Exploring the Development of Store Images

DAVID MAZURSKY
Lecturer in Marketing
Hebrew University
Jerusalem, Israel

JACOB JACOBY
Merchants Council Professor of Marketing
New York University
New York, New York

Despite extensive literature on store image, little is known regarding how such images develop. This article proposes a model of this process and describes an exploratory investigation which examines how environmental cues are used in forming store images. Unlike previous research, the external information environment in the present study contains pictorial information in addition to verbal. Findings show that subjects utilized different cues in developing different image factors. A spatial representation of these cues orders them hierarchically according to those which are central and those which are peripheral with respect to image formation.

It is generally acknowledged that over the course of time consumers form images of the stores, products, and brands in their environment, and that these images are capable of exerting a strong impact on their shopping and patronage behavior. It seems reasonable to suggest that a key factor in understanding store image involves understanding the processes which underlie its formation and change.

However, despite an extensive literature on store image (e.g., Arons 1961; Doyle and Fenwick 1974; Fisk 1961; Jain and Etgar 1976; King and Ring 1980), little is known about the dynamics of its development and formation. As Hirschman (1981) pointed out, the understanding of how consumers acquire cues from shopping experiences, advertising, peer report, and so forth, and how these cues are translated into a cognitive configuration which forms their store image, appears to suffer from a lack of conceptual and empirical research.

In part, the lack of research concerning the question of image formation may be attributable to the fact that most studies on store image rely on data from questionnaires which probe postshopping recall. The approach uti-

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lized in these studies may be categorized as a "top-down" approach, as it relies on retrospective recall of the aspects of the image after the overall (or holistic) image had already been formed. While the advantage of these methods lies in obtaining an assessment of overall image, they suffer from a major shortcoming. Consumers are likely to recall various aspects of the image rather than the environmental cues that gave rise to these aspects. For example, consumers may report that a certain store has "high quality merchandise," not "they carry Calvin Klein jeans, which I think is a high quality brand" (ergo, they have high quality merchandise). Retailers interested in understanding what produced the image of "high quality merchandise," or in modifying store image, can make more use of the former type of information which ties the image to specific features of the objective environment. However, according to the top-down perspective, a request to recall the environmental cues which yielded the existing image may not provide retailers with accurate information as memory of these cues may have been distorted, displaced, or forgotten. In addition, retrospective (i.e., recall) methods necessarily assess image formation as a static phenomenon rather than as the evolving dynamic process it is theorized to be.

Alternatively, another approach (i.e., a "bottom-up" approach) which tracks the inference process from objective cues (e.g., Calvin Klein jeans) to image (e.g., "high quality merchandise") is called for. The difference between the top-down and the bottom-up approaches can be detected by the kind of questions that each of them addresses. A fundamental question of the top-down perspective is: Just what are the major facets of store image? In contrast, the fundamental question posed by the bottom-up perspective is: Just what cues come into play in the development of the different image facets?

This article has several purposes. The first is to provide a conceptual definition of store image which permits this concept to be differentiated from other similar constructs (e.g., attitudes). Based on this definition, a second purpose is to outline a model of the process of store image formation. A third objective is to employ a behavioral process approach which adopts a bottom-up perspective (discussed later) to study the kinds of objective environmental information that go into the formation of different aspects of store image.

CONCEPTUAL DEFINITIONS OF STORE IMAGE

Martineau defined store image as "the way in which the store is defined in the shopper’s mind, partly by its functional qualities and partly by an
aura of psychological attributes’' (1958:47). “Functional,’’ in this definition, refers to physical properties such as merchandise selection, price ranges, and store layout. “Psychological attributes” refers to such things as a sense of belonging, the feeling of friendliness, and the like. Martineau recognized that the proper focus should be on subjectively judged image rather than on the objective and physical properties of the store.

Kunkel and Berry (1968), applying learning theory, defined store image as “the total conceptualized or expected reinforcement that a person associates with shopping at a particular store” (p. 22). According to their definition, a store’s image at any point in time is mainly the result of previous differential reinforcement.

Other scholars have defined store image as an attitude. For example, Doyle and Fenwick noted that “the term is used interchangeably with attitude toward the store to describe the overall impression a consumer has to it” (1974:40). As another example, James, Durand, and Dreves (1976:25) define store image as “a set of attitudes based upon evaluation of those store attributes deemed important by consumers.” Similarly, Engel and Blackwell (1982) define store image as “one type of attitude, measured across a number of dimensions hopefully reflecting salient attributes” (p. 518). Such definitions fail to make clear how image and attitude differ from each other.

Hirschman (1981:19) offered a definition that begins to touch on the process of image development and formation. According to this definition, store image is “a subjective phenomenon that results from the acquisition of knowledge about the store as it is perceived relative to other stores and in accordance with the consumer’s unique cognitive framework” (italics added).

Building upon the above, we propose a definition which more explicitly addresses the process aspect of store image development. According to this definition, image is:

1. a cognition and/or affect (or a set of cognitions and/or affects)
2. which is (are) inferred
3. either from a set of ongoing perceptions and/or memory inputs attaching to a phenomenon (i.e., either an object or event such as a store, a product, a “sale,” etc.)
4. and which represent(s) what that phenomenon signifies to an individual.

This definition does not conflict with several of the definitions reviewed earlier (e.g., Martineau; Kunkel and Berry; and Hirschman). Rather, it emphasizes two major properties of the image. First, in many instances
the image is merely cognitive (e.g., "it is an old-fashioned store") and
does not contain an affective component (e.g., "I like it" or "I don't like
it"). Second, this definition focusses on the process of image formation.
This aspect is further discussed and elaborated in the proposed model
below.

A MODEL OF THE STORE IMAGE FORMATION PROCESS

The above definition implies the following process: When shopping at a
store or obtaining information regarding the store from other sources (e.g.,
newspaper advertisements), a consumer is exposed to a reality which is
partly controlled by the retailer. The consumer extracts and perceives cer-
tain features from this reality and forms beliefs and/or affects which are
congruent with his or her idiosyncratic cognitive configuration. The pro-
cess of inferring various beliefs and affect from perceptions, with a pos-
sible intervention of memory factors, underlies the process of image de-
velopment and formation. Subsequently, when the consumer thinks about
the store, several of the most salient dimensions are retrieved from
memory and represent what the store signifies.

Figure 1 outlines a model which illustrates this process. The model
contains two basic fields: the external world (labeled objective reality) and
the consumer's subjective impressions of selected elements of that world
(perceived reality). Obviously, objective reality can be described in many
ways. For ease of discussion, we limit attention to a single store (store X)
within this field. Note that any such store can be considered in terms of its
specific details. While this decomposition can be done in various ways,
partitioning in terms of major departments (e.g., women's jeans, women's
shoes, etc.) and elements within these departments seems to make most
sense, at least for purposes of the present exploratory study. We assume
that these are all environmental cues to which consumers may or may not
attend.

The store image formation process is a subjective phenomenon taking
place in the perceived reality field and is believed to occur in sequential
fashion. First, consumers attend to some of the cues in the environment.
Though relevant cues go beyond the store (e.g., word-of-mouth communi-
cations from others regarding the store in question), present discussion is
confined to those cues emanating directly from the store itself. The at-
tended cues are then interpreted in relatively direct fashion (e.g., "These
are a pair of 7AAA ladies shoes;" "There are a number of other styles of
6AA, 7AAA, and 8AAA shoes;" "There are also a number of size 3
ladies dresses."). The consumer begins to assimilate these interpretations
under some broader rubric (e.g., "Women with petite and similarly unusual sizes are likely to find out what they need here."). These impressions are further integrated under even broader categories (e.g., "This store carries a broad line of merchandise.") At their broadest, these categories may be considered as the major facets of store image which, when integrated into a single holistic gestalt, represent that store’s image to the consumer.

Though the research described below adopts a bottom-up perspective, it has been mentioned earlier that the traditional top-down approach is particularly useful in identifying the major facets of store image. Thus, it is useful to first consider what the literature reveals regarding store image facets.

Lindquist (1974) summarized the results of 21 studies and identified 35 different aspects supposedly operating in store image formation. These were grouped into the following nine independent sets: merchandise, service, clientele, physical facilities, convenience, promotion, store atmosphere, institutional attributes, and posttransaction satisfaction. For purposes of the present investigation, the Lindquist review was updated using
the same categories used by Lindquist. Overall, the data from 26 studies were tabulated. The following image aspects were most frequently examined in these store image studies: merchandise quality (cited in 59% of the 26 studies), merchandise pricing (59%), merchandise assortment (55%), locational convenience (48%), salesclerk service (14%), and service, general (37%). Recent research has also begun to devote increased attention to store atmosphere and pleasantness of shopping (e.g., Donovan and Rossiter 1982), indicating its importance as a store image facet.

Based upon this review, it would appear that merchandise related aspects (such as quality, pricing, and assortment), service related aspects (such as quality in general and salespersons' service), and pleasantness of shopping at the store are among the most important components of store image. The present study thus focused on the kinds of information consumers considered when forming impressions of these major image components.

STUDYING THE PROCESS OF STORE IMAGE FORMATION

There are two basic situations under which consumers form "new store" images. In the first situation, it is the retailer who is new for that trading area. In the second, it is the consumer who is new, in the sense of having moved to a new area containing established retailers with whom the consumer has had no prior experience. In both cases, one could expect the consumer to form new store images. Both these situations are modeled in the present study.

General Design

Each subject in this study participated in three of the six cells formed by crossing the three image aspects of interest (merchandise quality, service quality, and pleasantness) with the two types of image formation circumstances (i.e., a new store entering an existing environment, a new consumer entering an existing environment). A modified Latin square format was used to insure that each subject participated in three tasks:

1. forming an impression of a new store on one image aspect;
2. forming an impression of a different new store on a second image aspect;
3. forming an impression of three other new stores on a third image aspect.
Subjects

The sample consisted of 120 students (57 males and 63 females) enrolled at a large northeastern university. They were recruited through announcements in classes and printed calls for participation posted in various campus buildings. Most (77%) were 17–22 years old, with the largest category being 20–22 (44.5%). Subjects reported having had extensive prior shopping experience with jeans and shoes (which were two of the four test products). Roughly 97 percent of the sample reported having shopped for these two products at least once during the preceding two years.

Procedure

Various process approaches have been developed to overcome the shortcomings attributable to the traditional static approaches, such as interviews and questionnaires used for studying image formation. The most commonly used process approaches include tracking eye movements and fixations (e.g., Russo and Rosen 1975), verbal protocols (e.g., Bettman 1970, 1971), and the behavioral process methodology (e.g., Jacoby 1975, 1977). Among these, the behavioral process approach is perhaps the easiest to implement and can most easily be applied to large sample sizes. The approach converts the experimental process of information acquisition into observational form. In its simplest form, it involves making an "options × properties" matrix of information available for accessing. While the subject is informed about the various properties which correspond to certain options (frequently labeled by letters to camouflage their true identity), only one value (or entry of that matrix) can be accessed at a time.

Behavioral process studies have typically focused on three aspects of the search process: (1) depth of search (i.e., how much information was accessed?); (2) content of search (i.e., which information was accessed?); and (3) sequence of search (i.e., in what order was the information accessed?).

Several advantages are associated with applying the behavioral approach in the context of store image formation. First it is conducted on an individual basis, thereby permitting each subject to access information in a way that is consistent with unique individual backgrounds and interests. The method is thus compatible with the notion of the subjectivity of image. Second, in this approach, attention is focused on the information that is actually acquired during the simulation (i.e., on behavior), rather than on the information people say they would or did acquire. One is
better able, therefore, to address the issue of how consumers infer aspects of store image from the available external information environment. Third, this approach permits a large number of properties to be made available for accessing. Thus, it enables the investigator to more readily simulate real world circumstances where consumers typically extract only a portion of the available information.

Each subject was given access to an "external information environment" containing $n$ cues for each store. Subjects were then given access to this environment and instructed to use as much or as little of this information in forming three types of store-related impressions. These were: (1) quality of service, (2) quality of merchandise, and (3) pleasantness of shopping.

Simulating a real world information environment requires first determining the properties of large department or specialty stores that were of interest to consumers similar to those participating in the present study (with respect to age, occupation, etc.). Since no prior research could be found that addressed this issue, a pretest was conducted. Twenty-five students enrolled in a basic marketing course responded to two open-ended questions pertaining to six product classes considered relevant for this age and social group. The six product classes were jeans, shirts, wallets, briefcases, shoes, and cameras. The first question for each product asked: "Have you bought at least one pair of jeans in the past two years?" If the answer was "yes," the second question was asked: "What kind of things would you want to know about a pair of jeans when you were shopping to buy a pair of jeans?" The number of factors mentioned for each of the products generally ranged between four and six.

The stimuli for the actual experiment, which were subsequently prepared, provided 34 items of merchandise information for each store. In addition, two other broad types of information were made available as part of the external information environment. First, seven items of general information about each store and its policies were incorporated. This general information was collected during actual visits to the stores. Second, seven photos of the interior design were provided for each store. This pictorial information was obtained from a firm specializing in store layout and design. The advantages of including pictorial information in this setting and its contribution to the validity of image formation research is reviewed in the discussion section.

Since (1) cameras were not available in some of the test stores, and (2) the large number and variety of types and brands of shirts sold in department stores made it difficult to generate a realistic simulation, these two products were excluded from the study.
Development of Store Images

All items of information were arranged in loose-leaf photo albums, where each album represented a separate "store," that is, contained information pertaining to only one store. To indicate the various items of information that were available, the task began with each of the albums being opened at its center page. This page provided a complete listing of all the available information. Tabs (which were labeled by the appropriate property) appeared alongside the outer edge of each page where the appropriate verbal information or photo was inserted. Overall, there were 48 tabs in each album representing 48 items of information for each store.

Subjects performed two types of tasks. First, they were asked to evaluate only one store for two of the three impressions (i.e., quality of merchandise, quality of service, and pleasantness of shopping). In forming the third impression, they were asked to evaluate three different stores simultaneously. Thus, subjects evaluated a total of five different stores. The specific stores used in forming the various impressions, and the order in which subjects evaluated them, were counterbalanced so as to eliminate time and order effects.

For all three tasks, subjects were told that, to access information, all they needed to do was turn the album pages to the item of information they desired. They were also instructed that they could look at as much or as little of the available information as they wanted and in any order they wanted.

Findings

Content of search. To enable making comparisons, it was first necessary to aggregate across certain properties. More specifically, while the external information environment contained 48 different properties for each store, several properties appeared more than once and described a different product each time (e.g., the property "brand names" appeared four times). Since the focus was to examine the development of store image, not brand image, aggregation was deemed desirable. A minor adjustment of the raw data was needed to accomplish this aggregation (see Table 1, Note).

Table 1 lists the properties rank ordered according to the proportion of information accessed when evaluating the quality of service facet. While the differences between single versus three-store evaluation conditions were marginal, substantial differences did exist in the information attended to when forming different impressions across the three different image facets. For example, the four most heavily accessed cues when forming quality of service impressions were "number of salespersons per department," "number of cashiers per department," "merchandise return
### TABLE 1
Factors Affecting Perceptions of Quality of Service, Quality of Merchandise, and Pleasantness of Shopping in Department Stores

<table>
<thead>
<tr>
<th>Factor</th>
<th>Quality of Service</th>
<th>Quality of Merchandise</th>
<th>Pleasantness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Adjusted Percentage of Times Acquired</strong></td>
<td></td>
<td><strong>Adjusted Percentage of Times Acquired</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Evaluation of</strong></td>
<td><strong>Evaluation of</strong></td>
<td><strong>Evaluation of</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Single Store</strong></td>
<td><strong>Three Stores</strong></td>
<td><strong>Single Store</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Simultaneously</td>
<td>Simultaneously</td>
</tr>
<tr>
<td>1. Number of salespersons per department</td>
<td>17</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>2. Number of cashiers per department</td>
<td>16</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>3. Merchandise return policy</td>
<td>17</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>4. Number of fitting rooms</td>
<td>12</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>5. Credit cards accepted</td>
<td>10</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>6. Location</td>
<td>9</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>7. Number of floors</td>
<td>5</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>8. Pictures of stores' interior design</td>
<td>4</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>9. Brand names</td>
<td>2</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>10. Price ranges</td>
<td>2</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>11. Assortment</td>
<td>2</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>12. Percentage of stock currently on sale</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>13. Merchandise material</td>
<td>1</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>14. Discount on sale merchandise</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>15. Merchandise colors</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

**Raw Frequency:**

- Quality of Service: 660 (Evaluation of Single Store), 978 (Evaluation of Three Stores Simultaneously)
- Quality of Merchandise: 856 (Evaluation of Single Store), 869 (Evaluation of Three Stores Simultaneously)
- Pleasantness: 817 (Evaluation of Single Store), 1898 (Evaluation of Three Stores Simultaneously)

*The entries presented in the table represent the adjusted frequencies of each item of information. An adjustment was needed since several items, such as price ranges of brands, were available seven times (i.e., pertaining to seven product classes), while others (such as location) were available only once. The adjustment was executed by multiplying the raw data to match the largest number of cards corresponding to a single item of information.*
Development of Store Images

policy," and "number of fitting rooms." In contrast, the most heavily accessed cues for evaluating quality of merchandise were "brand names," "pictures of stores' interior design," "merchandise material," and "price ranges." Finally, the highest accessing proportions when assessing pleasantness of shopping, were: "pictures of stores' interior design," "location," "number of salespersons per department," and "number of cashiers per department."

Figures 2 and 3 depict these results graphically. Of particular interest is the "frontier line" (i.e., the combination of properties which had the highest proportions). For example, the first four properties were most frequently associated with evaluating quality of service. The next three properties served as the main cues for assessing the pleasantness of shopping, while the last seven properties were dominated by quality of merchandise evaluation. This frontier line shows the same patterns for both the single and three-store evaluation conditions.

Table 2 summarizes the results of Kendal tau coefficients between type of impression formed and the task performed (single- vs. three-store evaluation). Several patterns emerge. First, the highest correlations were obtained in the within-impression comparisons (i.e., same impression for a single- versus three-store evaluation). The finding indicates a high internal consistency of the data with respect to the cues-image inference

FIGURE 2
Proportions of Search Process Devoted to Accessing Properties in Assessing Image Aspects (a Three-Store Evaluation)
process. Second, the correlations between service and pleasantness assessments ranged between $\tau = 0.54$ and $\tau = 0.64$, and were significant at 0.04 or better. However, the evaluation of quality of merchandise was, in most cases, unrelated both to the assessment of service quality and shopping pleasantness. It appears, therefore, that subjects considered different sets of cues depending upon the nature of the image aspect which they were asked to form.

A multidimensional scaling procedure (smallest space analysis; Guttman 1965) was utilized to depict the cues in a spatial representation according to their rate of accessing. Following the analysis reported above, it was expected that the appropriate space diagram would be partitioned into regions according to the sets of cues as obtained in that analysis. The space diagram is portrayed in Figure 4. Generally, the cues appearing in the left-hand side of the diagonal mainly represent information about the merchandise and the visual content of the stores. Conversely, the cues placed in the right-hand side of that diagonal describe general information about the stores' location, policy, and service.

A more detailed analysis of the space diagram reveals that the set of cues are ordered in a circular structure. Specifically, the outer circle describes general information about the stores (i.e., policy and service) while the inner circles represent more specific information about the store
### TABLE 2
Kendall Tau Correlation Coefficients Between Type of Impressions and Performance Task

<table>
<thead>
<tr>
<th></th>
<th>Quality of Service (Single-Store Evaluation)</th>
<th>Pleasantness (Single-Store Evaluation)</th>
<th>Quality of Merchandise (Single-Store Evaluation)</th>
<th>Pleasantness (Three-Store Evaluation)</th>
<th>Quality of Merchandise (Three-Store Evaluation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of Service</td>
<td>0.93</td>
<td>0.61</td>
<td>-0.01</td>
<td>0.64</td>
<td>0.05</td>
</tr>
<tr>
<td>(Three-Store Evaluation)</td>
<td>(p ≤ 0.01)</td>
<td>(p ≤ 0.01)</td>
<td>(p = 0.48)</td>
<td>(p ≤ 0.01)</td>
<td>(p = 0.40)</td>
</tr>
<tr>
<td>Quality of Merchandise</td>
<td>0.06</td>
<td>0.28</td>
<td>0.82</td>
<td>0.28</td>
<td></td>
</tr>
<tr>
<td>(Three-Store Evaluation)</td>
<td>(p = 0.380)</td>
<td>p = 0.078</td>
<td>(p ≤ 0.01)</td>
<td>(p = 0.079)</td>
<td></td>
</tr>
<tr>
<td>Pleasantness</td>
<td>0.59</td>
<td>0.85</td>
<td>0.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Three-Store Evaluation)</td>
<td>(p ≤ 0.01)</td>
<td>(p ≤ 0.01)</td>
<td>(p = 0.11)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of Merchandise</td>
<td>-0.03</td>
<td>0.27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Single-Store Evaluation)</td>
<td>(p = 0.439)</td>
<td>p = 0.087</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pleasantness</td>
<td>0.54</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Single-Store Evaluation)</td>
<td>(p = 0.04)</td>
<td></td>
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</tbody>
</table>
—namely, its merchandise and prices. The configuration illustrated in Figure 4 consists of several concentric circles and has been defined in past research as a "radex" structure. According to Coxon (1982:98), a radex consists of "two or more concentric circles with lines emanating from the centre, dividing the circles into sectors." Accordingly, the core of the radex structure consists of price information (i.e., price ranges, percent of stock on sale and discount on sale merchandise). These cues are placed in the midst of a larger circle containing information about the stores' merchandise (i.e., assortment, colors, material, and brand names). The next circle contains information about the stores' location and interior. Finally, the outer circle is composed of policy and service information (e.g., number of salespersons per department and merchandise return policy).

**Sequence of information search.** In many studies utilizing the behavioral process approach, prior experience was found to play a significant
role in the order in which consumers accessed information (e.g., Bettman and Kakkar 1977; Jacoby, Chestnut, Weigl, and Fisher 1976). The sequence of information accessing was characterized in these studies as representing one of two basic strategies: (1) those cases in which consumers considered one option at a time, focusing on a subset of its attributes, and then went on to consider other alternatives in similar fashion, or (2) those cases in which consumers acquired information across several options on a single attribute and then did the same for a subset of other attributes. Russo and Johnson (1980) suggested that since experienced consumers possess a fair degree of knowledge regarding each of the options, it is easier for them to store the information by option (i.e., brand, in most applications). Inexperienced consumers, on the other hand, may find it cognitively easier to process information by property.

While the present study differs from brand-choice models in that an option × property × sources (i.e., products × attributes × stores) array was used instead of the option × property matrix typically used in most brand-choice applications, a similar rationale is proposed regarding the impact of prior experience. Specifically, consumers who indicated a high level of experience in shopping for the test products were expected to integrate new information via accessing information by product. Alternatively, consumers indicating lower levels of experience with the test products were expected to focus first on one store to form a frame of reference and subsequently compare the other stores to this focal store.

To examine sequence of search, two patterns of information acquisition were translated into four types of transitions. Type A transitions represent accessing an item of information from the same category (e.g., women's wallets, men's shoes) and from the same store as the immediately preceding accessed item. Type B transitions represent accessing an item of information from a different category but from the same store as the immediately preceding accessed item. Type C transitions occur when subjects access an item of information which is from the same category but from a different store than the immediately preceding accessed item. Finally, type D transitions represent accessing an item of information which belongs to a different category and a different store than the immediately preceding accessed item. Clearly, a distinction had to be made between those tasks which involved a single-store evaluation and those in which subjects compared three stores simultaneously. While all four types of transitions were appropriate for the three-store evaluation, type A and type B transitions were the only ones which applied to the single-store evaluation.

Although consumers may be able to make some store-by-store compar-
isons from considering newspaper advertisements, and so forth, in real retail settings, they generally do not physically go back and forth between stores to compare several items of information. Thus, it may appear as if the three-store evaluation task is less externally valid than the single-store evaluation. Yet, we believe that treatment does possess merit. One important characteristic of store image is that it is formed in relation to other store images (Hirschman 1981). Thus, while this task does not faithfully represent a simulation of real life behavior, it does recreate some of the cognitive processes which take place in image formation.

Table 3 summarizes the descriptive statistics concerning sequence of search. From the three-store evaluation, it is evident that subjects engaged in Type A and Type C transitions more frequently than they did in the other two types of transitions. That is, they preferred accessing information within the same category to accessing information between categories. Among the two most frequently used transitions, Type C (same category, different store) had the highest mean use. A comparison between the single- and three-store evaluation reveals that in both cases Type A transitions were used more frequently than Type B transitions.

| TABLE 3 |
| Statistics of Sequence of Search |

<table>
<thead>
<tr>
<th>Transition Types (Definitions)</th>
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<tbody>
<tr>
<td>A - Same Category - Same Store</td>
</tr>
<tr>
<td>B - Different Category - Same Store</td>
</tr>
<tr>
<td>C - Same Category - Different Store</td>
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<th>A Single-Store Evaluation</th>
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To test the hypothesis regarding the impact of prior experience on sequence of search, a summated measure of the number of times subjects had shopped for the test products was correlated with each of the four types of transitions. In addition, a second measure, composed of the number of times the subject had moved to a different city or town since the age of 13, was correlated with the four transition types. It was assumed that moving to new cities often required developing images of stores, thereby implying a level of experience.

While the Pearson correlations between the two measures and the four types of transitions were low in magnitude (ranging between -0.02 and 0.24), four of the eight correlations were statistically significant. Of particular interest were the correlations between Types B and C sequences with the two measures of experience, since they directly tested the hypothesis. As expected, Type B transitions correlated negatively with the two measures ($r = 0.17$ and $r = 0.02$), although only the first correlation was significant at the $p = 0.03$ level. Type C transitions, on the other hand, were positively correlated with the two measures and were both statistically significant ($r = 0.16, p = 0.04$, and $r = 0.24, p = 0.01$).

**DISCUSSION**

Since external environmental cues (such as interior design, brand names, price levels, etc.) represent the most important channel through which retailers can communicate their images, it is imperative to understand how consumers infer images from such objective cues. The behavioral process approach appears to be well suited to tracking this inference process.

The importance of the inference process is reflected in the findings of the present study which suggest that subjects rely on different sets of objective cues to infer different image aspects. For example, the subjects considered brand name information as the most important cue in forming quality of merchandise impressions. In evaluating the quality of service, however, the number of salespersons per department appeared to be the most salient cue. Thus, by learning the fundamental properties of the store that consumers associate with quality of service or quality of merchandise, retailers can improve their "value" to the consumer.

In addition, the present study adds support to the idea that consumers simplify the complex reality associated with stores by accessing items which represent "chunks" of information. For example, in forming impressions regarding quality of merchandise, the most frequently accessed
property was brand names. Information on brand names may substitute for a much larger set of items of information (Jacoby, Szybillo and Busato-Schach 1977; Jacoby et al. 1978). Accordingly, accessing information on brand names may ease the processing of the extensive information associated with stores.

A conclusion emanating from the multidimensional scaling analysis is that store image can be characterized as having several core facets (e.g., price and merchandise information) as well as other, more peripheral facets (e.g., policy and service). This analysis implies that when retailers attempt to modify consumers' images of the merchandise and their prices, they are likely to have a more substantial impact on store image than when they attempt to affect consumers' perceptions of the stores' policy and service quality.

The contention that past shopping experience affects the order of information accessing was supported. Specifically, subjects with higher levels of prior shopping experience tended to acquire information by product. In contrast, inexperienced subjects preferred focusing on a single store, thereby forming a comparison level before acquiring more information.

Finally, the inclusion of pictorial information along with verbal information in the set of environmental cues is likely to contribute to the richness and validity of store image studies at least in two respects. First, the inclusion of pictorial information reflects a better simulation of realistic image development situations. Indeed, the literature reviewed earlier suggests that consumers' images of stores largely depends on their impressions of the interior design and layout.

Second, several theoretical and empirical frameworks have suggested that pictorial and verbal information differ in the way they are encoded and stored. For example, the Dual Encoding Model (e.g., Intraub 1980; Paivio 1975) suggested that pictorial information is stored in memory both in a linguistic and nonlinguistic manner and thus is richer than the representation of verbal information. This richness is manifested by a superior recall of pictorial information (Paivio, Rogers, and Smith 1968) and a better distinction among pictures than words (Jenkins, Neale, and Deno 1967). Similarly, the sensory-semantic model (Nelson, Reed, and Walling 1976) stated that memory representation of pictures contains both image-like and abstract conceptual compositions. According to this view, pictorial stimuli provide a qualitatively superior sensory code. In the context of marketing-related applications this superiority has been observed both in immediate and delayed recall (Childers and Houston 1984; Edell and Staelin 1983).
Implications

One implication of the present study relates to the strategic considerations involved when retailers attempt to create a certain image for their store. Since the findings suggest that consumers focus on different cues when developing different image facets, retailers would be well advised to clearly define their image objectives before they design the store and make decisions regarding the physical attributes of that store. For example, if the objective is to evoke an image of a store which carries high quality merchandise, then the physical attributes of the store need to be modified accordingly. On the other hand, if the objective is to create an image which emphasizes high quality of service, then different properties need to be addressed.

A second implication stems from the hierarchy according to which these sets of cues are ordered. Specifically, while distinct sets of cues have been identified, they are not independent. Rather, they are related in such a way that an attempt to modify the perception of central cues is likely to have a spreading impact on the other more peripherally related cues. For example, if a retailer wants to change customers’ image of his or her prices, any strategy which accomplishes this effect may cause customers to also modify their perception of various other image aspects. On the other hand, an attempt to modify the perception of peripheral cues (such as the merchandise return policy) may not impact on other more central perceptions (e.g., prices) which customers hold about the store.

While the present methodology was applied in the context of department stores, it is easily transferrable to other contexts, such as the development of banks or convenience store images. However, because the present study focused on department stores, the adaptation of this methodology to other situations was not considered.

Limitations and Directions for Future Research

One limitation relates to the fact that, though the information was authentic, the manner in which it was conveyed was artificial. In most real world situations, the information is not as easily accessible as in the present study. Thus, external validity may be limited. It should be noted, however, that the information that was made available was collected from actual and relatively typical stores. In that respect, the present study may possess superior external validity when compared to other studies which, in many instances, contrast only two or three factors (which in many cases have hypothetical values), thereby ignoring the possible influence of the
many other types of information available. The present study enabled the subjects to consider 48 fundamental properties, all of which were available for accessing.

In addition, the generalizability of the findings is limited by the college student sample used—a sample consisting of a narrow age group which was relatively upscale in terms of education. The present study was exploratory and the method used represents only a "first approximation" effort to recreate the information which customers experience when shopping at a store. Given the importance of studying the inferences which shoppers draw from the reality, it is suggested that efforts to simulate such processes continue. Pessemier (1980) noted that printed material (which was used in the present study) may be satisfactory as a first step. More technologically advanced methods, however, which utilize cable TV, video tapes, or video disks, are currently being explored and may enable us to prepare better simulations of the shopping experience.

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