AN ABSTRACT OF THE THESIS OF

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Consumer's efficiency is used as a measure of ability to evaluate product quality. An equation developed by Sproles, Geistfeld, and Badenhop (1980) measures the deviation of an individual's rank ordering of products from the rank ordering by Consumer Reports:

$$CES_j = \sum_{i=1}^{k} |R_i - C_{ij}|$$

where:

k = number of alternative choices (brands)

CES_j = consumer efficiency score of the j^{th} consumer for a given product set of k choices

R_i = "Consumer Reports" rating of the i^{th} alternative in the set of choices

C_{ij} = rating of the i^{th} alternative by consumer j

$\sum_{i=1}^{k}$ = directs the summation of the absolute values over all k alternatives, and is derived from the first of Spearman's Rank Order Correlation.

The purpose of the study was to a) identify attitudinal and behavioral factors which are related to consumer efficiency, and b)

compare consumers' perception of their ability to evaluate product quality with their demonstrated efficiency. The study used a random sample of 150 women from Lafayette, Indiana, who were over the age of twenty and were not enrolled as students at Purdue University. The subjects were randomly assigned to one of three treatment groups to evaluate slow cookers. Each group was provided with different amounts and types of information. Subjects in treatment one (R_1) used only the physical product to evaluate and rank product quality. Those in treatment two (R_2) used products and market information, and those in treatment three (R_3) used products, market information and extended information. Individuals in each group were directed to select the "best" slow cooker from a display of four brands. A consumer efficiency score was calculated for each subject by summing the differences between Consumer Reports rank ordering of the four slow cookers and the rank ordering by the participant.

Nine null hypotheses were developed to test the relationship between eleven independent and six dependent variables. Three statistical tests were used: X^2, ANOVA, and Pearson's r. One null hypothesis was rejected ($p \leq .05$): the type of information respondents based their evaluations on is not dependent upon treatment. There was a trend for the source of information used to change as the amount and type of information available increased. In R_2, the tendency was to rely more heavily on product examination in order to rank order the products. In R_3, the trend was for subjects to rely on the information cards or a combination of informational cards and product examinations as a basis for product evaluations. An important supportive observation was that levels of consumer efficiency were evenly distributed among treatment groups. Contrary to theory, the amount of information subjects were provided had no significant effect on their level of consumer efficiency. None of the subjects receiving perfect efficiency scores (i.e. CES = 0; n = 4) were members of R_3.

From the findings, it is concluded that:

* Consumer's give different weights to objective/technical

information than Consumer Reports

* The even distribution of consumer efficiency scores could be attributed to the existence of a variable or set of variables which was not controlled for or identified in measuring the level of consumer efficiency.

In a pilot study (student sample), subjects were found to be more efficient as they were exposed to increasing amounts of information. Those who were more efficient used combinations of product, market and extended information. Since students are more comfortable with a laboratory/testing situation and have been trained to use objective/technical information to select products their product rankings are more likely to be similar to those of independent testing organizations than are the rankings of average consumers. Consequently, using Consumer Reports rankings as the sole measure of consumer's efficiency will continue to provide an inaccurate assessment until the general population has the opportunity to develop attributes which are similar to those of the student population. Hence, a new measure of consumer efficiency is proposed which allows the individual to rank the products based upon personally weighted criteria[1]:

$$CES_i = \sum_{k=1}^{n} \left| |I_k - P_{kj}| v_k - |I_k - O_{kj}| v_k \right|$$

where:

CES_i = consumer efficiency score of the i^{th} consumer

I_k = ideal point of attribute k

P_{kj} = amount of attribute k that brand j is perceived to possess

O_k = objective rating of attribute k that brand j possesses

v_k = perceived importance of brand possessing the desired amount of attribute k

n = number of attributes relavent to preference of brand in product category

$\sum_{k=1}$ = directs the summation of the absolute values over all k.

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[1] Adapted from Winter (1974).

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Redacted for Privacy

Professor of Family Resource Management
in charge of major

Redacted for Privacy

Head of Department of Family Resource Management

Redacted for Privacy

Dean of Graduate School

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CONSUMERS' PERCEIVED AND ACTUAL EFFICIENCY IN PRODUCT SELECTION: A LABORATORY EXPERIMENT

CHAPTER I

Introduction

Consumer economists use models of rational decision making in order to explore and/or explain the concept of efficiency in product assessment and purchase. Decision making models are developed using the assumption that individuals are able to (1) identify a problem, (2) identify two or more alternative solutions to the problem, (3) subjectively and objectively evaluate each solution using various sources of information, and (4) select the most optimal solution. Assuming the output of the process is a satisfactory solution the process is considered rational, hence efficient. Yet post-purchase dissatisfaction is a common phenomena. Dissatisfaction could originate at any one of the four points in the system. However, the underlying element is lack of information. This deficit could occur because of imperfections in market information (Maynes 1976) and/or an individual's inability to identify, utilize and evaluate information regarding viable alternatives . Thorelli, Becker and Engledow (1975) identified several factors which restrict the amount of information consumers are provided:

* Proliferation of products, brands, and models
* Narrowing differentiation between and among products by increasing the number of subsitutes
* Increasing complexity of products
* Rapid change in product characteristics
*Convergence of mass production, promotion, distribution and

consumption

* Rise in performance expectations of consumers

Despite these barriers, Greyser (1978) found that two out of every three participants in a consumer survey, believed enough information is currently available to make sensible buying decisions. Furthermore, four out of five participants professed that most consumers do not use the information available and believed that many of the mistakes consumers make are the result of their own carelessness. Thorelli and Thorelli (1977) suggested that the average consumer does not consider prepurchase information to be necessary when making consumer decisions. Perhaps extant information is not sought after or used because it is not available in a useful form. Maynes (1981) argues that in order for information to be useable it must be available, comparable, credible, and organized. Very little information meets these criteria. Recognizing this, Sproles, Geistfeld, and Badenhop, designed a laboratory experiment using different types and amounts of information compiled and presented in a systematic manner in an attempt to measure consumer efficiency. In the pilot data they found strong support for their hypothesis that " as consumers are provided inreasing amounts of information relevant to a specific purchase decision, they will make increasingly efficient choices from among the available alternatives" Sproles, Badenhop, Geistfeld, 1978 p. 88-9). The strong support of the hypotheses indicated the need for data analysis of a replicated study.

Statment of the Problelm

A consumer in today's marketplace is faced with an ever increasing number of brands from which to choose in any given product class. This state, product proliferation, decreases consumers' probability of randomly selecting the best product (Dickinson, 1980). The best product as used in this context,

is defined as the product which most closely matches the ideal in the product class. To insure that a purchase decision will be ideal a consumer needs to have adequate information about each of the existing brands within the product class and needs to be able to use that information in order to compare, evaluate, and rank order the products.

A replication of the inital study was conducted in order to control for the biases inherent in student populations. The subjects of the second study were female residents of Lafayette, Indiana who were not students and over the age of twenty. The study was conducted based on the assumption that "A consumer's efficiency of performance is determined by how much his/her choice deviates from the "ideal" (Sproles, Geistfeld, Badenhop, 1978, p. 88). Using this definition a Consumer Efficiency Equation was developed to measure the differences between Consumer Reports ranking of a product and the consumer's ranking of that product.

Individuals who optimally utlize existing information to make ideal purchase decisions are considered to be efficient consumers. It is posited that an efficient consumer must be able to: (1) identify the type of information that is available; (2) identify sources of pertinent information and (3) know what combination of information (type and sources) leads to ideal purchase decisions. Since many consumers make purchase decisions that are less than ideal, the problem is, then, to identify factors related to consumer efficiency in order to test the validity of the Consumer Efficiency Equation.

Operational Definitons

For purposes of this study, the following terms are operationally defined.

SOURCES OF INFORMATION- Point of origin of avaialable information (i.e. manufacturer, government agency).

TYPES OF INFORMATION- Form in which the information is

presented (i.e. verbal, written).

QUALITY- the extent to which a product provides the service characteristics that an individual consumer desires. (Maynes 1976, p.52)

PERCEIVED ABILITY- Personal assesment by the subject of their own ability to distinguish between higher and lower quality portable electrical appliances.

LEVEL OF ABILITY- Scaled measurement of subject's perception of their own ability to distinguish between higher and lower quality portable electrical appliances. Categorized as extremely sure, somewhat sure, or extremely unsure.

PERCEIVED KNOWLEDGE- Personal assesment by the subject of their own knowledge of what features characterized a high quality portable electrical appliance.

LEVEL OF KNOWLEDGE- Scaled measurement of subject's perception of their own knowledge of what features characterized a high quality portable electrical appliance. Categorized as extremely knowledgeable, somewhat knowledgeable, or not at all knowledgeable

EFFICIENCY- Consumer's ability to differentiate levels of quality based on available iinformation so that he/she agrees with the objective assessment of quality. (Sproles, Geisfeld, and Badenhop, 1978, p.91)

CONSUMER EFFICIENCY SCORE (CES)- reflects the differences between the objective (Consumer Reports) rank ordering of the product quality and that of the j^{th} consumer (Sproles, Geisfeld and Badenhop 1978, p.39)

$$CES_j = \sum_{i=1}^{k} |R_i - C_{ij}|$$

where:

k= number of alternative choices (brands)

CEI_j= consumer efficiency index of the j^{th} consumer for a given product set of k choices.

R_j ="Consumer Reports" rating of the ith alternative in the set of choices.

C_{ij} = rating of the ith alternative by consumer j

$\sum_{i=1}^{k}$ = directs the summation of the absolute values over all k alternatives, and is derived from the first of Spearman's Rank Order Correlation

LEVELS OF EFFICIENCY- The calculated degree of agreement between Consumer Reports' and the subject's quality ranking with in the product set.

EFFICIENT CONSUMERS- Sixty percent (60%) or greater agreement with Consumer Reports ranking of the four slow cookers; those subjects with consumer efficiency scores of 4 and below.

MODERATELY EFFICIEINT CONSUMERS- Between fifty and twenty percent agreement with Consumer Reports ranking of the four slow cookers; subjects with scores between 5 and 8.

LOW EFFICIENT CONSUMERS- Less than ten percent agreement with Consumer Reports ranking of the four slow cookers; subjects with scores of 9 and above.

Purpose of the Study

The purpose of the study was to test the validity of the Consumer Efficiency Equation by:

1. Identifing attitudinal and behavioral factors which influence consumer efficiency.
2. Comparing consumers' perception of their ability to evaluate product quality with their demonstrated efficiency in selecting the "best" brand within a given product class in a laboratory situation.

Hypotheses

According to recent literature, factors such as previous experience, information cues, and perception of quality influence consumers' efficiency. The following null hypotheses were developed in order to test the relationship between selected attitudinal and behavioral variables and consumers' efficiency in assessing product quality and making purchase decisions.

H_o1 There will be no significant difference in mean consumer efficiency scores among the experimental treatment groups.

H_o2 The level of consumer efficiency will not be dependent upon the treatment group to which a subject is assigned.

H_o3 There will be no significant difference in mean consumer efficiency scores:

(a) by whether or not individuals read consumer oriented periodicals;

(b) by whether or not individuals participate in an Extension Homemaker group;
(c) by perceived level of ability to distinguish between higher and lower quality portable electrical appliances;
(d) by degree of difficulty in making product evaluations.

H_o4 There will be no linear relationship between consumer efficiency scores and the number of
(a) consumer articles an individual reads;
(b) social organizations to which an individual belongs;
(c) portable electrical appliances previously purchased.

H_o5 The level of consumer efficiency will not be dependent upon
(a) whether or not an individual has previously purchased a slow cooker;
(b) perceived level of knowledge of features that characterize high quality portable electrical appliances.

H_o6 Perceived level of knowledge of features that characterize high quality portable electrical appliances will not be dependent upon the number of appliances previously purchased.

H_o7 Perceived level of ability to distinguish between higher and lower quality portable electrical

appliances will not be dependent upon

(a) demonstrated level of ability to distinguish between high and low quality portable electrical appliances;

(b) the number of portable electric appliances previously purchased;

(c) whether or not a slow cooker was previously purchased.

H_o8 There will be no significan difference in mean number of cues selected by whether or not the respondents have previously purchased a slow cooker (treatment constant).

H_o9 The source of information respondents use as a basis for product evaluation is not dependent upon

(a) whether the respondent had or had not previously purchased a slow cooker (treatment constant);

(b) the treatment group to which the subject is assigned.

Assumptions and Limitations

For the purposes of this study, it was assumed that:

* The sample was representative of female consumers who purchase small electrical appliances.
* A conscious rational decision making process occurs in a consumer's product selection process.

* The information provided in the experiment included all pieces of information a consumer would need in order to make an efficient decision.
* An efficient consumer will be satisfied with their assigned product rankings.

The following limitations of the study are acknowledged:

* The questionnaire did not provide the opportunity for respondents to indicate their personal standards for the selection of slow cookers.
* The questionnaire did not provide the opportunity for respondents to express whether or not they were satisfied with their decisions.
* The study was restricted to females.
* This was the second of two experimental situations and subjects may have suffered from experimental fatigue and/or boredom.
* Participants' behavior may have been due to the Hawthorne effect (i.e. subjects may have tried to please the researcher by behaving in a manner presumed to be desireable).

CHAPTER II

REVIEW OF LITERATURE

Introduction

The major topics reviewed in this chapter are the two interdependent elements of consumer efficiency as applied to product selection prior to purchase: information and assessment of product quality. These categories are further subdivided into (a) sources of, search for, and use of information; and (b) indicators and correlates of product quality. The chapter concludes with a review of the findings from the pilot study.

Information

Sources of Information

Information can be obtained from three sources: from buyer experience, from manufacturer and retailer materials, and from reports which are independently generated (Thorelli, 1975, p. 17-18). Buyer experience refers to information gathered by an individual through a deliberate quest to learn about a product or product class through some form of research. The experience can be personal or vicarious in nature. The second information source, manufacturer or retail materials, directly or indirectly introduces the general public to a specific brand of product or products. Since the information is made available to the public by the manufacturer or retailer the messages transmitted are generally persuasive and biased in nature. Conversely, the final source of information is independent in nature.

This form of information is distributed from agencies or organizations which are not affiliated with nor sponsored by a specific manufacturer or retail establishment. Materials distributed from this latter source are supposedly unbiased factual reports which range from general product information to highly technical product descriptions. Andrea (1968) extrapolated and expanded this list by noting each source could then be either advocative (i.e. information source is affiliated with a particular product, brand or retail establishment) or independent (i.e. information source has no connection or vested interest in the patronization of a given brand or retailer) in nature. The categories Andrea identified were defined as:

IMPERSONAL ADVOCATE (IA)- mass media advertising including magazine ads, radio and television commercials, newspaper ads, or point of purchase displays. This information is generally sponsored by a manufacturer or retailer and is not geared to individualistic concerns or questions.

IMPERSONAL INDEPENDENT (II)- Consumer Reports or a technical report on the product. The information an individual obtains from this source is usually unbiased yet remains general in nature.

PERSONAL ADVOCATE (PA)- sales clerk's or store manager's opinion. While this information can be tailored to an individual's needs, it generally is biased since the informer has a vested interest in the final purchase decision. The factual degree of the information is dependent upon the informers knowledge and/or experience with the product.

PERSONAL INDEPENDENT (PI)- the brand a friend or neighbor uses, opinions of family members, close friends, or

co-workers. The information gained from this source is based upon personal experience of others and can be tailored to meet individual concerns. The factual degree of the information is dependent upon the informers knowledge and/or experience with the product.

DIRECT OBSERVATION/EXPERIENCE (OE)- asking for a product demonstration, relying on past personal experience, trying the product before buying, or reading the information on the package. Gathering information in this manner may not be transferable to the existing situation (i.e. information is obsolete or not applicable to the product currently being evaluated) and therefore can prove to be costly.

Lutz and Reilly (1973) suggest a sixth behavior pattern exists in which information is neither searched for nor utilized. This response was defined as PICK A BRAND (BUY)- this could be a habitually purchased product or a behavior characterized by selecting a brand without seeking any information, thus allowing a consumer to respond without being forced to select an outside information source (Locander and Hermann, 1979, p. 270). A number of studies have been conducted in attempt to discover who uses information from different sources and why the information from different sources is sought out and used.

Impersonal Advocate Berning and Jacoby (1974) investigated the interaction between sources of information and the level of product "newness" and found that the use of manufacturer's information served more to generate awareness of, or interest in, the product class rather than to influence the final selection decision. This pattern was also found in earlier studies conducted by Beal and Rogers (1957 a, b). Yet, both studies contradict a more recent finding in

which personal sources were attributed to creating product awarness and impersonal sources were influential later in the decision phase of the product choice process (Lazer and Bell, 1966).

Information from newspaper advertisements was used in selection decisions more frequently by married women than by single women or by consumers whose income ranged from $7,500 to $10,000 or was over $30,000 (Udell, 1966). In the same study, television and magazines were more frequently used by single women than married women. Moreover, the sample studied mentioned two information sources, television and magazines, more frequently than all others (Udell, 1966). Thorelli, Becker, and Engledow (1975) reported that "information seekers" (IS) used this type of information source more frequently than the evaluations of those who were not classified as information seekers. The studies which were reviewed did not report findings which would fall under the Personal Advocate Category.

Impersonal Independent Much research has been conducted in the area of the use of information sources which fall under the Impersonal Independent category. By far the most noted source of this type of information would be Consumer Reports, published by Consumers Union. The Information Seekers (Thorelli, Becker, and Engledow, 1975) deals exclusively with characteristics of subscribers of independent testing periodicals. International surveys were conducted in order to compare and contrast traits of users and non-users of testing periodicals and the influence of culture on those traits. In general, greater similarities were found between the groups demonstrating the same behavior (i.e. U.S. subscribers and German subscribers) than those who shared a common nationality (U.S. subscribers and U.S. non-subscribers).

Thorelli et. al. (1975) concluded "subscribers to and users of product test reports are an educated and income elite group when compared to the general public" (p. 61). Subscribers were more likely

to be in an upper middle income category, be a college graduate, and hold a professional position. On the average, subscribers also tend to read a larger number of consumer oriented magazines (other than the testing periodicals) than the average consumer. Users of Consumer Reports were classified as rational shoppers who prefer to base decisions on technical and economic criteria. Conversely, average consumers were reported to be concerned with the psychological or social aspects of the products (e.g. designer labels, product aesthetics) and, therefore, labeled "emotional consumers".

According to the Thorelli study, testing periodicals were generally consulted more frequently (a) for purchases which were more important, (b) when purchases involved more planning, (c) when purchasers were more experienced in selecting the product and (d) when the purchasers were in a high income and/or education bracket (p. 83-4). Testing periodicals are not consulted more frequently by larger numbers of consumers due to (1) the communication skills necessary to use the source, (2) the limited scope of products tested, (3) the expensive nature of the information and, (4) the rational quality and evaluation criteria used in rating the products (Thorelli et. al., 1975, p. 18). The last point, evaluation criteria, identifies a severe limitation in the interpretation of the ratings assigned to various products. In order for the information from the testing reports to be easily and directly applicable to an individual's evaluation of a product, a consumer must place the same value on the attributes of the product tested as did the independent testing agency (Thorelli, 1975; Beales et.al., 1980, p. 13).

Personal Independent Thorelli's information seeker "whether from lack of general self-confidence or a better recognition of the complexity of product evaluations, placed less reliance on personal experience and observation than the average consumer" (Thorelli et. al., 1975, p. 80-1). Udell (1966) found that more single men than

married men used personal sources of information when making product decisions (44% v 28%).

Direct Observation In Udell's (1966) study, a distinction was made in the types of consumers who relied more heavily on direct observation of product performance. Similar behavior patterns were found between married men and single women in their reliance on product observations when gathering information, whereas other members categories relied less on this information source. Kohn and Jacoby (1974) found that observation of product performance was used more frequently in the later stages of the decision process than the phase of realizing and identifying product needs. Locander and Hermann (1979) found that reliance on direct observation as a source of information increased as (1) the total risk of the purchase situation increased and (2) among those with high self-confidence with respect to the decision at hand (p. 270).

Search for Information

Consumers search for prepurchase information in order to reduce the risk inherent in making a purchase decision (Roselius, 1971; Lutz and Reilly, 1973). However, several studies have shown that the amount of search individuals engage in is directly related to specific characteristics of consumers. Primarily, the extent of search is dependent upon an individual's perception of price differentials within the marketplace. Theoretically, as the variabilty in product prices increases, the greater is the opportunity for search to payoff in terms of price paid for a good or service. Contrary to theories of classical economics, Jacoby (1975) maintains that consumers do not search until they find the very best product or brand available; rather, consumers engage in a limited search and accept alternatives which they find satisfying under the circumstances. Indeed the search process has been described as being "consistent and shallow" (Chestnut

and Jacoby, n.d., p. 3). Researchers consistently report that less than half of their subjects report making visits to more than one retail outlet before making purchase decisions (Katona and Miller, 1955; Udell, 1966; Newman and Staelin, 1972). In addition to visiting retail establishments in a search for information, some consumers read printed advertisements (Chaffee and McLeod, 1973), but very few consult independent testing periodicals such as Consumer Reports (Thorelli et. al., 1975).

Whether or not consumers search for information prior to making a purchase decision is also related to income and level of education. Low income consumers and those with less education are not as likely to search for information (Irelan, 1967; Bolen, 1972; Claxton, Fry and Portis, 1974; Kiel and Layton, 1981). Furthermore, Foster (1971) and Aaker and Day (1971) indicate that low income consumers are often completely unaware of all types of consumer information, including sources of information concerning product performance. Keil and Layton (1971) found, in their car buyer's, information search was inversely related to age but gender had no bearing on exhibited search behavior.

Several researchers have reported that consumers who were identified as innovative or early adopters were likely to search for information. Other factors influencing information search behavior are attitudes formed towards the shopping process; the relative price of the product (proportionate to income); how concerned the individual is about getting the right product; the amount of family interaction relating to the purchase decision; and consideration of products in alternative price ranges. Payoffs from search, as Hawkin and McCain (1979) note, are dependent not only on whether or not search is undertaken, but, just as importantly, on how a search is carried out.

A search for information can be internal as well as external. An internal search has been described as using stored information or predispositions formed as a result of experiences with and/or exposure

to a product or product class (Thorelli et. al., 1975, p. 15). Such experience/exposure need not be direct or personal in nature but can be vicarious- exposure to the related experience of another person (Beales et. al., 1980, p. 12). In contrast, an external search is "a conscious search for information as a part of a particular process" (Thorelli et.al., 1975, p. 15). Bettman (1979) maintains that internal searches are performed first and, if sufficient information is not present in memory, an external search is then conducted. Therefore, "the greater the quantity and the greater the credibility of stored experience and information the less the value of additional information search" (Thorelli et.al. 1975, p. 16).

Claxton, Fry and Portis (1974) also investigated determinants which influence the degree of search a consumer will undertake and identified three categories: product characteristics, situational determinants, and individual determinants. Product characteristics (i.e. style, cost, durability) and the magnitude each characteristic plays in the decision process is the first set of determinants in search behavior. Lehmann and Moore (1980) assert that a "positive relationship exists between stated or inferred importance of an attribute and search for the attribute and/or trait in each product" (p. 451). Situational determinants (e.g. economic constraints or urgency of purchasing the product) influence the quantity and quality of search that is undertaken. Locander and Hermann (1979) suggest that economic constraints tend to increase the search undertaken while immediacy of need has the converse effect. Individual determinants (i.e. purchaser's interest in and previous knowledge about a product) influence which sources of information will be consulted as well as the nature and amount of information gathered.

Cox (1967) associated experience , gained either by product demonstrations or use, with the degree of risk associated with purchasing a given product. Consumer's tend to reduce the uncertainty component by seeking information about the purchase decision (Bauer,

1960; Howard and Sheth, 1969; Day, 1970; Roselius, 1971; Hansen, 1972; Lutz and Reilly, 1973). Therefore, experience with a product class will directly affect the degree of specific self-confidence[1] (or conversely, level of anxiety) and the nature of the information search (both in the quantity and type of information and the order in which it is sought). High self-confidence or perceived ability increases the probability that the situation will be viewed as less anxiety producing (Hisrich, 1972; Spielberger, 1972; Locander and Hermann, 1979; Kiel and Layton, 1981). Locander and Hermann (1979) found a directly proportionate and increasingly significant correlation between the degree of Specific Self-Confidence and the amount of information an individual would search for as the cost of the product increased. Search behavior patterns are a function of (a) the perceived importance of the product being purchased (Irelan, 1967), which is directly related to (b) the perceived risks in making the product decision (Jacoby, Speller and Berning, 1974) and (c) the cost and value of the information to the perspective user (Thorelli et. al., 1975).

Use of Information

Bettman and Park (1980) identified two major influences on information use and processing: (1) the individual's past experience and (2) where the individual is in the product selection process. In order for information to have an impact on the decision process, one must havae the ability to process the information as well as the motivation to do so (Bettman and Park, 1980, p. 244). Marketers often rely on the Baysian Model to explain consumer's use of information. The model maintains that in order for information to be perceived as

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[1] Specific Self-Confidence- subject's confidence with respect to the decision at hand (Locander and Hermann, 1979, p. 270)

"valuable": (1) the decision being made must be of some value; (2) the decision must depend heavily on known information; and, (3) a reasonably high probability must exist that a decision other than that previously anticipated will occur. Consumer behaviorists find that consumer's, either by being misinformed, ill-informed, or uninformed about product quality, features, or availability, rarely believe that searching for and using information will be beneficial. To facilitate information use and adoption, consumers need to be persuaded that information exists and, contrary to their beliefs, can have a positive influence on the product purchase decision.

Two hypotheses exist which explain the effect that consumer experience has on information processing ability. First, cognitive psychologists suggest an "enrichment hypothesis" in which prior knowledge facilitates learning, and ultimately, product judgements or evaluations (Johnson and Russo, 1981). Second, Bettman and Park (1980) suggest that an inverted U pattern forms when correlating search for information with previous experience. Subjects having moderate familiarity with the product processed more available information than did groups with a low or high degree of familiarity. The researchers suggest that the low familiarity group may not possess the ability to process the data due to lack of knowledge structures. In turn, those possessing high product familiarity lack the motivation to perform an extensive external search. The hypothesis implies, "with experience, consumers become more selective in their search for information and use more narrowly focused phased decision rules" (Johnson and Russo, 1981, p. 310).

An individual's goal in acquiring information has been found to affect the method in which information is initally processed. Psychologists have postulated that the type of processing during information acquisition affects organization and subsequent retrieval. Swagler (1981) maintains that more effective processing will result in improvements in both the quality and quantity of information stock.

Simon (1974) discovered that his subjects converted bits of information into chunks in order to facilitate processing. Product familiarity has been found to influence the amount and type of information that is processed. Bettman and Park (1980) found that product familiarity influenced processing patterns. When a subject was less familiar with a class of products, the information tended to be processed by product attributes. Brand processing became more apparent as familiarity with the product increased. Biehal and Chakravarti (1981) suggested that consumer memory for product information was primarily brand organized. Bruner (1957) concluded that the less knowledgeable a consumer was with a product, the more he/she relied on brand name and price to insure selecting the "higher quality" product. Park and Lessig (1981), however, found that consumers with low product familiarity did not perceive price as being as useful an index of quality as brand name.

Throughout their experiment, Schaningaer and Sciglimpaglia (1981) found that housewives who were younger, earlier in the family cycle, more educated, of higher social class, and non-homeowners examined more cues and alternatives than older consumers. While differences occured between working and nonworking women, a greater difference emerged within the group of working women. Furthermore, those in lower economic status process less information and examine fewer attributes and alternatives compared to those of middle and upper economic status (Schaningaer and Schiglimpaglia, 1981, p. 211).

Jacoby (1975) found differences in information use among multibrand and brand loyal consumers. Those who were defined as multibrand users based their decisions on a greater number of information dimensions. After decisions were made, multibrand users were also able to recall more specific product information about all brands in the product class.

Processing Capacity

Based upon a quarter century of research, consumer behaviorists maintain that "there are finite limits to the ability of human beings to assimilate and process information during any given unit of time, and that once these limits are surpassed, behavior tends to become confused and dysfunctional" (Jacoby, Speller and Berning, 1974, p. 33). A consequence of imperfect information processing is that the consumer may undervalue (or overvalue) new information; hence, make a less than optimal choice. Marketing researchers frequently state that adequate product information is available for consumers to use in making decisions about purchases by consumers who do not use the information. Researchers have shown that consumers do not seek information because (1) they do not think they need it, (2) an information search is costly, and (3) societal roles rule out careful shopping.

It is further argued that consumers have difficulty in using what information is available because it has little utility. In many instances, consumers are unable to obtain relevant information, first because the technical complexity of products makes efforts to obtain accurate, comparative price information and efforts to judge quality relatively ineffective. Secondly, much information is local and subjective in nature (i.e. how to locate a plumber or what doctor to chose) and often the information is available only in print media; hence, it is essentially unavailable to low-educated, low-income families. Finally, many consumers are unwilling or unable to act on the information they possess either because they find the necessary task and/or processes distasteful or uncomfortable.

Basic management theory states that in order for a resource to be useable it must be in the right place, at the right time, in the right form, and recognizable as a resource. Since information is a resource, similar criteria apply. Maynes (1981), contends that for information to be relevant and useful it must meet seven criteria:

1. available at the time of use
2. available at the site of use
3. assembled
4. comparable
5. credible
6. organized
7. flexible, hence it should be available as a single quality index or in a form that permits the user to insert his/her own weights and evaluations.

Product Quality

Quality has been defined as the "extent to which a (product) provides the service characteristics that an individual consumer desires" (Maynes, 1976, p. 52). Assessment of product quality is the underlying element of consumer efficiency. Geistfeld (1981) stated, "an outward manifestation of consumer ignorance is a poor association between price and quality" (p. 45). Since quality is not always readily observable, individuals must develop sets of intrinsic and/or extrinsic cues so that product quality can be evaluated prior to purchase. Jacoby and Olson (1974) suggested that intrinsic cues, rather than extrinsic cues, are strongly related to perception of quality. Consumers' inability to evaluate product quality is partially due to information imperfections in the marketplace. The literature on consumers' ability to evaluate product quality pertains to assessment of quality, price/quality relationships and multicue research.

Assessing Product Quality

Geistfeld (1981) found that individuals can more easily assess product quality when they understand how the object operates. An

equation which enables a consumer to evaluate and compare the quality of one brand with another was developed by Maynes (1976). He postulated that consumers mentally assign importance weights to product characteristics and evaluate product alternatives based on the assigned values. The final selection is made by summing the values and choosing the product receiving the highest score. Theoretically, the purchase decision maximizes utility, and satisfaction is achieved Accuracy of any overall quality score is, however, dependent upon the knowledge and ability of the assessor as well as the care taken to evaluate the quality. Furthermore, in order to operationalize such an equation, two assumptions must be made: (1) fully informed consumers would make approximately uniform quality assessments of the same specimen and (2) everyone has access to complete and accurate information concerning prices and qualities offered for sale.

Price/Quality Relationship

Early research examining consumer's evaluation of quality was primarily concerned with the influence price had on consumers' perception of quality. Price is an observable dimension prior to purchase whereas quality is observable only after purchase and/or experience (Hey and McKenna, 1981). There is evidence that extensive variations of price exist within a product class, when quality is held constant. The weak association between price and quality is more likely to occur when assessment of product quality is more difficult. McConnell (1968) reported that his subjects identified a positive (but not linear) relationship between price and quality, despite the fact no actual quality differences existed among the products subjects evaluated. He also concluded that medium and low priced products were viewed more similar, whereas medium and high priced items were viewed as more dissimilar. Gabor and Granger (1965) found that consumers associate a price range, rather than a single price, with a given level of quality. Valenzi and Eldridge (1973) found that consumers'

unfamiliarity with a product may result in the use of the price as a cue for quality. Szybillo and Jacoby (1974) suggest that consumers search for "value for the money" rather than direct price quality relation.

Sproles (1977) found the relationship between price and quality for competing brands within a group of products can vary to considerable extremes. Within his sample of products analyzed, 51% were found to have a positive price quality association; however, the relationship cannot be generalized across products or product categories. Of the 51% identified as having a positive relationship, only 8 of the 135 products examined had a rank correlation of +.80 or above. From the analysis, it was also noted that 14% of the products had negative price quality relationships and 33% exhibited random patterns. Duncan (in press) suggests that the relationships between price and quality may not be linear and are product specific. Hey and McKenna (1981) and Gardner (1970) found consumers' evaluation of product quality to be product and time specific. Furthermore, Syzbillo and Jacoby (1974) found that price did not have as strong an effect on quality perception as did store image. In summary, the research reviewed supports Maynes' (1976) assumption that quality judgements are subjective, personal and anticipatory.

Multicue Research

Human behavior is a complex phenomenon; therefore, univariate explanations of behavior are of limited use. Price is only one of a number of potential quality cues to which a consumer is likely to be exposed and offers only partial explanation of consumers' demonstrated behavior in quality evaluations and product selection. Recent researchers have used combined variables (i.e. brand name and/or awareness, store image, and country of origin) to explain how an individual evaluates product quality.

Lambert (1980) identified three general conclusions in

summarizing multicue research:

(1) Price is not the most important quality cue

(2) Associations have been found to exist between perception of quality and (a) store image; (b) brand name; and (c) country of manufacturer

(3) A cue or a set of cues act as a surrogate for quality whose reliability is influenced by the product category and/or other idiosyncratic factors.

Lambert (1980) compared findings of consumer behavior in the use of multiple cues to assess product quality with research findings on attitude sets and information chunking. Attitudes have been defined as "learned predispositions to some object or situation and being evaluative in nature" (Allport, 1976). Lambert suggests that price may not be a salient factor in quality assessment since attitudes evoked by another cue may provide information about product quality. Grossman and Stiglitz (1976) take a similar view, describing price as an imperfect or "noisy" communicator.

Purdue Pilot Study

One hundred and forty-two undergraduate students, enrolled in Consumer Science classes at Purdue University, were the subjects in a pilot study conducted by Spoles, Geistfeld, and Badenhop (1978, 1980). The study was designed to establish scientific rationale for the hypothesis that product evaluation and choice efficiency increases as the amount of relevant information that was available and used increased. The experimental design utilized two consumer products which had recently been evaluated by Consumer Reports: electric blankets and slow cookers. The latter product was selected in order to investigate the impact an "innovative" product had on consumers decision making style and what factors separated "efficient" from "non-efficient" product evaluations in this situation.

The Consumer Reports evaluation of electric blankets and slow cookers was used as an objective measure against which to compare participants' evaluations of four selected brands within each product class. Using the Consumer Reports evaluation was justified by the premise that the testing agency evaluates and ranks products in order to identify the products which will provide consumers' the greatest benefits. From the analysis, the researchers found statistically significant evidence to support the hypothesis that "consumers' efficiency in rating product quality and personal purchase preferences was likely to increase with increasing use of information" (Spoles, Geistfeld, and Badenhop, 1978, p. 89).

Subjects who were in the treatment group which was provided no information exhibited a systematic preference pattern suggesting that they were able to make accurate comparative judgements. However, only when information was provided were subjects' ratings for both products identical to those of Consumer Reports.

Summary

The construct of consumer efficiency has, as its basic premise, a model of rational decisionmaking. In this context, a consumer is presumed to identify, evaluate, and select the optimal product from the existing set of products currently available in the marketplace. This decision process is inherently dependent upon two elements: information and assessment of product quality. The extent to which an individual (1) searches for and uses information and (2) accurately assesses product quality, is dependent upon the individual's perceived cognitions of extraneous factors.

In order for a consumer to search for information, the individual must first be aware of and believe that product quality and price differentials exist in the marketplace. Secondly, the individual must possess the necessary resources (e.g. knowledge,

ability, time) to conduct a search. Once collected, the information must be processed and acted upon. These latter processes are contingent upon the ability and motivation of the individual to expend the energy to do so. Therefore, the probability of information being sought and utilized in prepurchase decisions is greatly increased when the information is timely, accessable, processable, and is perceived as a resource.

Since quality is not a readily observable product feature, consumers must rely on intrinsic and/or extrinsic cues. Therefore, assessment of product quality is highly dependent upon market information. Accuracy in evaluating actual quality differentials, however, is dependent upon the individual's perceived and actual knowledge, ability and interest. While price has long been identified as the primary factor influencing perceptions of quality differences, recent research has found that quality may be more highly associated with preconceived connotations of factors (i.e. attitudes) such as country of origin or retailer's image. Due to the nature of attitudes, or learned predispositions, quality judgements have been found to be subjective, personal and anticipatory.

Past research, therefore, justifies further exploration in the area of consumer efficiency. Only in this way will consumer behaviorists, marketers and educators be able to develop programs in their respective fields which will promote and increase the probability that consumers will be able to make more efficient choices in the marketplace.

CHAPTER III

METHODOLOGY

Introduction

The primary function of this study was to investigate consumers' efficiency in assessing product quality. The data analyzed were taken from an earlier research project designed and conducted by Sue Badenhop, Loren Geistfeld and George Sproles, in 1977 at Purdue University. The original project was funded by Purdue University's Institute for Consumer and Family Studies; current analyses were funded by the Milne Computer Center at Oregon State University. The objectives of the study were to: (1) investigate relationships between attitudinal and behavioral factors and consumer efficiency, and (2) compare consumers' perception of their ability to evaluate product quality with their demonstrated efficiency in selecting the "best" brand within a given product class. The present investigation was limited to an analysis of data collected on the slow cookers.

Research Design

Data were collected using two instruments: a) a background questionnaire and b) a report of product and experiment evaluations. Subjects were randomly assigned to one of the three treatment groups. The amount of information provided prior to product evaluations, varied among the treatment groups (figure 1).

Figure 1
Model of Research Design

R_1: $O_a \rightarrow X_1 \rightarrow O_b$

R_2: $O_a \rightarrow X_2 \rightarrow O_c$

R_3: $O_a \rightarrow X_3 \rightarrow O_d$

where:

O_a= Background questionaire

$O_{b,c,d}$= Ranking of slow cookers and evaluation of the experimental experience

X_1= Four brands of slow cookers, physical products only

X_2= X_1 plus marketing information for each of the four brands

X_3= X_2 plus extended information, similar to that found in "Consumer Reports", for each of the brands

Selection of the Sample

Using the 1977 Lafayette, Indiana telephone book as the sampling frame, a random procedure was used to select the sample. After a telephone number was identified and dialed a qualifying interview was conducted. The

interview eliminated those who were (1) not women, (2) not over the age of twenty and (3) enrolled as a student at Purdue University. Three attempts were made to contact the resident. If, after the third attempt, no one answered, the number was eliminated and replaced with another. The procedure continued until a sample of one hundred and fifty was obtained.

Once a qualified subject was identified and agreed to participate, an appointment was made for the subject to come to Purdue University. A reminder letter confirming the date, time and location was sent after the phone interview and prior to the appointment. A map was also enclosed for those unfamilar with the location of the experimental setting. Appendix A contains a copy of the telephone script and confirmation letter. Upon completion of the experiment participants received a five dollar gift certificate, redeemable at a local department store.

Description of the Experiment

Upon arriving at the prearranged location each participant was given a background questionnaire to complete. The questionnaire included twenty-two questions printed on eight 8 1/2 X 11 inch pages. The responses to the questions provided socio-economic information and measured repondents' attitudes and behaviors related to their recent experience in selecting appliances. A copy of the questionnaire is contained in Appendix B. To simulate an actual selection process, a display area was constructed for the four brands of slow cookers. This display area was altered for each experimental situation. Each subject entered the display area alone and participated in the experiment on an individual basis.

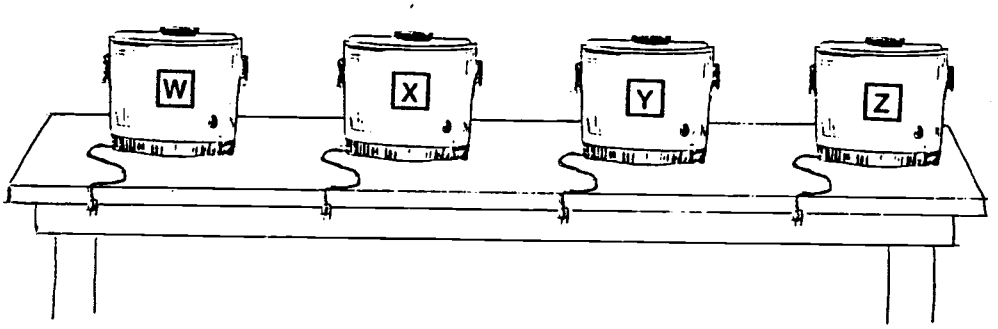
Treatment Group One

After completing the background questionnaire, each subject in treatment group one (R_1) was allowed to visually examine the display of

appliances (Figure 2). All markings were covered to prohibit subjects from identifying product brands. Physical handling of the slow cookers was allowed.

FIGURE 2

Display - Group 1



After this visual examination, participants were asked to completed a post experiment questionnaire. The questionaire included four major tasks:

I Evaluation of Quality where

a) subjects rated each product on a five point scale ranging from high quality to low quality, and

b) subjects listed the slow cookers in rank order from highest to lowest quality

II Purchase Preference where

a) subjects rated each product on a five point scale from the most preferred purchase to the least preferred purchase, and

b) subjects ranked the products from the most preferred to the least preferred puchase.

III Analysis of Decision Process where
Each subject identified factors which
a) had a positive influence on their decision
b) had a negative influence on their decision

IV Evaluation of Experiment Experience where subjects chose one of the following statements which most closely described their behavior:
a) It was fairly easy to judge differences in quality between the four slow cookers
b) It was moderately difficult to judge differences in quality between the four slow cookers, although some differences were apparent
c) It was extremely difficult to judge differences in quality between the four slow cookers. I feel that I may have had to "guess" my choices

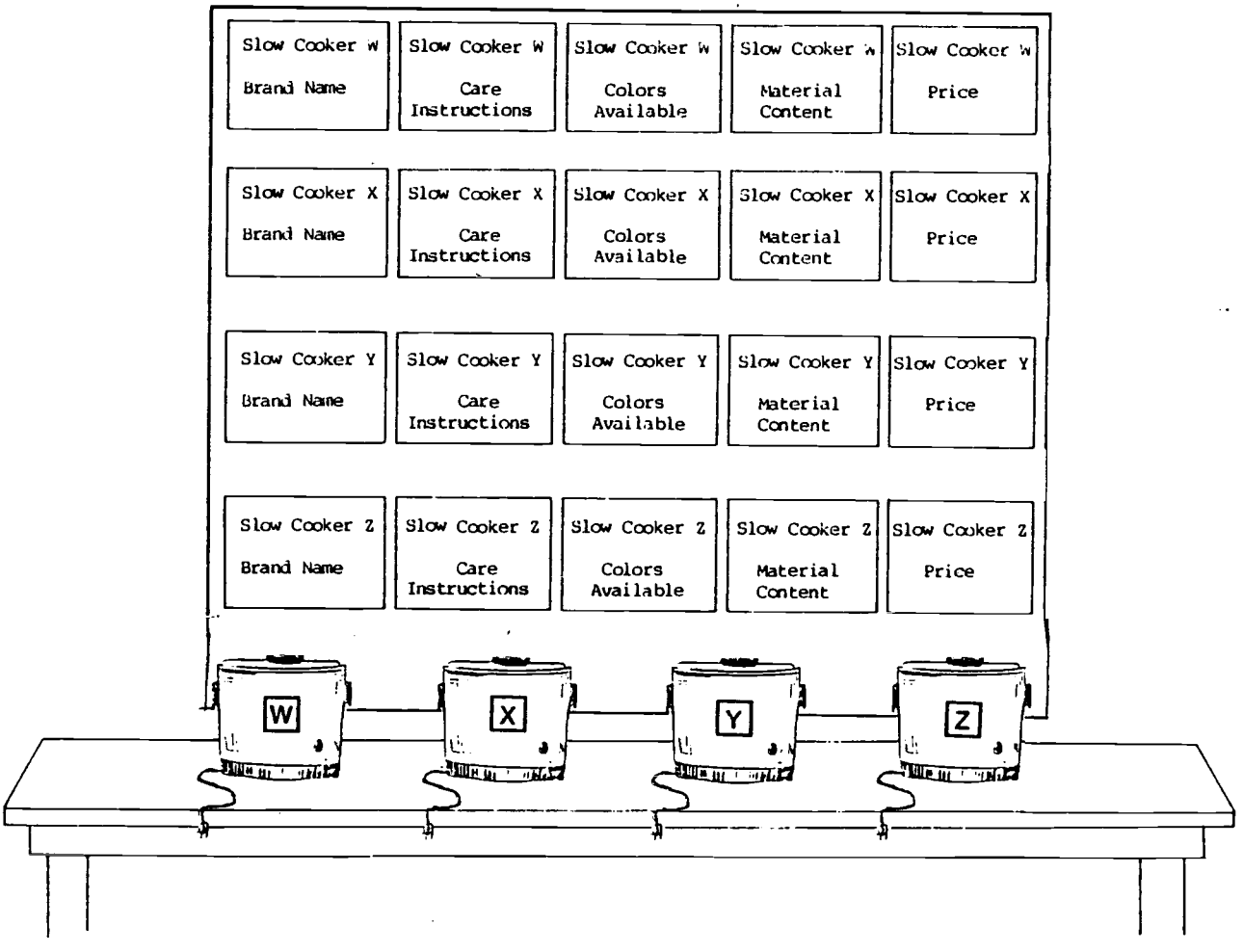
A copy of the questionaire completed by subjects in R_1 is included in Appendix C.

Treatment Group Two

After completing the background questionnaire, each subject in the second experimental group was provided with a form for recording their responses and then allowed to individually enter the product display area. Each subject in group two (R_2) was allowed to examine the actual products. Additionally, five bits of marketing information were provided (Appendix D). The information was made available to the subjects on a display board which

Figure 3

Display- Group 2



a display board which was placed behind the slow cookers (figure 3). Each participant in R_2 was given five tasks to complete:

I Report of Cues Examined- as each card was taken off the board, the subject was directed to write the card number on the record sheet. Each card number was reported in the order in which it was selected and each time it was selected.

II Evaluation of Quality where

a) subjects rated each product on a five point scale ranging from high quality to low quality, and

b) subjects listed the slow cookers in rank order from highest to lowest quality

III Indication of Purchase Preference where

a) subjects rated each product on a five point scale from the most preferred purchase to the least preferred purchase, and

b) subjects ranked the products from the most preferred to the least preferred puchase.

IV Analysis of Decision Process- For each of the available cues the subject reported that the

a) information was not selected

OR

b) information was selected but had no influence on purchase decision

OR

c) information was selected and had a positive influence on the purchase decision

OR

d) information was selected and had a negative influence on the purchase decision.

V Evaluation of the Experiment Experience where

Subjects chose one of the following statements which most

closely described their behavior:

a) My choices were based mostly on INFORMATION FROM THE CARDS

b) My choices were based mostly on MY EXAMINATION of each product (touching, looking at the construction)

c) My choices were based on about EQUAL USE of the informational cards and my examination of each product.

d) Neither the information on the cards nor my examination of the products was particularly helpful. I feel that I may have had to "guess" at my choices.

Treatment Group Three

After completing the background questionaire, each subject in R_3 was allowed to examine the actual products. In addition to the five bits of marketing information which were available to R_2, R_3 was provided with five additional cues relating to the use and care of the appliance. The bits of information were made available on cards, displayed on a board placed behind the four products (Figure 4)[2]. The post tasks assigned to R_3 were identical to those assigned to subjects in R_2. A copy of the questionnaire completed by R_3 is included in Appendix E.

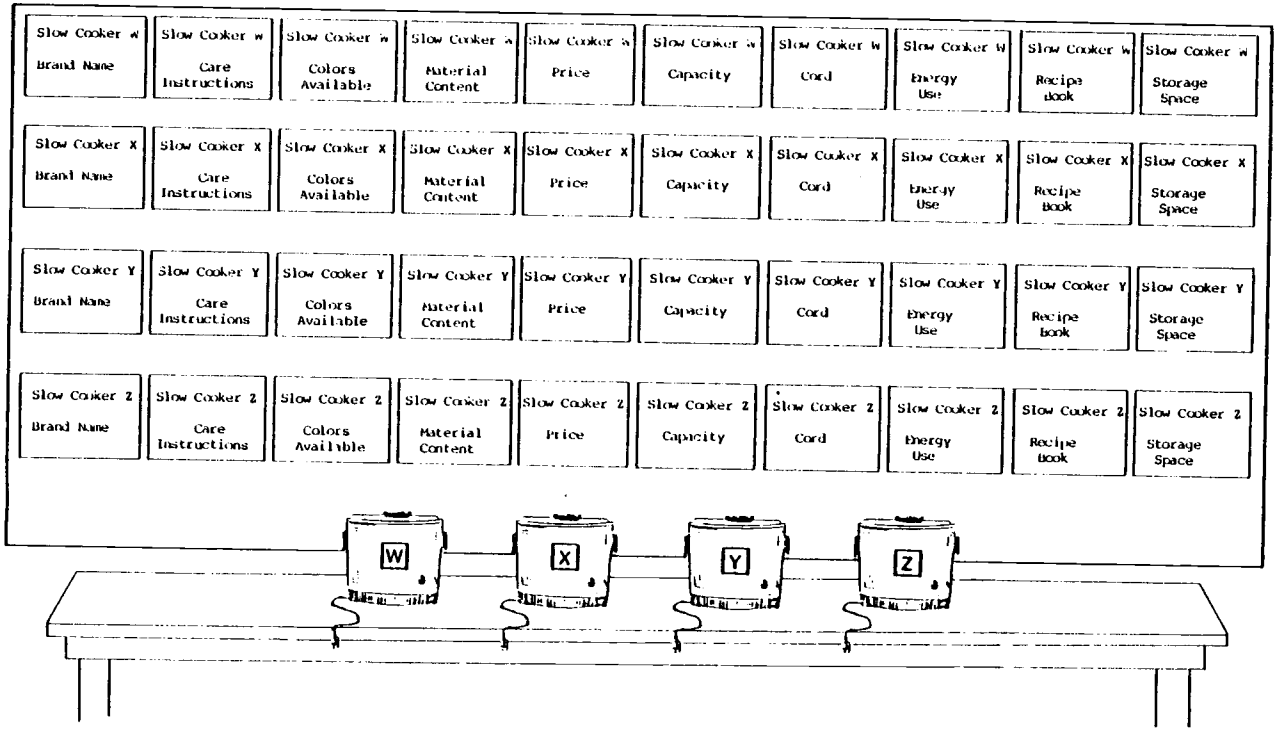
Statistical Analysis

Three statistical methods were used to test the hypotheses. The Chi-square test of independence was used in order to determine whether or not efficiency scores were dependent on consumers' behavioral characteristics. The level of significance was set at $p \leq .05$ indicating that

[2]See Appendix D for the facts included on the information cards.

Figure 4

Display- Group 3



there was less than a five percent chance that scores were independent of consumer's behavioral characteristics. One-way analysis of variance (ANOVA) was used to test for significant differences in the mean efficiency scores when respondents were grouped by social and behavioral characteristics. The level of significance was set at $p \leq .05$, indicating that there was less than a five percent chance that differences between the mean efficiency scores were the result of sampling error. Pearson's product moment coefficient (r) was used to test for linear relationships between efficiency scores and quantified behavioral characteristics of subjects. For purposes of this study, a correlation coefficient of $r = .66$ was determined to be an acceptable indication of the existance of a linear relationship.

CHAPTER IV

FINDINGS

Description of Sample

A random sample of 150 women over the age of 20, who were not students, and resided in Lafayette, Indiana were the subjects in this laboratory experiment. The demographic variables used to describe the sample were age, marital status, number in household, participants' education, participants' occupation, spouses' education, spouses' occupation, and annual household income.

Demographic Characteristics

Age Subjects were divided into eight age categories. The age categories 26-30 and over 55 had the greatest percentage of the sample with 20.0% and 21.3% respectively (Table 1).

Marital Status Marital status was separated into four groups: single, married, widowed, and divorced. Of the sample, 129 or 86.0% were married; 10 (6.7%) were single; eight (5.3%) were widowed; and two (1.7%) were divorced. One subject did not respond to the question (Table 2).

Number in Household Household size ranged from one to seven with the mean being 3.2 persons. Over half of the sample lived in a household of two (28.7%) or four (24.0%). Four participants did not respond to the question (Table 3).

Table 1

Age of Participants

AGE	FREQUENCY n	%
21-25	14	9.3
26-30	30	20.0
31-35	25	16.7
36-40	16	10.7
41-45	11	7.3
46-50	9	6.0
51-55	12	8.0
over 55	32	21.3
no response	1	.7
TOTAL	150	100.0

Table 2

Marital Status of Participants

MARITAL STATUS	FREQUENCY n	%
Single	10	6.7
Married	129	86.0
Widowed	8	5.3
Divorced	2	1.3
No Response	1	.7
TOTAL	150	100.0

Table 3
Size of Household

Number in Household	FREQUENCY n	%
1	16	10.7
2	43	28.7
3	19	12.7
4	36	24.0
5	24	16.0
6	5	3.3
7	3	2.0
No Response	4	2.7
TOTAL	150	100.0

Participant's Education Thirty percent of the sample had high school diplomas, 20% had completed some college, 27.3% had a four year college degree and 20.0% had completed a graduate or professional degree. Only three participants had less than a tenth grade education and one subject did not respond to the question (Table 4).

Participants' Occupation There were eleven occupation categories. Over half of the sample (66.7%) were either not employed or retired. The most frequently reported occupations were positions classified as low professional (Table 5).

Table 4

Educational Attainment of Participants

LEVEL OF EDUCATION	FREQUENCY n	%
Grad/Prof Degree	30	20.0
4 Yr. Coll. Degree	41	27.3
1-3 Yr. of College	30	20.0
High School Diploma	45	30.0
Tenth-Eleventh Grade	2	1.3
Seventh-Ninth Grade	1	.7
No Response	1	.7
TOTAL	150	100.0

Table 5

Occuaption of Participant

OCCUPATION	FREQUENCY n	%
High Professional	2	1.3
Low Professional	16	10.7
Technician	4	2.7
Administrative	1	.7
Craftsman	1	.7
Low Clerical	5	3.3
Low Sales	4	2.7
High Level Service	1	.7
Low Prestige/Glamor	2	1.3
Low Level Service	2	1.3
Not Employed/Retired	100	66.7
No Response	12	8.0
TOTAL	150	100.0

Spouse's Education When applicable, subjects reported their spouse's level of educational attainment. Over a third of the husband's were reported as holding a professional or graduate degree. An additional 38 (25.4%) of the spouses had attended at least one year of college, and 22 (14.7%) had earned degrees. Twenty-eight (18.7%) spouses had high school diplomas and four (2.7%) had completed less than twelve years of school (Table 6).

Table 6

Educational Attainment of Spouse

Level of Education Completed	FREQUENCY n	%
Grad/Prof Degree	59	39.3
4 Yr. College Degree	22	14.7
1-3 Yr. College	16	10.7
High School Diploma	28	18.7
Tenth-Eleventh Grade	3	2.0
Seventh-Ninth Grade	1	.7
No Response	21	14.0
TOTAL	150	100.0

Spouses' Occupation The 129 women who reported being married were asked to report their husband's occupation. These responses were catergorized into seventeen occupational groups. The categories with the highest response rate were high professional (27), low professional (21), and not employed/retired (17) (Table 7).

Annual Household Income Respondents were asked to indicate which of the six income categories best reflected their annual household income before taxes. The mean income category was $15,000 to $19,999 and included 23.3% of the sample (35 respondents). Thirty-four (22.7%) households had incomes of $10,000 to 14,999. An additional 22% of the sample reported annual earnings over $25,000 (33 respondents) (Table 8).

Table 7

Occupation of Spouse

OCCUPATION	FREQUENCY n	%
High Professional	27	18.0
Executive	3	2.0
Low Professional	21	14.0
Commissioned Officer	1	.7
Business Manager	6	4.0
Proprietor	5	3.3
Semi Professional	5	3.3
Technician	5	3.3
High Level Sales	1	.7
Administrative	1	.7
Foreman	8	5.3
Craftsman	6	4.0
Low Clerical	3	2.0
High Level Service	3	2.0
Operative	6	4.0
Low Level Service	2	1.3
Not Employed/Retired	17	11.3
No Response	30	20.0
TOTAL	150	100.0

Table 8

Annual Household Income

INCOME	FREQUENCY n	%
Under $5,000	6	4.0
$5,000-9,999	12	8.0
$10,000-14,999	34	22.7
$15,000-19,999	35	23.3
$20,000-24,999	24	16.0
Over $25,000	33	22.0
No Response	6	4.0
TOTAL	150	100.0

Description of the Treatment Groups

The 150 women participating in the study were randomly assigned to one of three treatment groups. Demographic variables of age, marital status, size of household, level of education, occupation, and income were used to compare the composition of the groups. Tables 9 through 14 show absolute and relative frequency data for each of these variables.

Relatively small variances were found in the composition of the three groups. Group R_1 had more respondents in the over 55 age category than groups R_2 and R_3; while, groups R_2 and R_3 had more respondents in the 26-30 category. Married subjects were evenly distributed among the three treatment groups. Group R_1, had the fewest single subjects as well as the smallest number of single person

households. Group R_3 had the highest level of education, with all subjects possessing at least a high school diploma. Group R_2 had the largest number of employed women of the sample but the fewest households earning over $25,000 a year.

Table 9

Age of Participants by Treatment Groups

	TREATMENT GROUP		
AGE	R_1 n	R_2 n	R_3 n
21-21	3	7	4
26-30	7	12	11
31-35	8	5	12
36-40	4	9	3
41-45	3	4	4
46-49	5	1	3
51-55	5	2	5
over 55	15	9	8
no response	0	1	0
TOTAL	50	50	50

Table 10

Marital Status of Participants by Treatment Groups

MARITAL STATUS	TREATMENT GROUP R_1 n	R_2 n	R_3 n
Single	1	4	5
Married	45	42	42
Widowed	3	2	3
Divorced	1	1	0
No Response	0	1	0
TOTAL	50	50	50

Table 11

Size of Household by Treatment Groups

Number in Household	TREATMENT GROUP R_1 n	R_2 n	R_3 n
1	2	7	7
2	18	13	12
3	6	6	7
4	11	13	12
5	8	9	7
6	1	2	2
7	1	0	2
No Response	3	0	1
TOTAL	50	50	50

TABLE 12

Educational Attainment of Participants by Treatment Groups

LEVEL OF EDUCATION	TREATMENT GROUP R_1 n	R_2 n	R_3 n
Grad/Prof Degree	8	10	12
4 Yr. Coll. Degree	12	15	14
1-3 Yr. of College	13	7	10
High School Diploma	15	16	14
Tenth-Eleventh Grade	1	1	0
Seventh-Ninth Grade	1	0	0
No Response	0	1	0
TOTAL	50	50	50

Table 13

Occupation of Participants by Treatment Groups

	TREATMENT GROUP		
	R_1	R_2	R_3
OCCUPATION	n	n	n
High Professional	0	1	1
Low Professional	5	6	5
Technician	1	1	2
Administrative	0	1	0
Craftsman	0	1	0
Low Clerical	3	1	1
Low Sales	1	2	1
High Level Service	1	0	0
Low Prestige/Glamor	1	1	0
Low Level Service	1	1	0
Not Employed/Retired	33	30	37
No Response	5	5	2
TOTAL	50	50	50

Table 14

Annual Household Income by Treatment Groups

	TREATMENT GROUP		
	R_1	R_2	R_3
INCOME	n	n	n
Under $5,000	2	1	3
$5,000-9,999	4	5	3
$10,000-14,999	12	11	11
$15,000-19,999	10	12	13
$20,000-24,999	6	10	8
Over $25,000	14	7	12
No Response	2	4	0
TOTAL	50	50	50

Hypothesis Testing

The null hypotheses are stated and the results of the hypotheses testing are reported. The findings are reported as shown on the statistical computation printouts.

H_o1 There will be no significant difference in mean efficiency scores by the experimental treatment a subject is exposed to.

The task of each group was to evaluate and rank the quality of four slow cookers. Consumer efficiency scores were then calculated by

comparing an individual's rankings with rankings of the same products in Consumer Reports (1975, p. 646)[2]. Specifically, scores were calculated by using the formula developed by the original research team[3]:

$$CEI_j = \sum_{i=1}^{k} |R_j - C_{ij}|$$

Scores ranged from 0-10 (a score of 0= perfect efficiency) and the mean score for the entire sample was 7.69 (s.d.= 2.65). Group R_2 had the lowest mean efficiency score[4] (7.48 with s.d.=3.07), with a range of 0 to 10. Group R_1 had a mean score of 7.78 (s.d.= 2.26), and scores ranged from 2 to 10. Group R_3 had the highest mean score (7.80 with s.d.= 2.59). Those scores ranged from 1 to 10. The SPSS program for one-way ANOVA was run to determine whether or not the mean consumer efficiency scores of the three treatment groups were significantly different (Table 15). The F-ratio was .227 with a probability greater than .05 (p= .80). The hypothesis was not rejected. In this study there was no statistically significant difference in the mean consumer efficiency scores of the three treatment groups.

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[2] A copy of the Consumer Reports article is in the Appendix E

[3] For a detailed explanation of the equation see Chapter 1, p. 5.

[4] Efficient consumers have low scores and consumers who are not efficient have high scores.

Table 15
Consumer Efficiency Scores by Treatment Group
and ANOVA Table

SOURCE	d.f	SS	MS	F RATIO	F PROB.
BETWEEN GROUPS	2	3.2133	1.6076	.227	.7973
WITHIN GROUPS	147	1041.0600	7.0820		
TOTAL	149	1044.2733			

At p=.05 (with 2 and 147 d.f.) F ≒ 19.49

H_o2 The level of consumer efficiency is not dependent upon the experimental treatment the subject is exposed to.

Three categories of efficiency were defined: efficient, moderate, and low. The efficient category included those participants receiving scores from zero to four (0 - 4), moderate efficient consumers were those with scores of five to eight (5 - 8), and low efficient consumers had scores greater than nine. Twenty-four subjects scored below five and were classified as efficient consumers. Sixty-one subjects were classified as moderate efficient consumers. The remaining 65 subjects scored above nine and were determined to have low consumer efficiency skills (Table 16). When the frequency data was examined it was apparent that the number of subjects in each efficiency category was evenly distributed among the treatment groups (Table 17). A Chi-Square test for independence was run (x^2= 2.01 with 2 d.f. and p= 0.77). Since the probability was greater than .05 the hypothesis was not rejected. Level of consumer efficiency is not

dependent upon a particular experimental treatment.

Table 16
Distribution of Scores by Efficiency Categories

	Score	Frequency n	Frequency %
	0	4	2.7
	1	2	1.3
	2	2	1.3
	3	1	.7
	4	15	10.0
Total Category 1		24	16.0
	5	0	0.00
	6	27	18.0
	7	0	0.00
	8	34	22.7
Total Category 2		61	40.7
	9	0	0.00
	10	65	43.3
Total Category 3		65	43.3
Total		150	100.00

Table 17

Level of Consumer Efficiency and Treatment Group

Treatment Group	Level of Efficiency LOW	MODERATE	EFFICIENT	TOTAL
1	24	18	8	50
2	22	19	9	50
3	19	24	7	50
TOTAL	65	61	24	150

Chi-Square = 1.85

d.f. = 4

Probability= .77 At p= .05 (4 d.f.) X^2= 9.49

H_o3a There will be no significant difference in mean consumer efficiency scores by whether or not the individual reads consumer oriented periodicals.

Included in the background questionaire was an alphabetized list of 21 popular periodicals. For each periodical, participants were asked to indicate if they a)rarely or never read, b) read about half of the issues, or c) read all or nearly all the issues. Among the list were two consumer oriented periodicals, Consumer Reports and Consumers Research. Readers were identified as those who indicated they read about half to all of either, or both, of the consumer oriented periodicals. Sixty-six subjects were classified as readers of Consumer Reports and 26 were classified as readers of Consumers Research. These subjects had a mean consumer efficiency score of 7.25 while the non-readers had a mean consumer efficiency score of 7.81.

A one way Analysis of Variance was run to determine whether or not the mean consumer efficiency score of readers of consumer periodicals was significantly different from non-readers (Table 18). The F-ratio was .309 with a probability greater than .05 (p= .58); therefore, the null hypothesis was not rejected. The results of this study do not enable the researcher to conclude that consumer efficiency scores of respondents who read consumer oriented periodicals were significantly higher than the scores of those who did not read such publications. It should also be noted that eight women reported being readers of a ficticious consumer periodical "Consumer Theory". Seven of those women reported reading all or nearly all the issues of "Consumer Theory". These findings are contrary to Thorelli's postulate that readers of consumer periodicals use a "rational" approach to product evaluations and therefore, are more efficient consumers.

H_o3b There will be no significant difference in mean consumer efficiency scores by whether or not the individual participates in an Extension Homemakers Group.

Respondents were asked to identify which social organizations they participated in. Among the list of social organizations was "Extension Homemakers Club". Seven women reported participating in all of the activities of the club, two reported participating in about half of the activities and 95 subjects reported that they rarely or never participate in Extension Homemakers club. Forty-six women did not respond to the question. The mean consumer efficiency score for the women participating in the homemakers culb was 6.00, whereas non-participants had a mean consumer efficiency score of 7.79. One-way ANOVA was run to determine if mean efficiency scores were significantly different by whether or not subject's participated in an

Table 18

Consumer Efficiency Scores and Readership of Consumer Periodicals and ANOVA Table

Reads Consumer Periodicals	n	$\bar{X}$
YES	78	7.25
NO	71	7.81

SOURCE	df	SS	MS	F RATIO	F PROB.
BETWEEN GROUPS	1	7.0720	7.0720	.309	.58
WITHIN GROUPS	148	1051.9071	22.8675		
TOTAL	149	1058.9792			

At p= .05 (with 1 and 46 d.f.) F= 3.84

extension homemaker club (Table 19). The F-ratio was 3.64, with a probability greater than .05 (p= .06); therefore, the null hypothesis was not rejected. This study did not provide evidence to indicate that consumer efficiency scores of women who participate in a homemakers extension group were significantly different from women who do not participate in such groups.

Table 19

Consumer Efficiency Mean Scores by Frequency of Participation in Extension Homemakers Club and ANOVA Table

Paricipataion	n	$\overline{X}$
YES	9	6.00
NO	95	7.79
NO RESPONSE	46	

SOURCE	df	SS	MS	F RATIO	F PROB.
BETWEEN GROUPS	1	26.3259	26.3259	3.640	.06
WITHIN GROUPS	102	737.7895	7.2332		
TOTAL	103	764.1154			

At p= .05 (with 1 and 102 d.f.) F≒ 3.93

H_o3c There will be no significant difference in mean efficiency scores by perceived level of ability to distinguish between higher and lower quality portable electrical appliances.

Prior to the experimental treatment, subjects were asked to assess their own ability to distinguish between "higher" and "lower" quality portable electrical appliances. The twelve subjects who reported that they were extremely sure that they could distinguish between quality levels had a mean consumer efficiency score of 7.41. The 103 women who were somewhat sure of their ability had a mean consumer efficiency score of 7.90. The 35 participants who were less

confident in their skills, reporting that they were somewhat to extremely unsure they could distinguish between product quality levels, had a mean consumer efficiency score of 7.14. The SPSS program for one-way ANOVA was run to determine whether or not there was significant difference in these mean scores (Table 20). The F-ratio was 1.14 with a probabilty of .32. Since the probability was greater than .05 the null hypothesis was not rejected. In this experimental situation there is no evidence to indicate that there is a statistically significant difference in mean consumer efficiency scores according to an individual's perception of their ability to distinguish between higher quality and lower quality portable electrical appliances. These findings are contrary to existing theories.

H_o3d Mean consumer efficiency scores are not significantly different by perceived degree of difficulty in making product evaluations.

After evaluating and ranking the four slow cookers, subjects in R_1 were asked to select one of four statements which most accurately reflected their behavior. Of the 48 women responding to the question, 19 believed it was "fairly easy to judge differences in quality between the four slow cookers". Twenty-six respondents reported the job as being "moderately difficult...although some differences were apparent". The remaining three women felt they "had to guess at" the choice since it was "difficult to judge differences in quality". The group perceiving the task to be moderately difficult had the lowest mean efficiency score of 7.65, aproximately .2 below the group mean (7.88). The highest mean score, 8.16, was obtained by the group

Table 20

Consumer Efficiency Mean Scores by Perceived Ability to Distinguish Quality and ANOVA Table

PERCEIVED ABILITY	FREQUENCY n	$\bar{X}$
EXTREMELY SURE	12	7.41
SOMEWHAT SURE	103	7.90
UNSURE	35	7.14

SOURCE	df	SS	MS	F RATIO	F PROB.
BETWEEN GROUPS	2	16.0418	8.0209	1.147	.32
WITHIN GROUPS	147	1028.2315	6.9948		
TOTAL	149	1044.2733			

At p= .05 (with 2 and 147 d.f.) F≒ 19.49

perceiving the task to be fairly easy. Those believing the task to be extremely difficult had a mean score of 8.00. An ANOVA was run to determine whether or not there was a significant difference in these mean scores (Table 21). The F-ratio was 0.20 with a probabilty of .82. Since the probabilty was greater than .05 the null hypothesis was not rejected. In this experimental situation there is no evidence to indicate that there is a statistically significant difference in mean consumer efficiency scores according individual's perceived difficulty in making product evaluations.

Table 21

Consumer Efficiency Scores and Perceived Task Difficulty and ANOVA Table (R_1)

	Efficiency Score						
Percieved Difficulty	1	4	6	8	10	n	$\bar{x}$
EASY	1	3	2	0	13	19	8.16
MODERATE	1	2	6	8	9	26	7.65
HARD	0	1	0	0	2	3	8.00
TOTAL	2	6	8	8	24	48	7.88

SOURCE	df	SS	MS	F RATIO	F PROB.
BETWEEN GROUPS	2	2.8391	1.4195	.201	.82
WITHIN GROUPS	45	318.4109	7.0758		
TOTAL	47	321.2500			

At p= .05 (with 2 and 45 d.f.) F≒ 3.23

H_o4a There will be no linear relationship between consumer efficiency scores and the number of consumer articles an individual reads.

The background questionnaire included an alphabetized list of 19 consumer oriented articles from a variety of popular periodicals. Subjects were to identify which features they read. For each feature read, the subject ranked how helpful they found the feature to be: not helpful, somewhat helpful, and extremely helpful. A reading score was computed by tabulating the number of articles each subject reported

reading. The SPSS program for Pearson Product-Moment Correlation Coefficient was run to determine whether or not there was a linear relationship between consumer efficiency scores and the number of consumer articles read. The correlation coefficient was r= .022, with p= .39. Since the probability was greater than .05, hypothesis was not rejected. The study did not provide evidence of a statistical significance of a linear relationship between consumer efficiency scores and the number of consumer articles read.

H_o4b There will be no linear relationship between consumer efficiency scores and social organization participation score.

The women were given a list of six social organizations and asked to indicate if they participated in a) all or nearly all of the activities, b) about half of the activities, or c) few to none of the activities. A participation score was calculated by totaling the number of organizations where a subject reported participating in half or more of the sponsored events. The Pearson Product Moment Correlation between consumer efficiency score and social organization participation score had a coefficient of r= .01 with a probability of .453. Since p> .05 the hypothesis was not rejected. There was no statistically significant linear relationship between consumer efficiency scores and social organization participation scores.

H_o4c There will be no linear relationship between consumer efficiency scores and the number of appliances previously purchased.

Given a list of nine portable electrical appliances, the

participants were asked to identify which items had been purchased, either as a gift or for themselves, during the past year. Using the number of appliances an individual had recently purchased as a surrogate measure for experience, a Pearsons Product Moment Correlation was run to determine whether or not there was a linear relationship between experience and efficiency scores. The correlation coefficient was r= .0144 with a probability of .431. Since the probability was greater than .05, the hypothesis was not rejected. In this study there was no statistically significiant linear relationship between the number of appliances purchased and consumer efficiency scores.

H_o5a The level of consumer efficiency is not dependent upon having had previous experience in purchasing slow cookers.

Respondents were asked whether or not they had previously purchased specific portable electric appliances. Slow cookers were one of the appliances listed. Of the 61 respondents in the low efficiency group, 35 had not purchased and 26 had purchased a slow cooker. In the moderately efficient group (n = 54), 32 had made a purchase and 22 had not. of the 23 efficient consumers, 17 had purchased a slow cooker and 6 had not. A Chi Square test for independence was run (x^2= 2.01; with 2 d.f. p= .37) (Table 22). Since the probability was greater than .05, the hypothesis was not rejected. The level of consumer efficiency was not dependent upon previous experience in purchasing a slow cooker.

Table 22

Frequency of Slow Cooker Purchases and Level of Consumer Efficiency

	Purchase Status		
Level of Efficiency	NOT PURCHASED	PURCHASED	TOTAL
LOW	35	26	61
MODERATE	32	22	54
EFFICIENT	17	6	23
TOTAL	84	54	138

Chi Square = 2.01
d.f. = 2
p = .37 At p= .05 (2d.f.) X^2= 5.99

H_o5b The level of consumer efficiency is not dependent upon perceived level of knowledge of features that characterize high quality portable electrical appliances.

Prior to exposure to the experimental treatment, subjects were asked whether they were extremely knowledgeable, somewhat knowledgeable, or not at all knowledgeable about what features characterized a high quality portable electrical appliance. Of the 149 respondents, 13 (8.7%) reported being extremely knowledgeable, 115 (76.7%) reported being somewhat knowledgeable, and 21 (14.0%) reported being not at all knowledgeable. A Chi Square test for independence was run (x^2= 2.91; with 4 d.f. p= .57) (Table 23). Since the probability was greater than .05, the hypothesis was not rejected. The level of consumer efficiency was not dependent upon consumer's

perceived level of knowledge of portable electrical appliances.

Table 23
Perception of Knowledge about Appliances and
Level of Consumer Efficiency

	Perceived Level of Knowledge			
Level of Efficiency	No Know	Some Know	Extreme Know	TOTAL
LOW	7	53	5	65
MODERATE	11	43	7	61
EFFICIENT	3	19	1	23
TOTAL	21	115	13	149

Chi Square = 2.91
d.f. = 4
p = .57 At p= .05 (4 d.f.) X^2=9.49

H_o6 Perceived level of knowledge of features that characterize high quality portable electrical appliances is not dependent upon the number of appliances previously purchased.

Prior to entering the display area, subjects were asked to evaluate their knowledge of small electrical appliances. Given three options, 13 subjects reported being extremely knowledgeable, 115 indicated they were somewhat knowledgeable, and 21 reported being not at all knowledgeable of what features characterize a high quality

appliance. From a list of eleven electrical appliances, an experience score was calculated by counting the number of appliances a subject indicated she had purchased within the past year. The number of appliances which had been purchased within the past year ranged from 0 to 7. Fify-two persons (35%) indicated that none of the of the 11 appliances had been purchased within the past year. The majority of the women purchasing an appliance (n = 43), either for themselves or for a gift, had purchased only one of the eleven listed appliances. Twenty-eight women had purchased two of the appliances, thirteen had purchased three, eight had purchased four, three indicated that five of the appliances had been purchased, and of the remaining two women, one had purchased six and one puchased seven of the listed appliances. A Chi-square test for independence was run (x^2= 8.65; with 6 d.f. p= .19) (Table 24). Since the probabilty was greater than .05, the hypothesis was not rejected. Perceived level of knowledge about small appliances is not dependent upon the number of portable electrical appliances previously purchased.

H_o7a In an experimental situation, the level of ability to judge differences in quality among slow cookers is not dependent upon subjects' previous perception of ability to distinguish between high and low quality portable electrical appliances.

Prior to entering the display area, participants were asked how confident they were in distinguishing between higher and lower quality portable electrical appliances. The majority of the sample (103 women) believed they were somewhat sure that they could distinguish between higher and lower quality appliances. Twelve women reported being extremely sure of their ability, while the remaining thirty-five women were somewhat to extremely unsure of their

Table 24

Perceived Knowledge About Electrical Appliances and Appliance Purchase Experience

	PERCEIVED KNOWLEDGE			
NUMBER PURCHASED	No Know	S. Know	Ex. Know	TOTAL
0	11	40	1	52
1	5	32	6	43
2	3	23	2	28
3^{+}	2	20	4	26
TOTAL	21	115	13	149

Chi-Square = 8.65

d.f. = 6

p = .19 At p= .05 (6 d.f.) X^2= 12.59

capabilities to distinguish quality differences. Actual ability to distinguish between levels of quality was measured by the consumer efficiency equation. Sixty-five participants received scores above 8 and were categorized as low efficient consumers. Only twenty-four women were identified as efficient consumers by receiving scores below 5. The remaining 61 subjects were categorized as moderately efficient consumers. A Chi-square test for independence was run (X^2= 5.51; with 4 d.f. p= .24) (Table 25). Since the probability was greater than .05 the hypothesis was not rejected. The level of consumer efficiency was not dependent upon previous perception of ability to distinguish between higher and lower quality portable electrical appliances.

Table 25

Level of Consumer Efficiency and Perceived Ability to Distinguish Quality

	PERCEIVED ABILITY TO DISTINGUISH QUALITY			
CONSUMER EFFICIENCY	Unsure	S. Sure	Ex. Sure	TOTAL
Low	13	49	3	65
Moderate	13	41	7	61
Efficient	9	13	2	24
TOTAL	35	103	12	150

Chi-Square = 5.51
d.f. = 4
p = .24 At p= .05 (4 d.f.) X^2= 9.49

H_o7b Perceived level of ability to distinguish between higher and lower quality electrical appliances is not dependent upon the number of portable electrical appliances previously purchased.

Prior to the experimental treatment, subjects were asked to assess their ability to distinguish between "higher" and "lower" quality portable electrical appliances. Twleve subjects professed being extremely sure that they could distinguish among quality levels, and 103 women were somewhat sure of their ability. Thirty-five participants were less confident in their skills, proclaiming to be somewhat to extremely unsure that they could distinguish product quality. Subjects were also asked to evaluate their knowledge of small

electrical appliances prior to entering the experiment station. From a list of eleven electrical appliances, an experience score was calcualted by counting the number of appliances a subject indicated she had purchased with in the past year. The number of appliances which had been purchased within the past year ranged from zero to seven. Fifty-three women indicated that they had not purchased any of the of the 11 appliances within the past year. Of the women purchasing an appliance, either for themseleves or for a gift, 43 had purchased only one of the eleven listed appliances. Twenty-eight women had purchased two of the appliances, thirteen had purchased three, eight had purchased four, three indicated that five of the appliances had been purchased, and of the remaining two women, one had purchased six and one puchased seven of the listed appliances. A Chi-square test for independence was run ($x^2 = 4.20$; with 6 d.f. $p = .65$) (Table 26). Since the probabilty was greater than .05, the hypothesis was not rejected. Perceived level of ability to distinguish between quality appliances was not dependent upon the individuals' experience in purchasing small electrical appliances.

H_o7c In an experimental situation, the ability to judge differences in quality among slow cookers is not dependent upon whether or not the respondent has previously purchased a slow cooker.

In completing the background questionnaire, each participant evaluated their own ability to judge differences between higher and lower quality portable electrical appliances. Subjects also reported whether or not they had purchased a slow cooker within the past year. Of the 84 women who had not purchased a slow cooker 21 were unsure of their ability to judge quality differences; 57 were somewhat sure of

Table 26

Perceived Ability to Distinguish Quality and Purchase Experience

	PERCEIVED ABILITY			
NUMBER PURCHASED	Unsure	Some Sure	Ex. Sure	TOTAL
0	15	36	2	53
1	9	28	6	43
2	6	20	2	28
3^{+}	5	19	2	26
TOTAL	35	103	12	149

Chi-Square = 4.20

d.f. = 6

p = .65 At p= .05 (6 d.f.) X^2= 12.59

their ability; and 6 were confident that they could judge quality differences in slow cookers. Fifty four women had previously purchased a slow cooker. Of those, 11 were unsure of their ability to judge quality differences; 37 were somewhat sure that they could judge qualiqy differences; and 6 were confident in their ability to judge differences in quality among slow cookers. A Chi-square test for independence was run (X^2= .90; with 2 d.f. p= .64) (Table 27). Since p> .05 the null hypothesis was not rejected. Ability to judge quality differences among slow cookers is not dependent upon having previously purchased the product.

Table 27

Purchase Experience and Perceived Ability to Judge Quality Differences

	PURCHASE EXPERIENCE		
PERCEIVED ABILITY	No Exper.	Experience	TOTAL
Unsure	21	11	32
Some Sure	57	37	94
Ex. Sure	6	6	12
TOTAL	84	54	138

Chi-Square = .90
d.f. = 2
p = .64 At p= .05 (2 d.f.) X^2= 5.99

H_8 There will be no significant difference in mean number of informational cues selected by whether or not the respondents have previously purchased a slow cooker: treatment constant.

When evaluating product quality, members of groups two and three recorded the order in which information cards were selected. The number of cards an individual selected was computed by counting the number of reported cues.

From a possible 20 informational cues, those in treatment group two reported using a mean of 12.65 cards with a range between 4 and 20. On the average, subjects who had previously purchased a slow cooker (n= 20) used slightly more cards than the total group (X^2=

13.10 with a range of 8 - 20). Participants who had not purchased a slow cooker (n = 28) consulted a mean of 12.32 informational cards prior to their evaluation decision. The number of cards for the total group ranged from four to twenty. The SPSS program for one-way ANOVA was run to determine whether or not there was significant difference in the mean scores (Table 28). The F-ratio was .31 with a probability of .58. Since p> .05 the hypothesis was not rejected. In this experimental situation, there was no evidence to indicate that there is a statistically significant difference in mean number of cues chosen by whether or not an individual had previously purchased a slow cooker.

Table 28

Number of Cues Selected by Slow Cooker Purchase Experience

(Treatment Group 2)

		Number of Cues	
Purchase Experience	n	Mean	Ranges
No Purchase Exper.	28	12.32	4.0 - 20.0
Purchase Exper.	20	13.10	8.0 - 20.0
TOTAL	48	12.65	4.0 - 20.0

SOURCE	d.f.	SS	MS	F Ratio	F Prob.
BETWEEN GROUPS	1	7.07	7.07	.31	.58
WITHIN GROUPS	46	1051.91	22.87		
TOTAL	47	1058.98			

At p = .05 (1 and 47 d.f.) F ≒ 4.08

In treatment group three (n = 45), the number of cards selected ranged between 4.0 and 30.0 (possible 40 informational cues). Subjects identified as having previously purchased a slow cooker consulted an average of 19.92, slightly more than the group mean of 18.33. Women who had not purchased a slow cooker (n = 31) selected an average of 17.62 cards prior to making the evaluation decision. The SPSS program for one-way ANOVA was run to determine whether or not there was a significant difference in these mean scores (Table 29). The F-ratio was .97 with a probability of .33. Since p> .05, the hypothesis was not rejected. In this experimental situation, there is no evidence to indicate that there is a statistically significant difference in the mean number of cues chosen by whether or not an individual has previously purchased a slow cooker.

H_o9a The type of information selected by respondents to base their evaluations on is not dependent upon whether or not the respondent has previously purchased a slow cooker: treatment constant.

After evaluating and ranking the four slow cookers, members of treatment group two and three were given four statements and asked to select the one which best reflected their behavior in evaluating the slow cookers.

In treatment group two, six members resported that their choices were based mostly on information from the cards, 15 based their decisions on examination of the products, and 28 reported equal use of informational cards and product examination in order to evaluate the slow cookers. One member of the group felt that her choice was based on a guess rather than informational cards or product examination. A chi-square test for independence was run (X^2 6.93; with 6 d.f. p= .30) (Table 30). Since the probability was greater

Table 29

Number of Cues Selected by Slow Cooker Purchase Experience

(Treatment Group 3)

Purchase Experience	n	Number of Cues Mean	Ranges
No Purchase Exper.	31	17.61	4.0 - 30.0
Purchase Exper.	14	19.93	4.0 - 30.0
TOTAL	45	18.33	4.0 - 30.0

SOURCE	d.f.	SS	MS	F Ratio	F Prob.
BETWEEN GROUPS	1	51.72	51.72	.97	.33
WITHIN GROUPS	43	2294.28	53.36		
TOTAL	44	2346.00			

At p = .05 (1 and 43 d.f.) F ≒ 4.08

than .05, the null hypothesis was not rejected. The type of information used to evaluate product quality is not dependent upon previously purchasing a slow cooker.

Table 30
Purchase Experience and Type of Information Used
(Treatment Group 2)

	PURCHASE EXPERIENCE			
TYPE OF INFO.	No Res.	No Exper.	Exper.	TOTAL
Cards	0	3	3	6
Prod. Exam	2	6	7	15
Cards/Prod. Exam	0	18	10	28
Guess	0	1	0	1
TOTAL	2	28	20	50

Chi-Square = 6.93
d.f. = 6
p = .33 At p = .05 (6 d.f.) x^2= 12.59

In treatment group three, 38 subjects based their evaluations of slow cookers on equal use of informational cards and product evaluations. Four women used product evaluations as the primary means of evalution and the remaining eight repondents used the informational cards. No member of group three indicated that their evaluations were made by guessing. A Chi-square test for independence was run (X^2= 3.72; with 4 d.f. p = .44) (Table 31). Since the probability was greater than .05, the null hypothesis was not rejected. In treatment group three, the type of information respondents selected to base their evaluations on is not dependent upon whether or not the respondent has previously purchased a slow cooker.

Table 31

Purchase Experience and Type of Information Used

(Treatment Group 3)

TYPE OF INFO.	PURCHASE EXPERIENCE No Res.	No Exper.	Exper.	TOTAL
Cards	0	4	4	8
Prod. Exam	1	2	1	4
Cards/Prod. Exam	4	25	9	38
TOTAL	5	31	14	50

Chi-Square = 3.73

d.f. = 4

p = .44 At p = .05 (4 d.f.) $x^2 = 9.49$

H_o9b The type of information respondents use as a basis for product evaluation is not dependent upon the treatment group to which the subject was assigned.

After evaluating and ranking the four slow cookers, members of treatment groups two and three were asked to report how their evauations were made. Given four statements describing the type of information used in the selection process, they were asked to select the one which best reflected their behavior.

When the two treatment groups are compared, is is evident that there was a tendency for subjects in R_2 to rely on product examinations in order to assess product quality. In group three, the trend was to rely on either the informational cues or combination of

information cues and product examination. A Chi-square test for independence was run (X^2= 7.90; with 4 d.f. p= .02) (Table 32). Since the probability was less than .05, the hypothesis was rejected. The type of information used by respondents as a basis for product evaluations was dependent upon the experimental situation to which they were exposed. Of the 150 subjects included in the study, the 34 members of R_3 who based their decisions on the combination of informational cues and product examination had the greatest probability of acheiving a perfect efficiency score. Yet, the four subjects who received perfect scores (i.e. CES = 0) were all in group two. The type of information used for the evaluation did not influence the respondents efficiency score. Therefore, some other factor or combination of factors influence consumer's ability to evaluate product quality as measured by the consumer efficiency equation.

Table 32
Type of Information Used for Product Evalualtions
by Treatment Group

TREATMENT	TYPE OF INFORMATION USED Info Cards	Prod. Exam	Combo.	TOTAL
Group 2	0	14	28	48
Group 3	8	2	34	45
TOTAL	14	17	62	93

Chi-Square = 7.90
d.f. = 2
p = .02 At p = .05 (2 d.f.) $x^2 = 5.99$

Discussion

The fact that only one of the hypotheses was found to be statistically significant is important. Primarily, the use of Consumer Reports ratings as the sole measure of consumer efficiency needs to be questioned. As the amount of information increased, subjects were more likely to use a combination of product examination and informational cues to make their product evaluations. The trend in treatment group two (R_2) was for a greater percentage of the sample to rely on product examination alone as a basis for evaluation. However, in treatment group 3 (R_3) the trend was to rely on either the informational cards or a combination of cards and product examinations in order to assess product quality. Theoretically, the 34 subjects in R_3 who used the combination of informational cards and product

examination had the greatest probability of being identified as perfectly efficient consumers (i.e. receive scores of 0). Yet, the only four individuals in the study who achieved a perfect efficiency score were in R_2. This finding, combined with the equal distribution of efficiency scores between and among treatment groups supports the assumption that the priorities (weights) assigned to product characteristics by Consumer Reports evaluators and by consumer participating in the study were different.

The current analysis provided no evidence of a significant relationship between prior experience purchasing slow cookers and the level of efficiency nor between prior experience and the number of cues or type of information used in the evaluation process. These findings are contrary to both behavior theory and the pilot study. According to theory, efficiency should increase with experience which would be positively related to confidence and learning (Cox 1967, Locander and Hermann 1979, Bettman and Park 1981). Other research has provided evidence that experience influences the types of cues consumers select during the decision process. In this study, the subjects exhibited a behavior pattern consistent with Chestnut and Jacoby's premise that search for information is consistent and shallow. Among those in the student sample, product quality evaluations were more similar to Consumer Reports than were the evaluations of those in the adult sample. Since, ability to objectively assess quality is dependent upon (1) the existing stock of information (Swagler 1981) and (2) the individual's understanding of the product's function and operation (Geistfeld 1981), the student exposure to principles in household equipment may have had an impact on their abilty to assess product quality. Furthermore, this finding is consistent with the premise that the payoff from an information search is not solely dependent on whether or not a search for information is undertaken but more importantly on how a search is carried out (Hawkin and McCain 1979). Students had also been

enrolled in Consumer Economics courses and had received training in searching for and using information to make rational consumer decisions.

No relationship between experience with purchasing small electrical appliances and perceived knowledge or confidence in evaluating quality was found to be significant. This finding is inconsistent with the findings of Cox (1967), in which confidence in product decisions is positively related to prior experience.

The women included in the present study behaved in a manner contrary to Thorelli's information seeker. Despite the preponderance of income, education, and/or occupation "elites" in the adult sample, few participants read consumer oriented periodicals and/or articles. Moreover, readers of such periodicals did not behave differently than non-readers. No relationship was found between consumer efficiency and readership of consumer periodicals or consumer oriented articles.

This series of findings, which are contrary to existing consumer behavior theory, leads the researcher to believe that there is need for modification of the equation used in this study to measure consumer efficiency.

CHAPTER V

SUMMARY, CONCLUSIONS, & RECOMMENDATIONS

Summary

Consumer efficiency is an assessment of an individual's ability to evaluate product quality. An equation developed by Sproles, Geistfeld, and Badenhop[5] measures the deviation of an individual's rank ordering of products from the rank ordering by Consumer Reports.:

$$CES_j = \sum_{i=1}^{k} | R_i - C_{ij} |$$

where:

k = number of alternative choices (brands)

CES_j = consumer efficiency score of the j^{th} consumer for a given product set of k choices.

R_i = "Consumer Reports" rating of the i^{th} alternative in the set of choices.

C_{ij} = rating of the i^{th} alternative by consumer j

$\sum_{i=1}^{k}$ = directs the summation of the absolute values over all k alternatives, and is derived from the first of Spearman's Rank Order Correlation.

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5 Sproles, Geistfeld, Badenhop. "Types and Amounts of Information Used by Efficient Consumers". Journal of Consumer Affairs 14(Summer 1980): 37-48

The purpose of the study was to a) identify attitudinal and behavioral factors which are related to consumer efficiency, and b) compare consumers' perception of their ability to evaluate product quality with their demonstrated efficiency. Data from a laboratory study conducted in 1978 at Purdue University were used for the analysis. The subjects were a random sample of 150 women from Lafayette, Indiana who were over the age of twenty and were not enrolled as students at Purdue University. The subjects were randomly assigned to one of three treatment groups in order to evaluate slow cookers. Each group was provided with different amounts and types of information. Subjects in treatment one (R_1) used only the products to evaluate and rank product quality. Those in treatment two (R_2) used products and marketing information, and those in treatment three (R_3) used products, marketing information and extended information (such as that found in Consumer Reports). Individuals in each group were directed to select the "best" slow cooker from a display of four brands. A consumer efficiency score was calculated for each subject by summing the differences between Consumer Reports rank ordering of the four slow cookers and the rank ordering by the participant.

Nine null hypotheses were developed to test relationships between eleven independent and six dependent variables. Three statistical tests were used: X^2, ANOVA, and Pearson's r. One null hypothesis was rejected ($p \leq .05$): the type of information respondents based their information on is not dependent upon treatment. There was a trend for the type of information used to change as the amount and type of infomation available increased. In R_2 the tendency was for subject to rely more heavily on product examinations in order to rank order the products. In R_3 the trend was for subjects to rely on the information cards or a combination of informational cards and product examinations as a basis for product evaluations. Contrary to theory, the amount of information subjects were provided had no significant

effect on their level of consumer efficiency. None of the subjects receiving perfect efficiency scores (i.e. CES= 0; n= 4) were members of R_3. An important supportive observation was that levels of Consumer Efficiency were evenly distributed among treatment groups.

Conclusions

The discrepancy in the findings between the current and previous analyses could be attributed to intervening variables. As pointed out by the original research team, the background of the subjects in the original study may have influenced the results of the initial study. As students in Consumer Economics, the participants were highly sensitized to using information based upon objective, qualitative criteria in order to make informed, rational decisions. Other intervening factors for this student group may have been (1) being test-wise, and (2) having had training concerning the function and operation of small appliances. The adult subjects in the replicated study may have based their evaluations on subjective criteria (i.e. personal experience and preference). Furthermore, the exhibited skills and behavior of subjects in the replicated study may be more representative of "average consumers" than that demonstrated by the student subjects in the initial study.

One intervening variable is, that at the time of the study, slow cookers were a relatively new product on the market. It is posited that knowledge accumulated, from previous experience purchasing small electrical appliances, was not transferable to the evaluation and rank ordering of slow cookers. Experience, therefore, is only an influencing factor when the accumulated knowledge and information is transferable to the situation at hand. This is demonstrated by the fact that, in the pilot study (student sample), a greater percentage of the subjects were found to be efficient. A major assumption of this study is, that, product rankings published by independent testing

associations are based on evaluative criteria identical to that which would be used by the average consumer. Furthermore, it was assumed that, in order for an individual to rank the products as they are ranked in Consumer Reports, a subject must be provided with and use all of the information that Consumer Reports utilized in evaluating the product class. Subjects were provided with that information but did not use all of that information. Theoretically, an inverted linear relationship between consumer efficiency scores and the amount of available information should exist (i.e. perfect consumer efficiency scores would have occured in group three- the group provided the most amount of information).

Consumer Reports provides an objective evaluation of a product's quality in that it identifies the degree to which a brand possesses a given attribute. However, when the products are assigned a rank order some objectivity may be lost. In order to rank brands a measure of comparision must be identified. Measures of comparision are based on the relative importance of a given attribute or set of attributes. Identifying the set of attributes used to compare products introduces a value structure, hence, subjectivity. Therefore, no matter how rational the comparision measure may be, rank ordering is subjective in nature. This is the point which users most often overlook. Too often consumers fail to identify a personal measure of comparision which reflects their own needs and constraints, and instead interpret the brand rated number one as the very best product available. Independent testing organizations provide an invaluable service so long as the information is personally interpreted to reflect criteria which would yield the optimal amount of personal satisfaction from the product selected.

It is concluded that:

* The greater agreement of the students' evaluation with Consumer Reports evaluation could be attributed to the

students being

- test-wise,
- trained to use objective/technical information to select products, and
- educated in the principles involved with various household appliances.

* Average consumers, give different weights to objective/technical information than Consumer Reports; and/or the subjects did not have the skill to process the objective information which was provided.

* Using Consumer Reports rankings as the sole measure of consumer's efficiency will continue to provide an inaccurate assessment until the general popualation has the opportunity to develop attributes which are similar to those of the student population.

* The even distribution of adult consumer efficiency scores over treatment groups could be attributed to the existence of a variable or set of variables which was not identified or controlled for in measuring consumer efficiency.

These conclusion are based on the even distribution of the consumer efficiency scores among and between the three experimental groups and the observation that (1) although R_3 was provided with greater amounts of information and (2) a majority of the subjects R_3 did maximize the use of the information, none acheived a perfect consumer efficiency score (i.e. CES = 0).

Recommendations

Based on the conclusion that individuals do not use the same criteria as Consumer Reports in evaluating product quality, but seldom re-evaluate published ranking of a product by inserting their own weighted criteria, it is recommended that periodicals such as Consumer Reports devise and use an evaluation equation similar to that developed by Maynes (1976). Product reports would explain the purpose and function of each feature and/or characteristic evaluated and tell how it contributes to the overall product performance. Based on needs or expectations, the consumer would identify and prioritize the attributes and/or features desired. Each alternative could then be evaluated, using the objective measures provided by the testing periodical. The results would enable an individual to select the product which would maximize the consumer's satisfaction.

Secondly, a revision of the consumer efficiency equation is recommended. Given that a consumer's level of satisfaction with a specific purchase is an indication of selection efficiency, the selection of the product ranked first by an independent testing laboratory may, in fact, lead to dissatisfaction and thereby an inefficient choice. The assumption, then, that the product which is rated highest by an independent testing organization will provide the greatest amount of satisfaction for all consumers may be in error. The revision in the efficiency equation should include a measure which quantifies the perceived utility of each product characteristic that is used in making product selections.

The utility measure would assist consumers in making a satisfier evaluation. Satisfier evaluation refers to a quantitative assessment of the alternative options available in the different products. In the selection process the consumer identifies the product options and attempts to quantify or rank each product according to its need satisfying ability (Dickinson 1981). These assessments use both intrinsic and extrinsic cues and are attitudinal

in nature (Olson and Jacoby, 1974; Lambert, 1980). Therefore, the degree to which a product is perceived to possess the combination of attributes which will provide the greatest amount of satisfaction (i.e. quality) is highly subjective, personal and anticipatory (Maynes 1976). The following model is posited[6]:

$$CES_i = \sum_{k=1}^{n} |I_k - P_{kj}| v_k - |I_k - O_{kj}| v_k|$$

where:

CES_i = consumer efficiency score of the i^{th} consumer

I_k = ideal point of attribute k

P_{kj} = amount of attribute k that brand j is perceived to possess

O_k = objective rating of attribute k that brand j possesses

v_k = perceived importance of brand possessing the desired amount of attribute k

n = number of attributes relavent to preference of brand in product category

$\sum_{k=1}$ = directs the summation of the absolute values over all k

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6 Adapted from — Winter "The Effect of Purchase Characteristics on Postdecision Product Reevaluation". Journal of Marketing Research 11(May,1974):164-171)

It is recommended that future investigations of consumer efficiency use instruments which include the following measures:

- subject's perceived and actual knowledge of the function and operation of the product being evaluated
- subject's perception of the "ideal" brand with in the product class
- subject's anticipated level of satisfaction upon purchasing and using each of the products available
- subject's anticipated behavior pattern (i.e. subject's plan to purchase one of the products available, delay purchase, eliminate purchase plan)
- subject's actual purchase behavior (i.e. a follow-up to identify action taken)
- subject's actual satisfaction with action taken

Small appliances have great energy conservation potential. Consequently, consumers need to be efficient in their selection of these products. Testing laboratories need to make product information more accessible and useful to consumers, and manufacturers and marketers need to know how consumers make product evaluations and select products that are perceived to be satisfactory. Further study of consumer efficiency will help meet these needs.

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APPENDICES

APPENDIX A

SCRIPT FOR TELEPHONE INTERVIEW

TELEPHONE INTERVIEW

Date _____; Phone Number dialed _____ .

Hello, my name is _____ and I am part of a research project sponsored by Purdue University. We are interested in how people make decisions about which consumer products they purchase. There is a $5.00 gift certificate for your participation and we would like to invite you to participate. Could you participate by coming to the Purdue campus for one hour session sometime between May 1 and May 14?

yes ____; no ____.

If no, say thank you and hang up.

If yes, continue:

We need some brief information - are you currently a student at Purdue?

yes ____; no ____.

Are you over 21?

yes ____; no ____.

(If it is an adult female, over 21 and not a Purdue student, "Good - You Qualify" make an appointment to come in during the first 2 weeks in May: _____
(date) (time)

Ask for her name and address (to mail a reminder for the appointment):

_____

_____

_____

Dr. Sue Badenhop of the faculty will send you a letter confirming your appointment and a map to our building? You'll really enjoy this experience, thanks very much! (If it is not an adult female, over 21 or if she is a Purdue Student) - "Thank you very much for your time, but we are looking for women over 21 who are not Purdue students." Hang up.

APPENDIX B

BACKGROUND QUESTIONNAIRE

QUESTIONNAIRE FOR SIMULATED PURCHASE PROJECT

Please answer each of the following questions to the best of your ability. We want to know your opinion concerning the purchasing of certain products. We are only interested in your opinion. There are no right or wrong answers.

In general, would you say that you are extremely knowledgeable, somewhat knowledgeable, or not at all knowledgeable about what features would characterize a high quality household textile (i.e. blankets, bedspreads, sheets)?

EXTREMELY KNOWLEDGEABLE _____

SOMEWHAT KNOWLEDGEABLE _____

NOT AT ALL KNOWLEDGEABLE _____

In general, how sure are you that you could distinguish between a "higher quality" and a "lower quality" household textile?

EXTREMELY SURE _____

SOMEWHAT SURE _____

EXTREMELY UNSURE _____

In general, would you say that you are extremely knowledgeable, somewhat knowledgeable, or not at all knowledgeable about what features would characterize a high quality portable electrical appliance (i.e. toasters, electric mixers, slow cookers)?

EXTREMELY KNOWLEDGEABLE _____

SOMEWHAT KNOWLEDGEABLE _____

NOT KNOWLEDGEABLE _____

In general, how sure are you that you could distinguish between a "higher quality" and a "lower quality" portable electrical appliance?

EXTREMELY SURE _____

SOMEWHAT SURE _____

SOMEWHAT UNSURE _____

EXTREMELY UNSURE _____

During the past year, have you purchased any of the following products, either as a gift for someone else or for yourself? Please check the appropriate column.

	Have Not Purchased	Purchased As a Gift	Purchased For Myself
Bed sheet			
Bedspread			
Blanket			
Bath Towel			
Hand towel			
Mattress cover			
Mattress pad			
Pillow case			
Wash cloth			
Crepe pan			
Deep fat fryer			
Electric fondue pot			
Electric frypan			
Electric saucepan			
Hamburger cooker			
Popcorn popper			
Portable oven			
Slow cooker			
Toaster			
Toaster oven			

Please offer your opinion as to the "value for the money" of the following brands of household textiles and portable electrical appliances.

	never heard of (no opinion)	Low Value						High Value
Household textiles:								
Cannon	0	1	2	3	4	5	6	7
Dravrah	0	1	2	3	4	5	6	7
Fairbo	0	1	2	3	4	5	6	7
J. P. Stevens	0	1	2	3	4	5	6	7
Penny's	0	1	2	3	4	5	6	7
Sears	0	1	2	3	4	5	6	7
Utica	0	1	2	3	4	5	6	7
Wards	0	1	2	3	4	5	6	7
Portable electrical appliances:								
General Electric	0	1	2	3	4	5	6	7
Hamilton Beach	0	1	2	3	4	5	6	7
Lenroc	0	1	2	3	4	5	6	7
Norelco	0	1	2	3	4	5	6	7
Oster	0	1	2	3	4	5	6	7
Penny's	0	1	2	3	4	5	6	7
Rival	0	1	2	3	4	5	6	7
Sears	0	1	2	3	4	5	6	7
Sunbeam	0	1	2	3	4	5	6	7
Wards	0	1	2	3	4	5	6	7
Wear-Ever	0	1	2	3	4	5	6	7
West Bend	0	1	2	3	4	5	6	7

Here is a list of features which a consumer might consider in purchasing a household textile. For each feature, please circle the number representing your opinion of the importance of each feature in choosing a household textile.

This feature would be considered:

Feature:	Not at All	Not Important						Very Important
Appearance	0	1	2	3	4	5	6	7
Brand Name	0	1	2	3	4	5	6	7
Care required	0	1	2	3	4	5	6	7
Color	0	1	2	3	4	5	6	7
Durability	0	1	2	3	4	5	6	7
Fiber content	0	1	2	3	4	5	6	7
Price	0	1	2	3	4	5	6	7
Seals of Approval	0	1	2	3	4	5	6	7
Strength	0	1	2	3	4	5	6	7
Style	0	1	2	3	4	5	6	7
Texture	0	1	2	3	4	5	6	7
Warmth	0	1	2	3	4	5	6	7
Warranty	0	1	2	3	4	5	6	7
Weight	0	1	2	3	4	5	6	7

Here is a list of features which a consumer might consider in purchasing a portable electrical appliance. For each feature, please circle the number representing your opinion of the importance of each feature in choosing a portable electrical appliance.

Feature:	Not at All	Not Important						Very Important
Brand Name	0	1	2	3	4	5	6	7
Color	0	1	2	3	4	5	6	7
Ease of care	0	1	2	3	4	5	6	7
Energy used	0	1	2	3	4	5	6	7
Instruction booklet	0	1	2	3	4	5	6	7
Materials content	0	1	2	3	4	5	6	7
Price	0	1	2	3	4	5	6	7
Seals of Approval	0	1	2	3	4	5	6	7
Size	0	1	2	3	4	5	6	7
Storage needs	0	1	2	3	4	5	6	7
Style	0	1	2	3	4	5	6	7
Warranty	0	1	2	3	4	5	6	7
Wattage Rating	0	1	2	3	4	5	6	7

We are interested in knowing which magazines and newspapers you read.
Please check the most appropriate lines below for each on the list.

Newspaper or Magazine	Rarely or Never Read	Read about half the issues	Read all or nearly all the issues
Apartment Life	____	____	____
American Home	____	____	____
Better Homes & Gardens	____	____	____
Changing Times	____	____	____
Consumer Reports	____	____	____
Consumers Research	____	____	____
Consumer Theory	____	____	____
Cosmopolitan	____	____	____
Family Circle	____	____	____
Indianapolis Star	____	____	____
Ladies Home Journal	____	____	____
Lafayette Journal & Courier	____	____	____
McCall's	____	____	____
Ms	____	____	____
Money	____	____	____
Moneysworth	____	____	____
National Observer	____	____	____
Parents'	____	____	____
Redbook	____	____	____
Sphere	____	____	____
Working Woman	____	____	____

Please choose three above sources which you feel have the most useful information in helping you choose products.

Best 1) _____
next best 2) _____
3) _____

Which of the following magazine and newspaper features do you read? Check the left column if you read that feature at least occasionally. In the right columns, check the ONE column indicating how helpful you find this feature in providing consumer - oriented information.

	I read this feature (check)	How helpful do you find it? Not at All	Some-what	Extremely
Consumer Information by Ralph Nader (Ladies Home Journal)	____	____	____	____
Creative Woman's World (Family Circle)	____	____	____	____
Current Accounts (Money)	____	____	____	____
Good Housekeeping Institute Reports	____	____	____	____
Home Sewing Hints	____	____	____	____
Right Now (McCalls)	____	____	____	____
How America Lives (Ladies Home Journal)	____	____	____	____
Family Money Management (Better Homes & Gardens)	____	____	____	____
Living & Leisure (Lafayette Journal & Courier	____	____	____	____
Money Facts (Woman's Day)	____	____	____	____
Money Helps (Money)	____	____	____	____
Money Management (Family Circle)	____	____	____	____
Money Talks (McCalls)	____	____	____	____
More than Money (American Home)	____	____	____	____
Needed: Help (Lafayette Journal & Courier)	____	____	____	____
Of Concern Now (Better Homes & Gardens)	____	____	____	____
Once Over (Consumer Reports)	____	____	____	____
Speaker for the House (Good Housekeeping)	____	____	____	____
Sylvia Porter	____	____	____	____

If you are married, complete the following:

What is your husband's occupation?

_____

What is the last year of school completed by your husband?

Completed a graduate/professional degree ____
Completed a 4 year college degree ____
Completed 1 - 3 years of college or post high school ____
Completed high school ____
Completed the 10th or 11th grade ____
Completed 7, 8 or 9 ____
Completed less than 7 years of school ____

How many persons are in your household? _____

What is the total annual income for your household before taxes?

Under $5000 ____ $15,000 - 19,999 ____
5,000 - 9,999 ____ 20,000 - 24,999 ____
10,000 - 14,999 ____ Over 25,000 ____

We are also interested in how much you participate in different groups. Please check the appropriate lines below.

Organization	Participate in all or nearly all of their activities	Participate in about half of their activities	Rarely or Never Participate
Church Women's Group	____	____	____
Craft Interest Group	____	____	____
Homemaker Extension Club	____	____	____
League of Women Voters	____	____	____
Women's Club	____	____	____
Sorority Alumnae Group	____	____	____
Other: (specify)			
_____	____	____	____
_____	____	____	____
_____	____	____	____

GENERAL INFORMATION

In which of these age groups are you?

21 - 25	____	41 - 45	____
26 - 30	____	46 - 50	____
31 - 35	____	51 - 55	____
36 - 40	____	Over 55	____

What is your current marital status?

Single ____
Married ____
Widowed ____
Divorced ____

What is your present occupation?

_____

What is the last year of school completed by you?

Completed a graduate/professional degree ____
Completed a 4 year college degree ____
Completed 1 - 3 years of college or post high school ____
Completed high school ____
Completed the 10th or 11th grade ____
Completed grades 7, 8 or 9 ____
Completed less than 7 years of school ____

APPENDIX C

EXPERIMENT QUESTIONNAIRE
TREATMENT GROUP ONE

SIMULATED CONSUMER CHOICES: BLANKETS AND SLOW COOKERS

INSTRUCTIONS: This study will help you determine the extent to which you are an effective consumer in the market. You will be given the opportunity to rate the overall quality and your purchase preferences for several products which are currently on the market:

4 Blankets

4 Slow Cookers

Please study each product, and then answer the questions which go with each product.

There are no right or wrong answers in this study. It is only important that you answer each question as if you were actually making a purchase of the product.

BE SURE TO READ THE INSTRUCTIONS ON EACH PAGE CAREFULLY BEFORE ANSWERING ANY PART OF THE QUESTIONNAIRE.

NOW GO TO THE BLANKET DISPLAY AREA

(Turn to the Next Page)

DATE_____

IN_____

OUT_____

Card _____

Resp. _____

Gp. _____

SLOW COOKERS

INSTRUCTIONS: Please make your judgments of the overall quality and your purchase preferences for each of the four slow cookers before you (Slow Cookers W, X, Y, Z). You may examine the slow cookers, however please do not take them apart. NOTE--Ignore any color differences, this is not a test of your color preferences.

1) YOUR RATINGS OF QUALITY: On each of the following scales, indicate your judgment of the overall quality of each slow cooker by circling the number best representing your judgment. In your judgment of quality, consider such factors as materials, workmanship, and any other features which you have judged in each slow cooker.

	Very Low Quality									Very High Quality
Slow Cooker W	1	2	3	4	5	6	7	8	9	10
Slow Cooker X	1	2	3	4	5	6	7	8	9	10
Slow Cooker Y	1	2	3	4	5	6	7	8	9	10
Slow Cooker Z	1	2	3	4	5	6	7	8	9	10

Rank the four slow cookers in your estimated order of overall quality. Write the letter of the ONE slow cooker you judge--

Highest Quality_____ 2nd Highest_____ 3rd Highest_____ 4th Highest_____

2) YOUR PURCHASE PREFERENCES: For each slow cooker, what is the likelihood (chance) that you would actually purchase that slow cooker, based on the knowledge or information you have obtained on that slow cooker. (Assume that you are now shopping for a slow cooker and have identified these four slow cookers as "possible" choices).

	Not Likely to Purchase									Very Likely to Purchase
Slow Cooker W	1	2	3	4	5	6	7	8	9	10
Slow Cooker X	1	2	3	4	5	6	7	8	9	10
Slow Cooker Y	1	2	3	4	5	6	7	8	9	10
Slow Cooker Z	1	2	3	4	5	6	7	8	9	10

Rank the four slow cookers in your preferred order of purchase. Write the letter of the ONE slow cooker which is your--

Most Preferred Purchase_____ 2nd Most Preferred_____ 3rd Most Preferred_____ 4th Most Preferred_____

PLEASE TURN TO THE NEXT PAGE

Card_____ .

Resp._____

Gp._____ .

SLOW COOKERS

INSTRUCTIONS: Now that you have made selections of your product preferences, please describe the factors that actually influenced this choice:

For your most preferred purchase, what factors actually influenced that choice (please write in)--

_____

_____

_____

What factors influenced you to reject the other products as the "most preferred purchase" (please write in)--

_____

_____

_____

Which of these three statements best describes your judgment of the differences in quality between the four slow cookers. Please read all three statements, and then check the ONE that is the best description.

It was fairly easy to judge differences in quality between the four slow cookers.....____-1

It was moderately difficult to judge differences in quality between the four slow cookers, although some differences were apparent.....____-2

It was extremely difficult to judge differences in quality between the four slow cookers. I feel that I may have had to "guess" my choices.....____-3

PLEASE BE SURE YOU HAVE ANSWERED ALL QUESTIONS ON THE LAST TWO PAGES.

APPENDIX D

EXPERIMENT QUESTIONNAIRE
TREATMENT GROUP TWO

SIMULATED CONSUMER CHOICES: BLANKETS AND SLOW COOKERS

INSTRUCTIONS: This study will help you determine the extent to which you are an effective consumer in the market. You will be given the opportunity to rate the overall quality and your purchase preferences for several products which are currently on the market:

4 Blankets

4 Slow Cookers

Please study each product, and then answer the questions which go with each product.

There are no right or wrong answers in this study. It is only important that you answer each question as if you were actually making a purchase of the product.

BE SURE TO READ THE INSTRUCTIONS ON EACH PAGE CAREFULLY BEFORE ANSWERING ANY PART OF THE QUESTIONNAIRE.

NOW GO TO THE BLANKET DISPLAY AREA

(Turn to the Next Page)

DATE_____

IN_____

OUT_____

Card _____

Resp. _____

Gp. _____

SLOW COOKERS

INSTRUCTIONS: Here are four different makes of slow cookers which are currently on the market (Slow Cookers "W", "X", "Y", "Z"). Behind the slow cookers is an informational board from which you may select cards containing information on each slow cooker. The information on each card may (or may not) help you determine your rating of overall quality and your purchase preferences for each slow cooker.

You may obtain whatever information you want on each slow cooker by selecting cards. The information is written on the back of each card on the board. Cards are listed on the board in alphabetical order.

You may select as many or as few cards as you feel would be useful. You may also examine the slow cookers, however please do not take them apart.

FOR EACH INFORMATIONAL CARD YOU SELECT, please write the number of the card (printed on back of card) on the following list. Write the numbers in the order you select the cards. (You may begin your selections).

First Card Selected → Continue Writing Card Numbers in Order of Selection. You May Stop Selecting at Any Time.

1) _____	11) _____	21) _____
2) _____	12) _____	22) _____
3) _____	13) _____	23) _____
4) _____	14) _____	24) _____
5) _____	15) _____	25) _____
6) _____	16) _____	26) _____
7) _____	17) _____	27) _____
8) _____	18) _____	28) _____
9) _____	19) _____	29) _____
10) _____	20) _____	30) _____

ON THE NEXT PAGE, YOU MAY MAKE CHOICES OF THE SLOW COOKERS. YOU MAY USE THE INFORMATION YOU HAVE JUST OBTAINED TO HELP MAKE THESE CHOICES.

TO MAKE YOUR CHOICES,

PLEASE TURN TO THE NEXT PAGE

Card _____

Resp. _____

Gp. _____

SLOW COOKERS

INSTRUCTIONS: Please make your judgments of the overall quality and your purchase preferences for each of the four slow cookers before you (Slow Cookers W, X, Y, Z). You may examine the slow cookers, however please do not take them apart. NOTE--Ignore any color differences, this is not a test of your color preferences.

1) YOUR RATINGS OF QUALITY: On each of the following scales, indicate your judgment of the overall quality of each slow cooker by circling the number best representing your judgment. In your judgment of quality, consider such factors as materials, workmanship, and any other features which you have judged in each slow cooker.

	Very Low Quality									Very High Quality
Slow Cooker W	1	2	3	4	5	6	7	8	9	10
Slow Cooker X	1	2	3	4	5	6	7	8	9	10
Slow Cooker Y	1	2	3	4	5	6	7	8	9	10
Slow Cooker Z	1	2	3	4	5	6	7	8	9	10

Rank the four slow cookers in your estimated order of overall quality. Write the letter of the ONE slow cooker you judge--

Hignest Quality_____ 2nd Highest_____ 3rd Highest_____ 4th Highest_____

2) YOUR PURCHASE PREFERENCES: For each slow cooker, what is the likelihood (chance) that you would actually purchase that slow cooker, based on the knowledge or information you have obtained on that slow cooker. (Assume that you are now shopping for a slow cooker and have identified these four slow cookers as "possible" choices).

	Not Likely to Purchase									Very Likely to Purchase
Slow Cooker W	1	2	3	4	5	6	7	8	9	10
Slow Cooker X	1	2	3	4	5	6	7	8	9	10
Slow Cooker Y	1	2	3	4	5	6	7	8	9	10
Slow Cooker Z	1	2	3	4	5	6	7	8	9	10

Rank the four slow cookers in your preferred order of purchase. Write the letter of the ONE slow cooker which is your--

Most Preferred Purchase_____ 2nd Most Preferred_____ 3rd Most Preferred_____ 4th Most Preferred_____

PLEASE TURN TO THE NEXT PAGE

Card_____
Resp._____
Gp._____.

SLOW COOKERS

INSTRUCTIONS: Now that you have made selections of your product preferences, please indicate which factors from the informational cards and/or your personal evaluations were actually influential in this choice and which were not. Read each of the following column headings, and check the factors that apply to you.

FACTORS:	Information on this factor was not selected	This factor was of no influence or help, even though I did select information on it	This factor positively influenced selection of my MOST PREFERRED PURCHASE	This factor influenced my rejection of one or more of the other products
Brand Name	____-1	____-1	____-1	____-1
Care Instructions	____-1	____-1	____-1	____-1
Colors Available	____-1	____-1	____-1	____-1
Material Content	____-1	____-1	____-1	____-1
Price	____-1	____-1	____-1	____-1
Your Personal Evaluation	____-1	____-1	____-1	____-1
Specific factors (others not listed, please specify):				
_____	____-1	____-1	____-1	____-1
_____	____-1	____-1	____-1	____-1
_____	____-1	____-1	____-1	____-1

Which of these statements best reflects how you made your choices of purchase preferences. Please read all four statements, and then check one which is the best description.

My choices were based mostly on information from the cards..._____-1

My choices were based mostly on my examination of each product (touching, looking at construction, etc.)....._____-2

My choices were based on about an equal use of the informational cards and my examination of each product....._____-3

Neither the information on the cards nor my examination of the products was particularly helpful. I feel that I may have had to "guess" my choices....._____-4

APPENDIX E

EXPERIMENT QUESTIONNAIRE
TREATMENT GROUP THREE

SIMULATED CONSUMER CHOICES: BLANKETS AND SLOW COOKERS

INSTRUCTIONS: This study will help you determine the extent to which you are an effective consumer in the market. You will be given the opportunity to rate the overall quality and your purchase preferences for several products which are currently on the market:

4 Blankets

4 Slow Cookers

Please study each product, and then answer the questions which go with each product.

There are no right or wrong answers in this study. It is only important that you answer each question as if you were actually making a purchase of the product.

BE SURE TO READ THE INSTRUCTIONS ON EACH PAGE CAREFULLY BEFORE ANSWERING ANY PART OF THE QUESTIONNAIRE.

NOW GO TO THE BLANKET DISPLAY AREA

(Turn to the Next Page)

DATE_____

IN_____

OUT_____

Card _____

Resp. _____

Gp. _____

SLOW COOKERS

INSTRUCTIONS: Here are four different makes of slow cookers which are currently on the market (Slow Cookers "W", "X", "Y", "Z"). Behind the slow cookers is an informational board from which you may select cards containing information on each slow cooker. The information on each card may (or may not) help you determine your rating of overall quality and your purchase preferences for each slow cooker.

You may obtain whatever information you want on each slow cooker by selecting cards. The information is written on the back of each card on the board. Cards are listed on the board in alphabetical order.

You may select as many or as few cards as you feel would be useful. You may also examine the slow cookers, however please do not take them apart.

FOR EACH INFORMATIONAL CARD YOU SELECT, please write the number of the card (printed on back of card) on the following list. Write the numbers in the order you select the cards. (You may begin your selections).

First Card Selected →

↓

Continue Writing Card Numbers in Order of Selection. You May Stop Selecting at Any Time.

1) _____	11) _____	21) _____
2) _____	12) _____	22) _____
3) _____	13) _____	23) _____
4) _____	14) _____	24) _____
5) _____	15) _____	25) _____
6) _____	16) _____	26) _____
7) _____	17) _____	27) _____
8) _____	18) _____	28) _____
9) _____	19) _____	29) _____
10) _____	20) _____	30) _____

ON THE NEXT PAGE, YOU MAY MAKE CHOICES OF THE SLOW COOKERS. YOU MAY USE THE INFORMATION YOU HAVE JUST OBTAINED TO HELP MAKE THESE CHOICES.

TO MAKE YOUR CHOICES,

PLEASE TURN TO THE NEXT PAGE

Card _____

Resp. _____

Gp. _____

SLOW COOKERS

INSTRUCTIONS: Please make your judgments of the overall quality and your purchase preferences for each of the four slow cookers before you (Slow Cookers W, X, Y, Z). You may examine the slow cookers, however please do not take them apart. NOTE--Ignore any color differences, this is not a test of your color preferences.

1) YOUR RATINGS OF QUALITY: On each of the following scales, indicate your judgment of the overall quality of each slow cooker by circling the number best representing your judgment. In your judgment of quality, consider such factors as materials, workmanship, and any other features which you have judged in each slow cooker.

	Very Low Quality									Very High Quality
Slow Cooker W	1	2	3	4	5	6	7	8	9	10
Slow Cooker X	1	2	3	4	5	6	7	8	9	10
Slow Cooker Y	1	2	3	4	5	6	7	8	9	10
Slow Cooker Z	1	2	3	4	5	6	7	8	9	10

Rank the four slow cookers in your estimated order of overall quality. Write the letter of the ONE slow cooker you judge--

Highest Quality_____	2nd Highest_____	3rd Highest_____	4th Highest_____

2) YOUR PURCHASE PREFERENCES: For each slow cooker, what is the likelihood (chance) that you would actually purchase that slow cooker, based on the knowledge or information you have obtained on that slow cooker. (Assume that you are now shopping for a slow cooker and have identified these four slow cookers as "possible" choices).

	Not Likely to Purchase									Very Likely to Purchase
Slow Cooker W	1	2	3	4	5	6	7	8	9	10
Slow Cooker X	1	2	3	4	5	6	7	8	9	10
Slow Cooker Y	1	2	3	4	5	6	7	8	9	10
Slow Cooker Z	1	2	3	4	5	6	7	8	9	10

Rank the four slow cookers in your preferred order of purchase. Write the letter of the ONE slow cooker which is your--

Most Preferred Purchase_____	2nd Most Preferred_____	3rd Most Preferred_____	4th Most Preferred_____

PLEASE TURN TO THE NEXT PAGE

Card_____

Resp._____

Gp._____

INSTRUCTIONS: Now that you have made selections of your product preferences, please indicate which factors from the informational cards and/or your personal evaluations were actually influential in this choice and which were not. Read each of the following column headings, and check the factors that apply to you.

FACTORS:	Information on this factor was not selected	This factor was of no influence or help, even though I did select information on it.	This factor positively influenced selection of my MOST PREFERRED PURCHASE	This factor influenced my rejection of one or more of the other products
Brand Name	____-1	____-1	____-1	____-1
Care Instructions	____-1	____-1	____-1	____-1
Colors Available	____-1	____-1	____-1	____-1
Material Content	____-1	____-1	____-1	____-1
Price	____-1	____-1	____-1	____-1
Capacity	____-1	____-1	____-1	____-1
Cord	____-1	____-1	____-1	____-1
Energy Use	____-1	____-1	____-1	____-1
Recipe Book	____-1	____-1	____-1	____-1
Storage Space	____-1	____-1	____-1	____-1
Personal Evaluation of the Products	____-1	____-1	____-1	____-1
Other Factors (Specify)				
_____	____-1	____-1	____-1	____-1
_____	____-1	____-1	____-1	____-1

Which of these statements best reflects how you made your choices of purchase preferences. Please read all four statements, and then check the ONE which is the best description.

My choices were based mostly on information from the cards....____-1

My choices were based mostly on my examination of each product (touching, looking at construction, etc.).....____-2

My choices were based on about an equal use of the informational cards and my examination of each product.....____-3

Neither the information on the cards nor my examination of the products was particularly helpful. I feel that I may have had to "guess" my choices.....____-4

APPENDIX F

INFORMATIONAL CUES

MARKET INFORMATION

ATTRIBUTE	INFORMATIONAL CONTENTS
	BRAND W
Brand Name	Regal
Care Instructions	Wash throughly after each use. Never use metal scouring pads. Do Not immerse unit in water
Colors Available	Green or Yellow
Material Content	Plastic Shell, Non-stick coated aluminum liner, Glass cover
Price	$23.00
	BRAND X
Brand Name	Penneys (J.C. Penney)
Care Instruction	Never submerge cooker in water. Fill with hot soapy water. Do not use abrasive cleaning compounds
Colors Available	Orange and Black Combination
Material Content	Painted Aluminum shell, Crockery liner, Glass lid
Price	$15.00
	BRAND Y
Brand Name	Hamilton Beach
Care Instructions	After use fill with hot soapy water. Do Not use cold water. Wipe with damp sponge. Do not immerse in water.
Colors Available	Gold
Material Content	Painted Aluminum shell, Glass liner, Glass lid
Price	$28.00

CHARACTERISTIC	INFORMATIONAL CONTENTS
	BRAND Z
Brand Name	Wear-Ever
Care Instructions	Remove liner, wash in hot sudsy water. May be washed in dishwasher. Outer shell: DO NOT immerse in water. Wipe with a damp cloth
Colors Available	Brown
Material Content	Porcelain enamel on aluminum shell. Crockery liner, Transparent glass lid.
Price	$30.00

EXTENDED INFORMATION

	BRAND W
Capacity	5 1/2 quarts
Cord	Cord is not detachable
Energy Use	130 Watts
Recipe Book	Contains fewer recipes than most.
Storage Space	Requires 8 1/2 x 13 x 11 in.

	BRAND X
Capacity	3 1/2 quarts
Cord	Not detachable
Energy Use	75 watts - 150 watts, Uses less energy than most at both heat settings
Recipe Book	Book contains many more recipes than most
Storage Space	Requires 9 x 10 1/2 x 9 1/2 in.

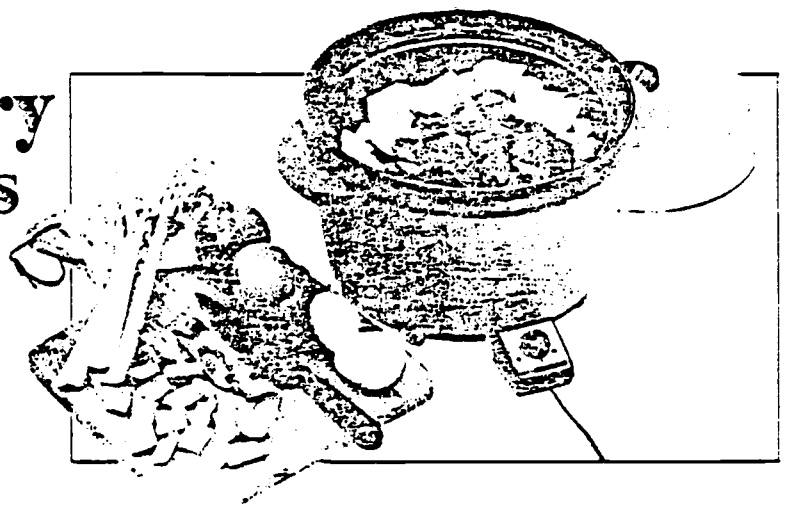
CHARACTERISTIC	INFORMATIONAL CONTENT
	BRAND Y
Capacity	4 quarts
Cord	Not Detachable
Energy Use	160 watts
Recipe Book	Book contains fewer recipes than most.
Storage Space	11 x 11 x 10
	BRAND Z
Capacity	3 1/2 quarts
Cord	Has detachable cord
Energy Use	75 watts and 150 watts. Uses less energy than most at low setting
Recipe Book	Recipe book has fewer recipes than most
Storage Space	Requires 7 x 12 1/2 x 10 in.

APPENDIX G

CONSUMER REPORTS

"Crockery Cookers" November 1975

Crockery Cookers



For centuries, people have cooked stews and other dishes slowly, over low heat. But the pot had to be watched. Now, along come electric crockery cookers, which can supposedly cook in 6 to 12 hours almost any dish that requires liquid—and no watching necessary. How good are they?

After testing 24 crockery cookers—not all of which were made of crockery—we'd say they're pretty good. A slow cooker, as we prefer to call it, will safely cook a meal while you're at work or while you sleep. At parties, it can be used to keep food warm. During hot weather, it will cook without adding much heat to your kitchen. A good slow cooker, we think, can be a handy kitchen aid.

But slow cooking does take some getting used to. With most slow cookers, there's virtually no evaporation during cooking, and sauces or gravies may emerge more watery than you'd fancy. Beef cooked at low temperatures may have a pink cast rather than the "done" look of browned meat. And some foods—such as milk products, pasta dishes, and soft-flesh fish—just won't stand up to the slow-cook process. But such difficulties can be circumvented. You can thicken a watery sauce by adding flour or by boiling it down in another pot just before serving. You can brown beef before adding it to the cooker. And you can add milk products, pasta, and such during the last stage of cooking.

Some readers may well wonder whether or not it's possible to circumvent the need for one more electric appliance by using a large pot on a range top and turning the heat down. Maybe yes, maybe no. We don't recommend allowing a pot to go unattended for long periods on a gas range because of the possibility that the low flame might blow out, leaving a dangerous gas leak. With an electric range, success would depend on just how low the controls can be set. If you have an electric range and a large, tightly sealed, heavy pot, it may work. But a good slow cooker is likely to work better, we think, since it will give you low heat, a tight seal, and the kind of heat conductivity that assures against burning.

The typical slow cooker is about the size and shape of a child's drum—roughly nine inches high and about nine inches in diameter—with metal or plastic outer shell and a stoneware liner. But there are a lot of variations. Some covers are transparent, some not. Some cookers are oblong or oval instead of cylindrical. Liners may be of aluminum, glass, or steel rather than stoneware, and may or may not be removable for cleaning. Capacities vary, and so do prices: The models we tested range in price from about $15 plus shipping to $50.

But our tests indicate that the basic difference, so far as cooking performance goes, is whether the cooker is a continuous-heat unit or a thermostatic unit, which cycles the heat on and off during the cooking process.

BEST BUYS

We think most people will be happiest with a continuous-heat cooker rather than with one that is thermostatically controlled. Among those we rated high: the *Wear-Ever H38032*, $30 list; *Wear-Ever C38033*, $33; *Penneys Cat. No. 0350*, a Best Buy at $15 plus shipping; *Rival 3100*, $28; *Grandinetti 532*, $25; and *Rival 3300*, $42. Those models offer a choice of two cooking heats, which should do for most of your slow-cooking recipes. You can reasonably choose among them on the basis of the capacity you need, the completeness of their recipe books, or a fortuitous discount. Cookers with thermostatic controls often also claim to serve for such chores as roasting, deep frying, or regular cooking. But with those models it can be more difficult to predict cooking times. If you want one, look first at the *West Bend 4399*, $25; *West Bend 5223*, $35; or *Nesco HB001*, $50.

CAN THEY COOK?

You might think a cooker that lets you regulate heat up or down over a wide range would be more desirable than a model that provides only one or two continuous heats. It didn't turn out that way, we discovered when we cooked with the cookers.

We tested each of the cookers on beef stew, a recipe found in one form or another in virtually every model's recipe book. The stew told us a good deal about the models' cooking times (quite variable) and whether they would soften

up relatively cheap, tough cuts of meat (they would). Following our own recipe, we put cut-up carrots and potatoes and 1½-inch cubes of stewing chuck into the pot, and topped it all with onions and celery. We then added spices and one cup of water. Instrumentation allowed us to check the stews' progress without having to raise the lids, which would have extended cooking time.

Performance. We gave almost all the **continuous-heat** pots two cracks at our stew, once on their high setting and again at the low setting. (The *Regal* provides only one heat.) At their high setting (and the *Regal* at its only setting), the cookers took from five to seven and a half hours to turn out the stew. On low, the six highest-rated models cooked the stew in 10 to 12 hours. Most of the rest did it in 15 hours or more. We judged the quicker performance on the low setting an advantage: with the really slow models, you're apt to run up against recipes that require an impractical amount of cooking time. The continuous-heat *Hamilton Beach 449* was among the slower units on low. But its control has an extra "automatic shift" position that delivers high heat for about two hours, then switches to low. On auto-shift, the *Hamilton Beach 449* cooked our stew in slightly less than nine hours.

We tried the **thermostatic** models at the setting their instructions recommended. Performance proved very unpredictable. About half the models cooked considerably faster (by as much as four to six hours) than their recipe books would suggest and most of the others considerably slower (by as much as five hours). But almost all of the models could be adjusted to turn out the stew in cooking times comparable to those of the continuous-heat models.

To be fair, our standard stew recipe didn't always correspond exactly to one in the recipe book that came with a specific model. But we think that, in general, finding the right control settings for the various dishes you'll want to cook may take some experimentation. And if, as seems likely, you'll want to extend your cooking range by buying a separate "crockery" cookbook, you'll have to do more experimenting to adapt the separate cookbook recipes to your particular thermostatic cooker.

Nutrition. There are claims that slow cooking is better than range-top or oven cooking because the higher temperatures often involved in the latter methods allow a greater loss of nutrients. But that's not the whole story. It's true that some nutrients are destroyed by high heat. But other nutrients can be lost because of the lengthy cooking times often required with slow cookery. And with some foods, nutrient loss can occur even at lower temperatures. Of course, water-soluble nutrients that are "lost" simply pass from the food into the surrounding liquid and are "recovered" if you consume the liquid along with the food—as you would with stew. But in general, we can't support the claims that slow cooking always means more nutritious cooking.

Taste. We didn't run formal taste tests, but there was no doubt about our stew's popularity with the many CU staffers who ate it. To judge by their comments, the stew cooked slowly (10 hours or more) had more flavor than stew that cooked in six hours or so.

ARE THEY HANDY?

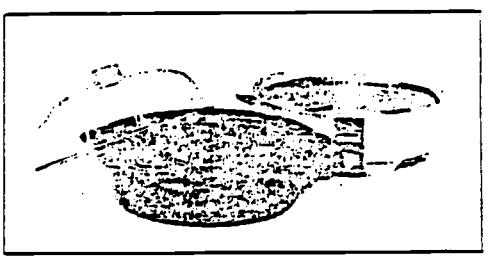
Recipe books. Though slow cooking requires special recipes, the books that come with some models (see Ratings) offer relatively few recipes. That will prove a small nuisance in using those cookers. Still, don't decide against an otherwise good model because of a lack of recipes: You can always buy one of the numerous slow-cookery cookbooks that are on the market. (For a partial rundown and critique, see the box on page 649.)

Plugging them in. If you buy a thermostatic model, be aware that some are rated for electrical draws of as much as 1600 watts. Those models will pretty well monopolize the branch circuit that powers them—a disadvantage in view of the long cooking time involved. Such models are noted in the Ratings. (But note that high-wattage draw does not necessarily mean a cooker uses a lot of energy: It occurs when the thermostat cycles the heater on; during "off" intervals, the cooker is not drawing *any* power.)

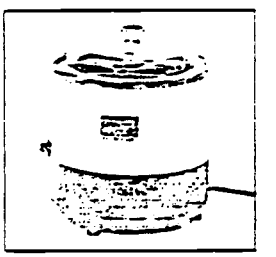
Shape and size. A shallow design can pose a problem. For example, when we put our stew in the *Sunbeam 7*, which resembles a frying pan, the single cup of water we added

SOME COOKERS MAKE GOOD SERVERS, SOME DON'T

Like many of the cookers, *Wear-Ever C38033*, $33, has detachable cord, makes a good server.

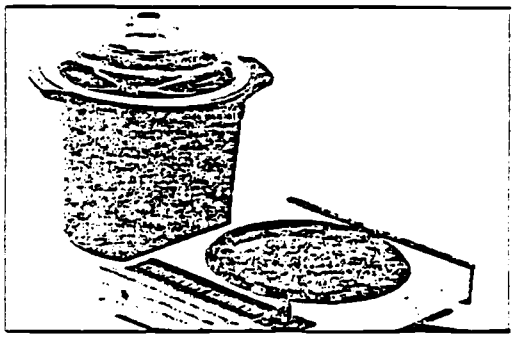


Removable stoneware liners of some cookers are suitable for serving, but they can get quite hot. *Grandinetti 732*, $35, is big enough to slow-cook a chicken or a small roast.

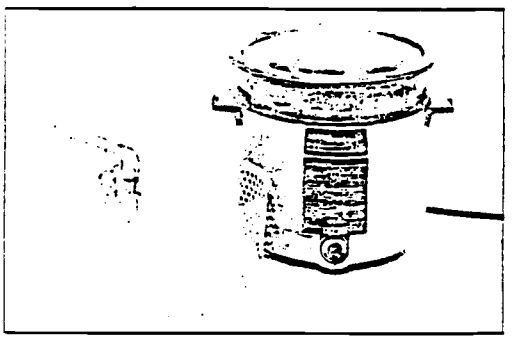


Best Buy *Penney's Cat. No. 0350*, $15 plus shipping, has attached cord, is inconvenient as server

SOME THERMOSTATIC UNITS OFFER FLEXIBILITY OF USES



Sears Cat. No. 63452. **$20 plus shipping, has separate, thermostatically controlled heating plate that can also be used to heat other utensils. Stoneware vessel can also be used in the oven.**



Penneys Cat. No. 2976. **$34 plus shipping, can also be used for regular cooking and deep-fat frying (with basket). Like many thermostatic units, it can monopolize a household circuit.**

left most of the stew uncovered and the meat didn't cook properly. A similar problem can occur with some cuts of meat in any slow cooker that's shallow or very wide in diameter: If the liquid doesn't cover enough of the meat, part of the meat may not get done as well as you'd like unless it is turned over during cooking.

Setup. A strong plus for the slow cooker's cooking method showed up at food-preparation time. All our stew ingredients could be made ready and put into the cooker at once. Then, whether the cooker was on low or high, all we had to do was to remember to check the stew for doneness as the expected finishing time neared. We were thus freed—as you would be—from having to wait around, pot-watching, stirring, and adding late-coming vegetables.

Serving. Look for a model with a detachable cord (see Ratings) if you'll use your cooker as a serving dish at the dinner table. Many of the removable liners can be used alone as serving dishes, but note that their handles get considerably hotter than the handles of the outer shells.

Food storage. All-metal and metal/plastic cookers (see Ratings) let you put cooked food directly into the refrigerator, cooker and all. When they later emerge from the cold, those cookers can also be turned on immediately. You can't do the same with cookers that have glass or stoneware liners, since too-sudden temperature changes may crack the liners.

Cleaning. Wash-up should prove easiest with the models whose liners are removable. Those liners can be fully immersed in water or, once any adhering material is loosened, put into a dishwasher. When you're washing most of the other models, you have to be careful not to dunk their bottoms and cords in water. Still, no model posed special cleaning problems. Most of the manufacturers suggest that you avoid abrasive cleaners or steel wool in favor of cloths, sponges, or plastic scrubbers.

Other functions. Most of the thermostatic models claim suitability for uses other than slow cooking. A number, for instance, are regular cookers and deep fryers whose controls can be turned low for slow cookery. One is a frying pan with a stoneware insert for slow cooking, another a two-piece unit that can also be used as a hot plate, still another a roaster and baker, and so on. We didn't test those other capabilities, since we were interested only in the slow-cooking abilities of our models. The Ratings nonetheless note any extra functions, as a matter of interest.

ARE THEY ENERGY SAVERS?

Manufacturers claim that you save energy with a slow cooker. That's true only sometimes. If you cooked stew as a casserole in the oven of an electric range, you'd expend about double the energy required by a continuous-heat cooker, whether set on high or low. But the *top* of an electric range is apt to handle the chore using the same amount of energy—or even less—than that required by most slow cookers. In general, we found that the continuous-heat cookers used about one-quarter less energy than the thermostat models. The Ratings note the cookers that used more or less energy than most.

One way to waste energy would be to leave a slow cooker plugged in and "on" inadvertently. A good signal light could prevent this, but none of the continuous-heat models had one. About half the thermostatic cookers did, but the lights only went on when the models' heating elements did, and even then they were difficult to see.

ARE THEY SAFE?

The lower a cooking temperature, the longer the time needed to cook food. Low cooking temperatures over a long period can pose a health hazard.

Bacteria grow rapidly in foods held more than three or four hours between 60° and 120°. Some may still grow, though more slowly, at 120° to 140°. Even if the food eventually gets hot enough to kill the bacteria, the heat won't destroy the toxin some bacteria leave behind, and that toxin could cause you to be sick.

The threat of trichinosis from undercooked pork, or even beef, is also a consideration. A cooking temperature of 140° is needed to kill trichinosis parasites, too. So the cookers' heating rates and holding levels called for close scrutiny.

Happily, none of the continuous-heat units gave cause

for concern; all heated food to well above 140° in a sufficiently short time and kept it there, even at a low setting.

But health problems could arise with a number of the thermostatic models that have keep-warm settings below their lowest slow-cook setting. The thermostats can be tricky to adjust; a very small change in position can produce a rather large change in the cooker's temperature. The result then could be a temperature that spurs bacterial growth. In using a thermostatic model, start by following its instructions closely. If you find you need longer cooking times, lower the control setting only a little at a time.

The thermostatic *Presto* is a special case. When we set its control at the low position recommended for some recipes, the result was a cooking temperature below 130°, not the 150° the instructions led us to expect. A second sample did produce a temperature somewhat in excess of 150°. But, in view of the variability that can occur with thermostats, we believe that model allows an insufficient margin of safety. We therefore rate it Not Acceptable, even though the bacteria involved are more likely to upset your stomach than make you seriously ill.

To qualify for listing by Underwriters' Laboratories, all these units must meet specifications concerned with overheating under abnormal conditions (a cooker that has run dry and a thermostat that has broken down and kept the heating element on continuously for seven to eight hours). All our test models are listed by UL.

There is, however, some chance of a fire hazard with certain units, if you misuse them. Some models come with cords as short as 2½ feet. That reduces the chance of a child's tugging on the cord and dumping the hot ingredients. However, there's a possible minus—short cords may fail to reach a convenient electric outlet. If you then use an undersized extension cord (not possible with the low-wattage continuous-heat cookers, but very possible with the higher-wattage thermostatic cookers), there's a good chance it will overheat dangerously during cooking.

If you need an extension cord, make sure to get one that has sufficient capacity. To calculate the minimum current capacity you need, divide the cooker's wattage by 120. (A 1600-watt cooker would require 13⅓ amps.)

When cooking, most of these cookers will prove distinctly uncomfortable if you grasp their lids or casings, which heat to at least 130° or so, even at a low setting. But the *Farberware* and *Sunbeam 7* will actually burn you, even if the contact is brief—exteriors of those two went to 200° or above. The outside surfaces of four others—*Rival 3300* and *3500*, and *Reval 7533* and *K7536*—remained cool during cooking.

The handles of all the cookers will give you reasonable protection; you can grasp any of them comfortably with

CHOOSING A CROCKERY COOKBOOK

Slow cooking is not like regular cooking. It takes very different quantities, seasonings, techniques, and cooking times. So, to get the most out of your slow cooker, you'll probably want to buy one of the new crockery cookbooks now flooding the bookstores. But which one to buy? CU asked an independent consultant in the food field to review five of the books for us. All of them were published this year. Here are the consultant's comments on them, in order of preference:

"Mike Roy's Crock Cookery," by Mike Roy with Don Fitzgerald, is a practical guide with about 90 recipes that suit both crockery cookers and busy contemporary lifestyles. Most of the recipes in this lowest-priced guide are honest, well-seasoned, and hearty. They make good use of inexpensive meats, beans, and vegetables that cook to tenderness and mellow flavor in the slow, moist crockery-pot heat. (An exception: Why cook canned baked beans six to eight hours?) Brief buying and use tips (how to set many of the various cookers on the market), plus practical advice on seasoning and on adapting recipes, are included. Directions for puddings, breads, and preserves—given in some of the other cookbooks—are omitted. This book doesn't have everything, but what it has is good. *Dell, 124 pages, paperback, $1.25, Ward Ritchie, 122 pages with color illus., large-sized paperback, $3.95.*

"Crockery Cookery," by Mable Hoffman, is the best-known and best-selling of this group, but it's not the best. The popular, large-sized, illustrated paperback is now available in a smaller, cheaper size without the color illustrations (which are only a disparate collection from varied stock sources anyway). The recipes vary in quality. Some (such as a curried chicken with canned cling peaches and prunes) use ingredients not intrinsic to the dishes; they are more relevant to the needs of the food-industry sources from which they apparently came than to the needs of the user or the functions of the crockery cooker. However, with 262 recipes from which to choose, plus detailed and illustrated descriptions of cookers (including instructions on how to set them), this book offers a lot for the money. *Bantam, 259 pages with illus., paperback, $1.95. H. P. Books, 176 pages with color illus., large-sized paperback, $4.95; cloth, $6.95.*

"The Crockery Cookbook," by Marie Hamm, includes 160 recipes of varied quality, plus a chart for adapting your own recipes to the crockery-cooking method. Using the chart may take some experimentation. For example: Most vegetables cook more slowly than meats in the crockery cooker, but the chart doesn't always reflect this. Some recipes are appealing, but others are simple put-togethers of prepared foods that hardly seem worth cooking for hours. *Fawcett, 207 pages, paperback, $1.75.*

"The Crockery Pot Cookbook," by Lou Seibert Pappas, is novel in format (an oblong paperback) and has some interesting recipes. But it is not always oriented either to the functions of the crockery cooker or the needs of a working user. Oddly, some salads, for which no crockery cooker is used, are also included. (But the salads *are* attractive.) This might be a nice second crockery cookbook to own or to give. *Nitty Gritty Productions, 183 pages with sketches, paperback, $3.95.*

"The Electric Slow Cooker Cookbook," by Barbara Bean, newest and most expensive of this group, is also the most ambitious in its approach to about 175 recipes and menu suggestions. But the book has overreached itself: Many of the recipes seem needlessly complex to prepare and involve several pans before the slow cooker is used. Some of the menus are contrived and include combinations that seem to be unrealistic for a working cook. On the plus side, recipes are given for preserves and international main dishes. *Henry Regnery Co., 192 pages, large-sized paperback, $4.95; cloth, $12.50.*

your bare hands. You may need a pot holder, though, if you lift the cover when your unit is set on high.

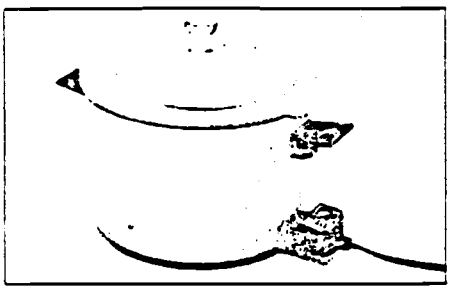
RECOMMENDATIONS

We've based the Ratings on our judgments of each model's performance and convenience of use. In general, we favor the continuous-heat models over the thermostatic type. The two heat settings on most of the continuous-heat cookers should be enough to handle practically any slow-cooking recipe you come across and yet free you from the need to fiddle with thermostats. Among the continuous-heat models, we'd suggest you consider first the six highest-rated ones:

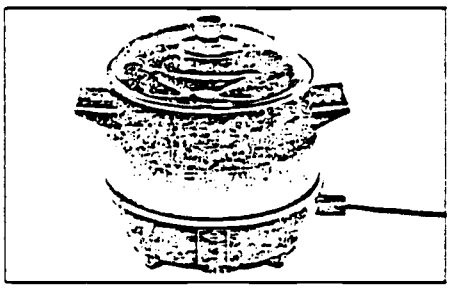
The two *Wear-Evers*, at $30 and $33 list, have removable inserts for easy cleaning and detachable cords for convenient table-top serving. Their recipe books, though, are a bit meager. The Best Buy *Penneys*, $15 plus shipping, and the similar *Rival 3100*, $28, also did well and come with very complete recipe books. The *Grandinetti 532*, $25, uses less energy than most and provides a good recipe book. The *Rival 3300*, $42, also provides recipes in abundance, a detachable cord, and about a quart more in capacity than the other high-rated units.

If you really want the flexibility of a thermostatic model and don't mind the experimentation you may need to realize it, consider the four-quart *West Bend 4399*, $25, or the six-quart *West Bend 5225*, $35. Their shortcomings come down to the lack of off switches and, for the *4399*, a stingy recipe book. For good slow cooking coupled with other uses, check the six quart *Nesco*, $50; its virtues and defects are noted in the Ratings.

TOP-RATED CROCKERY COOKERS



Continuous-heat: *Wear-Ever H38032*, $30.



Thermostatic: *West Bend 4399*, $25.

Ratings
CROCKERY COOKERS

Listed by types, continuous-heat or thermostatic; within types, listed in order of estimated overall quality. Unless otherwise indicated, all: require a storage space about 8 to 9 in. high, 11 to 12 in. wide, and 9 to 10 in. deep; have a 2½- to 4-ft. attached cord that makes use as a serving dish inconvenient; have recipe books that contain enough slow-cook recipes to be judged sufficient; come with a 1-yr. warranty for parts and labor. Prices are list, rounded to nearest dollar; discounts are generally available.

CONTINUOUS-HEAT COOKERS

All: ● Drew low wattages that will not monopolize a household circuit. ● Have transparent glass or plastic covers.
Except as noted all: ● Are cylindrical pots that cannot be immersed for cleaning. ● Have steel shell and a nonremovable stoneware liner that can't withstand sudden temperature changes. ● Have a high/low/off switch.

ACCEPTABLE

WEAR-EVER POKEY POT H38032 (Wear-Ever Aluminum, Inc., Chillicothe, Ohio). $30. Porcelain-enameled aluminum shell, removable glass liner. Capacity, 3½ qt. Requires storage space about 7x12½x10 in.
Advantages: Used less energy than most at low setting. Removable liner can be washed in dishwasher. Has detachable cord; convenient for use as a serving dish. **Disadvantages:** Recipe book contains fewer recipes than most.

WEAR-EVER POKEY POT C38033 (Wear-Ever Aluminum, Inc.). $33. Essentially similar to Wear-Ever H38032, preceding, except removable liner is stoneware, and model requires a storage space about 7½x12½x10 in.

PENNEYS SLOW CROCKERY COOKER Cat. No. 0350 (J. C. Penney). $15 plus shipping. Capacity, 3½ qt. Requires storage space about 9x10½x9½ in. 1-yr. replacement warranty. ▲ ***BEST BUY.***
Advantages: Used less energy than most at both heat settings. Recipe book contains many more recipes than most.

RIVAL CROCK POT 3100 (Rival Mfg. Co., Kansas City, Mo.). $28. Essentially similar to Penneys Cat. No. 0350, preceding, except warranty is for parts and labor.

GRANDINETTI CROCKERY COOK POT 532 (Grandinetti Prod., Inc., Lynwood, Calif.). $25. Capacity, 3½ qt. 6-ft. attached cord. $3 handling charge for service under warranty.
Advantages: Used less energy than most at both heat settings. Recipe book contains more recipes than most.

RIVAL CROCK POT 3300 (Rival Mfg. Co.). $42. Plastic shell. Claimed capacity, 5 qt.; measured 4¼ qt. Requires storage space about 8x13x11 in. Also available from Montgomery Ward as Cat. No. 36343, $30 plus shipping, and from J. C. Penney as Cat. No. 1903, $30 plus shipping. Sample purchased from Penneys had a claimed capacity of 4½ qt.
Advantages: Outside of pot remained cool during cooking. Has detachable cord; convenient for use as serving dish. Recipe book contains many more recipes than most.

■ *The following model cooked somewhat slower on "low" than those preceding.*

SEARS CROCKERY COOKER 65292 (Sears, Roebuck). approx. $20. Capacity, 4 qt. 4¾-ft. attached cord. Low setting is marked "medium." 1-yr. re-

placement warranty. Not listed in the current catalog, but may still be available in some Sears retail stores.
Disadvantages: Glass cover comes off too easily; more subject to accidental breakage than most.

• *The following models cooked slower on "low" than those above.*

RIVAL CROCK POT CASSEROLE 3500 (Rival Mfg. Co.), $42. Plastic shell, removable stoneware liner. Claimed capacity, 2½ qt.; measured 2 qt. Requires storage space about 6x13x11 in.
Advantages: Removable liner can be washed in dishwasher. Has detachable cord; convenient for use as serving dish. Outside of pot remained cool during cooking. Recipe book contains many more recipes than most.

HAMILTON BEACH CROCK WATCHER 449 (Hamilton Beach Div., Scovill Mfg. Co., Waterbury, Conn.), $34. Capacity, 4 qt. Also available in chrome finish as 449-C, at $38 (not tested).
Advantages: "Auto-shift" setting on dial provides added flexibility (see story).

HAMILTON BEACH SIMMER ON 442 (Hamilton Beach Div., Scovill Mfg. Co.), $28. Nonremovable glass liner. Capacity, 4 qt.

WARDS 46338 (Montgomery Ward), approx. $20. Nonremovable glass liner. Capacity, 4½ qt. Requires storage space about 8x13x11 in. 6-ft. cord. 1 yr. replacement warranty. Not listed in the current catalog; may still be available in some Wards retail stores.
Advantages: Has detachable cord; convenient for use as a serving dish.
Disadvantages: Recipe book contains fewer recipes than most.

GRANDINETTI CROCKERY CASSEROLE 732 (Grandinetti Prod., Inc.), $35. Oval plastic pot, removable stoneware liner. High-domed cover. Capacity, 4 qt. Requires storage space about 7x16x12 in.
Advantages: Removable liner can be washed in dishwasher. Recipe book contains more recipes than most. Disadvantages: Used more energy than most at both heat settings.

• *The following model has only a single heat-setting (closer to high than to low settings of above models) and so was judged less versatile than others.*

REGAL POLY POT 7533 (Regal Ware, Inc., Kewaskum, Wis.), $23. Plastic shell, nonremovable nonstick-coated aluminum liner. Capacity, 5½ qts. Requires storage space about 8½x13x11 in.
Advantages: Outside of pot remained cool during cooking. Disadvantages: No switch. Recipe book contains fewer recipes than most. Glass cover comes off too easily; more subject to accidental breakage than most.

THERMOSTATIC COOKERS

These models were judged to require more experimentation for proper use than the continuous-heat models. They were tested and rated only as slow cookers.

Except as noted, all: ❸ Drew low wattages that will not monopolize a household circuit. ❸ Have removable liners or cooking vessels (separate from heaters) that can be washed in a dishwasher and can withstand sudden temperature changes. ❸ Have an opaque cover.

ACCEPTABLE

WEST BEND HOME MAID 4399 (West Bend Co., West Bend, Wis.), $25. Porcelain-enameled aluminum pot with nonstick interior, separate heating plate. Pot can be used for other cooking. Plate can be used to heat other utensils. Capacity, 4 qt. Requires storage space of about 7½x11x9½ in.
Advantages: Has transparent glass cover. Has detachable cord; convenient for use as a serving dish. Disadvantages: Control lacks off position. Recipe book contains fewer slow-cook recipes than most.

WEST BEND LAZY DAY 5225 (West Bend Co.), $35. Porcelain-enameled steel pot, separate heating plate. Pot can be used for other cooking. Plate can be used to heat other utensils. Capacity, 6 qt. Requires storage space about 9½x12½x9 in.
Advantages: Has detachable cord; convenient for use as a serving dish. Disadvantages: Control lacks off position.

NESCO POTLUCK HB001 (Hoover Co., North Canton, Ohio), $50. Oval steel roasting pan with aluminum lid, porcelain-enameled interior, wire rack for roasting and baking, porcelain-enameled steel insert for slow cooking. Capacity, 6 qt. Requires storage space 8x16½x11½ in. 6-ft. cord. Also available with glass lid, $55 (not tested).
Advantages: Has detachable cord; convenient for use as a serving dish. Has signal light.
Disadvantages: Used more energy than most. No provision for closing off vent-holes in lid; may allow too much liquid to evaporate.

SEARS Cat. No. 85432 (Sears, Roebuck), $20 plus shipping. Stoneware cooker, separate heating plate. Pot can also be used for oven cooking. Plate can be used to heat other utensils. Capacity, 4 qt. 1-yr. replacement guarantee.
Advantages: Has transparent glass cover. Disadvantages: Sudden temperature changes could cause cooker to break (see story). Recipe book contains fewer slow-cook recipes than most.

OSTER SUPER POT 689 (Oster Corp., Milwaukee), $39. Porcelain-enameled aluminum cooker with nonstick interior. Can also be used for regular cooking and deep frying. Comes with metal rack. Can be immersed for washing. Capacity, 5 qt. Requires storage space about 7x13x11 in. 5¾-ft. cord. According to the company, this model has been discontinued.
Advantages: Has detachable cord; convenient for use as serving dish. Has signal light. Disadvantages: Drew 1150 watts, enough to monopolize a household circuit. Unless great care is taken in setting control, tended to boil when heating element cycled on. Recipe book contains fewer slow-cook recipes than most.

PENNEYS SLOW COOKER/FRYER Cat. No. 2976 (J.C. Penney), $34 plus shipping. Nonstick-coated aluminum cooker for regular cooking, stoneware liner for slow cooking. Basket for deep frying. Claimed capacity, 5 qt.; measured 3½ qt. Requires storage space about 10x12x11 in. 1-yr replacement warranty
Advantages: Has transparent glass cover, signal light. Disadvantages: Drew 1500 watts, enough to monopolize a household circuit. Sudden temperature changes could cause liner to break (see story). Tended to boil at recommended control settings. Recipe book contains fewer slow-cook recipes than most.

SUNBEAM CROCKER COOKER-FRYER 9-13 (Sunbeam Appliance Co., Oak Brook, Ill.), $50. Essentially similar to Penney's Cat. No. 2976, preceding, except lacks transparent cover and cooker may be repaired, instead of replaced, under warranty

SUNBEAM CROCKER FRYPAN 7 (Sunbeam Appliance Co.), $50. Square-shaped, nonstick-coated aluminum frying pan (can be immersed for washing), porcelain-enameled exterior, stoneware liner for slow cooking. Capacity, 3 qt. Requires storage area about 7x16x13 in. 4¾-ft. cord.
Advantages: Has detachable cord; convenient for use as serving dish. Has signal light. Disadvantages: Drew 1250 watts, enough to monopolize a household circuit. Used more energy than most. Outside of cooker got very hot during cooking, posing a burn hazard. Sudden temperature changes could cause liner to break (see story).

REGAL POT O'PLENTY X7538 (Regal Ware, Inc.), $38. Plastic shell, nonremovable nonstick-coated aluminum liner. Can also be used for regular cooking and deep frying. Basket for deep frying. Capacity, 5½ qt. Requires storage space about 9x13x11 in.
Advantages: Outside of pot remained cool during cooking. Used less energy than most. Disadvantages: Drew 1600 watts, enough to monopolize a household circuit. Unless great care is taken in setting control, tended to boil when heating element cycled on. Glass cover comes off too easily; more subject to accidental breakage than most. Harder to clean than other thermostatic models tested. Nonremovable liner: cannot be immersed. Control lacks off position. Recipe book contains very few slow-cook recipes.

FARBERWARE POT-POURRI 320A (Farberware, Yonkers, N.Y.), $40. Stainless-steel cooker with aluminum-clad bottom. Can be immersed for washing. Can also be used for regular cooking and deep frying. Claimed capacity, 5 qt., measured 4½ qt. Requires storage space about 7x13½x10½ in. 4¾-ft. cord.
Advantages: Has detachable cord; convenient for use as a serving dish. Has signal light. Disadvantages: Drew 1000 watts, enough to monopolize a household circuit. Cooked very fast at lowest "cooking" setting on control dial. Thermostat has very narrow slow-cooking range; may be difficult to set accurately. If not set properly, tended to boil when heating element cycled on. Outside of cooker got very hot during cooking, posing a burn hazard. Recipe book contains very few slow-cook recipes

NOT ACCEPTABLE

Not Acceptable because the low setting suggested for some recipes in the instruction book produced too low a temperature. In some samples, food may remain too long within range of temperature favorable to bacteria growth (see story).

PRESTO LC1 (National Presto Industries, Inc., Eau Claire, Wis.), $36.