

Valarie A. Zeithaml

Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence

Evidence from past research and insights from an exploratory investigation are combined in a conceptual model that defines and relates price, perceived quality, and perceived value. Propositions about the concepts and their relationships are presented, then supported with evidence from the literature. Discussion centers on directions for research and implications for managing price, quality, and value.

THOUGH consumer perceptions of price, quality, and value are considered pivotal determinants of shopping behavior and product choice (Bishop 1984; Doyle 1984; Jacoby and Olson 1985, Sawyer and Dickson 1984, Schlechter 1984), research on these concepts and their linkages has provided few conclusive findings. Research efforts have been criticized for inadequate definition and conceptualization (Monroe and Krishnan 1985; Zeithaml 1983), inconsistent measurement procedures (Monroe and Krishnan 1985), and methodological problems (Bowbrick 1982; Olson 1977; Peterson and Wilson 1985). One fundamental problem limiting work in the area involves the meaning of the concepts: quality and value are indistinct and elusive constructs that often are mistaken for imprecise adjectives like "goodness, or luxury, or shininess, or weight" (Crosby 1979). Quality and value are not well differentiated from each other and from similar constructs such as perceived worth and utility.

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Because definition is difficult, researchers often depend on unidimensional self-report measures to capture the concepts (Jacoby, Olson, and Haddock 1973; McConnell 1968; Shapiro 1973) and thus must assume shared meanings among consumers.

What do consumers mean by quality and value? How are perceptions of quality and value formed? Are they similar across consumers and products? How do consumers relate quality, price, and value in their deliberations about products and services? This article is an attempt to provide answers to these questions by:

- defining the concepts of price, quality, and value from the consumer's perspective,
- relating the concepts in a model, and
- developing propositions about the concepts, examining the available evidence in support of the propositions, and suggesting areas where research is needed.

To accomplish these objectives, a review of previous research was augmented by an exploratory investigation of quality and value in the product category of beverages. Company interviews, a focus group interview, and 30 in-depth consumer interviews conducted by free-elicitation approaches generated qualitative data

that supplemented previous research and served as the basis for 14 propositions.

The Exploratory Study

In the exploratory phase of the research, company, focus group, and in-depth consumer interviews were conducted to gain insight into consumer perceptions of quality and value. Cooperation was obtained from a national company that markets three distinct product lines of beverages: a line of 100% fruit-flavored children's drinks, a line of 100% fruit juices, and a line of tomato-based juices. In-depth interviews were held with the marketing research director, the senior product manager for juices, two company strategic planners, and the president of the company's advertising agency. Open-ended questions pertained to issues such as company knowledge about quality and value perceptions of consumers, ways the company determined those perceptions, and how quality and value were communicated to consumers.

A focus group interview on the topics of quality and value in beverages was held in a metropolitan area in the Southeast. The focus group was formed in accordance with guidelines traditionally followed in the marketing research field (Bellenger, Bernhardt, and Goldstucker 1976). Participants were recruited to fit the demographic profile of purchasers of fruit- and tomato-based beverages. All participants were women between the ages of 25 and 49 and all had at least one child younger than 10 years of age. Participants were screened to ensure current or recent usage of fruit- and tomato-based beverages. The identity of the participating firm was not revealed in the interview; discussion about price, quality, and value centered on consumer experiences and perceptions relating to beverages in general rather than to the specific brands of the sponsoring company. The moderator's questions covered such topics as the meaning of quality and value, the attributes used to evaluate quality and value, and the role of price in quality and value judgments.

A total of 30 in-depth interviews with female consumers were held in three metropolitan areas (one in the Southwest, one on the East Coast, and one in the Midwest). Free-elicitation approaches recommended by Olson and Reynolds (1983) were used to obtain information about the cognitive structures of consumers. These techniques included triad sorts and laddering. In the triad sorts, similar brands in the beverage category were divided into sets of three and subjects were probed for distinctions among them. This initial process uncovered the important distinctions that respondents used to discriminate among products. The laddering process, which followed the triad sorts, involved a sequence of in-depth probes designed to force the consumer up the ladder of abstraction. As these

procedures had successfully elicited the more important higher levels of abstraction in previous studies (Gutman and Alden 1985; Reynolds, Gutman, and Fiedler 1984; Reynolds and Jamieson 1985), they were used to reveal the links among product attributes, quality, and value. After these indirect methods, subjects responded to open-ended questions covering such topics as information needed to make judgments about quality and value, impact of related factors (e.g., advertising and packaging) on perceptions, and definitions of the concepts. Before debriefing, demographic and beverage usage data were collected from respondents.

As is typical in exploratory studies using means-end chains (e.g., Olson and Reynolds 1983), the data generated were not numerical. Instead, the data were in the form of protocols and means-end maps for individual consumers. Patterns of responses and observed similarities across individuals form the "results" of this type of exploratory study. When combined with the descriptive data from the executive and focus group interviews, the observations and insights provide a framework for speculating about the concepts and their relationships (Figure 1).

The Model

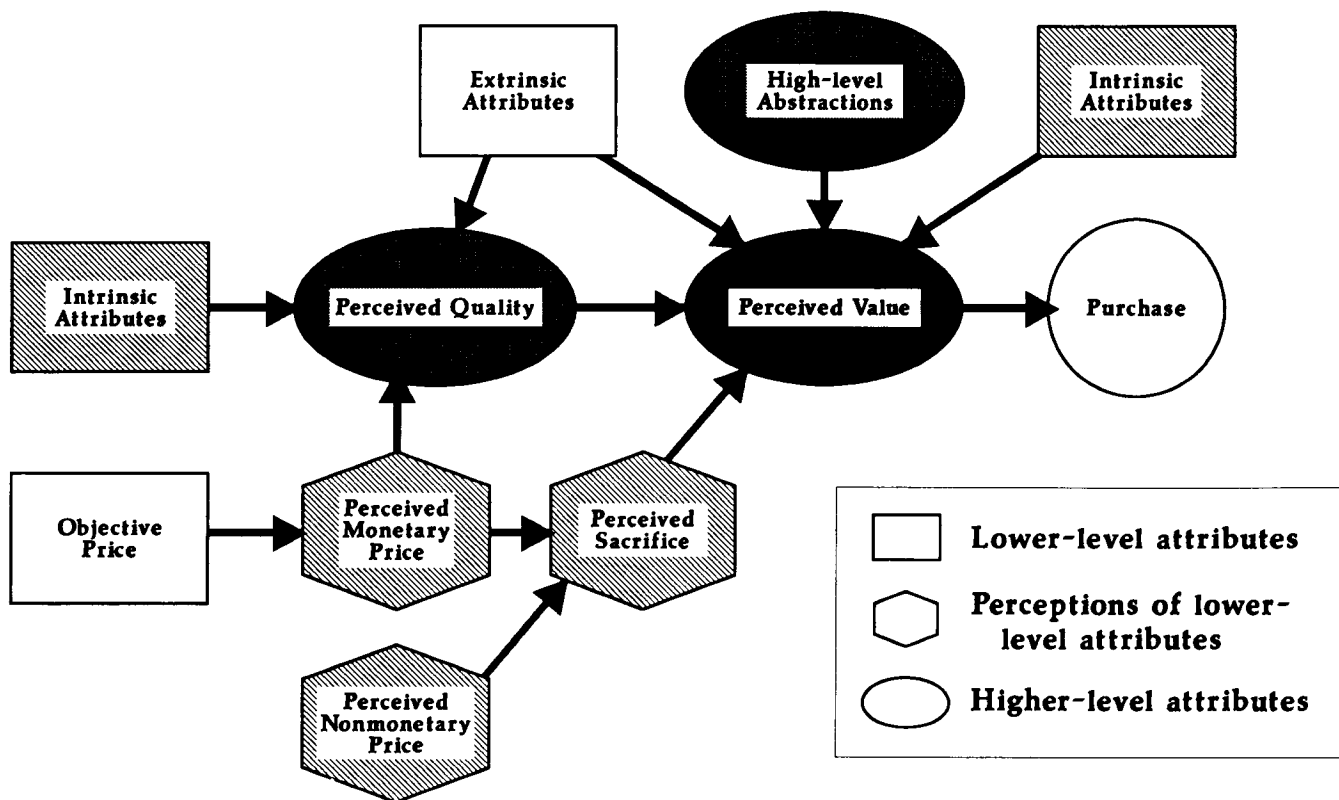
Figure 1, an adaptation of a model first proposed by Dodds and Monroe (1985), affords an overview of the relationships among the concepts of price, perceived quality, and perceived value. In the following sections, relevant literature and evidence from the exploratory investigation are used to define and describe each concept in the model. To differentiate between proposed relationships and empirically supported relationships, discussion of each proposition is divided into two parts. First, propositions are developed on the basis of the qualitative data from the exploratory study and other conceptual work from the literature. Second, for each proposition, empirical evidence that supports and refutes the proposition is reviewed.

The Concept of Perceived Quality

Quality can be defined broadly as superiority or excellence. By extension, perceived quality can be defined as the consumer's judgment about a product's overall excellence or superiority.¹ Perceived quality is (1) different from objective or actual quality, (2) a higher level abstraction rather than a specific attribute of a product, (3) a global assessment that in some cases

¹Lewin's (1936) field theoretic approach to evaluating the instrumentality of actions and objects in achieving ends could be viewed as a foundation for this definition. In his view, instrumentality is the extent to which an object or action will achieve an end. In this case, quality could be viewed as instrumentality.

FIGURE 1
A Means-End Model Relating Price, Quality, and Value



resembles attitude, and (4) a judgment usually made within a consumer's evoked set.

Objective quality versus perceived quality. Several researchers (Dodds and Monroe 1984; Garvin 1983; Holbrook and Corfman 1985; Jacoby and Olson 1985, Parasuraman, Zeithaml, and Berry 1986) have emphasized the difference between objective and perceived quality. Holbrook and Corfman (1985), for example, distinguish between mechanistic and humanistic quality: "... mechanistic [quality] involves an objective aspect or feature of a thing or event; humanistic [quality] involves the subjective response of people to objects and is therefore a highly relativistic phenomenon that differs between judges" (p. 33). "Objective quality" is the term used in the literature (e.g., Hjorth-Anderson 1984; Monroe and Krishnan 1985) to describe the actual technical superiority or excellence of the products.

As it has been used in the literature, the term "objective quality" refers to measurable and verifiable superiority on some predetermined ideal standard or standards. Published quality ratings from sources such as *Consumer Reports* are used to operationalize the construct of objective quality in research studies (see

Curry and Faulds 1986). In recent years, researchers have debated the use of these measures of quality on methodological grounds (Curry and Faulds 1986; Hjorth-Anderson 1984, 1986; Maynes 1976; Sproles 1986). Concern centers on the selection of attributes and weights to measure objective quality; researchers and experts (e.g., *Consumer Reports*) do not agree on what the ideal standard or standards should be. Others (such as Maynes 1976) claim that objective quality does not exist, that all quality evaluations are subjective.

The term "objective quality" is related closely to—but not the same as—other concepts used to describe technical superiority of a product. For example, Garvin (1983) discusses product-based quality and manufacturing-based quality. Product-based quality refers to amounts of specific attributes or ingredients of a product. Manufacturing-based quality involves conformance to manufacturing specifications or service standards. In the prevailing Japanese philosophy, quality means "zero defects—doing it right the first time." Conformance to requirements (Crosby 1979) and incidence of internal and external failures (Garvin 1983) are other definitions that illustrate manufacturing-oriented notions of quality.

These concepts are not identical to objective quality because they, too, are based on perceptions. Though measures of specifications may be actual (rather than perceptual), the specifications themselves are set on the basis of what managers perceive to be important. Managers' views may differ considerably from consumers' or users' views. *Consumer Reports* ratings may not agree with managers' assessments in terms of either salient attributes or weights assigned to the attributes. In a research study for General Electric, Morgan (1985) points out striking differences between consumer, dealer, and manager perceptions of appliance quality. When asked how consumers perceive quality, managers listed workmanship, performance, and form as critical components. Consumers actually keyed in on different components: appearance, cleanliness, and durability. Similarly, company researchers in the exploratory study measured beverage quality in terms of "flavor roundedness" and "astringency" whereas consumers focused on purity (100% fruit juice) and sweetness.

To reiterate, perceived quality is defined in the model as the consumer's judgment about the superiority or excellence of a product. This perspective is similar to the user-based approach of Garvin (1983) and differs from product-based and manufacturing-based approaches. Perceived quality is also different from objective quality, which arguably may not exist because all quality is perceived by someone, be it consumers or managers or researchers at *Consumer Reports*.

Higher level abstraction rather than an attribute. The means-end chain approach to understanding the cognitive structure of consumers holds that product information is retained in memory at several levels of abstraction (Cohen 1979; Myers and Shocker 1981; Olson and Reynolds 1983; Young and Feigen 1975). The simplest level is a product attribute; the most complex level is the value or payoff of the product to the consumer. Young and Feigen (1975) depicted this view in the "Grey benefit chain," which illustrates how a product is linked through a chain of benefits to a concept called the "emotional payoff."

Product → Functional → Practical → Emotional
Benefit Benefit Payoff

Related conceptualizations (Table 1) pose the same essential idea: consumers organize information at various levels of abstraction ranging from simple product attributes (e.g., physical characteristics of Myers and Shocker 1981, defining attributes of Cohen 1979, concrete attributes of Olson and Reynolds 1983) to complex personal values. Quality has been included in multiattribute models as though it were a lower level attribute (criticisms of this practice have been leveled by Ahtola 1984, Myers and Shocker 1981, and oth-

ers), but perceived quality is instead a second-order phenomenon: an abstract attribute in Olson and Reynolds's (1983) terms, a "B" attribute (somewhat abstract, multidimensional but measurable) in Myers and Shocker's (1981) formulation.

Global assessment similar to attitude. Olshavsky (1985) views quality as a form of overall evaluation of a product, similar in some ways to attitude. Holbrook and Corfman (1985) concur, suggesting that quality is a relatively global value judgment. Lutz (1986) proposes two forms of quality, "affective quality" and "cognitive quality." Affective quality parallels Olshavsky's and Holbrook and Corfman's views of perceived quality as overall attitude. Cognitive quality is the case of a superordinate inferential assessment of quality intervening between lower order cues and an eventual overall product evaluation (Lutz 1986). In Lutz's view, the higher the proportion of attributes that can be assessed before purchase (search attributes) to those that can be assessed only during consumption (experience attributes), the more likely it is that quality is a higher level cognitive judgment. Conversely, as the proportion of experience attributes increases, quality tends to be an affective judgment. Lutz extends this line of reasoning to propose that affective quality is relatively more likely for services and consumer nondurable goods (where experience attributes dominate) whereas cognitive quality is more likely for industrial products and consumer durable goods (where search attributes dominate).

Judgment made within consumer's evoked set. Evaluations of quality usually take place in a comparison context. Maynes (1976) claimed that quality evaluations are made within "the set of goods which . . . would in the consumer's judgement serve the same general purpose for some maximum outlay." On the basis of the qualitative study, and consistent with Maynes' contention, the set of products used in comparing quality appears to be the consumer's evoked set. A product's quality is evaluated as high or low depending on its relative excellence or superiority among products or services that are viewed as substitutes by the consumer. It is critical to note that the specific set of products used for comparison depends on the consumer's, not the firm's, assessment of competing products. For example, consumers in the exploratory study compared the quality of different brands of orange juice (which would be the comparison context of the firm), the quality of different forms (refrigerated vs. canned), and the quality of purchased versus homemade orange juice.

Figure 2 depicts the perceived quality component of the conceptual model in Figure 1.

P_{Q1}: Consumers use lower level attribute cues to infer quality.

TABLE 1
Selected Means-End Chain Models and Their Proposed Relationships with Quality and Value

Scheme	Attribute Level	Quality Level	Value Level	Personal Value Level
Young and Feigin (1975)	Functional benefits	Practical benefit	Emotional payoff	
Rokeach (1973) Howard (1977)	Product attributes	Choice criteria	Instrumental values	Terminal values
Myers and Shocker (1981)	Physical characteristics	Pseudophysical characteristics	Task or outcome referent	User referent
Geistfeld, Sproles, and Badenhop (1977)	Concrete, unidimensional, and measurable attributes (C)	Somewhat abstract, multidimensional but measurable (B)	Abstract, multidimensional, and difficult to measure attributes (A)	
Cohen (1979)	Defining attributes	Instrumental attributes		Highly valued states
Gutman and Reynolds (1979)	Attributes	Consequences	Values	
Olson and Reynolds (1983)	Concrete attributes	Abstract attributes	Functional consequences Psychosocial consequences Instrumental values	Terminal values

Holbrook and Corfman (1985) note that early philosophers used the word "quality" to refer to explicit features (i.e., properties or characteristics) of an object as perceived by a subject (e.g., Austin 1964, p. 44; Russell 1912). Olshavsky (1985) terms this tendency to infer quality from specific attributes "surrogate-based preference forming behavior" and cites examples of product categories in which a given surrogate is highly associated with quality (e.g., size signals quality in stereo speakers, style signals quality in cars and clothes). In the exploratory study, consumers repeatedly associated quality in fruit juices with purity (e.g., 100% fruit juice with no sugar added) or freshness. In these and other product categories, one or a few attributes from the total set of attributes appear to serve as reliable signals of product quality.

Attributes that signal quality have been dichotomized into intrinsic and extrinsic cues (Olson 1977; Olson and Jacoby 1972). Intrinsic cues involve the physical composition of the product. In a beverage, intrinsic cues would include such attributes as flavor, color, texture, and degree of sweetness. Intrinsic attributes cannot be changed without altering the nature of the product itself and are consumed as the product is consumed (Olson 1977; Olson and Jacoby 1972). Extrinsic cues are product-related but not part of the physical product itself. They are, by definition, outside the product. Price, brand name, and level of advertising are examples of extrinsic cues to quality.

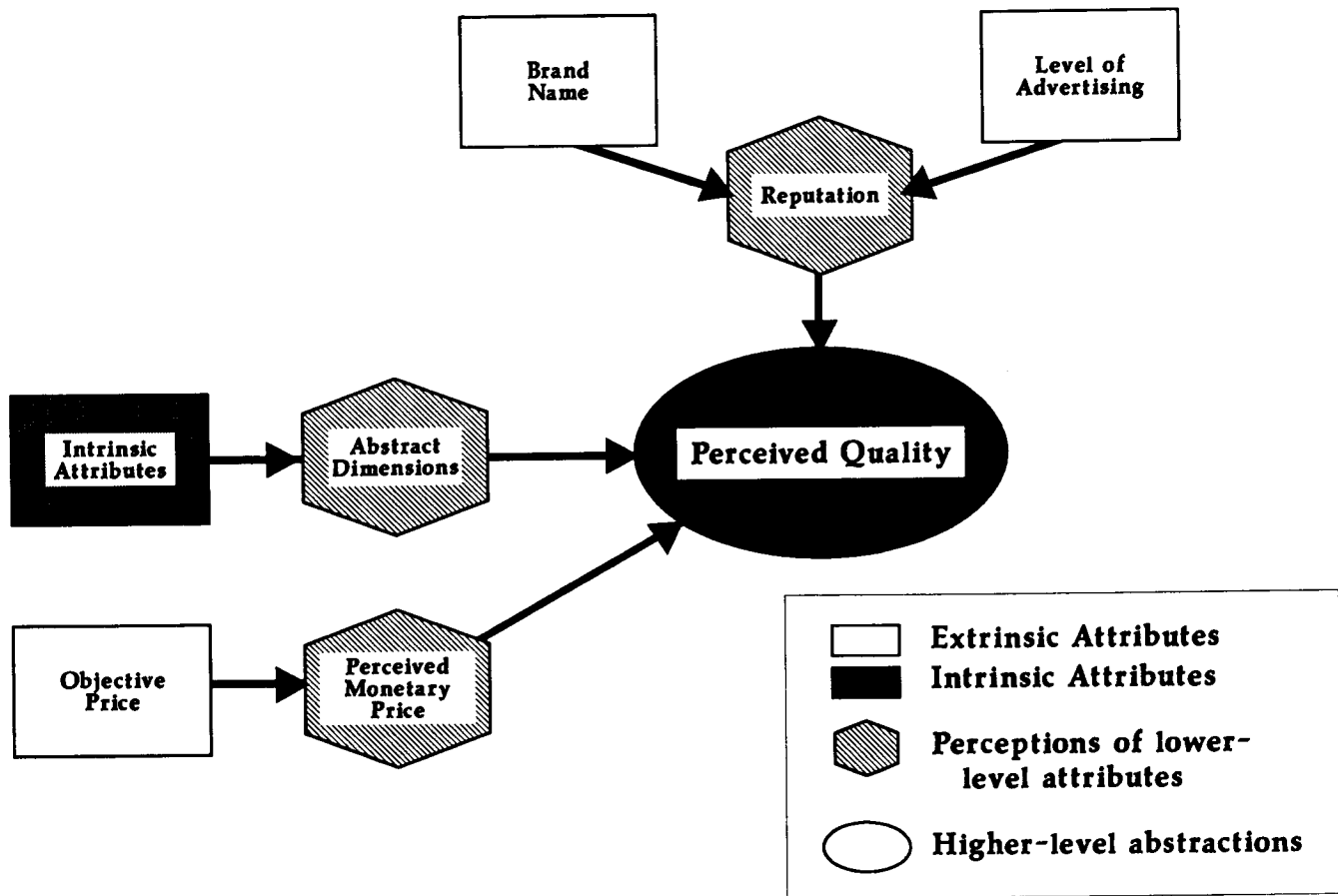
The intrinsic-extrinsic dichotomy of quality cues is useful for discussing quality but is not without con-

ceptual difficulties.² A small number of cues, most notably those involving the product's package, are difficult to classify as either intrinsic or extrinsic. Package could be considered an intrinsic or an extrinsic cue depending on whether the package is part of the physical composition of the product (e.g., a dripless spout in detergent or a squeezable ketchup container), in which case it would be an intrinsic cue, or protection and promotion for the product (e.g., a cardboard container for a computer), in which case it would be an extrinsic cue. For purposes of the model, package is considered an intrinsic cue but the information that appears on the package (e.g., brand name, price, logo) is considered an extrinsic cue.

Evidence. Researchers have identified key lower level attributes used by consumers to infer quality in only a few product categories. These lower level cues include price (Olson 1977; Olson and Jacoby 1972), suds level for detergents, size for stereo speakers (Olshavsky 1985), odor for bleach and stockings (Laird 1932), and produce freshness for supermarkets (Bonner and Nelson 1985).

²Other methods of classification could have been used for these cues. Possible alternative classification schemes include (1) tangible/intangible, (2) distal/proximal (Brunswick 1956), and (3) direct/inferential. However, each of these dichotomies has the same "fuzzy set" problems that are inherent in the intrinsic/extrinsic dichotomy. Notably, with each scheme, some cues (particularly package) would be difficult to classify. Because the intrinsic/extrinsic dichotomy has a literature underpinning it, because it is widely used and recognized, and because it has clear managerial implications, it was retained in this review.

FIGURE 2
The Perceived Quality Component



P_{Q2} : The intrinsic product attributes that signal quality are product-specific, but dimensions of quality can be generalized to product classes or categories.

Generalizing about quality across products has been difficult for managers and researchers. Specific or concrete intrinsic attributes differ widely across products, as do the attributes consumers use to infer quality. Obviously, attributes that signal quality in fruit juice are not the same as those indicating quality in washing machines or automobiles. Even within a product category, specific attributes may provide different signals about quality. For example, thickness is related to high quality in tomato-based juices but not in fruit-flavored children's drinks. The presence of pulp suggests high quality in orange juice but low quality in apple juice.

Though the concrete attributes that signal quality differ across products, higher level abstract dimensions of quality can be generalized to categories of products. As attributes become more abstract (i.e., are

higher in the means-end chains), they become common to more alternatives. Garvin (1987), for example, proposes that product quality can be captured in eight dimensions: performance, features, reliability, conformance, durability, serviceability, aesthetics, and perceived quality (i.e., image). Abstract dimensions that capture diverse specific attributes have been discussed by Johnson (1983) and Achrol, Reve, and Stern (1983). In describing the way consumers compare noncomparable alternatives (e.g., how they choose between such diverse alternatives as a stereo and a Hawaiian vacation), Johnson posited that consumers represent the attributes in memory at abstract levels (e.g., using entertainment value as the dimension on which to compare stereos and Hawaiian vacations). Similarly, Achrol, Reve, and Stern proposed that the multitude of specific variables affecting a firm in the environment can be captured in abstract dimensions. Rather than itemizing specific variables that affect particular firms in different industries under varying circumstances, they proposed conceptualizing the environment in terms of its abstract qualities or dimen-

sions (e.g., homogeneity-heterogeneity, stability-instability, concentration-dispersion, and turbulence).

Olson (1978) pointed out that consumers may use informational cues to develop beliefs about products and that task response (i.e., choice or evaluation) may be a direct function of these mediating beliefs. According to Olson, these beliefs may be of two types: descriptive, which involve a restatement of the original information in more abstract terms (e.g., "accelerates from 0 to 60 in 5 seconds" generates the belief "high performance") and inferential, which involve an inference to information missing in the environment (e.g., "accelerates from 0 to 60 in 5 seconds" generates the belief "probably corners well, too"). This distinction roughly parallels Alba and Hutchinson's (1987) distinction between interpretive and embellishment inferences and both dichotomies illustrate the level at which dimensions of quality can be conceptualized.

Interviews with subjects in the exploratory study suggested that specific intrinsic attributes used to infer quality could not be generalized across beverages, but that higher level abstract dimensions could capture the meaning of perceived quality in whole categories or classes of beverages. Purity, freshness, flavor, and appearance were the higher level abstract dimensions subjects discussed in defining quality in the beverage category.

Evidence. In a study of quality in long distance telephone, banking, repair and maintenance, and brokerage services, Parasuraman, Zeithaml, and Berry (1985) found consistent dimensions of perceived quality across four consumer service industries. These abstract dimensions included reliability, empathy, assurance, responsiveness, and tangibles. Similarly, Bonner and Nelson (1985) found that sensory signals such as rich/full flavor, natural taste, fresh taste, good aroma, and appetizing looks—all higher level abstract dimensions of perceived quality—were relevant across 33 food product categories. Brucks and Zeithaml (1987) contend on the basis of exploratory work that six abstract dimensions (ease of use, functionality, performance, durability, serviceability, and prestige) can be generalized across categories of durable goods. Though empirical research has not verified the generalizability of dimensions for categories of packaged goods other than food products, for durable goods, or for industrial goods, abstract dimensions spanning these categories could be conceptualized, verified, and then used to develop general measures of quality in product categories.

P_{Q3}: Extrinsic cues serve as generalized quality indicators across brands, products, and categories.

Extrinsic attributes (e.g., price, brand name) are

not product-specific and can serve as general indicators of quality across all types of products. Price, brand name, and level of advertising are three extrinsic cues frequently associated with quality in research, yet many other extrinsic cues are useful to consumers. Of special note are extrinsic cues such as product warranties and seals of approval (e.g., Good Housekeeping). Price, the extrinsic cue receiving the most research attention (see Olson 1977 for a complete review of this literature), appears to function as a surrogate for quality when the consumer has inadequate information about intrinsic attributes. Similarly, brand name serves as a "shorthand" for quality by providing consumers with a bundle of information about the product (Jacoby et al. 1978; Jacoby, Szybillo, and Busato-Schach 1977). Level of advertising has been related to product quality by economists Nelson (1970, 1974), Milgrom and Roberts (1986), and Schmalensee (1978). The basic argument holds that for goods whose attributes are determined largely during use (experience goods), higher levels of advertising signal higher quality. Schmalensee argues that level of advertising, rather than actual claims made, informs consumers that the company believes the goods are worth advertising (i.e., of high quality). Supporting this argument is the finding that many subjects in the exploratory study perceived heavily advertised brands to be generally higher in quality than brands with less advertising.

The exploratory investigation of beverages provided evidence that form of the product (e.g., frozen vs. canned vs. refrigerated) is an additional important extrinsic cue in beverages. Consumers held consistent perceptions of the relative quality of different forms of fruit juice: quality perceptions were highest for fresh products, next highest for refrigerated products, then bottled, then frozen, then canned, and lowest for dry product forms.

Evidence. The literature on hedonic quality measurement (Court 1939; Griliches 1971) maintains that price is the best measure of product quality. Considerable empirical research has investigated the relationship between price and quality (see Olson 1977 for a review of this literature in marketing) and has shown that consumers use price to infer quality when it is the only available cue. When price is combined with other (usually intrinsic) cues, the evidence is less convincing.

In forming impressions about quality of merchandise, respondents in a study by Mazursky and Jacoby (1985) selected brand name more frequently than any other information. Gardner (1970, 1971) found significant main effects on quality perceptions due to brand name.

Kirmani and Wright (1987a,b) found empirical support for the relationship between level of spending

on advertising and quality inferences. Manipulating expenditures on media budgets and on production elements in advertisements, they found significant effects of both on consumers' quality perceptions.

Bonner and Nelson (1985) confirm that product form relates to quality perceptions. An empirical study revealed the same hierarchy of quality in package form (fresh, refrigerated, frozen, bottled, canned, dried) as was found in the exploratory study. Bonner and Nelson conclude: "The sensory maintenance ability of packaging differs by type and those packaging forms that can best deliver a rich/full flavor, natural and fresh taste, good aroma, and an appetizing appearance, are likely to gain market share" (p. 75).

- P_{Q4}: Consumers depend on intrinsic attributes more than extrinsic attributes
- (a) at the point of consumption,
 - (b) in prepurchase situations when intrinsic attributes are search attributes (rather than experience attributes), and
 - (c) when the intrinsic attributes have high predictive value.

Which type of cue—intrinsic or extrinsic—is more important in signaling quality to the consumer? An answer to this question would help firms decide whether to invest resources in product improvements (intrinsic cues) or in marketing (extrinsic cues) to improve perceptions of quality. Finding a simple and definitive answer to this question is unlikely, but the exploratory study suggests the type of attribute that dominates depends on several key contingencies.

The first contingency relates to the point in the purchase decision and consumption process at which quality evaluation occurs. Consumers may evaluate quality at the point of purchase (buying a beverage) or at the point of consumption (drinking a beverage). The salience of intrinsic attributes at the point of purchase depends on whether they can be sensed and evaluated at that time, that is, whether they contain search attributes (Nelson 1970). Where search attributes are present (e.g., sugar content of a fruit juice or color or cloudiness of a drink in a glass jar), they may be important quality indicators. In their absence, consumers depend on extrinsic cues.

At the point of consumption, most intrinsic attributes can be evaluated and therefore become accessible as quality indicators. Many consumers in the exploratory study on beverages used taste as the signal of quality at consumption. If a beverage did not taste fresh or tasted "tinny" or too thin, the evaluation was that quality was low.

Consumers depend on intrinsic attributes when the cues have high predictive value (Cox 1962). Many respondents in the exploratory study, especially those

expressing concern for their children's health and teeth, unequivocally stated that purity (100% juice, no sugar) was the criterion they used to judge quality across the broad fruit juice category. The link between quality and this intrinsic attribute was clear and strong: all fruit beverages with 100% juice were high quality beverages and all others were not.

Evidence. Researchers addressing this question (Darden and Schwinghammer 1985; Etgar and Malhotra 1978; Olson and Jacoby 1972; Rigaux-Bricmont 1982; Szybillo and Jacoby 1974) have concluded that intrinsic cues were in general more important to consumers in judging quality because they had higher predictive value than extrinsic cues. This conclusion does not account for the fact that many assessments about quality are made with insufficient information about intrinsic cues. Selected individual studies (e.g., Sawyer, Worthing, and Sendak 1979) have shown that extrinsic cues can be more important to consumers than intrinsic cues. Conflicting evidence about the importance of intrinsic and extrinsic cues becomes clearer if the conditions under which each type of cue becomes important are investigated.

- P_{Q5}: Consumers depend on extrinsic attributes more than intrinsic attributes
- (a) in initial purchase situations when intrinsic cues are not available (e.g., for services),
 - (b) when evaluation of intrinsic cues requires more effort and time than the consumer perceives is worthwhile, and
 - (c) when quality is difficult to evaluate (experience and credence goods).

Extrinsic cues are posited to be used as quality indicators when the consumer is operating without adequate information about intrinsic product attributes. This situation may occur when the consumer (1) has little or no experience with the product, (2) has insufficient time or interest to evaluate the intrinsic attributes, and (3) cannot readily evaluate the intrinsic attributes.

At point of purchase, consumers cannot always evaluate relevant intrinsic attributes of a product. Unless free samples are being provided, consumers cannot taste new food products before buying them. Consumers do not know for certain how long a washing machine or automobile will last until they purchase and consume it. In these and similar situations, the consumer relies on extrinsic attributes such as warranty, brand name, and package as surrogates for intrinsic product attributes.

At other times, intrinsic attributes on which to evaluate quality are available but the consumer is un-

willing or unable to expend the time and effort to evaluate them. Working women, men, and single shoppers, for example, have been reported to use supermarket product information significantly less than other demographic segments (Zeithaml 1985), in part because these segments are more time-conscious than other segments (Zeithaml 1985; Zeithaml and Berry 1987). Working women interviewed in the exploratory study reported that they shopped quickly and could not study nutritional information carefully on beverage containers. They selected beverages on the basis of the freshness or quality conveyed by packages or brand names.

In other situations, intrinsic product attributes indicating quality are simply too difficult for the consumer to evaluate. Evaluation may be difficult prior to purchase, as with haircuts, restaurant meals, and other experience goods. Complex stereo equipment, insurance policies, and major auto repairs are examples of products that for many consumers are difficult to evaluate even after purchase and consumption. For these "credence goods" (Darby and Karni 1973), consumers may rely on extrinsic cues because they are simpler to access and evaluate.

Evidence. Research has shown that price is used as a quality cue to a greater degree when brands are unfamiliar than when brands are familiar (Smith and Broome 1966; Stokes 1985). Research also has shown that when perceived risk of making an unsatisfactory choice is high, consumers select higher priced products (Lambert 1972; Peterson and Wilson 1985; Shapiro 1968, 1973).

- P₀₆: The cues that signal quality change over time because of
- (a) competition,
 - (b) promotional efforts of companies,
 - (c) changing consumer tastes, and
 - (d) information.

As improved technology and increasing competition lead to the development of technically better products, the features that signal superiority change. The exploratory study suggested that the attribute cues signaling quality in beverages are not static, but instead change over time. The shift from canned orange juice to frozen orange juice to refrigerated orange juice is one example of the evolving standards of quality in beverages. The replacement of saccharin with Nutra-sweet in beverages is another.

Harness (1978, p. 17) illustrates the forces of change and the responses made by Procter & Gamble to keep Tide detergent the highest quality brand in the packaged soap category:

Since Tide was first introduced in 1947, consumers have changed, washing machines have changed, fab-

rics have changed, laundry habits have changed, and competition has changed. . . . These are just a few of the more significant changes in the household laundry market, and every one of these changes has a meaning for the performance and the marketing plans for Tide. The product which we are selling today is importantly different from the Tide product which we introduced in 1947. It is different in its cleaning performance, in sudsing characteristics, aesthetics, physical properties, packaging. In total, there have been 55 significant modifications in this one brand during its 30-year lifetime.

The Concept of Perceived Price

From the consumer's perspective, price is what is given up or sacrificed to obtain a product. This definition is congruent with Ahtola's (1984) argument against including monetary price as a lower level attribute in multiattribute models because price is a "give" component of the model, rather than a "get" component. Defining price as a sacrifice is consistent with conceptualizations by other pricing researchers (Chapman 1986; Mazumdar 1986; Monroe and Krishnan 1985).

Figure 1 delineates the components of price: objective price, perceived nonmonetary price, and sacrifice. Jacoby and Olson (1977) distinguished between objective price (the actual price of a product) and perceived price (the price as encoded by the consumer). Figure 1 emphasizes this distinction: objective monetary price is frequently not the price encoded by consumers. Some consumers may notice that the exact price of Hi-C fruit juice is \$1.69 for a 6-pack, but others may encode and remember the price only as "expensive" or "cheap." Still others may not encode price at all.

A growing body of research supports this distinction between objective and perceived price (Allen, Harrell, and Hutt 1976; Gabor and Granger 1961; *Progressive Grocer* 1964). Studies reveal that consumers do not always know or remember actual prices of products. Instead, they encode prices in ways that are meaningful to them (Dickson and Sawyer 1985; Zeithaml 1982, 1983). Levels of consumer attention, awareness, and knowledge of prices appear to be considerably lower than necessary for consumers to have accurate internal reference prices for many products (Dickson and Sawyer 1985; Zeithaml 1982). Dickson and Sawyer reported that the proportions of consumers checking prices of four types of products (margarine, cold cereal, toothpaste, and coffee) at point of purchase ranged from 54.2 to 60.6%. Among the groups of consumers not checking prices in these studies, a large proportion (from 58.5 to 76.7% in the four product categories) stated that price was just not important. Another recent study indicates that price awareness differs among demographic groups, the greatest levels of awareness being in consumers who are female, married, older, and do not work outside

the home (Zeithaml and Berry 1987). Attention to prices is likely to be greater for higher priced packaged goods, durable goods, and services than for low priced beverages, but other factors in these categories—complexity, lack of price information, and processing time required—may interfere with accurate knowledge of prices. An additional factor contributing to the gap between actual and perceived price is price dispersion, the tendency for the same brands to be priced differently across stores or for products of the same type and quality to have wide price variance (Maynes and Assum 1982).

P_{P1} : Monetary price is not the only sacrifice perceived by consumers.

Full price models in economics (e.g., Becker 1965) acknowledge that monetary price is not the only sacrifice consumers make to obtain products. Time costs, search costs, and psychic costs all enter either explicitly or implicitly into the consumer's perception of sacrifice. If consumers cannot find products on the shelf, or if they must travel distances to buy them, a sacrifice has been made. If consumers must expend effort to assemble durable products or time to prepare packaged goods, and if this time and effort does not provide satisfaction to the consumer in the form of recreation or a hobby, a sacrifice has been made.

Evidence. Research in economics, home economics, and marketing supports the proposition that other costs—time, effort, search, psychic—are salient to consumers (Down 1961; Gronau 1973; Leibowitz 1974; Leuthold 1981; Linder 1970; Mabry 1970; Mincer 1963; Nichols, Smolensky, and Tideman 1971; Zeithaml and Berry 1987).

The Price-Quality Relationship

Nearly 90 research studies in the past 30 years have been designed to test the general wisdom that price and quality are positively related. Despite the expectation of a positive relationship, results of these studies have provided mixed evidence.

P_{PQ1} : A general price-perceived quality relationship does not exist.

Price reliance is a general tendency in some consumers to depend on price as a cue to quality (Lambert 1972; Shapiro 1968, 1973). The body of literature summarized by Olson (1977) is based on the assumption that a general price-perceived quality relationship exists. Despite a multitude of experimental studies on the topic, however, the relationship has not surfaced clearly except in situations where methodological concerns such as demand artifacts (Sawyer 1975) could offer alternative explanations for the results

(Monroe and Krishnan 1985; Olson 1977). Bowbrick (1982) questioned the universality of the price-perceived quality relationship, called the stream of studies on the topic "pseudoresearch," and claimed that the price-perceived quality hypothesis is too general and untestable to produce anything other than trivial results. Peterson and Wilson (1985) argue that the relationship between price and perceived quality is not universal and that the direction of the relationship may not always be positive.

Evidence. Monroe and Krishnan (1985) concluded that a positive price-perceived quality relationship does appear to exist despite the inconsistency of the statistical significance of the research findings. They also noted, however, that multiple conceptual problems and methodological limitations compromised previous research. Monroe and Dodds (1988) describe these limitations in greater detail and delineate a research program for establishing the validity of the price-quality relationship.

Many empirical studies have produced results that conflict with Monroe and Krishnan's assessment of a positive relationship. In several studies (Friedman 1967; Swan 1974), overall association between price and perceived quality is low. Other studies show the relationship to be nonlinear (Peterson 1970; Peterson and Jolibert 1976), highly variable across individuals (Shapiro 1973), and variable across products being judged (Gardner 1971). Other research, summarized by Olson (1977), shows that price becomes less important as a quality indicator when other product quality cues, such as brand name (Gardner 1971) or store image (Stafford and Enis 1969), are present. Exploratory and survey research (Bonner and Nelson 1985; Parasuraman, Zeithaml, and Berry 1985) indicates that price is among the least important attributes that consumers associate with quality.

Related studies (summarized by Hjorth-Anderson 1984) have consistently shown price to be correlated only weakly with objective (rather than perceived) quality. Typical of these studies is work by Sproles (1977), who correlated the prices of products with quality ratings obtained through *Consumer Reports* and *Consumers' Research Magazine*. Though a positive price-objective quality relationship was found in 51% of the 135 product categories, no relationship was found in 35% and a negative relationship was found in 14%. Similarly, Riesz found the mean rank correlation between price and objective quality to be .26 for 685 product categories reported in *Consumer Reports* between 1961 and 1975 and .09 for 679 brands of packaged foods (Riesz 1978). Geistfeld (1982) found variability among markets and across stores in the price-objective quality relationship. Most recently, Gerstner (1985) assessed the correlation between quality and

price for 145 products and concluded that the relationship appeared to be product-specific and generally weak.

Both Peterson and Wilson (1985) and Olshavsky (1985) argue that the emphasis in price-quality studies should not be on documenting the general price-perceived quality relationship, but on the conditions under which price information is likely to lead to an inference about product quality. One possibility is that some individuals rely heavily on price as a quality signal whereas others do not. Peterson and Wilson sorted respondents into groups on the basis of their having a price-reliance schema and confirmed in an experiment that "schematics" perceive a stronger relationship between price and quality than "aschematics." This general tendency on the part of some consumers to associate price and quality has been examined in the context of covariation assessment by Roedder-John, Scott, and Bettman (1986), who confirmed that consumers differ in their beliefs about the association between the price and quality variables. These studies provide evidence that some consumers have a schema of price reliance, rather than indicating a generalized tendency in consumers to associate price and quality.

- P_{PQ2}: The use of price as an indicator of quality depends on
- (a) availability of other cues to quality,
 - (b) price variation within a class of products,
 - (c) product quality variation within a category of products,
 - (d) level of price awareness of consumers, and
 - (e) consumers' ability to detect quality variation in a group of products.

Monroe and Krishnan (1985) contend that most past price-perceived quality research has been exploratory and has not succeeded in resolving the question of when price is used to infer quality. Contingencies affecting the use of price as a quality indicator fit into three groups: informational factors, individual factors, and product category factors.

The first category of factors believed to affect the price-perceived quality relationship consists of other information available to the consumer. When intrinsic cues to quality are readily accessible, when brand names provide evidence of a company's reputation, or when level of advertising communicates the company's belief in the brand, the consumer may prefer to use those cues instead of price.

Several individual difference factors may account for the variation in the use of price as a quality signal. One explanatory variable is price awareness of the consumer: consumers unaware of product prices obviously cannot use price to infer quality. Another in-

dividual difference is consumers' ability to detect quality variation among products (Lambert 1972). If the consumer does not have sufficient product knowledge (or perhaps even interest) to understand the variation in quality (e.g., French, Williams, and Chance 1973), price and other extrinsic cues may be used to a greater degree.

Consumers appear to depend more on price as a quality signal in some product categories than in others. One explanation for this variation may be differences in price-objective quality relationships by category (e.g., the low price of Japanese automobiles does not diminish the well-established perception of quality in the category). Another explanation may be price variation in a category. In packaged goods categories (such as beverages) where products differ little in price, the consumer may not attribute higher quality to products that cost only a few cents more than those of competitors. Respondents in the exploratory study, for example, did not associate beverage price with quality. Still another category-specific contingency is quality variation: in categories where little variation is expected among brands (such as salt or paper sandwich bags), price may function only as an indication of sacrifice whereas in categories where quality variation is expected (such as canned seafood or washing machines), price may function also as an indication of quality.

Evidence. Olson (1977) showed that availability of intrinsic and extrinsic cues other than price typically results in weighting those factors (e.g., brand name) as more important than price. He concluded that brand name is a stronger cue than price for evaluating overall quality (Gardner 1971; Jacoby, Olson, and Haddock 1973; Smith and Broome 1966; Stokes 1985).

Studies have indicated that use of price as a quality indicator differs by product category. Except for wine and perfume, most positive links have been found in durable rather than in nondurable or consumable products (Gardner 1970; Lambert 1972; Peterson and Wilson 1985). In an experimental setting, Peterson and Wilson documented the relationship between price variation and price-perceived quality association: the greater the price variation, the greater the tendency for consumers to use price as a quality indicator.

In a recent meta-analysis of 41 studies investigating the association between price and perceived quality, Rao and Monroe (1987) found that the type of experimental design and the magnitude of the price manipulation significantly influenced the size of the price-perceived quality effects obtained. The number of cues manipulated and the price level were not found to have a significant effect. Because of constraints imposed by the meta-analysis, the reviewers included only

consumer products and eliminated several studies as outliers, so the full range of prices and types of products was not investigated.

Considerable empirical research supports individual differences in consumer knowledge of prices. Consumers are not uniformly aware of prices and certain consumer segments (such as working women and men) are less aware of prices than other segments (Zeithaml 1985; Zeithaml and Berry 1987; Zeithaml and Fuerst 1983). Price awareness level has not been studied as it relates to quality perceptions, though Rao (1987) documented the impact of prior knowledge of products on the use of price as a quality cue.

The Concept of Perceived Value

When respondents in the exploratory study discussed value, they used the term in many different ways, describing a wide variety of attributes and higher level abstractions that provided value to them. What constitutes value—even in a single product category—appears to be highly personal and idiosyncratic. Though many respondents in the exploratory study agreed on cues that signaled quality, they differed considerably in expressions of value. Patterns of responses from the exploratory study can be grouped into four consumer definitions of value: (1) value is low price, (2) value is whatever I want in a product, (3) value is the quality I get for the price I pay, and (4) value is what I get for what I give. Each definition involves a different set of linkages among the elements in the model and each consumer definition has its counterpart in the academic or trade literature on the subject. The diversity in meanings of value is illustrated in the following four definitions and provides a partial explanation for the difficulty in conceptualizing and measuring the value construct in research.

Value is low price. Some respondents equated value with low price, indicating that what they had to give up was most salient in their perceptions of value. In their own words:

- Value is price—which one is on sale.
- When I can use coupons, I feel that the juice is a value.
- Value means low price.
- Value is whatever is on special this week.

In industry studies, Schechter (1984) and Bishop (1984) identified subsets of consumers that equate value with price. Other industry studies, including Hoffman's (1984), reveal the salience of price in the value equations of consumers.

Value is whatever I want in a product. Other respondents emphasized the benefits they received from the product as the most important components of value:

- Value is what is good for you.
- Value is what my kids will drink.
- Little containers because then there is no waste.
- Value to me is what is convenient. When I can take it out of the refrigerator and not have to mix it up, then it has value.

This second definition is essentially the same as the economist's definition of utility, that is, a subjective measure of the usefulness or want satisfaction that results from consumption. This definition also has been expressed in the trade literature. Value has been defined as "whatever it is that the customer seeks in making decisions as to which store to shop or which product to buy" (*Chain Store Age* 1985). Schechter (1984) defines value as all factors, both qualitative and quantitative, subjective and objective, that make up the complete shopping experience. In these definitions, value encompasses all relevant choice criteria.

Value is the quality I get for the price I pay. Other respondents conceptualized value as a tradeoff between one "give" component, price, and one "get" component, quality:

- Value is price first and quality second.
- Value is the lowest price for a quality brand.
- Value is the same as quality. No—value is affordable quality.

This definition is consistent with several others that appear in the literature (Bishop 1984; Dodds and Monroe 1984; Doyle 1984; Shapiro and Associates 1985).

Value is what I get for what I give. Finally, some respondents considered all relevant "get" components as well as all relevant "give" components when describing value:

- Value is how many drinks you can get out of a certain package. Frozen juices have more because you can water them down and get more out of them.
- How many gallons you get out of it for what the price is.
- Whatever makes the most for the least money.
- Which juice is more economical.
- Value is what you are paying for what you are getting.
- Value is price and having single portions so that there is no waste.

This fourth definition is consistent with Sawyer and Dickson's (1984) conceptualization of value as a ratio of attributes weighted by their evaluations divided by

price weighted by its evaluation. This meaning is also similar to the utility per dollar measure of value used by Hauser and Urban (1986), Hauser and Simmie (1981), Hauser and Shugan (1983), and others.

These four consumer expressions of value can be captured in one overall definition: perceived value is the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given. Though what is received varies across consumers (i.e., some may want volume, others high quality, still others convenience) and what is given varies (i.e., some are concerned only with money expended, others with time and effort), value represents a tradeoff of the salient give and get components.

Value and quality. In the means-end chains, value (like quality) is proposed to be a higher level abstraction. It differs from quality in two ways. First, value is more individualistic and personal than quality and is therefore a higher level concept than quality. As shown in Table 1, value may be similar to the "emotional payoff" of Young and Feigen (1975), to "abstract, multi-dimensional, difficult-to-measure attributes" of Geistfeld, Sproles, and Badenhop (1977), and to "instrumental values" of Olson and Reynolds (1983). Second, value (unlike quality) involves a tradeoff of give and get components. Though many conceptualizations of value have specified quality as the only "get" component in the value equation, the consumer may implicitly include other factors, several that are in themselves higher level abstractions, such as prestige and convenience (see Holbrook and Corfman 1985 for a discussion of the difficulty involved in separating these abstractions in the value construct).

P_{V1} : The benefit components of value include salient intrinsic attributes, extrinsic attributes, perceived quality, and other relevant high level abstractions.

Differences among the benefit or get components shown in the model and listed in P_{V1} can be illustrated by findings from the exploratory study of fruit juices. As discussed before, perceived quality in fruit juices was signaled by the attribute "100% fruit juice" plus sensory attributes such as taste and texture.

Some intrinsic attributes of fruit juices—other than those signaling quality—were cited as providing value to respondents. Color was one important intrinsic attribute. Most mothers knew which colors or flavors of juice their children would drink; only those flavors were considered to be acceptable to the child and therefore to have value for the mother. Other intrinsic attributes (e.g., absence of pulp and visible consistency of the drinks) also affected value perceptions.

In addition to perceived quality and these intrinsic

attributes, other higher level abstractions contributed to perceptions of value. A frequently mentioned higher level abstraction for fruit juice was convenience. Some consumers did not want to reconstitute the juice. Others wanted self-serve containers so that children could get juice from the refrigerator by themselves. For this reason, small cans with difficult-to-open tops were not as convenient as little boxes with insertable straws. Fully reconstituted, ready-to-serve, and easy-to-open containers were keys to adding value in the category. These intrinsic and extrinsic lower level attributes added value through the higher level abstraction of convenience.

Another higher level abstraction important in providing value in children's fruit juices was appreciation. When children drank beverages the mothers selected, when they mentioned them to mother or evidenced thanks, the mothers obtained value. This particular psychological benefit was not evoked directly in any of the consumer interviews, but came through strongly in the laddering process. The value perceptions filtered through the higher level abstraction of appreciation and did not come directly through intrinsic or extrinsic attributes. This indirect inferencing process illustrates a major difficulty in using traditional multiattribute or utility models in measuring perceived value. The intrinsic attributes themselves are not always directly linked to value, but instead filter through other personal benefits that are themselves abstract.

Evidence. Though no empirical research has been reported on the pivotal higher level abstractions related to value, several dimensions have been proposed in selected categories. Bishop (1984), for example, claimed that value in supermarket shopping is a composite of the higher level abstractions of variety, service, and facilities in addition to quality and price. Doyle (1984) identified convenience, freshness, and time as major higher level abstractions that combine with price and quality to produce value perceptions in supermarket consumers.

P_{V2} : The sacrifice components of perceived value include monetary prices and non-monetary prices.

Consumers sacrifice both money and other resources (e.g., time, energy, effort) to obtain products and services. To some consumers, the monetary sacrifice is pivotal: some supermarket shoppers will invest hours clipping coupons, reading food advertising in the newspaper, and traveling to different stores to obtain the best bargains. To these consumers, anything that reduces the monetary sacrifice will increase the perceived value of the product. Less price-conscious consumers will find value in store proximity,

ready-to-serve food products, and home delivery—even at the expense of higher costs—because time and effort are perceived as more costly.

Evidence. Recent research reveals that saving time has become a pivotal concern of consumers in supermarket shopping and cooking. Supermarket shoppers have cited fast checkout as more important than low prices in selecting grocery stores (Food Marketing Institute 1985, 1986). Studies also show that consumers are willing to spend money to get more convenient packaging in food products (Morris 1985).

P_{V3} : Extrinsic attributes serve as “value signals” and can substitute for active weighing of benefits and costs.

How carefully do consumers evaluate these components of products in making assessments of value? To judge from the product category of beverages, cognitive assessment is limited. Rather than carefully considering prices and benefits, most respondents depended on cues—often extrinsic cues—in forming impressions of value. A few respondents carefully calculated the cheapest brand in their set on a regular basis, but most seemed to follow Langer’s (1978) notion of mindlessness: most respondents bought beverages with only minimal processing of available information. They repeatedly bought a brand they trusted or used extrinsic value cues to simplify their choice process.

These value triggers were present regardless of the way consumers defined value. Many consumers who defined value as low price reported using a coupon as a signal to low price without actually comparing the reduced price of the couponed brand with the prices of other brands, or they reported that “cents-off” or “everyday low price” signs or a private label brand triggered the value perception. Respondents who defined value in terms of what they wanted in products cited small containers, single-serving portions, and ready-to-serve containers. Consumers who defined value as the quality they get for the price they pay used signals such as 100% fruit juice on special or brand name on special. Finally, consumers who defined value as what they get for what they pay depended on form (frozen vs. canned juice) and economy-sized packages as signals.

Not all consumers responded in this mindless way—many saw their role as economical shopper to be important enough to spend time and effort to weigh carefully the give and get components in their own equations of value. Moreover, not all products are as simple or inexpensive as beverages. One would expect to find more rational evaluation in situations of high information availability, processing ability, time availability, and involvement in purchase.

Evidence. To date, no reported empirical studies have investigated the potential of triggers that lead to perceptions of value.

P_{V4} : The perception of value depends on the frame of reference in which the consumer is making an evaluation.

Holbrook and Corfman (1985) maintain that value perceptions are situational and hinge on the context within which an evaluative judgment occurs. This view may help explain the diversity of meanings of value. In the beverage category, for example, the frame of reference used by the consumer in providing meanings included point of purchase, preparation, and consumption. Value meant different things at each of these points. At the point of purchase, value often meant low price, sale, or coupons. At the point of preparation, value often involved some calculation about whether the product was easy to prepare and how much the consumer could obtain for what she paid. At consumption, value was judged in terms of whether the children would drink the beverage, whether some of the beverage was wasted, or whether the children appreciated the mother for buying the drinks.

Evidence. No empirical studies have been conducted to investigate the variation in value perceptions across evaluation contexts.

P_{V5} : Perceived value affects the relationship between quality and purchase.

As Olshavsky (1985) suggested, not all consumers want to buy the highest quality item in every category. Instead, quality appears to be factored into the implicit or explicit valuation of a product by many consumers (Dodds and Monroe 1985; Sawyer and Dickson 1984). A given product may be high quality, but if the consumer does not have enough money to buy it (or does not want to spend the amount required), its value will not be perceived as being as high as that of a product with lower quality but a more affordable price. In other words, when $get_a - give_a > get_b - give_b$ but the shopper has a budget constraint, then $give_a > budget\ constraints > give_b$, and hence b is chosen. The same logic may apply to products that need more preparation time than the consumer’s time constraint allows.

The respondents in the beverage study illustrated this point as they discussed their typical purchasing behavior. For respondents with several children, beverages accounted for a large portion of their weekly food bill. Though most believed that pure fruit juice was of higher quality than fruit drinks, many of these respondents did not buy only pure fruit juice because it was too expensive. They tended to buy some proportion of pure fruit juice, then round out these more

expensive purchases with fruit drinks. In their evaluation, high quality was not worth its expense, so lower levels of quality were tolerated in a portion of the weekly beverages. These consumers obtained more value from the lower quality juices because the low costs compensated for the reduction in quality.

Evidence. Several empirical studies have investigated the relationship between quality and purchase, but no empirical studies have investigated explicitly the role of value as an intervening factor between quality and purchase. However, studies on the use of unit price information (e.g., Aaker and Ford 1983; Dickson and Sawyer 1985; Zeithaml 1982) suggest that many consumers use unit price information (i.e., a measure of value) in making product choices in supermarkets.

Research Implications

The preceding propositions raise questions about ways in which quality and value have been studied in the past and suggest avenues for future research.

Current Practices in Measuring Quality

Academic research measuring quality has depended heavily on unidimensional rating scales, allowing quality to be interpreted in any way the respondent chooses. This practice does not ensure that respondents are interpreting quality similarly or in the way the researcher intends. Hjorth-Anderson (1984) claims that unidimensional scales are methodologically invalid by showing that the concept of overall quality has many dimensions. Holbrook and Corfman (1985) call for ambiguous quality measures to be replaced with scales based on conceptual definitions of quality. An example of the approach they recommend is illustrated by Parasuraman, Zeithaml, and Berry (1985), who investigated service quality in an extensive exploratory study, conceptualized it in dimensions based on that investigation, and operationalized it using the conceptual domain specified in the first phase (Parasuraman, Zeithaml, and Berry 1986). In that stream of research, quality was defined as a comparison between consumer expectations and perceptions of performance based on those dimensions, an approach that allows for individual differences across subjects in the attributes that signal quality.

The research approach used by Parasuraman, Zeithaml, and Berry (1985) could be used in different categories of products (e.g., packaged goods, industrial products, durable goods) to find the abstract dimensions that capture quality in those categories. Such an attempt is currently underway by Brucks and Zeithaml (1987) for durable goods. Studies also are needed to determine which attributes signal these dimensions, when and why they are selected instead of other cues,

and how they are perceived and combined (see also Gutman and Alden 1985, Olson 1977, and Olson and Jacoby 1972 for similar expressions of needed research). Finally, the relationship between the constructs of attitude and quality should be examined. The instrumentality of a product feature (Lewin 1936) and the quality rating of such a feature in separately determining choice may be an interesting research issue. The convergent and discriminant validity of the constructs of attitude and quality also warrant investigation. Quality measurement scales remain to be developed and validated.

Current Practices in Modeling Consumer Decision Making

Three aspects of modeling consumer decision making can be questioned if the propositions prove to be accurate representations: the tendency to use actual attributes of products rather than consumer perceptions of those attributes, the practice of duplicating and comingling physical attributes with higher order attributes (Myers and Shocker 1981), and the failure to distinguish between the give and get (Ahtola 1984) components of the model.

Howard (1977, p. 28) clearly states the first problem.

It is essential to distinguish between the attributes per se and consumers' perceptions of these attributes, because consumers differ in their perceptions. It is the perception that affects behavior, not the attribute itself. "Attribute" is often used to mean choice criteria, but this leads to confusion. To use "attribute" when you mean not the attribute itself but the consumer's mental image of it, is to reify what is in the consumer's mind.

Jacoby and Olson (1985) concur, claiming that the focus of marketers should not be objective reality but instead consumer perceptions, which may be altered either by changing objective reality or by reinterpreting objective reality for consumers.

Myers and Shocker (1981) point out that comingling quality, a higher level abstraction, with lower level physical attributes in models limits the validity and confounds the interpretation of many studies, especially when this practice duplicates lower level attributes. Therefore, it is necessary to use attributes from the same general classification or level in the hierarchy in modeling consumer decision making. Ahtola (1984) confirms that when the hierarchical nature of attributes is not recognized in consumer decision models, double and triple counting of the impact of some attributes results. Techniques to elicit and organize attributes, in his opinion, should precede modeling of the attributes. Myers and Shocker (1981) discuss different consumer decision models appropriate for the levels and ways attributes should be presented in research instruments and analyzed later. Huber and

McCann (1982) reveal the impact of inferential beliefs on product evaluations and acknowledge that understanding consumer inferences is essential both in getting information from consumers and in giving information to consumers. Finally, Ahtola (1984) calls for expanding and revising models to incorporate the sacrifice aspects of price. Sacrifice should not be limited to monetary price alone, especially in situations where time costs, search costs, and convenience costs are salient to the consumer.

Methods Appropriate for Studying Quality and Value

The approach used in the exploratory investigation is appropriate for investigating quality in other product categories. Olson and Reynolds (1983) developed methods to aggregate the qualitative data from individual consumers. Aggregate cognitive mapping, structural analysis, cognitive differentiation analysis, and value structure mapping are all techniques designed especially to analyze and represent higher order abstractions such as quality. These techniques are more appropriate than preference mapping or multiattribute modeling for investigating concepts like quality and value (for a complete discussion and explication of these techniques, see Gutman and Alden 1985 or Reynolds and Jamieson 1985).

Several researchers have developed approaches to link product attributes to perceptions of higher level abstractions. Mehrotra and Palmer (1985) suggest a methodological approach to relating product features to perceptions of quality based on the work of Olson and Reynolds (1983). In their procedure, lists of cues and benefits are developed from focus groups or in-depth interviews with consumers, semantic differential scales are constructed to capture the benefits, a tradeoff procedure is used to determine the importance of the cues, and respondents match cues to product concepts. Through this type of analysis, degree of linkage (between cues and benefits), value of a cue, and competitive brand information are provided.

Mazursky and Jacoby (1985) also recognized the need for procedures to track the inference process from consideration of objective cues to the higher level image of quality. Instead of free-elicitation procedures, they used a behavioral processing simulation whereby they presented attribute information to respondents and asked them to form an impression of quality by choosing any information they wished. Though this method can be criticized as unrealistic, it provides insights into the types of information that consumers believe signal quality. Modifications of the method to make the environment more realistic (such as by Brucks 1985) are also possible.

Other researchers have described analytic proce-

dures to link attributes with perceptions. Holbrook (1981) provides a theoretical framework and analytic procedure for representing the intervening role of perceptions in evaluative judgments. Neslin (1981) describes the superiority of statistically revealed importance weights over self-stated importance weights in linking product features to perceptions.

Researching Value

A major difficulty in researching value is the variety of meanings of value held by consumers. Building a model of value requires that the researcher understand which of many (at least of four) meanings are implicit in consumers' expressions of value. Utility models are rich in terms of methodological refinements (see Schmalensee and Thisse 1985 for a discussion of different utility measures and equations), but do not address the distinction between attributes and higher level abstractions. They also presume that consumers carefully calculate the give and get components of value, an assumption that did not hold true for most consumers in the exploratory study.

Price as a Quality Indicator

Most experimental studies related to quality have focused on price as the key extrinsic quality signal. As suggested in the propositions, price is but one of several potentially useful extrinsic cues; brand name or package may be equally or more important, especially in packaged goods. Further, evidence of a generalized price-perceived quality relationship is inconclusive. Quality research may benefit from a de-emphasis on price as the main extrinsic quality indicator. Inclusion of other important indicators, as well as identification of situations in which each of those indicators is important, may provide more interesting and useful answers about the extrinsic signals consumers use.

Management Implications

An understanding of what quality and value mean to consumers offers the promise of improving brand positions through more precise market analysis and segmentation, product planning, promotion, and pricing strategy. The model presented here suggests the following strategies that can be implemented to understand and capitalize on brand quality and value.

Close the Quality Perception Gap

Though managers increasingly acknowledge the importance of quality, many continue to define and measure it from the company's perspective. Closing the gap between objective and perceived quality requires that the company view quality the way the consumer does. Research that investigates which cues are important and how consumers form impressions of qual-

ity based on those technical, objective cues is necessary. Companies also may benefit from research that identifies the abstract dimensions of quality desired by consumers in a product class.

Identify Key Intrinsic and Extrinsic Attribute Signals

A top priority for marketers is finding which of the many extrinsic and intrinsic cues consumers use to signal quality. This process involves a careful look at situational factors surrounding the purchase and use of the product. Does quality vary greatly among products in the category? Is quality difficult to evaluate? Do consumers have enough information about intrinsic attributes before purchase, or do they depend on simpler extrinsic cues until after their first purchase? What cues are provided by competitors? Identifying the important quality signals from the consumer's viewpoint, then communicating those signals rather than generalities, is likely to lead to more vivid perceptions of quality. Linking lower level attributes with their higher level abstractions locates the "driving force" and "leverage point" for advertising strategy (Olson and Reynolds 1983).

Acknowledge the Dynamic Nature of Quality Perceptions

Consumers' perceptions of quality change over time as a result of added information, increased competition in a product category, and changing expectations. The dynamic nature of quality suggests that marketers must track perceptions over time and align product and promotion strategies with these changing views. Because products and perceptions change, marketers

may be able to educate consumers on ways to evaluate quality. Advertising, the information provided in packaging, and visible cues associated with products can be managed to evoke desired quality perceptions.

Understand How Consumers Encode Monetary and Nonmonetary Prices

The model proposes a gap between actual and perceived price, making it important to understand how consumers encode prices of products. Nonmonetary costs—such as time and effort—must be acknowledged. Many consumers, especially the 50 million working women in the U.S. today, consider time an important commodity. Anything that can be built into products to reduce time, effort, and search costs can reduce perceived sacrifice and thereby increase perceptions of value.

Recognize Multiple Ways to Add Value

Finally, the model delineates several strategies for adding value in products and services. Each of the boxes feeding into perceived value provides an avenue for increasing value perceptions. Reducing monetary and nonmonetary costs, decreasing perceptions of sacrifice, adding salient intrinsic attributes, evoking perceptions of relevant high level abstractions, and using extrinsic cues to signal value are all possible strategies that companies can use to affect value perceptions. The selection of a strategy for a particular product or market segment depends on its customers' definition of value. Strategies based on customer value standards and perceptions will channel resources more effectively and will meet customer expectations better than those based only on company standards.

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