each power index.

Development: The initial pool of items for the indices was drawn from extant channels literature (e.g., Hunt and Nevin 1974; Lusch 1976). The items were screened, modified to fit the research setting, and checked for face validity. Then, with a large sample, the measures were assessed for reliability and validity.

Sample: The large sample consisted of 238 dealers of heavy industrial machinery (i.e., dealers who handled the Melroe products of the Clark Equipment Company, the supplier).

Validity: Coefficient alpha estimates for the perceived reward power, perceived coercive power, exercised reward power, and exercised coercive power indices were 0.87, 0.69, 0.83, and 0.62, respectively. The alpha for the supplier's ability to affect the dealer's business index was 0.86. Discriminant validity was said to be evidenced by the fact that the correlations among indices were not as high as the lowest coefficient alpha of the indices. These correlations ranged from –0.16 to 0.56. The power indices were used as independent variables to predict dealer satisfaction with the supplier, conflict with the supplier, and dealer performance. For dealer satisfaction, significant regression coefficients were –0.12, –0.30, 0.31, and 0.35 for perceived coercive power, exercised coercive power, perceived reward power, and exercised reward power, respectively. For conflict, significant regression coefficients were 0.19, 0.43, –0.30, and –0.37 for perceived coercive power, exercised coercive power, perceived reward power, and exercised reward power, respectively. For performance, only exercised reward power showed a significant regression coefficient (–0.11). These results show support for the predictive validity of the power indices.

Scores: Neither mean nor percentage scores were reported.

Source: Gaski, John F. and John Nevin (1985), "The Differential Effects of Exercised and Unexercised Power Sources in a Marketing Channel," *Journal of Marketing Research*, 22, 130–42.

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References: Hunt, Shelby and John R. Nevin (1974), "Power in a Channel of Distribution: Sources and Consequences," *Journal of Marketing Research,* 11, 186–93.

Lusch, Robert F. (1976), "Sources of Power: Their Impact on Intra-Channel Conflict," *Journal of Marketing Research*, 13, 382–90.

Power Sources in a Marketing Channel

(Gaski and Nevin 1985)

Perceived Coercive Power (Source)

Please check (✔) the appropriate space to indicate **how much capability** Clark Equipment has to take each of the following kinds of action in their dealings with your organization.

	No Capability	*Very Much Capability*
Delay delivery		
Delay warranty claims		
Take legal action against you		
Refuse to sell		
Charge high prices		
Deliver unwanted products		

Perceived Reward Power (Source)

Please check (✔) the appropriate space to indicate **how much capability** Clark Equipment has to take each of the following kinds of action in their dealings with your organization.

	No Capability	*Very Much Capability*
Provide advertising support		
Give trade allowances/incentives		
Train personnel		
Provide sales promotion materials		
Grant favors (golf, lunches, etc.)		
Give inventory rebates		
Provide financing/credit		
Furnish supplies		
Give business advice		
Provide service		
Give pricing assistance		
Give free samples		
Provide ordering assistance		
Provide inventory management assistance		
Demonstrate products		

Exercised Coercive Power

Please indicate (✓) **how often** Clark Equipment takes each of the following kinds of action in their dealings with your organization.

	Never	*Often*
Delay delivery		
Delay warranty claims		
Take legal action against you		
Refuse to sell		
Charge high prices		
Deliver unwanted products		

Exercised Reward Power

Please indicate (✓) **how often** Clark Equipment takes each of the following kinds of action in their dealings with your organization.

	Never	*Often*
Provide advertising support		
Give trade allowances/incentives		
Train personnel		
Provide sales promotion materials		
Grant favors (golf, lunches, etc.)		
Give inventory rebates		
Provide financing/credit		
Furnish supplies		
Give business advice		
Provide service		
Give pricing assistance		
Give free samples		
Provide ordering assistance		
Provide inventory management assistance		
Demonstrate products		

Supplier's Ability to Influence the Dealer's Business

Please indicate (✓) your response to each of the following.

| *Not at all* | *Slightly* | *Moderately* | *As Much As They Wanted* |

If Clark Equipment wanted you to raise the prices you charge for their products, what is the maximum amount you would raise prices?

If Clark Equipment wanted you to lower the prices you charge for their products, what is the maximum amount you would lower prices?

If Clark Equipment wanted you to increase the quantity of their products you order, what is the maximum amount you would increase order quantity?

If Clark Equipment wanted you to decrease the quantity of their products you order, what is the maximum amount you would decrease order quantity?

If Clark Equipment wanted you to change the composition of your product line, what is the maximum amount you would change your product line?

If Clark Equipment wanted you to change the type of advertising and sales promotion you do for their products, what is the maximum amount you would change your advertising and sales promotion?

If Clark Equipment wanted you to change your customer service policy, what is the maximum amount you would change your customer service?

If Clark Equipment wanted you to change your inventory procedures, what is the maximum amount you would change your inventory procedures?

If Clark Equipment wanted you to change your customer credit policy, what is the maximum amount you would change your customer credit?

If Clark Equipment wanted you to change the way you display their products, what is the maximum amount you would change your display of their products?

Other Measures Related to Interfirm Issues

Economic and Social Satisfaction

(Geyskens and Steenkamp 2000)

Construct: Economic satisfaction is defined as a channel member's evaluation of the economic outcomes that flow from the relationship with its partner, such as sales volume, margins, and discounts. Social satisfaction is defined as a channel member's evaluation of the psychosocial aspects of its relationship, in that interactions with the exchange partner are fulfilling, gratifying, and facile (Geyskens and Steenkamp 2000, p. 13). Additional description of the concepts is presented in Geyskens, Steenkamp, and Kumar (1999). The authors propose that insight can be obtained from assessing both economic and social satisfaction, because they are conceptually distinct, created through different practices, and have a different impact on channel relationships.

Description: The satisfaction measures comprise 10 items, with 5 items reflective of economic satisfaction and 5 items of social satisfaction. Study participants scored the economic and social satisfaction items on 7-point scales, ranging from *strongly disagree* (1) to *strongly agree* (7). Three of the social satisfaction items require reverse scoring.

Development: Fifty items were generated from satisfaction scales in the marketing, management, and psychology literatures and interviews with channel members. Pretest procedures recommended by Anderson and Gerbing (1991) were also employed. Thirteen marketing doctoral students were used as expert judges in a process that resulted in 24 economic and 22 social satisfaction items remaining. In the next stage, the 179 barkeepers responded to a survey containing the remaining items. Examination of corrected item-to-total correlations and a series of factor analyses resulted in the 10-item two-factor scale. Item content was examined throughout for variability in wording.

Samples: The final 10-item scale was primarily developed from a sample of 179 barkeepers from Belgium. Cross-validation was examined on separate samples of 193 butchers and 150 bakers.

Validity: Following development of the two-factor satisfaction scale, cross-validation using the samples of 193 butchers and 150 bakers was reported. Acceptable model fits from two-factor LISREL models confirmed the measures for both samples. The correlations between the factors for the two samples were 0.56 and 0.46. Tests of discriminant validity between the two factors were reported. Average standardized loadings above 0.77 were described as support for convergent validity. Using the butcher sample, nomological validity was investigated in tests of relationships involving both antecedents and consequences of economic and social satisfaction. Briefly, the use of noncoercive power and coercive power were associated with increases and decreases in economic and social satisfaction. In addition, economic satisfaction increased loyalty and decreased destructive response strategies (i.e., exit and neglect). Social satisfaction increased voice and decreased destructive response strategies.

Scores: Mean and standard deviation estimates were not presented.

Source: Geyskens, Inge and Jan-Benedict E. M. Steenkamp (2000), "Economic and Social Satisfaction: Measurement and Relevance to Marketing Channel Relationships," *Journal of Retailing,* 76 (Spring), 11–32.

References: Anderson, James C. and David W. Gerbing (1991), "Predicting the Performance of Measures in a Confirmatory Factor Analysis With a Pretest Assessment of Their Substantive Validity," *Journal of Applied Psychology,* 76 (5), 732–40.

Geyskens, Inge, Jan-Benedict Steenkamp, and Nirmalya Kumar (1999), "A Meta-Analysis of Satisfaction in Marketing Channel Relationships," *Journal of Marketing Research,* 36 (May), 223–38.

Economic and Social Satisfaction

(Geyskens and Steenkamp 2000)

Economic Satisfaction

1. My relationship with this supplier has provided me with a dominant and profitable market position in my sales area.

2. My relationship with this supplier is very attractive with respect to discounts.

3. I am very pleased with my decision to distribute the supplier's products since their high quality increases customer traffic.

4. The marketing policy of this supplier helps me to get my work done effectively.

5. This supplier provides me with marketing and selling support of high quality.

Social Satisfaction

1. The working relationship of my firm with this supplier is characterized by feelings of hostility. (*)

2. This supplier expresses criticism tactfully.

3. Interactions between my firm and this supplier are characterized by mutual respect.

4. This supplier leaves me in the dark about things I ought to know. (*)

5. This supplier refuses to explain the reasons for its policies. (*)

Notes: Participants scored economic and social satisfaction on 7-point scales, ranging from *strongly disagree* (1) to *strongly agree* (7). Items marked with an asterisk are reverse scored.

Managers' Perceptions of Relationship Marketing in Inter-Organizational Exchanges

(McNally and Griffin 2007)

Construct: The focal construct involves managerial perceptions of relationship marketing. Analysis reveals that these perceptions of managers are best viewed as a second-order, four-factor model. The factors are an ongoing bonding process, mutual value creation, a cooperative atmosphere, and information technology use (McNally and Griffin 2007, p. 382).

Description: The measure consists of 15 items, with the items distributed as follows: ongoing bonding process (4 items), mutual value creation (4 items), cooperative atmosphere (5 items), and use of information technology (2 items). Participants responded to the following stem: "Relationship marketing is associated with . . ." (1 = *not at all*; 4 = *somewhat*; 7 = *very much*). Items were averaged to form scores for each factor.

Development: Candidate items (54) were first generated from the extant academic and trade literature. Items were pretested for relevance, face validity, and readability with marketing managers and academics. A final pretest using the responses from 14 executive MBAs and 6 members of a professional association reviewed the survey. A heterogeneous sample of 87 practitioners from a variety of industries and positions was collected using a mail survey. Five factors were obtained from initial factor analyses. Confirmatory analyses were used to determine the final scale structure. Intercorrelations among the four resulting factors ranged from 0.22 to 0.68. The first order construct reliabilities, as well as the overall factor reliability, exceeded 0.70. Few differences in mean scores across the professions were reported in terms of their perceptions of relationship marketing and relationship management.

Samples: Business managers and academics assessed item wording clarity and domain coverage. Executive MBAs and association members were also used in a series of pretests. Data were collected from 87 managers in three professions (e.g., marketers/product managers, purchasers/supply managers, and mechanical engineers/designers; cf. Table 2, McNally and Griffin 2007, p. 387). The responses from 116 purchasers, engineers, and marketers from earth-moving equipment and automotive companies composed the more homogeneous utility test data (cf. Table 5, McNally and Griffin 2007, p. 390).

Validity: The generalizability of the factor structure was subsequently tested on a more homogeneous sample of 116 purchasers, engineers, and marketers from earth-moving equipment and automotive companies. The second-order model fit the data well. However, two of the factors had average variance extracted estimates below 0.50. The second-order factor had an AVE above 0.50 and a construct reliability estimate of 0.81. Evidence of nomological validity was said to be offered from tests of the relationship between the perceptions of the relationship marketing measure and a five-item measure of relationship marketing profession institutionalization (Kostova and Roth 2002; beta = 0.35).

Scores: The means (and standard deviations) for the four factors and the development sample were as follows: ongoing bonding process, 4.11 (1.00); mutual value creation, 5.51 (1.27); cooperative atmosphere, 5.99 (0.61); and use of information technology, 3.83 (0.83). The means (and standard deviations) for the four factors and the utility test sample were as follows: ongoing bonding process, 5.36 (0.71); mutual value creation, 5.20 (0.95); cooperative atmosphere, 6.07 (0.70); and use of information technology, 3.11 (0.85).

Source: McNally, Regina C. and Abbie Griffin (2007), "A Measure and Initial Test of Managers' Perceptions of Relationship Marketing in Inter-Organizational Exchanges," *Journal of the Academy of Marketing Science,* 35 (September), 382–97.

Reference: Kostova, Tatiana and Kendall Roth (2002), "Adoption of an Organizational Practice by Subsidiaries of Multinational Corporations: Institutional and Relational Effects," *Academy of Management Journal,* 45 (1), 215–33.

Managers' Perceptions of Relationship Marketing in Inter-Organizational Exchanges

(McNally and Griffin 2007)

Relationship marketing is associated with:

Factor 1: Ongoing Bonding Process

RM3: Integration of our exchange partners' information systems with ours.

RM7: Low antagonism between our exchange partners and us.

RM11: Contacts between the firms at multiple organizational levels.

RM20: Employee retention programs at both firms.

Factor 2: Mutual Value Creation

RM1: Analyzing the exchange partner data that we collect.

RM22: Evaluating our profitability resulting from the relationship.

RM23: Expectations of future exchanges.

RM24: Using exchange partner data analysis results to enhance our relationships.

Factor 3: Cooperative Atmosphere

RM13: Commitment between our exchange partners and us.

RM16: Both our exchange partners and us adapt to support the relationship.

RM17: Communication between our exchange partners and us.

RM28: Cooperation between our exchange partners and us.

RM10: Joint problem solving.

Factor 4: Use of Information Technology

RM14: Using specialized software to manage the relationship.

RM27: Installing new information technology to support our customers.

Notes: Participants responded to the following stem: "Relationship marketing is associated with . . ." (1 = *not at all*; 4 = *somewhat*; 7 = *very much*). For surveys sent to purchasers and engineers, relationship management was substituted for relationship marketing, and the appropriate profession was substituted for marketers.

Norms: Relational Norms

(Heide and John 1992)

Construct: Relational norms are defined as a higher order construct consisting of the dimensions flexibility, information exchange, and solidarity (Heide and John 1992, p. 37). Norms are defined generally as expectations shared by a group of decision makers. Specifically, flexibility defines a bilateral expectation of willingness to make adaptations as circumstances change. Information exchange defines the expectation that parties will provide information useful to the partner. Solidarity reflects a high value being placed on the relationship (Heide and John 1992, pp. 35–6).

Description: A total of 10 items are used to assess the three relational norm factors: flexibility, 3 items; information exchange, 4 items; and solidarity, 3 items. Each statement is operationalized using a 7-point scale anchored by *completely inaccurate description* and *completely accurate description*. The three norm types were subsequently combined into an equally weighted composite score for hypothesis tests (Hide and John 1992, p. 39).

Development: The specific items used are based on the items developed earlier by Kaufmann and Stern (1988) and Noordewier, John, and Nevin (1990). (See Heide and John 1992, p. 38.)

Samples: Participants in the research were 155 representatives of buying firms. The initial sampling frame was a national list of purchasing agents and directors of manufacturing in the two-digit SIC major groups 35, 36, and 37. Sixty-one key informants from supplier firms were also surveyed. The initial buying firm respondents identified this latter group representing the supplier firms.

Validity: Unreported item-to-total correlations were used initially to evaluate the items. Test of a 10-item, three-factor higher order model (Heide and John 1992, p. 39) resulted in the following fit statistics: chi-square = 40.40 (32 *df, p* = 0.15), GFI = 0.95, and RMSR = 0.04. All item and second-order factor loadings were significant (t values > 4.6). The correlation between the composite relational norm measures across the buyer-seller dyads was 0.50. Additional evidence of measurement validity is provided by the tests of hypotheses in which relational norms moderate the effects of buyer specific assets.

Scores: Means and standard deviations were not provided.

Source: Heide, Jan B. and George John (1992), "Do Norms Matter in Marketing Relationships?" *Journal of Marketing,* 56, 32–44.

© 1992 by the American Marketing Association. Scale items taken from Table 1 (p. 37). Reprinted with permission.

References: Kaufmann, Patrick J. and Louis W. Stern (1988), "Relational Exchange Norms, Perceptions of Unfairness, and Retained Hostility in Commercial Litigation," *Journal of Conflict Resolution,* 32, 534–52.

Noordewier, Thomas G., John George, and John R. Nevin (1990), "Performance Outcomes of Purchasing Arrangements in Industrial Buy-Vendor Relationships," *Journal of Marketing,* 54, 80–93.

Norms: Relational Norms

(Heide and John 1992)

Norm of Flexibility

1. Flexibility in response to requests for changes is a characteristic of this relationship.

2. The parties expect to be able to make adjustments in the ongoing relationship to cope with changing circumstances.

3. When some unexpected situation arises, the parties would rather work out a new deal than hold each other to the original terms.

Norm of Information Exchange

1. In this relationship, it is expected that any information that might help the other party will be provided to them.

2. Exchange of information in this relationship takes place frequently and informally, and not only according to a prespecified agreement.

3. It is expected that the parties will provide proprietary information if it can help the other party.

4. It is expected that we keep each other informed about events or changes that may affect the other party.

Norm of Solidarity

1. Problems that arise in the course of this relationship are treated by the parties as joint rather than individual responsibilities.

2. The parties are committed to improvements that may benefit the relationship as a whole, and not only the individual parties.

3. The parties in this relationship do not mind owing each other favors.

Note: Items scored on 7-point scales from *completely inaccurate description* to *completely accurate description.*

Performance: Supplier Perceptions of Reseller Performance

(Kumar, Stern, and Achrol 1992)

Construct: Kumar et al. (1992, p. 241) postulate that an effective reseller from the supplier's perspective plays an instrumental role in helping the supplier meet the four functional imperatives of goal attainment, integration, adaptation, and pattern maintenance. Based on a summary of four effectiveness models, reseller performance is defined by Kumar et al. (1992) as consisting of eight facets: contribution to profits, contribution to sales, reseller competence, reseller loyalty, reseller compliance, contribution to growth, reseller adaptability, and customer satisfaction.

Description: The final measures consist of a five-item global performance scale and seven three-item facet scales. All items are assessed using 7-point Likert-type scales.

Development: An initial set of 100 items was developed from a review of the extant literature. Executives from Firms 1 and 2 judged the content validity of the items, and 62 items remained. Twenty-one graduate students reduced the pool further to 34 items via an item sort pretest. These 34 items were used in the subsequent field study (Kumar et al. 1992, p. 242). Confirmatory factor analyses and item-to-total correlations then were used to reduce the reseller performance measures to 21 items distributed evenly across seven facets. (The reseller loyalty facet was dropped entirely due to correlations of items with other facets.) The reliabilities for the remaining individual facets ranged from 0.68 to 0.82 for Firm 1. The reliabilities ranged from 0.68 to 0.96 for Firm 2.

Samples: Data analysis was conducted on 98 resellers for Firm 1 and 63 resellers for Firm 2. Firm 1 was a major vehicle leasing company with more than 5,000 independent business dealers. Firm 2 was a division of a multinational firm that manufacturers and distributes a portable telecommunications product through approximately 1,000 dealers. The input for the data analysis consisted of organizational level responses averaged over key informants within each reseller. The data for Firm 2 were used to assess the generalizability of the measures of reseller performance that had acceptable levels of validity in Sample 1 (Kumar et al. 1992, pp. 241–44).

Validity: Evidence of convergent validity is offered by the correlation of a unit performance measure with the global performance measure (0.78). Additional supportive evidence is provided by predictive and nomological validity tests involving correlations with other measures (i.e., consideration of dropping reseller, influence over the supplier, supplier satisfaction, and conflict). These results are summarized in Table 4 (Kumar et al. 1992, p. 246). Evidence of discriminant validity was provided by tests of models in which pairs of facets were alternatively allowed to be correlated or the phi between each facet in the pair constrained to unity. Other evidence of discriminant validity is cited in the discussion of Table 5. These results involve the pattern of correlations between the facet performance measure, the global performance measure, and the other constructs. Support for criterion-related and nomological validity is offered from the significant and expected gamma path coefficients from each facet, the unit measure, and the global measure to the three constructs—reseller influence over supplier, supplier satisfaction, and conflict (Kumar et al. 1992, pp. 247–48).

Scores: Overall measure means and standard deviations were not provided. However, the responses from 21 executives reflecting perceptions of the relative importance of the different facets are described in Table 2 (Kumar et al. 1992, p. 244).

Source: Kumar, Nirmalya, Louis W. Stern, and Ravi S. Achrol (1992), "Assessing Reseller Performance From the Perspective of the Supplier," *Journal of Marketing Research*, 29, 238–53.

Performance: Supplier Perceptions of Reseller Performance

(Kumar, Stern, and Achrol 1992)

1. Contribution to Sales: Sales

1. Over the past year, the dealer has been successful in generating high [rental revenues/sales volume] for *the supplier,* given the level of competition and economic growth in his market area.

2. Compared to competing dealers in the [district/territory], this dealer has achieved a high level of market penetration for *the supplier.*

3. Last year, the revenue that this dealer generated from *the supplier* was higher than what other competing dealers within the same [neighborhood/territory] generated.

4. Relative to his size, his available resources, and the competition he faces, the dealer could have generated greater [sales volume/revenues] for *the supplier* last year.*

5. Last year, the dealer did not meet the sales target that *the supplier* had set for it.*

2. Contributions to Profits: Profits

1. *The supplier's* cost of servicing the dealer is reasonable, given the amount of business which the dealer generates for *the supplier.*

2. The dealer's demands for support [some examples] have resulted in inadequate profits for *the supplier.*

3. *The supplier* made inadequate profits from this dealer over the past year because of the amount of time, effort, and energy which *the supplier* had to devote to assisting him.

4. Last year, the revenues generated by this dealer were not commensurate with *the supplier's* effort to stimulate that revenue.*

3. Reseller Competence: Competence

1. The dealer has the required business skills necessary to run a successful [kind of business the supplier is in] business.

2. The dealer [has amassed/demonstrates] a great deal of knowledge about the features and attributes of *the supplier's* products and services.

3. The dealer and his personnel have poor knowledge of competitors' products and services.

4. The dealer has not invested enough time or money in educating or training himself or his employees to be more competent in selling *the supplier's* products and services.*

4. Reseller Compliance: Compliance

1. In the past, *the supplier* has often had trouble getting the dealer to participate in its [some program important to the supplier] program.

2. The dealer almost always conforms to *the supplier's* accepted procedures.

3. The dealer has frequently violated [stipulations/terms and conditions] contained in his [contract agreement] with *the supplier.*

4. The dealer accurately [files some reports required by the supplier] and gets them in on time.*

5. Reseller Loyalty: Loyalty

1. The dealer clearly wants to [rent/sell] *the supplier's* products and shows his desire to do so in a number of positive ways.*

2. It takes an inordinate amount of time, effort, and energy to get the dealer's attention on *the supplier.**

3. The dealer shows greater motivation to [sell competing brands or] engage in other business rather than in furthering *the supplier's* business.*

4. The dealer places a disproportionately higher amount of time and effort behind *the supplier* relative to other businesses that he engages in.*

6. Reseller Adaptation: Adapt

1. The dealer senses long-term trends in his market area and frequently adjusts his selling practices.

2. The dealer is very innovative in his marketing of *the supplier's* products and services in his [neighbor hood/territory].

3. The dealer makes an effort to meet competitive changes in his [neighborhood/territory].

4. The dealer could be more responsive (by changing hours of operations, staff, and local advertising) to seasonal sales fluctuations.*

7. Contribution to Growth: Growth

1. The dealer will either continue to be or will soon become a major source of revenue for *the supplier.*

2. Over the next year, *the supplier* expects its revenue generated from this dealer to grow faster than that from other competing [of the supplier] dealers within the same [district/territory].

3. In the past *the supplier's* [business with the dealer/market share through the dealer] has grown steadily.

4. Over the years, the dealer has been successful in his efforts to expand *the supplier's* business.*

5. Through its association with this dealer, *the supplier* has generated [large/significant monthly] increases in revenues.*

Customer Satisfaction: CusSat

1. *The supplier* has [frequently] received complaints from customers regarding this dealer.

2. The dealer goes out of his way to make his customers happy.

3. The dealer provides [customers/end users] with good assistance in the solution of any problems involving *the supplier's* products and services.

4. The dealer helps his customers reduce their concerns about [buying or renting the supplier's products] by providing useful information.*

Global Performance: GlobPerf

1. *The supplier's* association with this dealer has been a highly successful one.

2. If I had to give the dealer a performance appraisal for the past year, it would be (where 1 was poor and 5 was outstanding).

3. The dealer leaves a lot to be desired from an overall performance standpoint.

4. Taking all the different factors into account the dealer's performance has been (where 1 was *excellent–couldn't be better* and 7 was *bad–couldn't be worse*).

5. Overall, how would you characterize the results of *the supplier's* relationship with the dealer (where 1 was *it has fallen short of expectations* and 5 was *it has greatly exceeded our expectations*).

Note: * denotes items not included in final scale. Items scored on 7-point Likert-type scales.

Satisfaction-Channel Satisfaction: SATIND and SATDIR

(Ruekert and Churchill 1984)

Construct: Channel member satisfaction is defined as the domain of all characteristics of the relationship between a channel member (the focal organization) and another institution in the channel (the target organization) which the focal organization finds rewarding, profitable, instrumental, and satisfying or frustrating, problematic, inhibiting, or unsatisfying (Ruekert and Churchill 1984, p. 227). Two operationalizations of the construct were presented. One is an indirect evaluation of the focal organization's beliefs. This scale is labeled SATIND. The other operationalization reflects a more direct approach to obtain the focal organization's evaluation of the target organization (i.e., satisfaction is asked for directly), and the scale is therefore labeled SATDIR. The dimensionality of each of the measures includes the following five components:

Social interaction: how satisfactorily interactions between focal organization and manufacturer are handled, primarily through the sales representative servicing the account.

Product: the demand for, awareness of, and quality of the manufacturer's products.

Financial: the attractiveness of the arrangement with respect to such matters as the focal organization's margins and ROI.

Cooperative advertising: how well the manufacturer supports the focal organization with co-op ad programs.

Other assistance: satisfaction with other promotional materials such as consumer promotions and point-of-purchase displays.

Description: Both the finalized versions of the SATIND, containing 21 items, and the SATDIR, containing 16 items, were designed for self-administration. A 5-point Likert-type scale format was used for items in both scales, with possible responses ranging from *strongly agree* to *strongly disagree* for SATIND items and from *very dissatisfied* to *very satisfied* for SATDIR. Item scores can be summed within the five SATDIR and SATIND components to form dimension indices, or overall to form overall SATDIR and SATIND scores.

Development: Based on expert interviews and an extensive literature review, the construct's domain was originally defined as consisting of four components. Thirty-six items for SATIND and 16 for SATDIR served as the initial pool of items. The dimensionality of the SATIND measures was assessed via the following steps: (a) Item-to-total correlations were examined, and any item that did not have a statistically higher correlation with the dimension to which it was hypothesized to belong was eliminated from the analysis; and (b) the internal homogeneity of items belonging to each dimension was then examined via coefficient alpha, plots of the item-to-total correlations, and principal factor analysis with oblique rotation. After these procedures were performed, 21 of the original 36 items remained for the SATIND scale. A final assessment of dimensionality (via LISREL) was conducted. The results of the confirmatory factor analysis showed that the items loaded as hypothesized on the five SATIND dimensions.

A set of similar procedures was applied to the 16 items making up the SATDIR scale. The subsequent factor analysis indicated that the SATDIR items reflect five dimensions of satisfaction. The five factors together account for slightly more than 67% of the total variation in the items. In summary, the evidence indicated that the SATDIR measure has five dimensions, and the labels are similar to the labels one would attach to those of the SATIND measure. In the confirmatory factor analysis though, one item

from the SATDIR product dimension was switched to the other assistance dimension. Additionally, the convergent, discriminant, and nomological validity of SATDIR and SATIND were assessed.

Samples: The research setting for testing the conceptualization was a field study of the perceptions of retailers and wholesalers toward the manufacturer of consumer batteries and ancillary products. After measures were developed, a total of 173 diverse organizations, representing 32% of the sample organizations, provided usable questionnaires. These organizations included both retailers and wholesalers. Also, four distinct lines of trade were represented, including food, drugs, hardware, and mass markets.

Validity: The reliability of the 21-item linear combination for SATDIR was 0.89. Individual dimension alphas were 0.87, 0.76, 0.67, 0.56, and 0.73 for social interaction, product, financial, cooperative advertising, and other assistance, respectively. The reliability for a 15-item (though 16 items are specified) linear combination of SATDIR was 0.90, and dimension reliabilities were 0.70, 0.68, 0.79, and 0.75 for social interaction, financial, cooperative advertising, and other assistance. (Only one item was retained for the SATDIR product dimension.) The correlation between the overall SATIND and SATDIR measures was 0.63, and the correlations between the overall SATIND and SATDIR measures and a single-item global satisfaction measure were 0.68 and 0.58, respectively, offering evidence of convergent validity. Nomological validity was assessed by correlating SATIND and SATDIR with various constructs. For example, the overall SATIND had correlations of –0.52 and –0.55 with measures of role ambiguity, and –0.43 and –0.46 with domain descensus measures. SATDIR correlations with these constructs were –0.58 and –0.57, and –0.39 and –0.48, respectively.

Scores: Means scores and standard deviations were not reported in the Ruekert and Churchill (1984) article.

Source: Ruekert, Robert W. and Gilbert A. Churchill, Jr. (1984), "Reliability and Validity of Alternative Measures of Channel Member Satisfaction," *Journal of Marketing Research, 21,* 226–33.

Satisfaction-Channel Satisfaction: SATIND and SATDIR

(Ruekert and Churchill 1984)

SATIND Scale Items

Social Interaction

1. My manufacturer's sales representative isn't well organized.

2. My manufacturer's sales representative doesn't know his products very well.

3. Manufacturer's salespeople are helpful.

4. Manufacturer's sales representatives have my best interests in mind when they make a suggestion.

5. My manufacturer's sales representative is always willing to help me if I get into a tight spot.

Product

6. Manufacturer's products are asked for by our customers.

7. Manufacturer's products are a good growth opportunity for my firm.

8. Manufacturer's products are not well known by my customers.

9. My customers are willing to pay more for manufacturer's products.

10. I would have a difficult time replacing manufacturer's products with similar products.

11. Manufacturer's products perform much better than their competition.

Financial

12. Manufacturer's everyday margins are lower than industry margins.

13. Manufacturer provides very competitive margins on their products.

14. There is poor return for the amount of space I devote to manufacturer's products.

15. Some of the manufacturer's products aren't worth carrying because their margins are too small.

16. I am very happy with the margins I receive on manufacturer's products.

Cooperative Advertising Support

17. Manufacturer should have better cooperative advertising program.

18. Manufacturer should provide better cooperative advertising allowances.

Other Assistance

19. Manufacturer conducts excellent consumer promotions.

20. Manufacturer provides adequate promotional support for their products.

21. Manufacturer provides excellent point-of-purchase displays.

SATDIR Scales Items

Social Interaction

1. Personal dealings with manufacturer's sales representatives.

2. Assistance in managing your inventory of manufacturer's products.

3. Order handing by manufacturer.

4. Manufacturer's handling of damaged merchandise.

Product

5. The quality of manufacturer's products.

Financial

6. Income received from the sale of manufacturer's products.

7. Everyday margins on manufacturer's products.

8. Manufacturer credit policies.

Promotional Support

9. Manufacturer's national advertising support.

10. Manufacturer's cooperative advertising support.

11. Consumer promotion support by manufacturer (coupons, rebates, displays).

12. Off-invoice promotional allowances.

13. How promotional payments are made.

Other Assistance

14. Order handling by manufacturer.

15. Level of backorders of manufacturer's products.

16. Speed of delivery of manufacturer's products.

Note: Although not specified by the authors, items 1, 2, 8, 12, 14, 15, 17, and 18 of SATIND seem to require reverse scoring. Items scored on 5-point Likert-type scales from *strongly agree* to *strongly disagree* for SATIND items and from *very dissatisfied* to *very satisfied* for SATDIR items.

Appendix to Inter-/Intrafirm Issues
(Articles Containing Inter-/Intrafirm-Related Measures)

Numerous articles use multi-item measures to assess aspects of power, conflict, and influence strategies in the channels literature. Most of these measures, though, were derived for the specific research setting or product being studied. Application of these measures to other products and settings could be problematic, and, thus, we have chosen not to summarize these types of measures here. However, the interested reader is referred to the following articles as a partial guide to some of these study/product specific channel measures.

Anderson, James C. and James A. Narus (1984), "A Model of the Distributor's Perspective of Distributor-Manufacturer Working Relationships," *Journal of Marketing,* 48, 62–74.

Anderson, James C. and James A. Narus (1990), "A Model of Distributor Firm and Manufacturer Firm Working Partnerships," *Journal of Marketing,* 54, 42–58.

Frazier, Gary and John O. Summers (1984), "Interfirm Influence Strategies and Their Application Within Distribution Channels," *Journal of Marketing,* 48, 43–55.

Frazier, Gary and John O. Summers (1986), "Interfirm Power and Its Use Within a Franchise Channel of Distribution," *Journal of Marketing Research,* 23, 169–76.

Gaski, John (1984), "The Theory of Power and Conflict in Channels of Distribution," *Journal of Marketing,* 48, 9–29.

Gaski, John (1986), "Interrelations Among a Channel Entity's Power Sources: Impact of the Exercise of Reward and Coercion on Expert, Referent, and Legitimate Power Sources," *Journal of Marketing Research,* 23, 62–77.

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