# Underlying Determinants of Clothing Quality: The Consumers' Perspective

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# Underlying Determinants of Clothing Quality: The Consumers' Perspective

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*Abstract*

*The means-end chain model provided the framework to assess how consumers evaluate clothing quality by examining the cognitive structure that exists between the evaluative criteria used to judge quality and personal values. The in-depth probing technique of laddering was used to elicit responses from 25 women. Analysis of the resulting protocols indicates that for this group of consumers, the concept of perceived clothing quality includes a number of associated concepts at various levels of abstraction. While a number of attributes were identified by the subjects, only "fabric" was consistently chosen by the women to denote quality. The underlying reasons for their choice become evident at higher levels of abstraction where other concepts of perceptions of quality emerged. In this study, consumers evaluated quality using attributes that they associated with social, psychological, economic, physiological, and aesthetic consequences. Research to assess how consumers evaluate quality should be designed to include factors other than physical attributes.*

*Key Words*: clothing quality, means-end analysis

Quality is a factor used by many manufacturers, retailers, and marketers to differentiate their product from their competitors'. How consumers perceive quality and how those perceptions affect decision making are critical issues to those interested in consumer behavior. Clothing researchers have attempted to identify how consumers perceive clothing quality. Generally, quantitative methodologies have been used that are limited to unidimensional scales concentrating on the effect of single or multiple concrete attributes on consumers' perceptions of quality (e.g. Baugh & Davis, 1989; Behling & Wilch, 1988; Davis, 1985, 1987; Heisey, 1990). The use of only attribute descriptors to assess perceived quality does not provide information about the underlying reasons for the attribute's importance to consumers. A single attribute may be interpreted in a variety of ways, while different attributes may provide essentially the same meaning to different individuals (Reynolds & Jamieson, 1985). To understand the concept of perceived quality, the meaning a consumer gives to a specific attribute and the additional associations or linkages to consequences and personal values are essential (Reynolds & Jamieson, 1985). Therefore, the purpose of this study is to evaluate the underlying meaning of attributes used by consumers to judge clothing quality by examining the cognitive structure that exists between the evaluative criteria used to judge quality and personal values.

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## Perceptions of Quality

Generally, studies of perceptions of clothing quality have focused on either extrinsic or intrinsic information cues used by consumers to evaluate quality. Effects of physical attributes such as brand or designer labels (Behling & Wilch, 1988; Davis, 1987), country of origin (Davis, Kern, & Sternquist, 1986; Dickerson, 1982; Heisey, 1990; Sternquist & Davis, 1986; Wall & Heslop, 1986), and store image (Baugh & Davis, 1989; Heisey, 1990; Sternquist & Davis, 1986) on consumers' perceptions of quality have been inconsistent. Davis (1985) ascertained that consumers could differentiate between low and high quality garments based on ratings of physical attributes of the garments, other studies held garments constant while manipulating other cues such as price, store image, or country of origin and have suggested some consumers perceived quality differences while others did not (Baugh & Davis, 1989; Behling & Wilch, 1988; Heisey, 1990; Sternquist & Davis, 1986). What attributes did those consumers use to determine if differences in quality were or were not present? What determines the attributes selected by consumers to evaluate quality? Are there factors besides physical attributes that consumers use to evaluate quality?

These questions may be answered by examining underlying factors involved in consumers' perceptions of quality. The means-end chain model, reported in marketing literature (Reynolds, 1985; Reynolds & Gutman, 1984b), provides one method to operationalize the concept of perceived quality by allowing consumers to evaluate product

choices in their own words (Zeithmal, 1988). This methodology directly taps an individual's choice of physical attributes used to evaluate quality and then links the attributes to personal values by probing the cognitive associations in memory related to the attributes.

Personal values have been recognized by researchers as a basic psychological construct with the potential for affecting a wide range of consumption-related behavior (Gutman, 1982; Rokeach, 1973). Clothing researchers have recognized the importance of personal values in purchase decisions (Ryan, 1966; Sproles, 1979) and have segmented consumers based on personal values and clothing selection (Cassill & Drake, 1987; Jenkins & Dickey, 1976). Generally, these studies have been limited to quantitative approaches which segment consumers into predetermined groups based on their value orientation. These methods have failed to provide an understanding of how specific concrete aspects of the product fits into the consumer's life (Reynolds & Gutman, 1988). Little research has been conducted to assess the effects personal values have on an individual's perception of clothing quality. This may be due to the more qualitative nature of psychological approaches to research and the difficulty in analyzing the resulting data (Reynolds & Gutman, 1988). Many psychological techniques are grounded in motivation research (Ditcher, 1960) which result in highly interpretive psychoanalytical procedures and data that are difficult to analyze. Methodology associated with the means-end chain model overcomes some of the problems associated with these approaches by incorporating more objective data collection and analysis techniques (Reynolds & Gutman, 1988).

## Means-End Chain Theory

The means-end theory provides a conceptual cognitive framework that relates salient values of the consumer with evaluative criteria (attributes) of the product (Gutman, 1982; Howard, 1977; Vinson, Scott, & Lamont, 1977). Inherent in the theory is the assumption that product information is retained in memory at several levels of abstraction, from concrete attributes to personal values or goals. Gutman (1982) expanded the theory underlying means-end by linking consequences of consumers' actions to their choices of products or brands. The model may be conceptualized as shown in Figure 1.

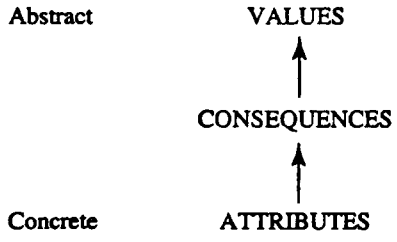


**Figure 1. Conceptual model of the means-end chain and levels of abstraction.**

Gutman (1982) provided a research paradigm to examine the association between personal values and consequences and their relationship to product characteristics. The links from concrete attributes to higher levels of abstraction (consequences) and ultimately to self, are assumed to determine the basis for perceptions that govern choice (Reynolds, 1985). Central to the expanded theory is the belief that consumers choose actions that maximize desired consequences and minimize undesired consequences.

Means-end theory assumes that: (a) values play a dominant role in guiding choice patterns, (b) all consumer actions have consequences, and (c) consumers learn to associate a particular consequence to a particular action (Gutman, 1982). Consequences accrue from consuming products and those consequences may be desirable (benefits) or undesirable. They may occur directly from use of the product, indirectly from use or effect at a later time, or from reactions of others to the individual's behavior. Attributes create consequences and may be defined as the physical characteristics of the item under consideration. Personal values[1] determine whether consequences are positive or negative. Therefore, values provide impetus for behavior, perceived consequences determine the behavior, and the attributes are what make up the product that actually produces the consequences.

The model offers a procedural guide that establishes linkages or associations connecting values important to the consumer to specific attributes of products. The "means" are identified as product attributes and the "ends" as values important to the consumer (Gutman, 1982). Theoretically, then, by understanding why things are personally meaningful, the underlying basis of evaluation is determined.

## Methods

### Subjects

Adult women between the ages of 26 and 45 were recruited to participate in the study. The women were screened to assure they had no previous formal training in home economics and/or clothing and textiles since there is some evidence that consumer search and evaluation behavior may be influenced by prior training (Alba & Hutchinson, 1987). The size of the sample was limited to 25 since Olson and Reynolds (1983), using the methodology described in this study, found 25 to be sufficient. While testing various sample sizes, they found that even when the number of respondents was increased to as high as 250, relatively few new concepts were generated. They noted that people seem to have a similar and rather limited set of concepts in their cognitive structures. However, each subject produces multiple ladders that increases the number of means-end chains available for analysis.

[1]Values in this study are the instrumental and terminal values identified by Rokeach, M. (1973) in The nature of human value.

## Stimuli

Three women's blazers similar in design, color, and fiber content were used as the stimuli for the study[2]. All labels attached to the garments at the time of purchase were left on the jackets including price, brand, and store of purchase to allow the subjects to have the same information as they would in an actual purchase situation. A panel of four professionals in clothing and textiles used Norum and Clark's (1989, pp.4-5) objective clothing quality measure to differentiate the levels of quality of the blazers.

An one-way analysis of variance (ANOVA) indicated a significant difference in objective quality [$F$ (2,9) = 31.250, $p < .0001$]. The least significant difference test for *post hoc* comparisons revealed a significant difference between the highest and lowest quality blazers ($M$ = 5.925 and 3.450, $p < .0001$), the highest and medium quality blazers ($M$ = 5.925 and 4.175, $p < .0004$), and between the lowest and middle quality blazers ($M$ = 4.175 and 3.450, $p < .05$).

## Data Collection

The blazers were displayed on identical free standing hangers and labeled as "A", "B", and "C" for ease in identification. Subjects were told the purpose of the study was to determine how consumers evaluate clothing, especially the quality of clothing[3]. The women were told all their responses would be confidential, but that they would be tape recorded to ensure all information was accurately reported.

Each subject was asked to examine the garments to determine if there were any differences in quality. Each person reported a perceived difference in quality of the blazers and so was asked to identify which blazer was of highest quality plus verbalize reasons for the choice. As subjects verbalized their reasons, the responses were recorded on paper by a researcher. Researchers reviewed written responses with each subject and asked her to rank the importance of each response for determining the quality of clothing on a seven point Likert scale. Attributes that were rated as 5, 6 or 7 (important/very important) were used as the bases for the laddering procedure.

## Laddering Procedure

The procedure central to this study is a controlled qualitative research method that probes levels of abstraction through an in-depth interviewing technique, termed laddering (Gutman & Reynolds, 1979; Reynolds & Gutman, 1984a; 1984b). The first step is to elicit from the consumer the bases for distinguishing between or among stimuli in terms of perception. This information is then used in a sequence of in-depth probes in the form of "why is that important to you?" questions to trace the network of associations in memory.

For each attribute rated as important/very important, the subject was asked: "You mentioned that (attribute) was important in determining quality. Why is (attribute) important to you in determining quality?" The subjects response became the basis for the following question: "Why is (response) important to you?" Each response became the basis for a subsequent question. The questioning continued until the subject mentioned a value, or until she had no further response. The procedure was repeated for each attribute the subject identified as being important in evaluating clothing quality.

## Data Analysis

The tape recorded interviews were transcribed and content analysis of the resulting protocols was conducted. Responses were analyzed and those with similar meanings were collapsed into concepts that incorporated the meanings of words given by the subjects. Three professional judges developed a coding framework by grouping the elicited concepts into four levels of abstraction: attributes, inferences, consequences, and values. Although the conceptual model (Gutman, 1982; Reynolds and Gutman, 1984b) for this study suggested only three categories or levels of response—attributes, consequences, and values—review of the data indicated another level after the attribute level but prior to the consequence level. Gutman (1982) recognized the existence of such a category, suggesting it may provide a bridge between consequences that are properties of the person and attributes that are part of the product. No further study, however, was found that categorized or analyzed this particular level. Since this study involved several concepts which could be placed within the category previously recognized but not identified by Gutman, the level was coded and analyzed for use. Through an assessment of the types of responses made at this level the professional judges agreed to label the category "inferences" of attributes. Each category was further divided into subcategories. Table 1 illustrates the framework used to code the responses of the subjects.

Two independent judges used the resulting framework to code the actual responses of subjects. Disagreements in coding were negotiated between the judges so that each response was entered into only one category. Interjudge agreement of coded responses within categories was determined by dividing the number of agreements about coding of responses by the sum of agreements plus disagreements. Interjudge reliability of all responses was calculated (Scott, 1955). Agreement between judges was 100% at the attribute level, 85.2% at the inference level, 86.4% at the consequence level, and 91.4% at the values level. The total interjudge reliability of the coded responses was .83.

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[2]The selection of the garments was guided by the criteria suggested by Davis (1985) and Norum and Clark (1989) to differentiate the level of objective clothing quality. The blazers differed in construction techniques, design details (for example, patch pockets, welt pockets, or hidden pockets; sleeve plackets or not; metal or plastic buttons), and fiber content of the lining and jacket. One blazer was 100% wool, one a blend of 70% wool and 30% polyester, and the third a blend of 80% wool and 20% nylon. There were also visual and tactile differences in the fabrics including the weight, softness, firmness of weave, and luster.

[3]While subjects were told the general purpose of the study, they were not told that the primary purpose was to assess attributes of quality and associations linking the attributes to consequences and values. Since meaning is encoded in the associations rather than the specific attributes, the probing technique which was used to uncover concepts held in memory should have prevented non-random responses, thus preventing contamination of data as a result of "demand effects".

**Table 1. Coding Framework and Summary of Responses.**

| Concepts | *n* | Percentage |
|---|---|---|
| Attributes- | | |
| Extrinsic | 4 | 4.08 |
| Intrinsic | 94 | 95.88 |
| Inference- | | |
| Expectations | 75 | 76.52 |
| Descriptions | 38 | 38.72 |
| Perceptions | 69 | 70.36 |
| Workmanship | 51 | 52.06 |
| Consequence- | | |
| Economic | 53 | 56.10 |
| Social | 76 | 77.56 |
| Psychological | 77 | 78.50 |
| Physiological | 9 | 9.18 |
| Aesthetic | 11 | 11.20 |
| Value- | | |
| Instrumental | 25 | 25.46 |
| Terminal | 56 | 57.10 |

## Results

### Content Analysis

A majority of the women (76%) identified the garment with the highest objective mean score as highest in quality. Each subject identified between two and six salient attributes to evaluate quality of the blazers. These attributes became the bases for the probing technique which produced ninety-eight (98) chains to be analyzed from the 25 respondents. Subjects generally generated multiple concepts about a single attribute at the inference and consequence levels. For example, a chain elicited from one subject included the following concepts: Fabric (Attribute), firm (Inference), won't pill (Inference), can wear longer (Consequence), saves money (Consequence), feel good about self (Value).

Table 1 indicates the frequency of types of concepts elicited from the subjects at each level of abstraction. The majority of the chains (96%) included an intrinsic attribute concept when evaluating quality. Approximately 77% of the chains contained inference concepts that were expectations and 70% included concepts relating to perceptions of image created by the garments. Psychological consequence concepts and social consequence concepts were elicited in 78.5% and 77.5% of the chains respectively. Fifty-seven percent of the chains ended in values classified as terminal values by Rokeach (1973).

### Hierarchical Value Structure Maps

The final evaluation of the responses elicited from the laddering procedure is the construction of a hierarchical value map (HVM)(Gutman, 1982; Gutman & Alden, 1985; Reynolds & Gutman, 1984a, 1984b; Reynolds & Jamieson, 1985). These maps visually display the implied relationships among cognitive elements across subjects and permit a visual identification of the path(s) that extend from attributes to values (Gutman, 1982).

Key to the development of HVM is the determination of strongly linked concepts. That is, how often did the mention of one concept cause the mention of another? To determine associations between concepts in this study, each concept was paired with every other concept elicited in the study and frequency and pattern of associations of concepts were calculated. Consideration was given to the frequency of responses needed in the chains to include paired concepts in the hierarchical value structure map. Four or more links have been used as the determinants of inclusion in reported literature on means-ends analysis (Olson & Reynolds, 1983), although, no explanation for the cut-off of inclusion/exclusion was discussed. The number selected for this study needed to be high enough to be indicative of a strong association of concepts by the subjects, and yet still create a comprehensive model of the content and cognitive associations the subjects made when evaluating clothing quality. The requirement of concepts being paired in seven or more chains appeared to create the clearest and most comprehensive model of strong associations of concepts used by this group of subjects to evaluate quality. Therefore, concepts linked in seven or more chains were used to develop the HVM.

Using the criteria discussed, a hierarchical value structure map was constructed to show the number of associations this group of subjects made between levels of abstraction (Figure 2).

### Analysis of HVM

"Fabric" was the only attribute linked to inference concepts in a sufficient number of chains to be included in the map. It was associated with eight concepts at that level. The most common associations were with "durable" (20), "looks high quality" (10), "feels good" (10), and "firm" (10).

Highest associations between the inference and consequence levels occurred between "durable" and "saves money" (17), "looks high quality" and "feel good about myself" (15), and "well made" and "feel good about myself" (13). "Looks like high quality" and "durable" were associated with four of the consequences each.

Six consequences—"saves money," "can wear longer," "good job," "create image," "feel good about self," "look good to others"—were linked with three personal values. Three additional consequences—"look clean/crisp," "can do a good job," and "look successful"—were linked to values in seven or more chains, but not to inferences thus, were added to the map at this level. The consequences "feel good about myself" and "look good to others were linked to all three values—"self-esteem," "social recognition/respect," and "capable."

Linkages that occurred within each level were calculated. Six linkages were elicited between concepts at the inference level. (Please note that these do not appear on the HVM because of their positioning to each other). "Looks like higher quality" was linked to "durable," "manufacturer spent time/paid attention to detail," and "well made"; "durable" was also linked to "natural fiber," "holds shape," and

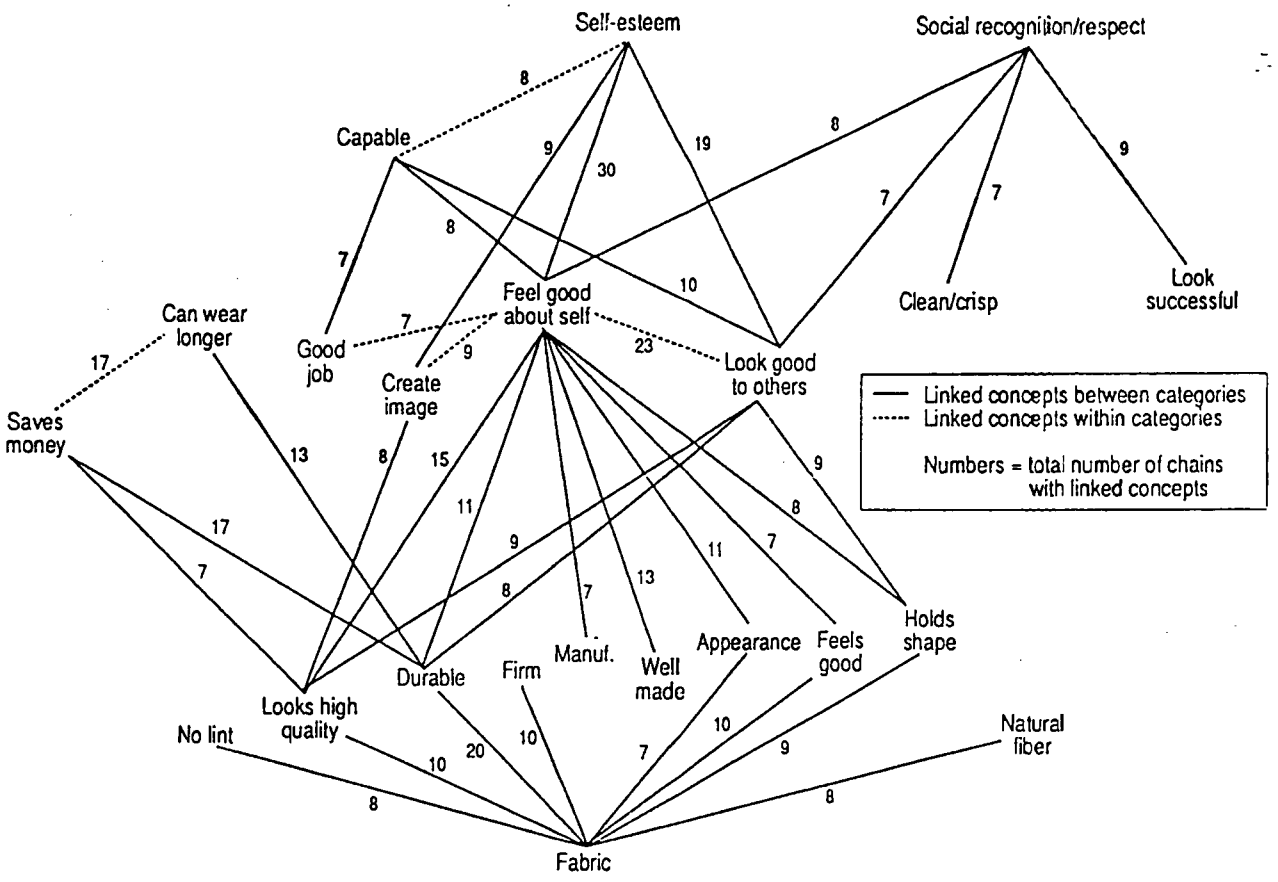


**Figure 2. Linked attribute to inference concepts; inference to consequence concepts; consequence to personal values concepts.**

"well made." Four concepts within the consequence level were linked. "Feel good about myself" was linked to "will do a good job," "create image," and "look good to others"; "saves money" was linked to "can wear longer." At the value level "capable" was linked to "self-esteem."

## Discussion

"Fabric" was the only attribute identified by the majority of the subjects (92%) for evaluating quality. Closer analysis of the reasons given for selecting an attribute to determine quality (inference concepts) made it logical that the fabric is the first attribute noticed. Fabric is an integral part of a garment. If the fabric does not meet standards expected in a quality garment, all other factors may be unimportant. In addition, if the subjects' lack of knowledge of the quality concept limits mention of specific construction techniques, fabric seems the logical choice for basing or at least verbalizing a quality decision. All subjects would have had experience with "fabric" and formed perceptions of it. These perceptions, then, could be used to make evaluations of quality of these garments based on information about an attribute for which all subjects had experience.

At the inference level, subjects identified motives for selecting attributes. These motives included expectation concepts and perception of image concepts that a high quality garment would create. As a group, subjects expected the fabric that was firm and smooth would not pick up lint or pill, would hold its shape, and be durable. They also thought that fabric helped to create perceived images of what a quality garment should look like in creating a good overall appearance. Fabric was also important for economic reasons. Fabrics meeting expectations should save the consumer money since the garment could be worn longer. Fabric that was described as "looks higher quality" had the psychological effect of making the subject feel good about herself, and the social effect of being able to create images and looking good to other people. These consequences resulted from personal values of capable, self-esteem, and social recognition/respect.

In this study fabric was perceived to have had a salient effect on overall appearance and performance of the garment and therefore, a major influence on evaluation of the quality. This selection of a single attribute may have occurred due to the control of variables (such as color and style) in the stimuli, perhaps resulting in limited formation or verbalization of quality perceptions on other cues. However, this finding is consistent with those of Fiore and Damhorst (1992) who found fabric to be the best predictor of perceived quality of apparel.

Although previous work (Rokeach, 1973) did not identify economy as a personal value, many of the subjects in this study indicated "saves money" and "can wear longer" were important consequence concepts of a quality garment and ended their chains with one or both concepts. Other studies (Jenkins & Dickey, 1976; Hemmerick & Sproles, 1988) have found economic factors to be important in evaluating the quality of garments.

Results of this study indicated consumers judge clothing quality for more than its economic benefits. Social and psychological benefits were at least equally as important. Social consequence concepts were mentioned in 77.5% of the chains and psychological consequences in 78.5%. In addition, physiological consequences were mentioned in 9% of the chains and aesthetic consequences in 11%. The findings indicate that for this group of women the social, psychological, and economic consequences are salient concepts used in evaluating quality. Thus, high quality garments play an important role in how women feel about themselves, how they perceive others to view them, and how they assess economic value for money spent.

The underlying importance of fabric to quality led to higher levels of abstraction. The methodology required quality to be evaluated within the consumer's evoked set of information. Their verbalizations reflected a global assessment of the responses they expected to be generated from wearing a quality garment. This result lends support to Zeithmal's (1988) notion of perceived quality as a global construct.

Consumers in this study identified quality based on attributes that they evaluated for performance, perceptual image, workmanship, and expectations of the attributes. The social, psychological, economic, physiological, and aesthetic consequences of the attributes selected were factors that influenced use/avoidance of an attribute to evaluate quality. Personal values gave impetus to consequences that the subjects desired or avoided.

Gutman's (1982) research paradigm is appropriate for studying consumers' perception of clothing quality. The concrete attribute (fabric) was linked to inferences to higher level abstract concepts (consequences) and then to values. This finding lends support to a primary assumption underlying means-end theory: product information is retained in memory at several levels of abstraction. If, as posited by the theory, consumers choose actions that maximize desired consequences, and consequences are linked to product attributes which denote quality, then perceived quality is indeed a determinant of product purchase. However, one should note that consequences associated with attributes of quality are not just physical, but include economic, social, psychological, and aesthetic.

Analysis of the data from this study confirm Gutman's (1982) observed existence of an additional level of abstraction for categorizing information, labeled as inferences for this research. Although no other study has analyzed this level, several concepts mentioned after the attribute level, but prior to the consequence level in this study made it possible to identify and include the new level. Several concepts were beneficial in understanding the importance of the concrete attributes mentioned, but could not be classified at either the attribute level or consequence level. This finding may suggest that when the means-end chain is used to evaluate consumers' perceptions of products, the model should be expanded to include an additional level of abstraction, labeled herein as inferences.

## Implications

For this group of consumers, the concept of perceived clothing quality included a number of associated concepts at various levels of abstraction. While a number of attributes were identified by subjects in this study, none other than "fabric" was consistently chosen to denote quality. The underlying reasons for their choice became evident at higher levels of abstraction where other concepts of perceptions of quality emerged. Thus, quality appears to have a similar meaning for consumers at an abstract level, but a specific attribute or set of attributes may not necessarily indicate quality to a consumer.

It was evident through the laddering process that the same attribute selected by a number of subjects does not hold the same meaning for each one. These underlying factors may account for the mixed results found in studies based only on the effects of concrete attributes on consumers' perceptions of clothing quality. If consumers do not believe that attributes such as price, brand label, store image, and country of origin are linked to salient personal values, inconsistent results may be expected.

Results of this study indicate that consumers' perception of clothing quality should be assessed on more than the effects of physical attributes. The means-end chain model and laddering technique provide a more comprehensive method for evaluating consumers' perceptions of quality. The laddering procedure provides a technique to differentiate products, not by focusing on attributes, but rather evaluating the underlying importance of each attribute based on values. The means-end chain model and the laddering procedure can serve as an effective method in clothing research as a bridge between qualitative approaches that are difficult to quantify and quantitative models that lack depth of meaning. The methodology uncovered salient factors used in assessing clothing quality that have not been examined or tested in the literature related to perceived clothing quality.

Further studies with more diverse groups of subjects should be conducted. Subjects who differ in age, gender, and ethnic background might be expected to hold different values and thus respond differently when evaluating quality. Responses from these studies can be used to develop a multidimensional measurement instrument and model to assess quality perceptions. By uncovering some of the motivating factors that influence clothing choices, researchers can move closer to understanding and predicting consumers' behavior relating to clothing.

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