ABSTRACT
The relation between macro approaches to research on consumer values, such as VALS, and micro approaches, such as the Means-End Model, is discussed. The relevances of the Means-End Model, represented by the attribute—consequence—value hierarchy, to judgment tasks of psychological distance and preference evaluation are reviewed. Specifics of the research methods and analysis procedures required to investigate the relative contribution of means-end theory to explaining the underlying processes of these two judgment tasks are detailed.

Implications for Value Research: A Macro Vs. Micro Perspective

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The direction of marketing in the 1980s—in both theory and practice—has been toward developing an understanding of the psychology of markets, rather than simply relying on a manufacturer's orientation, reflecting a physiological perspective (Sheth, 1983). The psychological perspective, based upon the realization that products and services go beyond functional properties and are actually part-and-parcel of consumers' lives, has resulted in research that focuses on consumers and how products fit into their world.

In attempting to understand the consumer and this personal relationship thought to exist between product and self, marketing research has routinely explored the framework of personal values as a basis for market segmentation and subsequent product positionings. More recently, the values framework has been
applied to the development of communication models used in positioning products and assessing positioning strategy (Reynolds & Gutman, 1984b). The belief that the key to positioning lies in understanding the dominant values of the target audience, and ultimately, the link between the product and this value system, has recently become widespread throughout the marketing and advertising communities.

Although the logic of better understanding the personal orientations of consumers has face validity (and thus serves as an excellent sales tool for advertisers), the measurement issues pertaining to value research have not been explicitly detailed. The primary goals of this article are to provide a basis for understanding the latent issues of value research and to provide methodological direction for future efforts.

THE MACRO VS. MICRO APPROACHES

The application of value theory and research to marketing and advertising problems, in particular as used in the development of segmentation strategy has taken two fundamentally distinct tracks. The "macro" approach, grounded in sociology and survey research methodology, is based upon developing a classification system or taxonomy used to segment individuals into qualitative groups defined by value orientations. This is typically accomplished by deriving a scoring algorithm that, when applied to a set of statements in the survey, yields a given classification for the individual respondent.

Though several value-based survey methodologies are available, the prototypical example of this approach on a total population basis is the VALS Program developed and marketed by Stanford Research Institute (SRI). The SRI method essentially created a priori categories and then developed a set of statements (and a scoring system) that permitted classification of respondents into those categories.

Inherent to the "macro" methodological approach are several key assumptions, the most important being that respondents can, in fact, deal with value orientations and the statements that reflect such highly personal meanings. Underlying this explicit assumption are two implicit assumptions: first, that respondents are in touch with these personal motivations, and second, that they choose to respond accurately. Of course, it is extremely difficult in a survey context to test assumptions such as these; hence, they are "taken on faith."

The second research approach, termed "micro," stems from psychological theory and uses in-depth qualitative methods to understand consumer motivations. Although this type of research was originally applied to marketing problems by Dr. Ernest Dichter (1960) utilizing a highly interpretation-based psychoanalytic perspective, more recent applications have been grounded in Means-End Theory (Gutman, 1982), and more objective analytical methods.

Common to most applications is a standard in-depth probing methodology, known as "laddering" (Gutman and Reynolds, 1979). Laddering attempts to un-
MACRO VERSUS MICRO

cover the linkages between the attributes that are the bases for respondents' differentiations among products, and desirable consequences resulting from the use or consumption of the product, and personal values. The underlying theory, briefly summarized, explains that values determine whether consequences are desirable, and the consequences in turn, determine the importance or salience of the attributes. In other words, the Means-End model states that the meanings of products are translated through the various connections across the individual's levels of abstraction (attribute-consequence-value). Thus, the "macro" and "micro" perspectives are essentially the same in that both are predicated on the assumption that values drive behavior; the "micro" approach (as represented here by the Means-End Model) is simply more specific regarding the process.

In the "micro" framework, both the levels and the identification of the personal orientations, anchored by values, can be viewed as a research paradigm to understand personal values and their relationships to the product characteristics. Consequently, this research approach offers the potential for investigating the implicit assumptions of the "macro" approach detailed above. Unfortunately, no systematic, large-scale treatment of the "micro" approach with a scope equivalent to VALS has been undertaken. However, a few preliminary, small-scale studies, focusing primarily on the key assumptions, have been conducted. In point of fact, the research methods incorporated in these studies are totally new and thus merit full explanation and review prior to the consideration of both their implications and their potential extension.

The purposes of the remainder of this paper are (1) to specify and review the research methods that are the basis of "micro" level evaluation, and (2) to summarize the implicit and explicit assumptions underlying the analysis methods used to evaluate the validity of the levels in abstraction conceptualization.

MEANS END METHODOLOGY

Recently, a means-end framework for conceptualizing cognitive processes has received considerable attention as an alternative to the more traditional attribute and benefit-based research approaches (Gutman & Reynolds, in press; Olson & Reynolds, 1983; Reynolds & Gutman, 1984a; Reynolds & Gutman, 1984b; Reynolds, Gutman & Fiedler, 1984; Reynolds & Jamieson, 1984). The means-end method permits interpretation of consumer product perceptions in terms of the underlying levels of abstraction (Gutman & Reynolds, 1979), that are the bases for those perceptions. This approach, which considers attribute-consequence-value hierarchical levels and their corresponding links, suggests a potential improvement over either attribute or benefit (positive consequence) based models in terms of understanding and explaining consumer perception.

The means-end methodology designed specifically to uncover the levels of abstraction is an in-depth interviewing technique termed "laddering" (Gutman & Reynolds, 1979; Reynolds & Gutman, 1984). The first step of this methodology
is to elicit from the consumer the fundamental bases on which he or she distinguishes, either in terms of preference or perception, between or among relevant stimuli (e.g., competing products, services or stores). A sequence of in-depth probes then traces the network of connections or associations in memory that eventually leads to a personal value. This process is accomplished by some version of the "why is that important to you" question, essentially using the response at each level as the basis for the next probe. The resulting set of linkages or connections, representing the outcome of the probing procedure, reveals the respective levels of abstraction that represent the means-end chain.

The means-end chain is composed of an attribute important in discriminating among relevant products, a reason that attribute is important, a desired consequence, and a value, or reason the consequence is relevant in terms of modifying the way in which the consumer sees or desires to see himself or herself. Values in the means-end framework, then, are what impel an individual to select a relevant consequence that will satisfy a personal need or motivation (e.g., need for achievement). As such, values represent the level at which a product can be linked directly to self.

Laddering uncovers a perceptual orientation, defined by the connections across the content levels, which represents the theoretical framework by which the consumer processes and gives meaning to information about a product class. The links from level to level, and ultimately to self, essentially are assumed to define the bases for perceptions that govern choice; therefore, by understanding why things are personally meaningful to an individual, one theoretically is actually determining the underlying bases of evaluation.

The translations of attributes to the higher levels of abstraction, as uncovered by the laddering process, can be illustrated by way of an example of the output of the laddering process presented in Reynolds & Jamieson (1984). The product class in this case is high-image department stores. The triad distinction elicited is "carries one-of-a-kind clothes," which represents the desired pole of the attribute level distinction. The higher levels then elicited were "individual look," "stand out," and "a feeling of self esteem."

The ability to understand an individual's cognitive organization, which determines how information is received and assessed and which, in turn, provides key inputs to the choice process, offers an opportunity for understanding consumer decision-making to a degree not possible with current procedures. The fact that laddering permits identification of both the content and structural aspects of cognitive organization has created substantial research interest in the methodology, particularly for communication and advertising strategy (Olson and Reynolds, 1983; Reynolds and Gutman, 1984b; Gutman and Reynolds, in press).

The basic issue at this early stage of investigation is obvious: What is the predictive validity of this essentially qualitative research tool? More specifically, how do these higher levels of abstraction relate to an understanding of the processes underlying perception and preference? Moreover, can consumers accurately provide importance evaluations representing the strength of the relationship between
Macro versus Micro

these higher levels and preference? The implication is that, if inclusion of these higher levels was found to be worthwhile and their respective importances contribution could be accurately assessed, they could be included in the more traditional attitude models. The issue of the degree to which consumers can truly understand the concept of levels of abstraction and thus use this information to identify their dominant perceptual orientation—or "more representative" ladder—for preference, also needs to be addressed. This key point pertains directly to the degree to which consumers are in touch with true higher level motivating personal values.

MEANS-END ANALYTIC FRAMEWORK

The methodological and analytical procedures used in the previous work are relatively new and thus require additional exposition. The methodological format utilized in assessing the contribution of a set of descriptors or attributes to a set of discrimination judgments is typified by the procedures used to interpret multidimensional scaling (MDS) spaces. The standard approach is first to input judgments reflecting the psychological distance between all pairs of stimuli to MDS. That is, each respondent is asked to judge the relative distance, based upon whatever personal constructs they may be using, between all pairwise combinations of the stimuli.

The task of gathering the distances is usually done in either of two ways. The most common method involves using a 1 to 9 scale of psychological dissimilarity, 1 representing very similar and 9 very dissimilar. A second method requires the respondent to sort a deck of cards, each card containing one pair, into homogenous piles representing similar distances. A more demanding extension of this sorting task requires the respondent to sort within each initial pile, thereby yielding a complete rank order of all the cards (pairs of stimuli).

The result of such data analysis is a spatial representation that is assumed to reflect the true perceptual distances among the set of stimuli. The primary justification for this assumption is that it is based on use of the nonrestrictive scale format, thus avoiding the potential bias resulting from the use of researcher-supplied scales. The obvious problem that arises, however, is how to interpret the resulting multidimensional spatial configuration. The interpretation is accomplished by presenting the respondent with an additional judgment task whose format corresponds to traditional methods of rating or sorting the stimuli by researcher-supplied attributes or benefits.

Subsequent analysis involves assessing the relationship of the stimulus ratings on the descriptors to the coordinates of the spatial configuration. This typically is done by regressing individual descriptors on the spatial coordinates, providing a basis for graphically positioning vectors in the space representing each of the descriptors (Chang and Carroll, 1969). These positioned descriptors are then used as a framework for postulating the underlying bases of the discrimination judg-
Macro versus Micro

The multiple correlation output from the regression, essentially quantifying the goodness-of-linear-fit of the respective descriptor vector to the dimensional coordinates, is the criterion for assessing the descriptor's contribution.

Although application of these analytic procedures is straightforward, two methodological issues arise when the assessment is applied to data output from laddering. The first issue concerns the fact that judgments reflecting perceptions, commonly assumed to be represented by the concept of psychological distance, provide information about only half of the issue at hand. Missing from the method is an operational surrogate for choice—preference—which must also be related to the various levels. As suggested, if the underlying levels of these processes differ, a meaningful interpretation and subsequent assessment can be made only if the relative contributions of the respective levels are analyzed using both types of discrimination judgments. Thus, an essentially identical methodology for perception and preference, yielding comparable judgment data, must be implemented.

The second problem stems from the metric assumptions inherent to the regression approach of relating the descriptors to the derived space. The explicit assumption that an interval scale exists for the traditional ratings format is, as always, subject to question. In addition, if a sorting methodology is used, the interval metric assumption is clearly violated. But the use of rating scale methods is not an optimal option because sorting procedures require a desirable increased involvement on the part of the respondent. In addition, sorting methods probably more closely reflect the fundamental cognitive processes underlying discrimination, grouping and distinguishing.

Thus, a method of analysis less restrictive than traditional regression is needed. What is needed is a regression approach based only on ordinal assumptions. Cognitive Differentiation Analysis (CDA) (Reynolds; 1983; Reynolds & Sutrick, in press), with its ability to treat descriptor ratings as ordinal data, is such a method. The primary output of CDA is a set of indices that basically reflects the discrimination power of each of the descriptors for the pairwise discriminations between stimuli.

Interestingly, CDA has another significant advantage over the traditional vector-fitting regression procedures. CDA operates directly on the n(n-1)/2 pairwise discrimination judgments, rather than on the derived coordinates output from MDS. The obvious advantage of one analysis step rather than two is secondary to the benefit derived from operating directly on the actual judgments. By eliminating the MDS step, CDA is free of perturbations or distortions that could resist from fitting the judgments to a smaller dimensional space. This is particularly important when small stimulus set sizes are considered, as is typically the case in marketing studies.

The application of CDA to judgments of psychological distance yields measures of the (assumed) contribution or discrimination power of the descriptors subjected to the sorting or rating task. The measures output from the analysis correspond closely to more standard measures of ordinal correlation (i.e., Ken-
dall's (1955) tau). These indices, then, provide a basis for evaluating the degree to which each of the levels derived from the laddering is related to the pairwise discrimination judgments reflecting psychological distance.

The remaining issue is the formulation of a parallel task, with respect to psychological distance, for gathering preference judgments. The problem can be resolved through a simple translation of the essence of the psychological distance judgment task to the judgment of preference distance. That is, instead of basing the discrimination on psychological distance, the respondent can be instructed to consider how much he or she prefers each stimulus in the pair. Having considered absolute preference for each, then, the respondent can use the same basic judgment task. In this case, however, the basis of judgment is relative difference in preference. Thus, all pairwise differences in preference, produced by forcing the respondent to make fine discriminations required by either the complete sorting of these differences or by the standard 1–9 dissimilarity scale, can be recorded in a format identical to that of the psychological distances.

A thought-provoking by-product of this type of procedure is the relaxation of the implicit assumption that preference must be a unidimensional construct. Although radically different from all standard preference-based models, the logic underlying this multidimensional format for gathering preference judgments is worth reviewing.

To elaborate, a consistent point of view held by many of the means-end theorists, and typified by Gutman (1982), is that the consumption occasion provides the basis for determining which consequence is considered desirable, and thus which perceptual orientation is operative. Consumers, given the means-end framework, are assumed to have multiple orientations that are triggered by a given occasional context (i.e., combination of situation and actors). Thus, if the means-end perspective is valid, preference would in fact have to be multidimensional in nature, thereby warranting this type of research methodology. It should be noted, however, that the multidimensionality of preference is not a necessary result of the application of this approach. A unidimensional representation could be reflected just as well.

In sum, the primary goal of this research approach is to determine the relative value of levels of abstraction, embodied in the means-end approach, in gaining additional insight into the judgment processes of perceptual differences and differences in preference. Secondarily, and paramount to the more genuine value research issues at hand, is the issue of how well consumers can deal with these higher levels of abstraction. Toward this end, two small-scale consumer studies (Reynolds, Gutman and Fiedler, 1984; Reynolds and Jamieson, 1984) and a study investigating the evaluation process used to assess individuals in an organization (Jolly, 1985), have recently illustrated this methodology.

The top-line summary of the findings of these three studies are:

1. On average, the "attribute" level produces the highest "fit" with pairwise psychological distance judgments.
(2) On average, the values level distinctions produce the highest “fit” with pairwise preference distance judgments, with consequences being second and attributes third.

(3) In terms of overall fit, pairwise preference judgments are accounted for or, are reproduced, better than judgments of psychological distance.

(4) The higher in terms of involvement the product category is perceived, the less likely the respondent can select their “best” ladder that corresponds most closely to their pairwise preference judgments.

(5) The assigning of importance weights to the attribute-consequence-value elements of a ladder, and their subsequent comparison to “goodness-of-fit” statistics, reveals that the higher levels are significantly underestimated.

Clearly, these preliminary findings lead one to strongly question any instrument that relies on self-report of higher level constructs such as values. More specifically, these initial findings from the “micro” model suggest that the implicit assumptions of the “macro” approach are tenuous at best. If the “macro” methods are to be considered, it would seem advisable (and necessary) for the researcher to validate each scoring algorithm with this more objective and thus verifiable methodology.

CONCLUSION

The need for further research on the advantages and disadvantages of means-end conceptualization is evident. Research evaluating alternative research methods would be an initial priority. In particular, the emphasis should be on further understanding this multidimensional concept of preference and its relation to more traditional measures.

Additional issues of substantial interest include the following: Do consumers utilize the same values across product classes? Are the dominant preference levels operating for a given individual consistent across product categories? Is there a relation between the dominant level of abstraction and other theoretical constructs, such as involvement?

Based on the studies cited here and others, the clear differences between the levels of abstraction and their relation to the judgment processes of perception and preference provide support for the process perspective attributed to Means-End Theory. A connected hierarchy of translations of meaning, from the product attributes to how, ultimately, they are personally meaningful to the consumer, would seem a logical way of storing information and thus serve as the perceptual lens through which one sees and processes information. Although this last point clearly is conjecture, particularly given the early stage of research in this area, the fact that the data are consistent across substantially different product classes and in the evaluation of subordinates merits further consideration.
Macro versus Micro

REFERENCES


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