

188

WP: 188

Working Paper

WP188



WP

1977

(188)

IIM
WP-188



**INDIAN INSTITUTE OF MANAGEMENT
AHMEDABAD**

POSITIONING STRATEGY AND MULTIATTRIBUTE
INFORMATION PROCESSING

by

Dr. Ruby Roy Dholakia
Dr. Nikhilesh Dholakia

W P No. 188
Dec. 1977

The main objective of the working paper series
of the IIMA is to help faculty members
to test out their research findings
at the pre-publication stage

INDIAN INSTITUTE OF MANAGEMENT
AHMEDABAL

Abstract

The concept of "positioning" a brand in the mind of the buyer has evolved from the search for the most effective advertising strategy. The view that consumption objects are not notionally perceived as "products" but as conglomerations of attributes has altered the concept of positioning. Multiattribute positioning strategies rely on the manipulation of the way attributes are considered and evaluated. Several such strategies are discussed and a general framework is presented by which the interactions of positioning strategy with market conditions can be systematically explored for purposes of theory building, marketing practice and public policy.

POSITIONING STRATEGY AND MULTIATTRIBUTE INFORMATION PROCESSING

In a competitive market economy, the quest for an unassailable market niche is endless. Every product or brand is continually jockeying for a preferential perch. These competitive battles are often fought in the consumers' minds and this has given rise to the notion of "positioning" a brand vis-a-vis its rivals.

As the classical definition goes, "positioning is what you do to the mind". Knowledge about how the consumers exercise their minds in choosing a brand has been rapidly multiplying. An important advance has been made by discovering that choice between a number of objects is determined by multiple attributes (Myers & Alpert, 1968; Twedt, 1969;). The concept of positioning has been enriched by this multiattribute choice. Interesting implications of multiattribute choice models for positioning strategies have been presented by marketing researchers (Angelmar and Pras, 1975; Boyd, Ray and Strong, 1972; Wright, 1973).

This paper assesses the status of this "multiattribute view" of positioning. It identifies certain hitherto unexplored strategy implications of the multiattribute view of positioning. Finally, it presents a systemic framework which can be the basis for research into, practice of and policy about multiattributed positioning.

POSITIONING AND MULTIATTRIBUTE MODELS

Origins of Positioning

The concept of positioning originated in the field of advertising.

Rather than a sudden discovery the idea of positioning a product was the culmination of several phases in the evolution of advertising strategy. Ries and others, who gave wide currency to the term "positioning", identify three evolutionary phases in advertising.

1. The Product Era: Advertising in this period focused on the product. The prescription for effective advertising of pioneers like Rosser Reeves was to identify (or create) and highlight a unique selling proposition for one's brand.
2. The Image Era: Championed by David Ogilvy, advertising in this period relied on creating appropriate "affect" or "gestalt". The selling point was the "mood" or emotive content of the advertisement; the product was incidental.
3. The Positioning Era: Finally, the emphasis of advertising shifted to creating a position for the brand in the mind of the buyer vis-a-vis competing brands.

It should be noted that the idea of positioning a brand vis-a-vis competition was inherent even in the product and image eras. Product-based advertising tried to do it emphasising a strong and unique claim. Image-based advertising attempted this by creating a complex and hopefully unique imagery for the product. The distinctive feature

of the positioning concept was the explicit and often direct portrayal of the brand in terms of specific attributes and in comparison to competing brands. As will be explained later, these different approaches to advertising can be reduced to a conceptually common denominator if one takes a multiattributed view of positioning.

Multiattribute Models

The use of multiple attributes, rather than single attribute, in the evaluation of consumption objects implies that there are many alternative ways of ordering the objects to represent a consumer's preference. For example, a consumer may rate three brands (a,b and c) of coffee (b,a,c) in terms of taste, (a,c,b) in terms of aroma and (c,a,b) in terms of price. These preference orders are basic to the selection of brand alternatives and hence their market position and profitability. Therefore, the determinants of the preference orders become important information for brand and marketing managers.

While it is now widely recognized that an object is evaluated on multiple attributes, there is no single and fixed manner in which these attributes are actually used to evaluate objects. The variability in multiattribute evaluation process is caused by:

1. The number of attributes used for evaluation,
2. The relative importance of attributes,

3. The hierarchical structure of attributes,
4. The out-off levels for attributes,
5. The dependence of attribute importance on the level of an attribute,
6. The stability over time or situations of each of the above conditions.

Not all attributes available for product evaluation may be actually used. Similarly, consumers while using a subset of the available attributes, need not select the same number or type of attributes. Attributes differ in their relative importance and their inter-relationships. The selection of attributes is influenced by the relative importance as well as other individual or situational variables. Furthermore, different rules may be used to evaluate specific attributes; while a fixed level (value) of an attribute may be considered sufficient (satisficing rule), increasing levels of another attribute may be more preferable (extremizing rule). In some cases, the relative importance of an attribute may be independent of the value it can take or actually takes. This independence may not hold in other cases. Finally, the constancy of these individual process characteristics cannot always be assured. The same consumer may use different sets of attributes for the same object but for different occasions and the importance of attributes may depend on these occasions. Similarly, the value of an attribute may change with experience of a consumer, changes in the object set, etc.

Several models are available to represent the multiattribute evaluation process (See Exhibit I). These models can be differentiated on the dimensions of the evaluation process such as number and fixity of attributes used for any one object, interdependence of the attributes, rule for subjective evaluation of any one attribute, etc. These differences are discussed in the following paragraphs and summarized in Table 1.

The treatment of the evaluation rule is particularly relevant. Several models exist which are based on the assumption that individual attributes are satisfied, i.e., some specified level/ amount of an attribute is sufficient for acceptance of an object (e.g., conjunctive and disjunctive models). Other models assume a maximizing rule where "more is better" (e.g., linear compensatory models).

Implicit in these models are different assumptions about relative importance of attributes and their inter-relationships. These assumptions increase in significance when the set of objects to be evaluated does not include any one object which is subjectively preferred on each and every attribute, i.e. no single object strictly dominates the object set. Under the usual circumstance of less clearly defined choice the evaluation process may allow trade-offs between attributes such that a low value on one attribute can be compensated for by a higher value on another attribute. The linear-compensatory model is based on this trade-off principle.

Exhibit 1Selected Models of Multiattribute EvaluationProcess

Conjunctive Model: This model established minimum requirements on each attribute and only those objects possessing at least these minimum levels are accepted by a consumer. It does not matter how much more than the cut-off level is obtained and a high score on one attribute is not compensated by a less than minimum score on another attribute.

Thus an object (j) is favourably evaluated if

$$\begin{array}{l} X_{1j} \\ \text{and } X_{2j} \\ \text{and } X_{ij} \end{array}$$

Where X_i is an attribute with minimum cut-off level of

Disjunctive Model: When a clearly superior performance on any one attribute satisfies a consumer it can be represented by the disjunctive model. Even if other attributes are lower in value it does not affect the evaluation of the object.

The evaluation rule is as follows. Accept object (j) if:

$$\begin{array}{l} X_{1j} \\ \text{or } X_{2j} \\ \text{or } X_{ij} \end{array}$$

where X_i is an attribute with a satisfying level of

Dominance Model: In an attribute-by-attribute comparison, superiority of an object over another on at least one attribute while being equal to others will lead to its preference with respect to the attribute in which it must be relatively superior and there is no specified level of an attribute that any object must possess.

Accordingly, an object (j) will be preferred over another (k), if for any attribute i:

Lexicographic Model: Sometimes consumers may be strict on the relative importance of attributes which determines the order in which the attributes are considered. If an object (j) is evaluated higher than object (k) on the most important attribute, it will be preferred and the evaluation process will stop. If however, both j and k are equal on the most important attribute, then second most important attribute will be considered and so on until a choice results. Poorer performance on a more important attribute cannot be compensated for by higher performance on a less important attribute.

Linear Additive Model: Also known as linear compensatory, multiattribute, and expectancy-value model; this model assumes that every attribute has a relative importance weight assigned to it but this weight is

6(b)

independent of the order in which attributes are considered. It also assumes that a global evaluation of an object is first made and this global evaluation is used to judge different objects. This model allows poor performance on one attribute to be compensated by superior performance on another attribute. The global evaluation is supposed to be a sum of the object's evaluation on individual attributes.

$$A_j = \sum_{i=1}^n w_i x_{ij}$$

Object (j) will be preferred to object(k) if its global evaluation (A_j) is greater than (A_k).

Linear Multiplicative Model: While this model is based on a similar assumption of a linear evaluation of a specific attribute, it differs from the linear additive model in that it postulates that the overall evaluation is based on a multiplication of the evaluation of the individual attributes. The global evaluation is then used exactly as previously to select between alternative objects. The model also allows compensation for relatively poorer performance on some attributes although the rates of trade-off vary.

Thus, overall evaluation of an object (j) is:

$$A_j = \prod w_i x_{ij}$$

and object (j) will be preferred over object (k) if:

$$A_j > A_k$$

compensatory models assume different-rates of trade-off between attributes, sometimes varying over the attribute levels (e.g., linear multiplicative models). However, trade-off are not always allowed and models such as lexicographic, conjunctive, disjunctive, etc. reflect these non-compensatory evaluation processes. In some models, the hierarchical structure of attributes determines the order in which attributes are evaluated (e.g., lexicographic, elimination-by-aspects models) while other models do not assume any such fixed order of attribute evaluation (e.g., linear-compensatory, conjunctive, disjunctive models).

The subjective process of comparing multiple objects on multiple attributes may take several forms. Some models assume that the comparison implicit in multiattribute evaluation is object-by-attribute. In other words, each object in the evaluation set is compared on one attribute at a time (e.g., lexicographic model). Other models assume that each object is evaluated on all the relevant attributes and the overall evaluation is used to compare it with similar judgements of other objects. It is an attribute-by-object process (as in linear compensatory model). These models also therefore assume that the same set of attributes are used to evaluate each and every object. Other models assume that different attributes are used for evaluation of objects depending on their performance on attributes considered first (e.g. lexicographic models). Even

when assuming an object-by-attribute process, other models assume that each object is considered on all the attributes (e.g. dominance, conjunctive models).

The use of multiple attributes for object evaluation requires that the multiple attributes be integrated to arrive at an overall judgement of an object which will determine its probability of being selected over alternative objects. Different rules of integration may be used such as addition, multiplication, etc. and models, therefore, differ in the integrative rule incorporated in each. The most common form of the linear compensatory models is based on an additive rule while other forms use higher order rules such as multiplication. Integration is simplified when attributes are sequentially processed as in lexicographic and elimination-by-aspect models.

The different models, as representation of the subjective evaluation process, generally lead to unique representations of the consumer's preference order. Sometimes two models may lead to identical order of preferences. However, since the underlying assumptions about the manner in which the evaluation takes place are quite different for each of the models, an understanding of these differences lead to different strategies for influencing consumer evaluation processes and judgements.

Process Dimensions of Multiattribute Models

Process Dimensions	Conjunctive	Disjunctive	Dominance	Lexicographic	Linear Additive	Linear Multiplicative
1. Attribute Set	All attributes considered for all objects	All attributes considered for all objects	All attributes considered for all objects.	Different attributes considered depending on attribute value and object set.	All attributes considered.	All attributes considered.
2. Attribute Importance	Not considered	Not considered	Not considered	Strict Consideration	Considered	Considered
3. Inter-attribute compensation	Not allowed	Not allowed	Not allowed	Not allowed	Allowed at constant rate	Allowed at variable rate.
4. Attribute interdependence	Yes	Yes	No	Yes	No	No
5. Attribute evaluation rule	Satisficing on all attributes.	Satisficing on any one attribute.	Extremizing	Extremizing	Extremizing	Extremizing
6. Nature of comparison	Attributes compared against a standard.	Attributes compared against a standard.	Objects compared relative to attribute at a time.	Objects compared relatively on one attribute at a time.	Objects compared on overall evaluation not on any specific attribute.	Objects compared on overall evaluation not on any specific attribute.
7. Attribute Integration Rule	Any order Not required.	Any order Not required	Any order Not required	Sequential consideration across objects. Fixed order Not required	Parallel/sequential consideration within an object. Additive	Parallel/Sequential consideration within an object. Multiplicative

Positioning and Multiattribute Models

If products are viewed as conglomerations of attributes, it becomes possible to explain positioning strategies as attempts to influence the manner in which consumers process information about multiattributed objects. The various positioning strategies possible under a multiattributed view of positioning can be grouped as follows:

1. Evaluation Oriented Strategies: These entail changing the relative evaluation of a brand on one or more attributes.
2. Importance Oriented Strategies: These attempt to vary the importance of one or more attributes.
3. Attribute Oriented Strategies: These are strategies which alter the size of the attribute set by adding or deleting attributes.
4. Process Oriented Strategies: These attempt to alter the information integration rules, i.e., the way in which multiple attributes are processed by the buyer to form an overall assessment of brands or objects.
5. Object Oriented Strategies: These are strategies which try to specify the range of objects with which a brand or object should be compared.

It is, of course, possible to think of complex positioning strategies which are combinations of above strategies. The product and image based advertising strategies can be viewed as special cases of multi-attribute positioning (see Table 2).

The marketing implications of positioning strategies emanating from the multiattribute view have been investigated in the literature. However, a comprehensive and systemic view has not yet emerged. The next section reviews the major attempts at multiattribute treatment of the positioning problem. A systemic view, supplementing and integrating the existing literature, is presented.

MARKETING IMPLICATIONS AND A SYSTEMIC VIEW

Guidelines for Communication Strategies

Many guidelines for product positioning have been evolved based on the multiattribute view. These guidelines mostly focus on ways of communicating about product or brand. Boyd and others suggest five such advertising strategies:

1. Influence the choice criteria for evaluating brands belonging to a product class.
2. Add characteristic(s) to those considered salient for product class.
3. Increase/decrease rating for a salient product class characteristic.

Table 2Communication Eras in a Multiattribute Perspective

<u>Dimensions of Comparison</u>	<u>Communication Eras</u>		
	<u>Product Era</u>	<u>Image Era</u>	<u>Positioning Era</u>
Number of attributes used	one	multiple	multiple
Type of attributes	physical	psychological	varied
Explicitness of attribute treatment	explicit	implicit	explicit
Reference to competition	none	none	sometimes
Communication strategy:			
(a) attribute set	uniqueness	diffused	well defined
(b) attribute evaluation	dichotomous (possesses/does not possess the attribute)	a) difused b) total affect	dichotomous or continuous
(c) attribute importance	implicit emphasis: maximizing importance of unique attribute	explicit emphasis: maximising total affect, not importance of any one attribute.	explicit emphasis: attribute importance influenced by various strategies
(d) evaluation process	not applicable	emphasis on overall affect only	Sometimes implicit other times explicit; use of alternative integration rules.
(e) Object set (i.e. competitive brands)	not evoked	not evoked	may be avoked

4. Change perception of company's brand with respect to particular salient product attribute.
5. Change perception of competitive brands with respect to particular salient product attribute.

It is evident that the first two of those are attribute oriented strategies. Whether the attribute set relevant for a whole product class is influenced, or whether attributes relevant to a brand are augmented, is a matter of degree. In fact, the multiattribute view bridges the product-brand dichotomy because it considers underlying attributes as relevant. The last three strategies listed above are examples of evaluation oriented strategy. The attribute, importance and evaluation oriented strategies have been discussed by others, although without explicitly recognizing the generic commonalities. Ray, for example, has suggested positioning strategies which "switch dimensions or add completely new ones" (attribute orientation) and methods of "changing the importance weights or changing the brand's rating on each of the characteristics" (importance and evaluation orientation). Wright has also discussed the promotional implications of two evaluation-cum-importance oriented models—Fishbein's and Rosenberg's — which have greatly influenced research on consumer judgement of brands. Wright, however, does point out the need to consider "composition rules" or process oriented models. These models deal with how consumers process

multiattributed information about a set of objects to arrive at overall judgements about these objects.

The existing work on multiattribute positioning appears to be inadequate on the following counts:

1. Very little attention has been paid to process and object oriented positioning strategies.
2. Although numerous positioning strategies of a multi-attributes nature have been discussed, no attempt has been made to integrate these into a general framework.

The rest of this paper attempts to meet in some measure these inadequacies.

Process and Object Oriented Strategies

Although a variety of models for processing multiattributed information have been hypothesized and empirically tested, most prescriptions for, and analyses of, multiattribute positioning strategy continue to rely on the linear compensatory model.

There are some good reasons for this. The linear compensatory model is easy to understand, easy to manipulate and versatile in generating strategic options. However, there are two situations where positioning strategies based on linear compensatory rules may not be effective:

- (i) Situations where there is ample empirical evidence that buyers follow a nonlinear and/or non-compensatory model.

- i) Situations where all the communications competing for a buyer's attention adopt linear compensatory strategies and a nonlinear and/or non-compensatory strategy may suggest a refreshingly new information processing method to the buyer.

There are some attempts to examine process oriented positioning strategies that go beyond the linear compensatory model. There is, however, need for an exhaustive study of the various process oriented strategies — their forms, usage and effectiveness. It may be noted here that an exhaustive treatment of process oriented strategies would have to focus on three aspects of the information integration process: (a) the number of attributes considered (one, some, all), (b) the order of processing attributes (simultaneously, singly) and (c) the evaluation method (extremizing, satisficing). Another distinction — a finer one but which may have tremendous practical significance — is whether a positioning strategy employs a processing rule explicitly (and deductively) or implicitly (and inductively). It may be argued a priori that the latter may be effective with more sophisticated audience in certain situations.

Although object oriented positioning strategies are used in practice, those who conceptualize about multiattribute positioning have not shown sufficient interest in it. Partly the problem

may be that the evoked set of the buyer depends on a variety of factors and positioning per se may not be thought to have a major role in it. However, the "head on" type of positioning strategy, (Avis vs. Hertz, 7 - up the "Uncola" vs. Coke) is a direct attempt to influence the evoked set of the buyer (Maggard, 1976). It should be noted that an object-oriented positioning strategy ultimately relies on one of the other four mechanisms (attributes, importance, evaluation, process) to achieve its aims. For example, the 7-Up or Limca type of strategy tries to focus buyer's attention on attributes that are obverse of the cola concept.

In some instances, object-oriented strategies use alternative objects to emphasize certain attributes, attribute levels or attribute importance. For example, a small car Q in the American market claims that its steering, suspension, upholstery, brakes, etc. are respectively identical to larger and expensive car models W,X,Y,Z etc. This advertisement further suggests a quasi-dominance type of processing rule by saying that Q is priced far below W,X,Y,Z etc. A firm may also sometimes use object-oriented positioning to induce people to down-trade from its premium to popular brand.

In process and object-oriented strategies, as well as in the other types of strategies, the specific method of implementing the strategy would be quite important. This requires a considerably deeper understanding of consumer information processing than what exists

at present. The relevance of the multiattribute view of positioning will also depend on the general framework within which positioning strategies and market conditions can be related.

A General Framework:

It is clear that in comparison to the unitary concept of positioning of just a few years ago, the multiattribute view opens up positioning possibilities vastly greater in number and complexity. The literature on multiattribute positioning has so far taken a fragmentary view of the strategic options. The five basic strategy orientations offered in this paper; viz., "evaluation", "importance", "attribute", "process" and "object" orientation, provide an exhaustive framework for strategy types. It should be noted that within a broad strategy type, several specific strategic variants are possible.

From the points of view of business practice, public policy and marketing theory, it is of interest to know the conditions under which the various positioning strategy variants are effective (in achieving their communication goals). For this purpose, it becomes necessary to study the interaction of positioning strategy with-

- (i) Product life-cycle stage (introductory, growth, maturity, decline)
- (ii) Competitive environment (market structure and share)
- (iii) Media type (audio, visual, etc.)
- (iv) Audience type (demographic segment, use status, other)

For example, different positioning strategies are likely to be followed at various stages of a product life cycle. At the introductory stage when the product is new, it must make itself known by announcing the new set of attributes that characterize it and/or by the new values on these or other attributes. Therefore, an attribute-oriented strategy will be most important. When other competitors enter the field, emphasis will shift to evaluation-oriented strategies with the aim of establishing relative evaluation of the brand-vis-a-vis its competitors on one or more attributes. Also, the relative importance of attributes will be attempted to be influenced as each brand attempts to increase salience of attributes on which it performs relatively better.

Once standardization sets in and brands become more comparable and market potential is reached, the need to differentiate brands is likely to lead to repositioning strategies through manipulation of the attribute set. New attributes are likely to be introduced (e.g. abrasion level of a toothpaste), other attributes deleted or minimized in importance. The attribute-oriented strategy may be accompanied by a process-oriented one, as specific brands attempt to 'help' the consumer reach a conclusion by guiding them through integration rules that are favourable to the concerned brands.

The strategies to be followed will also depend on the market position of a particular brand. A brand that is dominant and holds a large share of the market is likely to stress attribute oriented and importance-oriented strategies. Smaller brands who must operate in a competitive environment shaped by the leaders can counter attack successfully with the use of evaluation and object oriented strategies. The implicit assumption that dominant brands are superior performers on specific attributes can be argued against by an object-by-attribute comparison using an evaluation-oriented strategy. Similarly, by specifying the objects against which it can be compared, smaller brands will attempt to influence the evoked set in order to become a member of it.

Similar differences in strategies are likely for different audience types and communication media. Elementary combinatorics will indicate that even the first-level interactions would run into thousands. It is this structured and exhaustive set of interactions between strategies and conditions which constitutes the general framework for practice, policy and research relating to multiattribute positioning. Figure 1 presents a broad summary of the interactions which need to be investigated. Evidently, the scope for conceptual and empirical work in this field is quite broad. There are possibilities for creative use of computer simulation methods for the purposes of business and

Figure 1 -Interactions of Positioning Strategy with Market Conditions

	<u>Market Conditions</u>
	<u>BRAND LIFT-CYCLE STAGE</u>
	- Introductory
	- Growth
	- Maturity
	- Decline
<u>MULTIATTRIBUTE POSITIONING STRATEGIES</u>	<u>MARKET STRUCTURE AND POSITION</u>
Attribute - Oriented	- Monopoly brand
Evaluation - Oriented	- Dominant brand
Importance - Oriented	- Smaller brand of dominant firm
Process - Oriented	- Small brand
Object - Oriented	
	<u>COMMUNICATION MEDIA TYPE</u>
	- Print
	- Audio
	- Video
	<u>AUDIENCE TYPE</u>
	- Demographic Status
	- Usership status
	- Personality
	- Other

public policy research as well as for theory building. All this is not to suggest that work on multiattribute positioning should diversify into innumerable but trite streams. It is only hoped that the general framework would produce some much-needed conceptual and empirical work which would enable a higher level of synthesis and understanding about communication strategy and information processing in general.

REFERENCES

1. Angelmar, R. and Pras, B., "Advertising Strategy Implications of Consumer Evaluation Process Models", Working Paper, ESSEC, 1975.
2. Boyd, H.W.Jr., Ray, M.L. and Strong, E.C., "An Attitudinal Framework for Advertising Strategy", Journal of Marketing, Vol. 36, April, 1972, pp 27-33.
3. Maggard, J.P., "Positioning Revisited", Journal of Marketing, Vol. 40, January, 1976, pp 63-66.
4. Myers, J.H. and Alpert, M.I., "Determinant - Buying Attitudes: Meaning and Measurement", Journal of Marketing, Vol. 32, Oct., 1963, pp 13-20.
5. Ray, M.L., "A Decision Sequence Analysis of Developments in Marketing Communication", Journal of Marketing, Vol. 37, Jan., 1973, pp 29-38.
6. Ries Cappiello Colwell, "The Positioning Era", "Slide Presentation, n.d.
7. Trout, J. and Ries, A., "The Positioning Era", Advertising Age, April 24, May 1, May 8, 1972.
8. Twedt, D.W., "How to Plan New Products, Improve Old Ones, and Create Better Advertising", Journal of Marketing, Vol.33, January 1969, pp 53-57.
9. Wright, P., "Use of Consumer Judgement Models in Promotion Planning", Journal of Marketing, Vol.37, Oct., 1973, pp 27-33.