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The Use of Interacting Marketing Models as Framework for Research

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The Use of Interacting Marketing Models as Framework for Research

Abstract

The recent emphasis on consumers as the *raison d'être* of the business firm has led marketers to neglect or deemphasize the roles of the other participants in the marketing system. Yet, an understanding of the marketing system requires the development of a comprehensive marketing model focusing on the consumers, distributive institutions, manufacturers, and other participants involved in the marketing of the given product(s).

Disciplines

Business | Business Administration, Management, and Operations | Business Analytics | Business Intelligence | Marketing | Statistics and Probability

Comments

This is an unpublished manuscript.

THE USE OF INTERACTING MARKETING
MODELS AS FRAMEWORK FOR RESEARCH

by

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May, 1968

Working Paper

INTRODUCTION

The recent emphasis on consumers as the *raison d'etre* of the business firm has led marketers to neglect or deemphasize the roles of the other participants in the marketing system. Yet, an understanding of the marketing system requires the development of a comprehensive marketing model focusing on the consumers, distributive institutions, manufacturers, and other participants involved in the marketing of the given product(s).

Although we know the agencies which make up distribution channels and have some information about their operations, we have little structured knowledge of how consumers choose their sources of supply (as distinct from choosing their brands), and how the various participants in the marketing channel choose among possible responses to what consumers and manufacturers do.

Developing an interactive marketing model of the entire marketing system would, hopefully, improve the understanding and predictability of the response of the system and its parts both to policy variables and to changes in environmental variables. This should provide a better grasp of the kinds of responses which wholesalers, retailers, and consumers would make to possible marketing variables which a manufacturer might employ. This understanding could eventually take the form of testable models. Simulation could be used to forecast the effects of alternative inputs. Their major and immediate function, however, would be to generate relevant research hypotheses and provide the framework for needed

research projects.

The first use of a comprehensive marketing model as the basis for computer simulation--has been recognized by Amstutz¹, Balderston and Hoggatt² and others. The second function of a comprehensive marketing model--as a framework for research--has been often overlooked while research projects were selected primarily on an ad-hoc basis. It is the purpose of this paper to illustrate the potential use of an interactive marketing model as a framework for relevant research.

To accomplish this task the paper is divided into three parts. The first addresses itself to the issue of using models as a framework for research. The second part suggests an interactive marketing model for a frequently purchased household product. This example models only consumers and retailer behavior; the modeling of wholesalers and manufacturers is omitted. The third and last part of the paper presents some research hypotheses derived from the interactive model.

I. RESEARCH AND INTERACTIVE MARKETING MODELS

The relation of research and models is one of mutual contribution. Clair Selltiz and her co-authors in summarizing the relations between theory and research, which can be applied also to the case of research and models, states:

¹Arnold E. Amstutz, Computer Simulation of Competitive Market Responses, Cambridge: M.I.T. Press, 1967.

²Frederick E. Balderston and Austin C. Hoggatt, Simulation of Market Processes, Berkeley Institute of Business and Economic Research, University of California, 1962.

"Theory can point to areas in which research is likely to be fruitful, can summarize the findings of a number of specific studies, and can provide a basis for explanation and prediction. Research findings, on the other hand, can test theories which have been worked out, can clarify theoretical concepts, and can suggest new theoretical formulations or extend old ones. Moreover, the process of reciprocal contribution is a continuing one; research stimulated by theoretical considerations may raise new theoretical issues, which in turn lead to further research, and so on indefinitely. At whatever point in this spiral of activities a social scientist chooses to work, the significance of his contribution will increase with his insight into the processes that link the results of separate studies to theoretical formulations. To conduct research without theoretical interpretation or to theorize without research is to ignore the essential function of theory as a tool for achieving economy of thought." ³

More specifically, in emphasizing the important role of a model (or a theory) in directing research to potentially fruitful areas, Merton states:

"... if concepts are selected such that no relationships between them obtain, the research will be sterile, no matter how meticulous the subsequent observations and inferences. The importance of this truism lies in its implication that truly trial-and-error procedures in empirical inquiry are likely to be comparatively unfruitful, since the number of variables which are not significantly connected is infinitely large". ⁴

A comprehensive model of the marketing system for a product identifies the critical nodes in the behavior process about which hypotheses are needed. Hypotheses about behavior at these points can then be tested with full recognition of the relationships between behavior at this node and other parts of the system. In this way possible hypotheses can be interrelated even where they seek to explain

³Claire Seltiz et al. Research Methods in Social Relations, (Holt, Rinehart and Winston, Revised ed. 1962.) pp. 498-499.

⁴R. K. Merton, Social Theory and Social Structure, (Rev. edition, N. Y.: The Free Press) 1957.

different parts of the behavior system.

A second value of the model is to provide a structure upon which we can identify (a) those things we "know", (b) those "unknowns" upon which we have common agreement, and (c) those "unknowns" about which we disagree.

Formulating hypotheses and designing experiments in the context of a comprehensive interactive model has an additional benefit in making explicit various side conditions. In doing so, two hazards to meaningful research are anticipated and hopefully avoided: (a) failure to anticipate, and hence control through research design, an influencing factor which turns out to be significant (e. g. , shelf location in a study of shelf space), and (b) testing, through a valid research design, an hypothesis which turns out to be trivial, while more significant hypotheses are overlooked.

The model provides a basis for determining which hypotheses are critical. Which areas should be researched will in turn depend upon cost and our willingness to accept an hypotheses about behavior at some level without verification. Thus we would be less likely to devote research to testing an hypotheses the validity of which was widely agreed on than one concerning which there is substantial debate. Hypotheses of debatable validity concerning critical decision nodes are likely to be those in most need of research.

II. AN INTERACTIVE MARKETING MODEL

The interactive marketing model (figure 1) for a frequently purchased household product is built around the activities of the four

major actors within the market:

1. Manufacturers (M)
2. Distributors and wholesalers (W)
3. Retailers (R) [including establishments for on-premise consumption]
4. Consumers (C)

In addition, competing firms (manufacturers, retailers, etc.), the government (as an external constraint), and facilitating marketing institutions (such as marketing research and advertising agencies) affect the overall operation of the marketing system. Their influences will not be treated separately, however, and whatever effects they have will be covered in the analysis of the major actors.

The model is primarily concerned with the marketing interactions and responses of the major actors. Hence, the complete model could be divided into four parts dealing with

1. Consumers [C_i] responses which cover both the in-source selection and in-store behavior.
2. Retailers (including establishments for on-premise consumption) [R_i] responses to consumers and suppliers [W and M].
3. Wholesalers [W_i] responses to manufacturers [M] and retailers [R].
4. Manufacturers [M] responses to wholesalers [W_i], retailers [R_i], and consumers [C_i].

The interaction among the actors, which results in the actors' response, is through the elements of product, information, capital and control. More specifically the interactive marketing model includes the effects of all the controllable marketing variables such as pricing, package size, promotion, service, communication of information, etc.

The formulation of macro and highly oversimplified consumer and retailer models is undertaken next to illustrate the type of interactive marketing model which is necessary for the understanding of the marketing system for a frequently purchased household product(s). The models are summarized in a set of macro flow charts. Some of the information required to make the models operational is suggested in each case.

A. CONSUMER BEHAVIOR MACRO MODEL

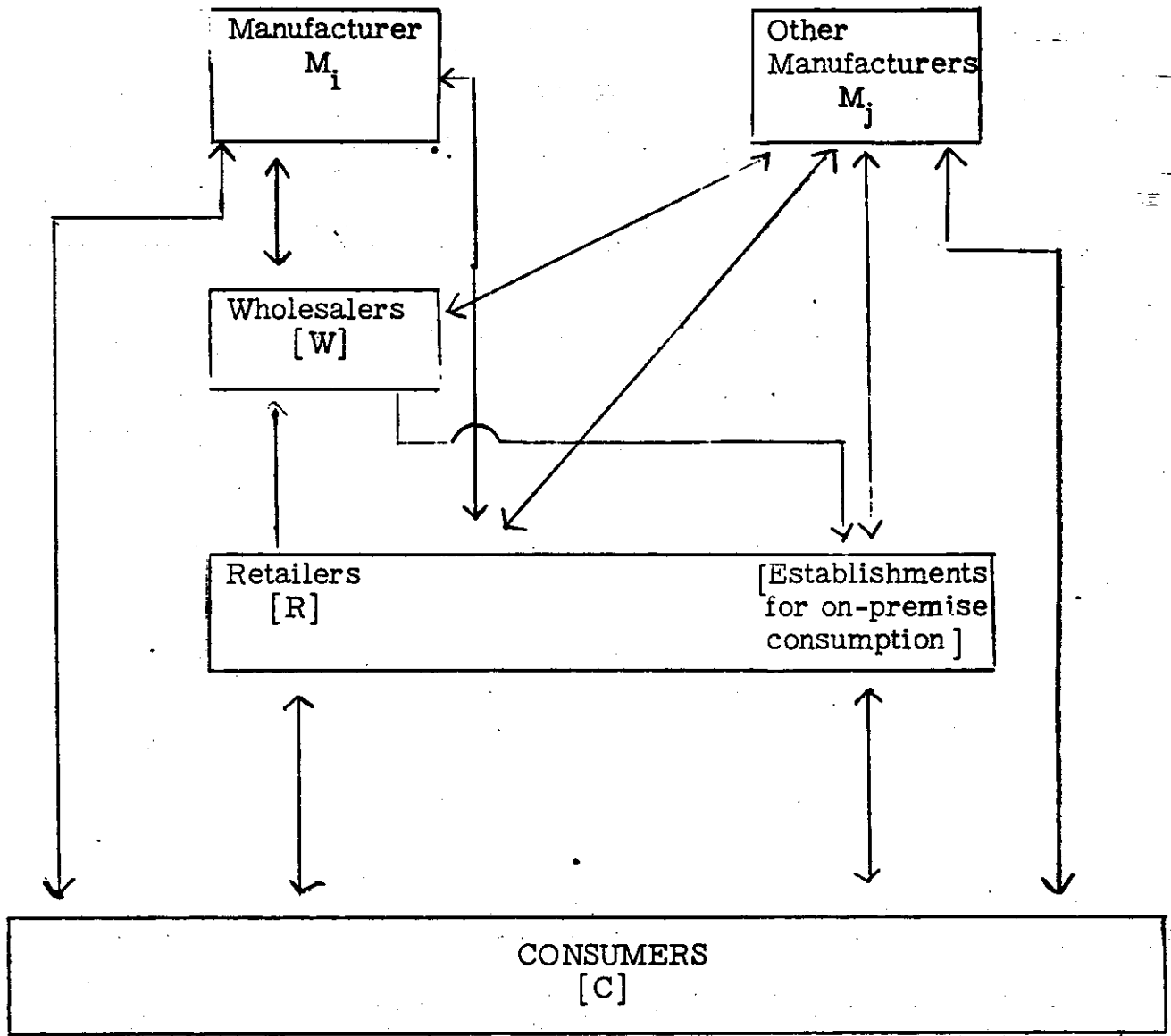
Consumer purchasing and usage decisions, as a special case of human behavior, can be examined in terms of attempts to explain what goes on within his "black box". Most of the psychological theories of human behavior, in fact, subscribe to this form of explanation. No consensus has been reached, however, on one "true" theory of human behavior. This lack of a generally acceptable theory about the process that transpires within the "black box" led the students of cybernetics⁵ and the behavioristic school of psychology⁶ to make no assumptions about what went on in the "black box" and to analyze any complex behavior by discovering the relationships which hold between the stimulus (information inputs) and response. Similarly, it is our intention to analyze consumer's purchase behavior making no assumptions as to the cognitive, affective or other processes which occur within the consumer's "black box".

⁵Stafford Beer, Cybernetics and Management, (N. Y.: J. Wiley & Sons, 1959).

⁶See, for example, Watson, Behavior: An Introduction to Comparative Psychology, (N. Y., Holt, Rinehart, & Winston 1914) and Skinner, The Behavior of Organisms: An Experimental Analysis, (N. Y.: Appleton-Century-Crofts, 1938).

FIGURE 1

A MACRO MODEL OF A MARKET



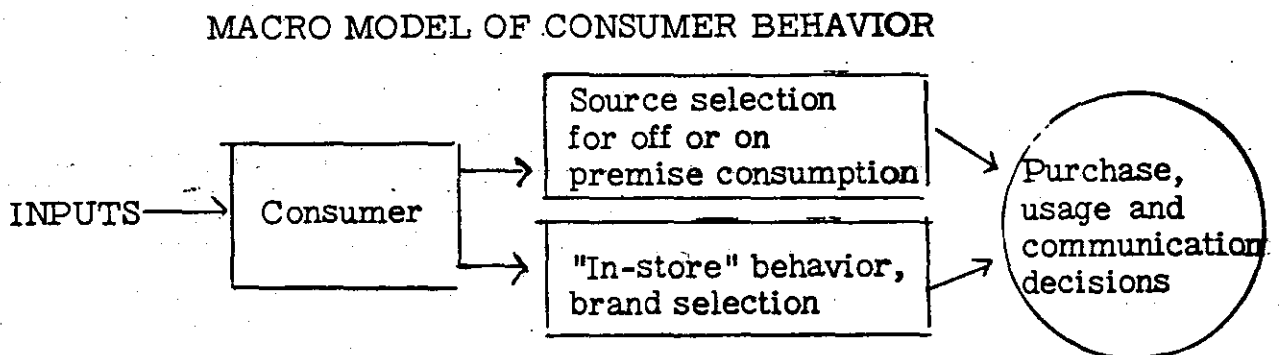
The model presented is based on the authors' analytical inference and is aimed at improving the understanding of consumer's purchase behavior of a frequently purchased household product.

In its most general form the term consumer behavior refers to the decision processes covering the purchase and consumption of an item. Furthermore, it is concerned with the decisions of what to buy and use and where and when to buy and use. Since the when decisions affect both the what and where decisions they are not discussed separately. The distinction between what and where to buy and use suggest distinct buying-using processes. In reality, however, these processes are closely interrelated and with no clear cut point at which a decision is being made. Yet, for simplicity, and at the risk of oversimplification the consumer model is divided into two main parts.

1. the consumer's source selection model.
2. the consumer's "in store" behavior model.

The interrelation of these two models and their relation to the overall model of consumer behavior is presented in Figure 2.

FIGURE 2



Consumers' Source Selection Behavior

The essence of the consumer source selection decision is the buying situation (or consumption situation for on-premise consumption). It is hypothesized that there are primarily three buying situations: weekly household replenishment, emergency convenience shopping and special replenishment of a given product. Each of the buying situations is associated with certain stores. For example, the weekly household replenishment stores are those used for the bulk of the household shopping. It need not be the same store each week as long as it is the primary source for food and related items for the particular week. Emergency convenience shopping is usually carried out either by walking to the emergency item store (the so called "corner stores" except where such stores serve as main replenishment stores) or driving to the convenience store (the 24-hour 7/11 and similar stores found along traffic arteries and highways). The specialty store such as liquor, beverage, drugstore, etc. attract buyers who make a particular trip to purchase a specific product (beer or liquor for example). These stores may or may not have been used for the purchase of other items on other trips. They differ from the above two types of stores in being product and not convenience oriented.

Each of the above buying situations has associated with it a set of desired store characteristics. The characteristics, such as location, parking facilities, assortment of products, service provided, etc. differ from one situation to another. Yet some characteristics may be common to more than one buying situation. Such a classification of stores based

on their desired characteristics for different buying situations is in line with the commonly accepted but little used notion of marketing orientation.

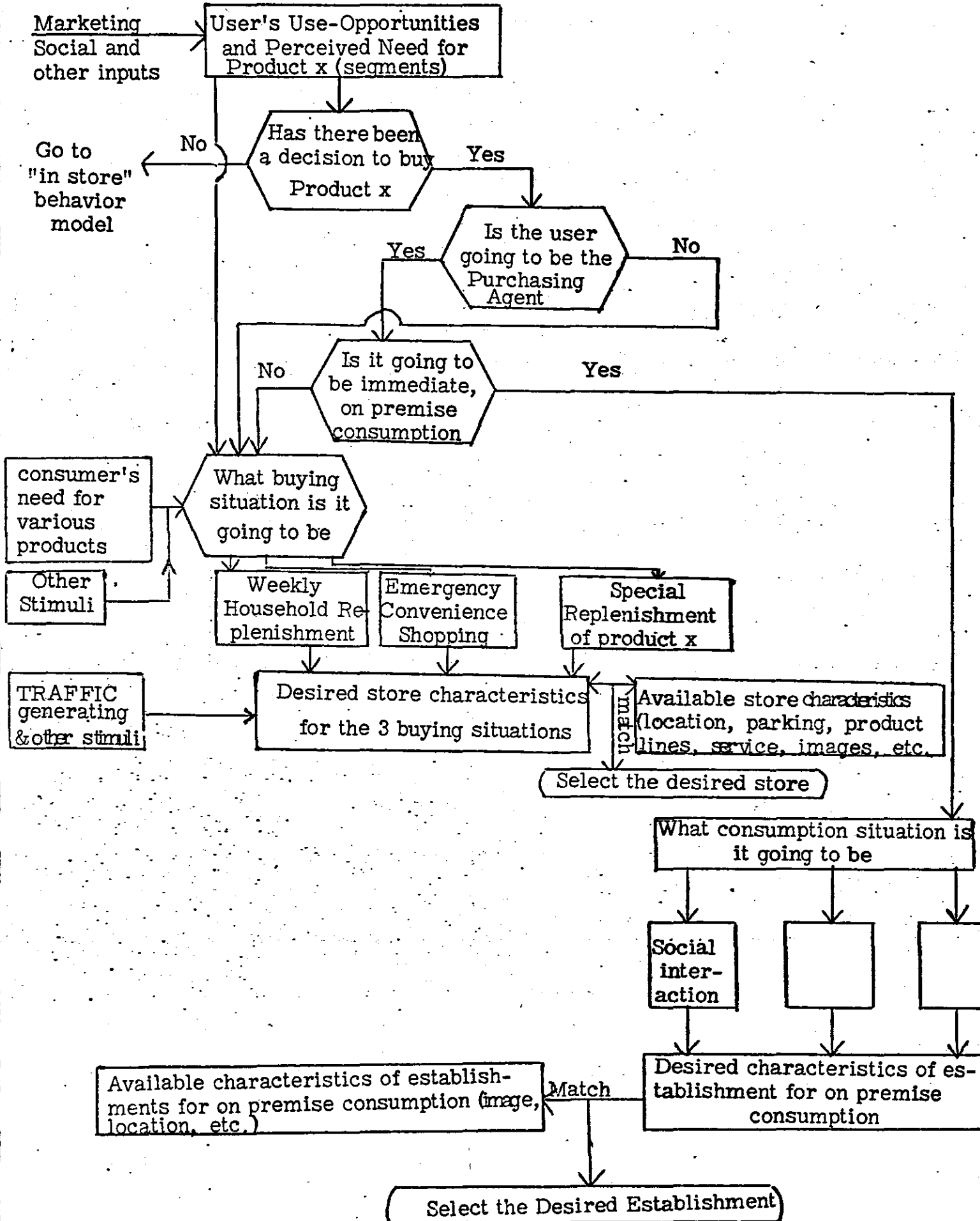
Similar analysis can be applied for the selection of an establishment for on-premise consumption by distinguishing among different consumption situations.

The buying and consumption situations are among the major determinants of consumers' source selection. Yet, both the buying situation and, in turn, the source selected depend on many factors such as the user's use opportunities and perceived need for the given product and brand, and the "division of labor" among the user and buyer. The former factor reflects both the consumers' characteristics (income, age, sex, etc.) and social inputs as perceived by the individual. It is at this stage that the market can be segmented into users' classes each with a similar use opportunities and perceived needs for the product. The Tavistock's drinkers typology (into reparative, social and indulgent drinkers) might, for example, be used at this stage. The second factor, which distinguishes between the user who buys the product for his own use and the buyer who only performs a purchasing agent function, is a major distinction in industrial marketing which has been neglected in consumer marketing situations. It is the authors' belief, however, that both source selection and "in store" behavior reflect this "division of labor" in the family.

Some hypothesized relations among these variables are presented in Figure 3.

Figure 3

MACRO MODEL OF CONSUMER'S SOURCE SELECTION BEHAVIOR



Consumer "In-Store" Behavior

The selection of, and hopefully loyalty to, given brands usually takes place within a store. Yet, most of the attempts to study this form of behavior overlook the effect of the in-store Traffic Tapping promotions on the consumers' brand selection. (Which for our purposes includes in addition to the brand selected, the quantity purchased). It is, therefore, hypothesized that consumers' in-store behavior is influenced by both their predisposition to behave when entering the store and the store's traffic-tapping promotions. Hence, the effect of brand promotions, via the mass media or word of mouth communication, and previous experience with the brand lies in determining the consumers' initial probability of purchasing the given brand. This probability is affected to some extent by the in-store environment--availability of the brand, display and in-store promotions of the "predisposed" and other brands, and other factors such as behavior of other consumers. A schematic illustration of the effect of some of these factors on the consumer's in-store behavior is presented in Figure 4.

B. RETAILER BEHAVIOR MACRO MODEL

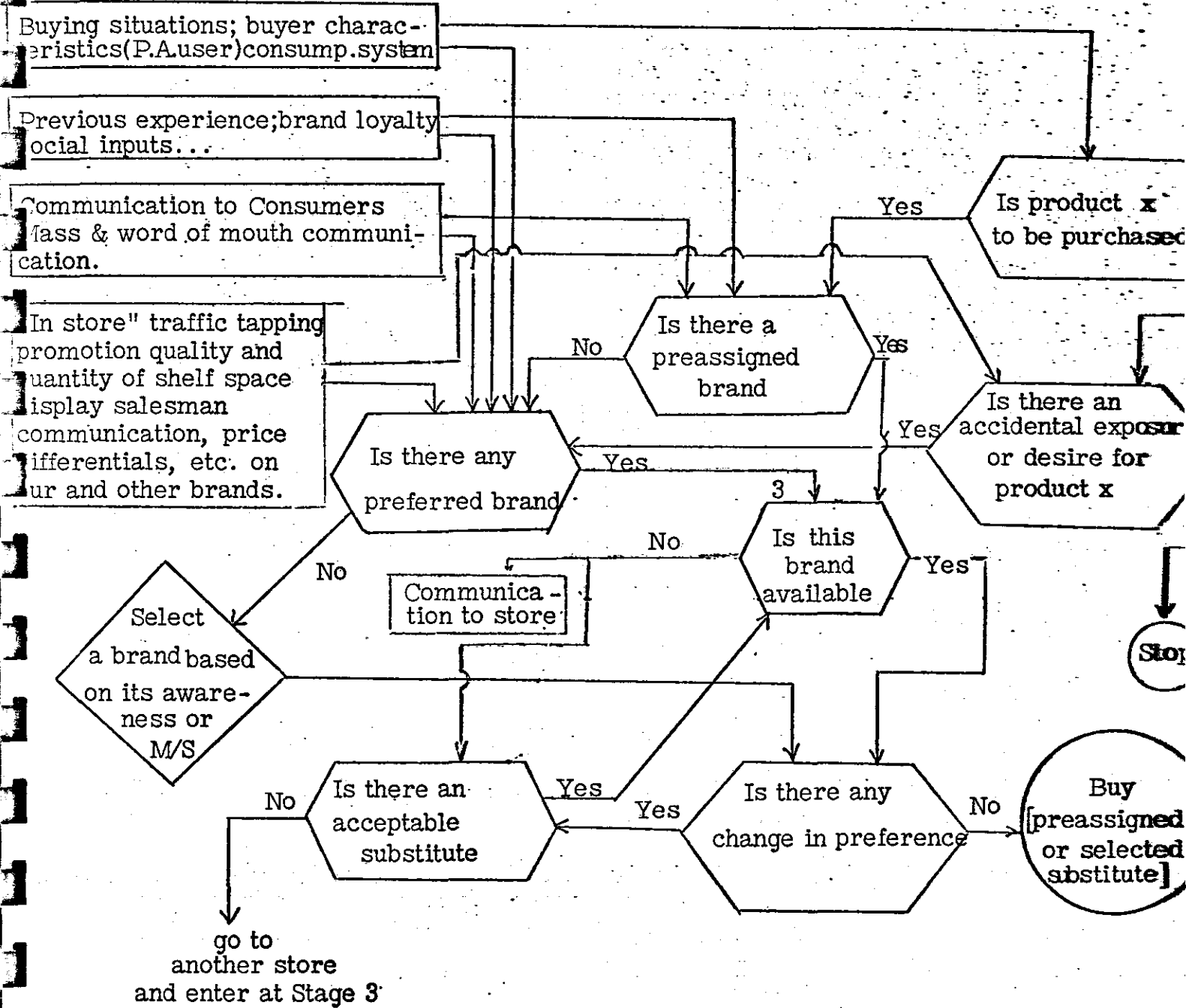
The model is concerned with retailers' responses to (a) actions of consumers and (b) actions of suppliers. Suppliers include manufacturers (e. g. brewers in the case of beer) and product wholesalers (e. g. beer wholesalers, food brokers, manufacturers distribution units such as sales branches or offices or distribution facilities).

Retailer comprises two levels of activity:

1. The retail store unit level with its store echelon management.

Figure 4

MACRO MODEL OF CONSUMER "IN-STORE" BEHAVIOR



This level does not include chain store headquarters, district, zone, or buying offices or warehouses.

2. The coordinating wholesaler (CW) level.

This level exercises (broad or limited) control over several retail stores. Examples are central facilities of chain stores which perform such functions as buying, inventory management, centralized promotion and policy formulation. Also includes voluntary group wholesalers and central offices of retail cooperative groups who perform similar functions although their authority over retail stores may be substantially more limited. The coordinating wholesaler function is distinguished from product wholesaling in that its central focus is on the performance of the retail store, and it is largely product-item indifferent. Most general line wholesalers carrying a broad assortment of competing brands would come under this classification. While such wholesalers may not "control" the retail outlet to the same degree as a chain or voluntary group wholesaler, by controlling what is made available to their customers, they impose constraint on courses which an independent store may, in fact, pursue.

Retailer Response to Consumer Actions

Three types of stimulus events by consumers are considered:

1. A reduction in the rate of purchase of item i in store j
2. An increase in the rate of purchase of item i in store j
3. A work statement about item i to personnel in store j

This category includes such communications as inquiries about items not in stock (which might influence propensity to stock), inquiries about location of items (which could influence location decisions, signing, etc.), and complaints or comments about items stocked.

Four types of responses are considered:

1. Add item.
2. Drop item.
3. Change price of item.
4. Change resource inputs devoted to item.

Three types of resource inputs are considered:

- a. Shelf space. Shelf space (SS) may be improved either by providing more of it or by providing a superior location. Either is considered to be an improvement in shelf space.
- b. Traffic-tapping promotion (TT) all promotional activities aimed at persons who are in the store. It includes posters, mass displays, markers, signs, arrows, special (i. e. term rather than permanent) locations for promotional effect, etc.
- c. Traffic-generating promotion (TG). All efforts directed at persons not in the store. Includes window displays, handbills, space advertising, etc.

Figures 5, 6, and 7 suggest the response determination pattern for each of the types of consumer stimuli for which the retailer must have a response pattern or system.

Acts in the model are considered final in the sense that the flow charts do not provide scheduled feedbacks. Implicitly, feedback occurs automatically after any act.

The terms catalog and authorized list are used synonymously to refer to the set of items which a store is permitted to carry within the authority granted by the chain headquarters or other CW level authority. An item is available to a store if it is on an authorized list, or, where no authorized lists are applicable, is obtainable from or through a regular supplier. Availability carries no connotation as to stock status at any level of distribution at any point in time (i. e. , it does not connote that the item is in stock and thus available for order filling).

FIGURE 5

MACRO MODEL - RETAILER RESPONSE
TO CONSUMER STIMULI

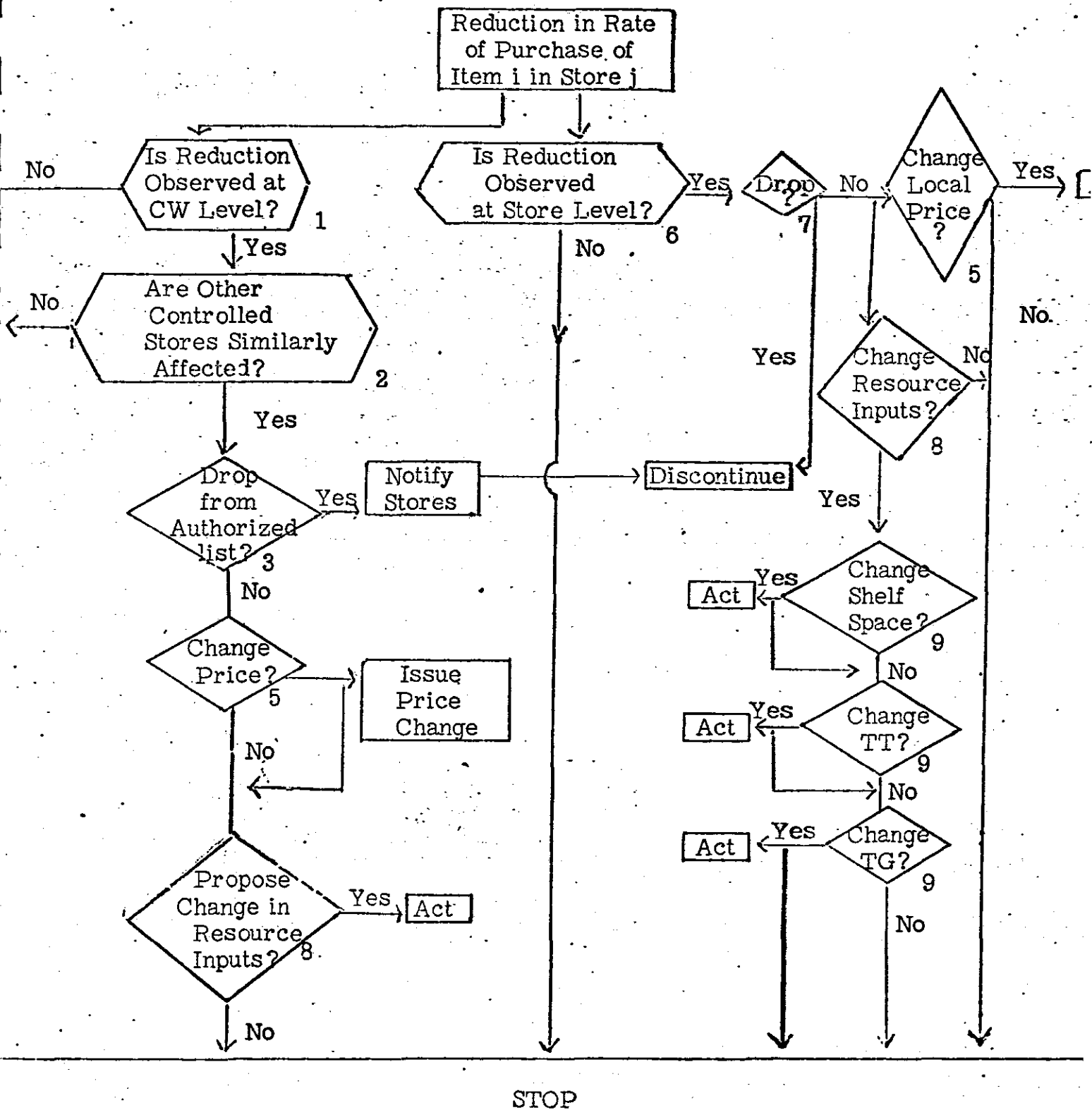


FIGURE 6

MACRO MODEL - RETAILER RESPONSE TO CONSUMER STIMULI

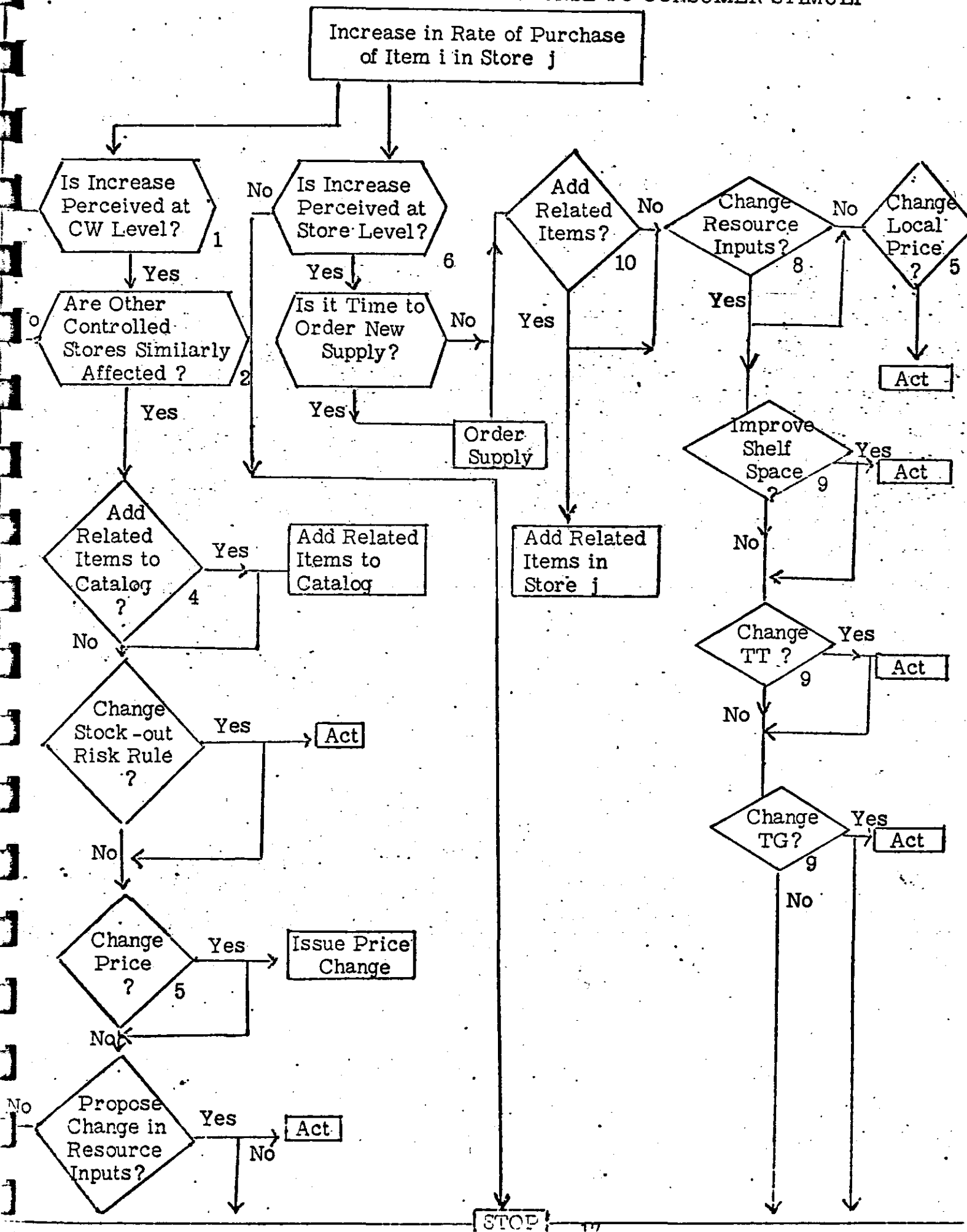
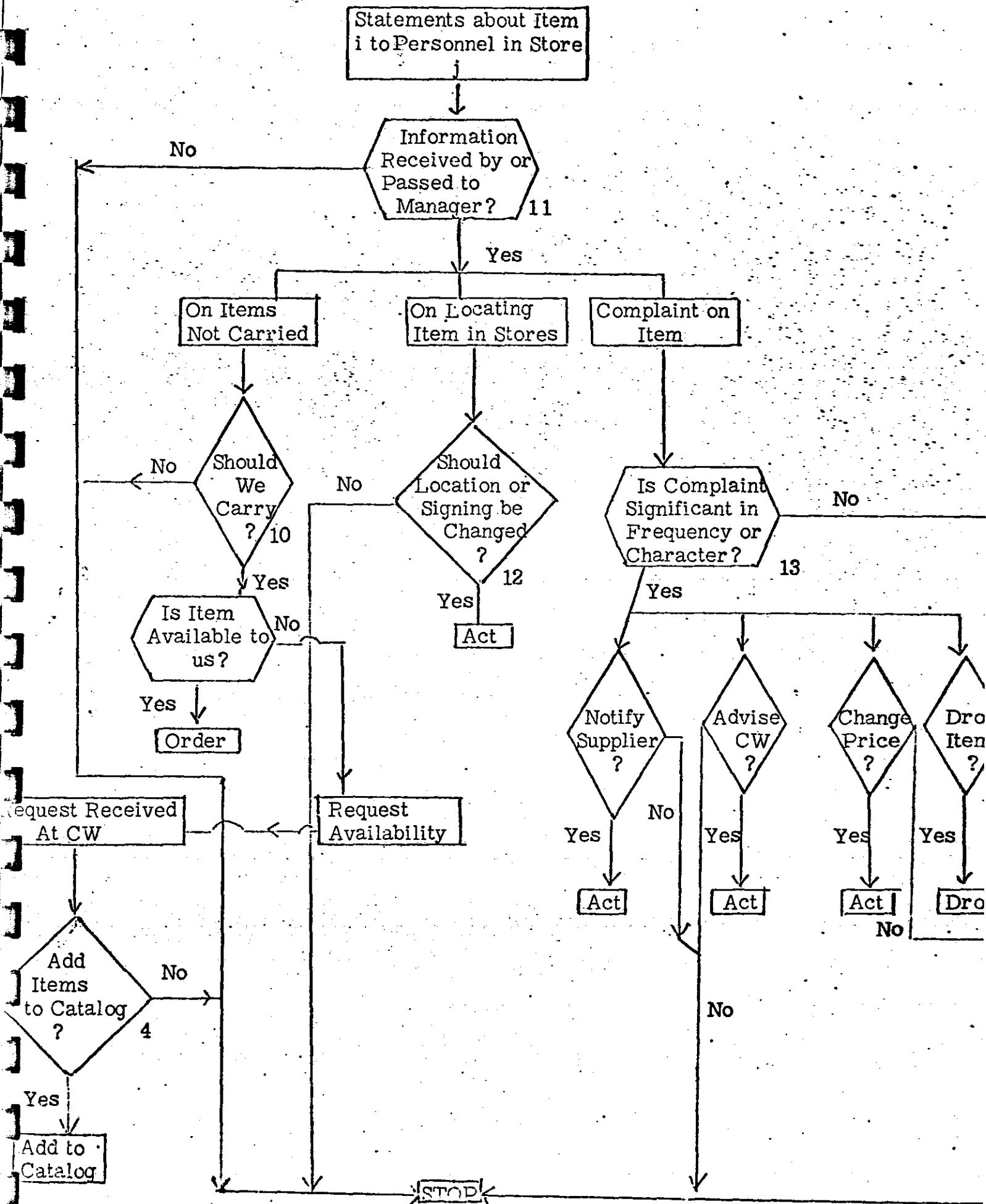


FIGURE 7

MACRO MODEL - RETAILER RESPONSE TO CONSUMER STIMULI



Information Requirements for Macro Retailer-Response-to-Consumer
Model
(Figures 5, 6, and 7)

1. How does CW level "observe"? What triggers an "observation"? To whom communicated?
2. How and who determines if change is general or isolated?
3. What criteria for dropping from authorized list?
How and by whom are criteria determined?
How and by whom are criteria applied?
How are criteria changed?
4. What criteria for adding to authorized list?
How and by whom are criteria determined?
How are criteria changed?
How and by whom are criteria applied?
5. What criteria for price changes?
How and by whom are criteria determined?
How are criteria changed?
How and by whom are criteria applied?
6. How does store management learn of changes in volumes?
Are formal means used to identify item with changing rates?
To whom is informal information reported?
(N. B. System may be different for increasing
vs declining rates).
7. What criteria for closing out (i. e., dropping from store)?
How and by whom are criteria determined?
How and by whom are criteria applied?
How are criteria changed?
8. How is responsibility/authority for use of resource inputs
divided among headquarters personnel, field supervisors,
store managers, subordinate managers within stores (e. g.,
grocery manager), owners and others (e. g., suppliers
representative who may have authority to reallocate space
within a category).
How does each discharge his responsibility? } See 9 for specifics
What criteria are used?
9. What criteria for changes in use of this input?
How and by whom are criteria determined?
How and by whom are criteria applied?
How are criteria changed?

10. How are add-item decision made in the store?
How and by whom are criteria determined?
How and by whom are criteria applied?
How and by whom are criteria changed?
11. How does customer statement information reach (dept. or store) manager?
What criteria used by employees to filter out or pass on?
How complete and noise-free is content received?
What criteria of relevance influence managers' reception?
12. How are location and signing decision made in the store?
How and by whom are criteria determined?
How and by whom are criteria applied?
How and by whom are criteria changed?
(N. B. answers may differ with items. Often managers operate within close constraints on some items and with broad latitude on others).
13. How do managers react to customer complaints?
What reactions are used?
How and by whom are reaction criteria determined?
How and by whom are reaction criteria applied?
How and by whom are reaction criteria changed?

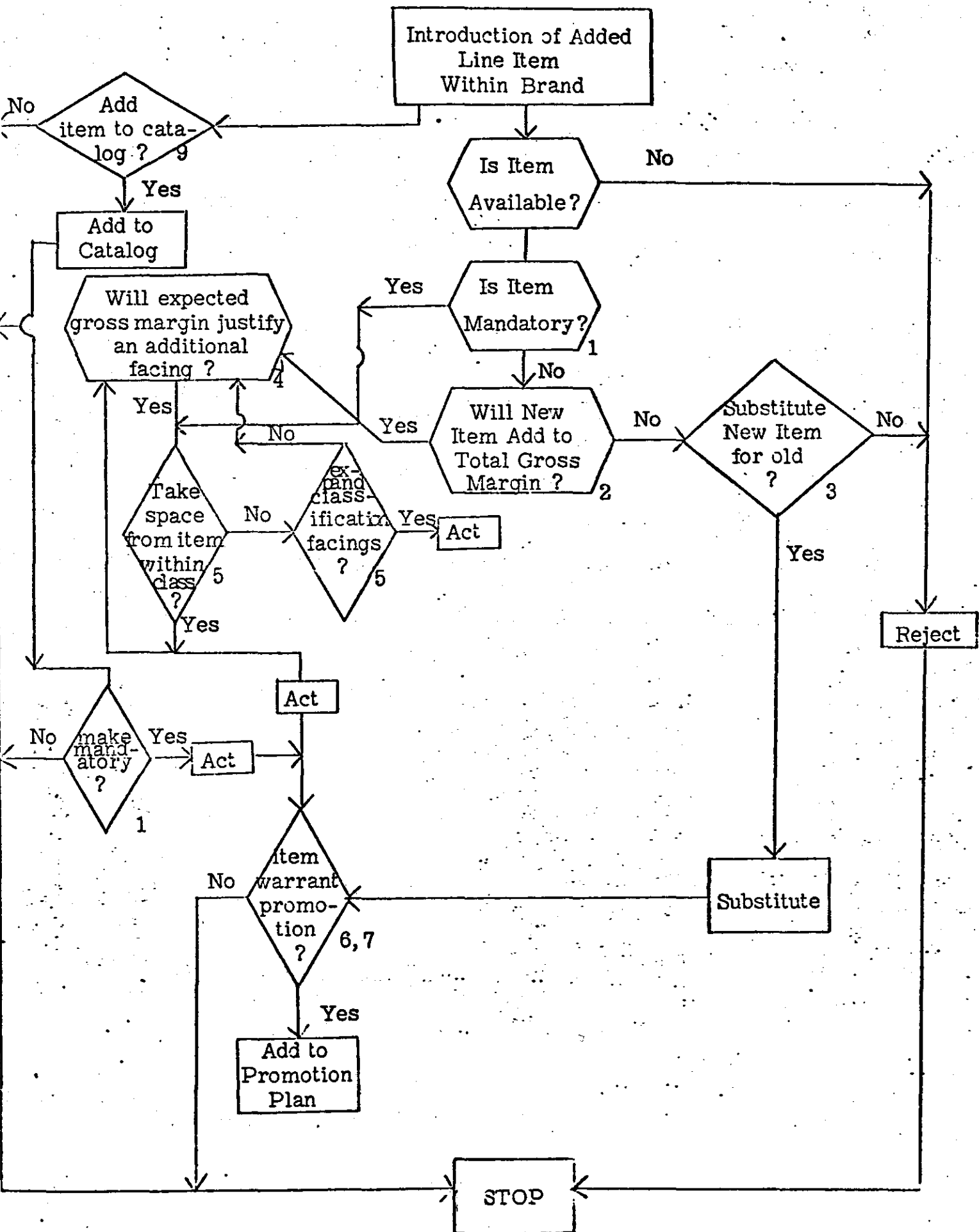
Retailer Response to Supplier Actions

Seven types of stimulus events by suppliers (manufacturers and product wholesalers) are considered:

1. The introduction of an added line item within a brand in a product class. Examples: new size; new 8-pack; new zip-top can. (A change which merely replaces an existing item is not considered to be a stimulus event in the present context).
2. The introduction of an added product or new brand. Examples: Addition of Busch-Bavarian in Budweiser areas; addition of instant tea to instant coffee line.
3. Price increase (permanent).
4. Price decrease (permanent). This stimulus does not include deals or promotional prices which are part of promotional events and are not intended to be permanent or "regular" price changes.
5. Change in supplier service mix.
6. Promotional activities by suppliers directed to store level. These promotional efforts may be designed to accomplish one or more of the following:
 - a. Addition of added line item within brand.
 - b. Addition of added product or new brand.
 - c. Improvement of shelf space: shelf space may be improved either by providing more of it or by providing a superior location. Either is considered to be an improvement in shelf space.
 - d. Improvement in Traffic-tapping promotion (TT): promotional activities within the store which are aimed at persons who are in the store. Includes posters, mass displays, markers, signs, arrows, special (i. e., term rather than regular) locations for promotional effect, in-store announcements, etc.
 - e. Improvement in Traffic-generating promotion (TG): all traffic generating promotional efforts. Examples: window displays, handbills, space advertising.
7. Promotional activities by suppliers directed to CW level. (Activities similar to #6).

Figures 8, 9, 10, 11, 12, and 13 are provided to suggest the response determination pattern of each of the types of supplier stimuli. Definitions and procedures are the same as for the previous section.

MACRO MODEL RESPONSE TO SUPPLIER ACTION



MACRO MODEL RETAILER RESPONSE TO SUPPLIER ACTIONS

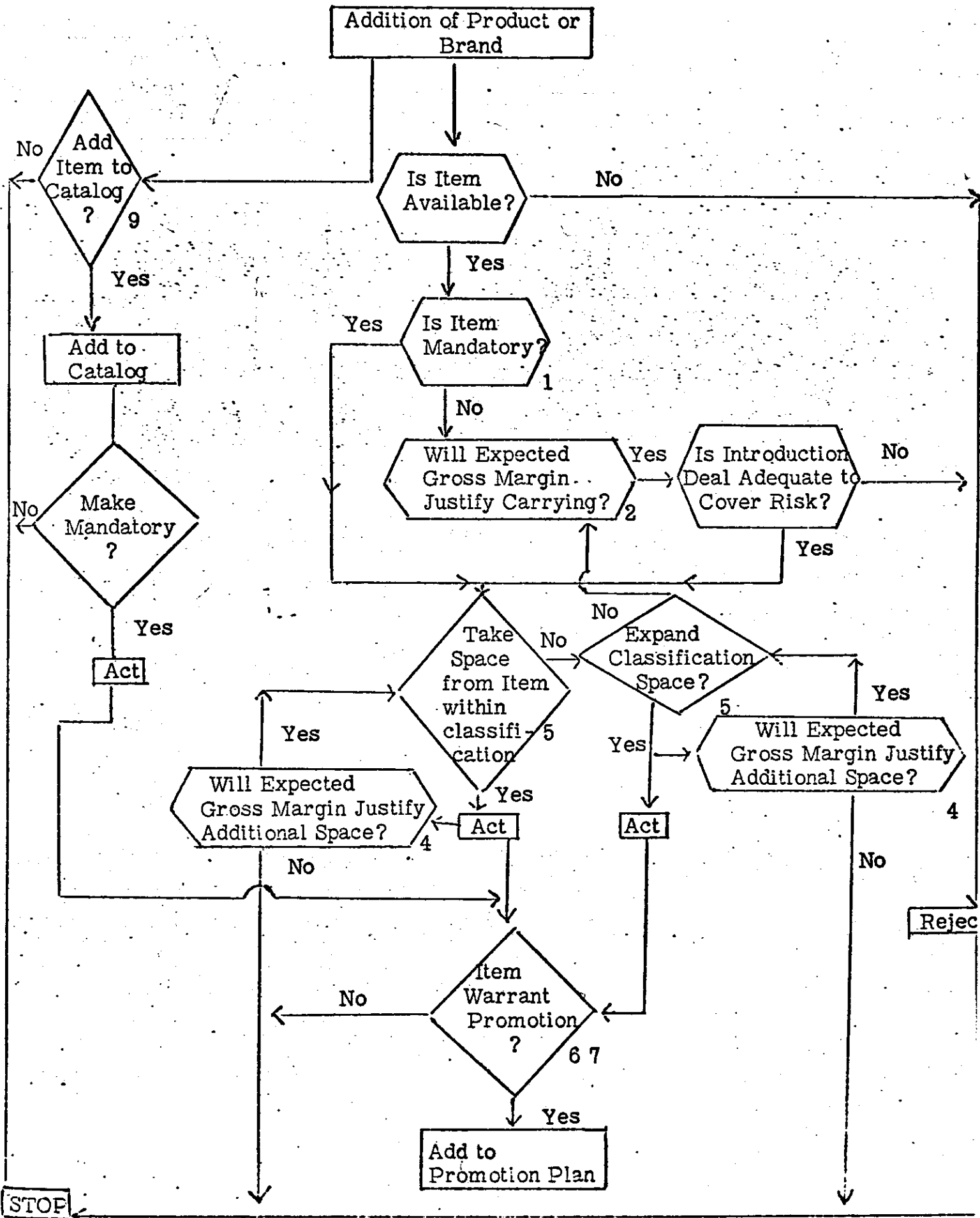
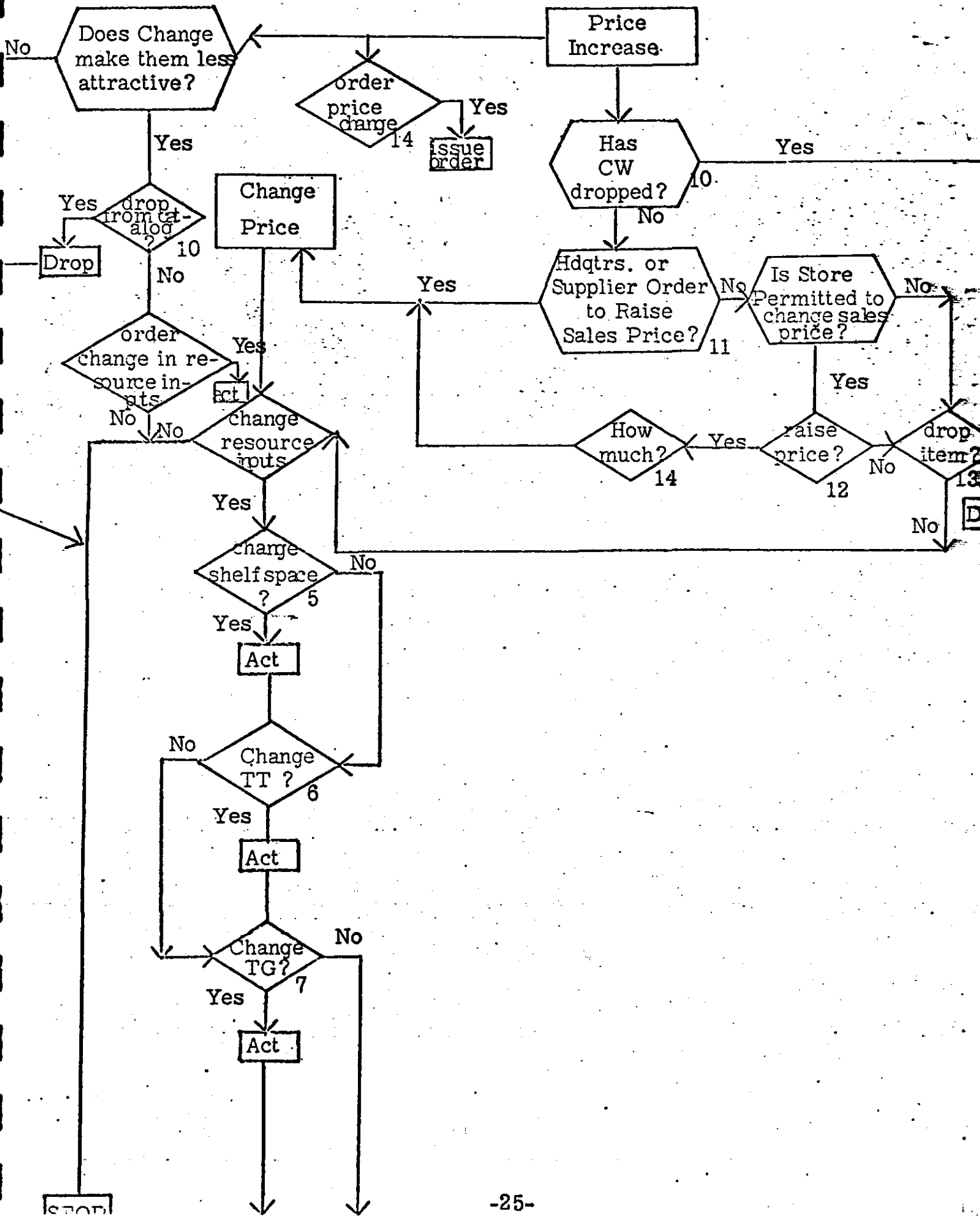
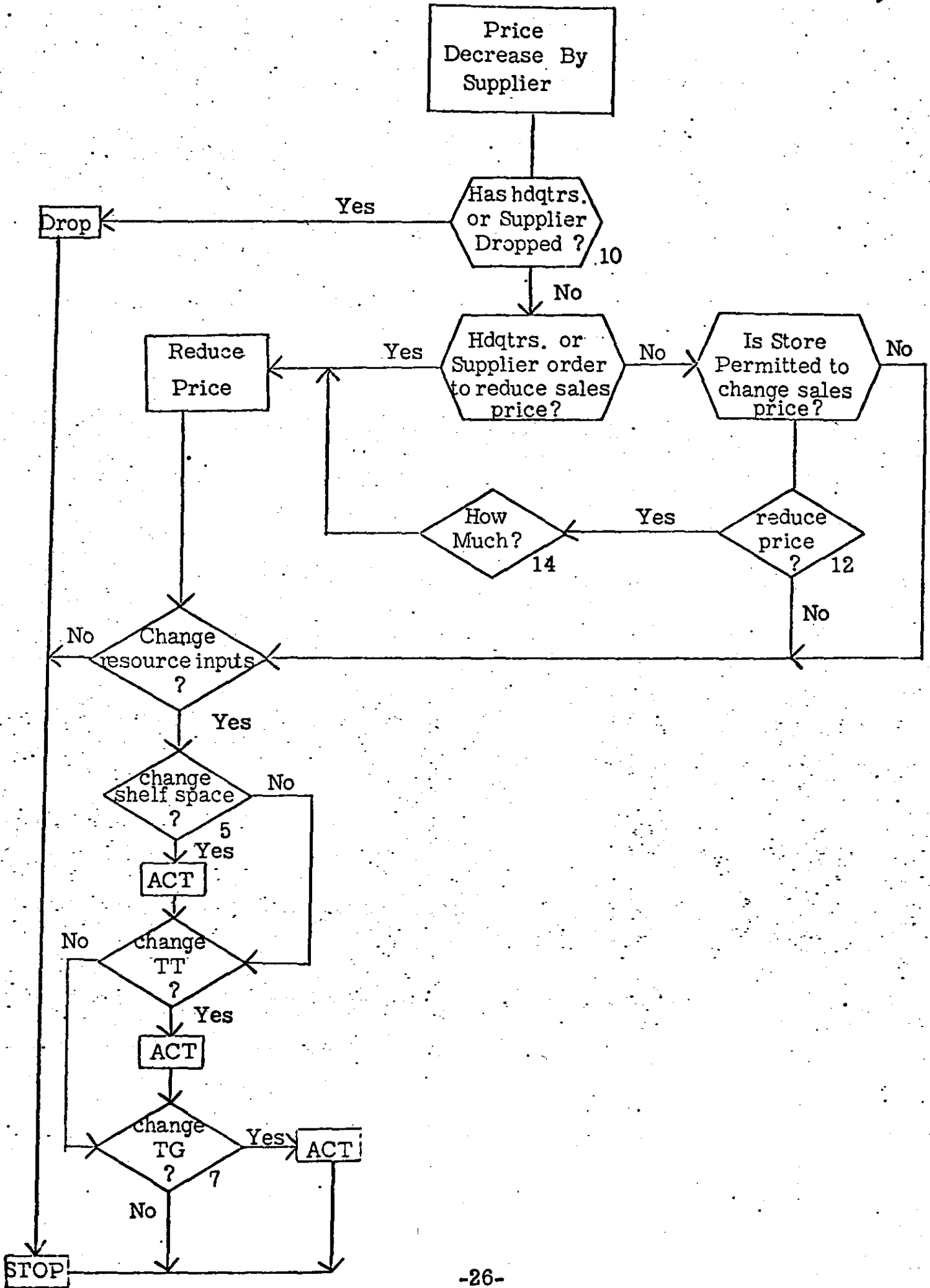


FIGURE 10

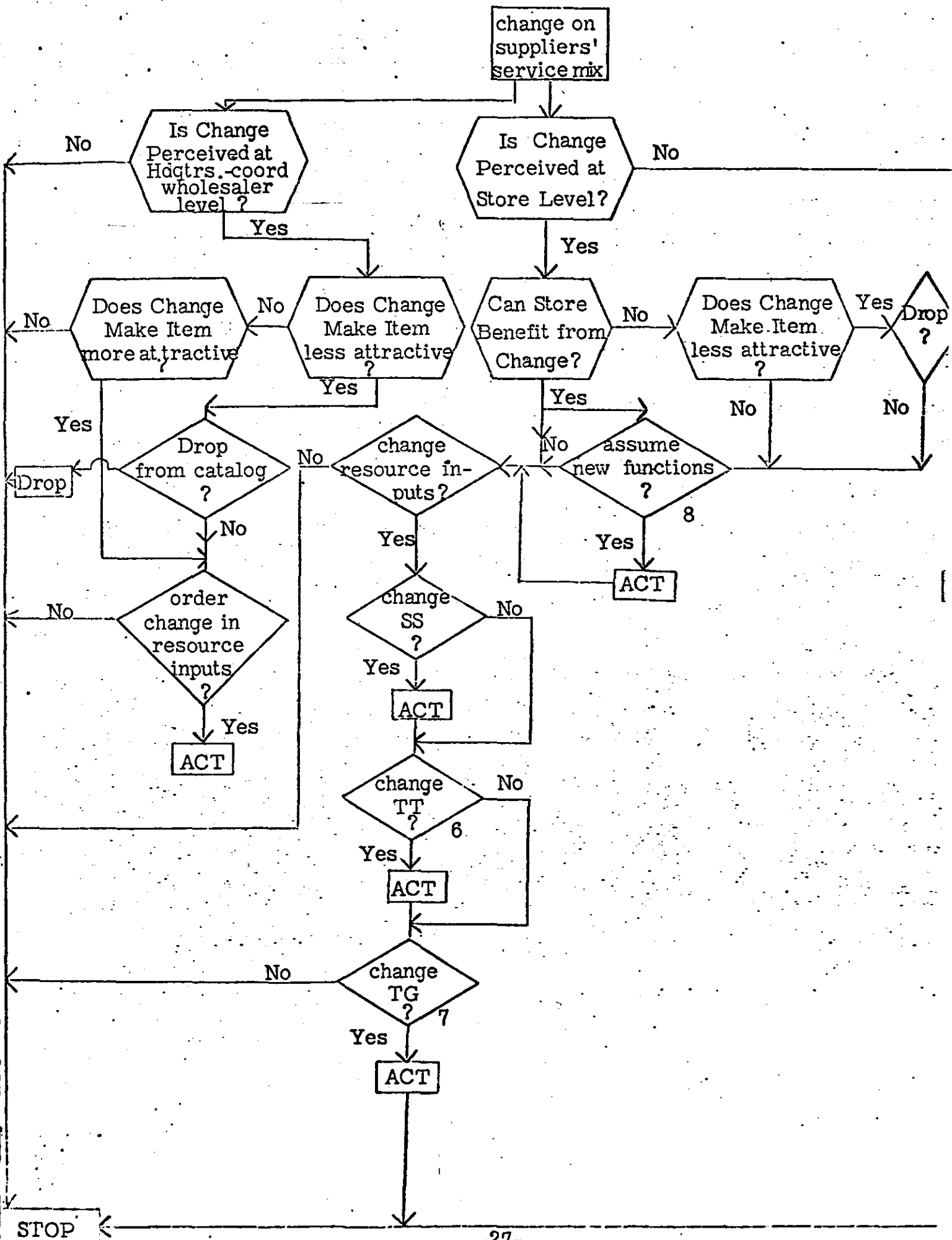
MACRO MODEL RETAILER RESPONSE TO SUPPLIER ACTION



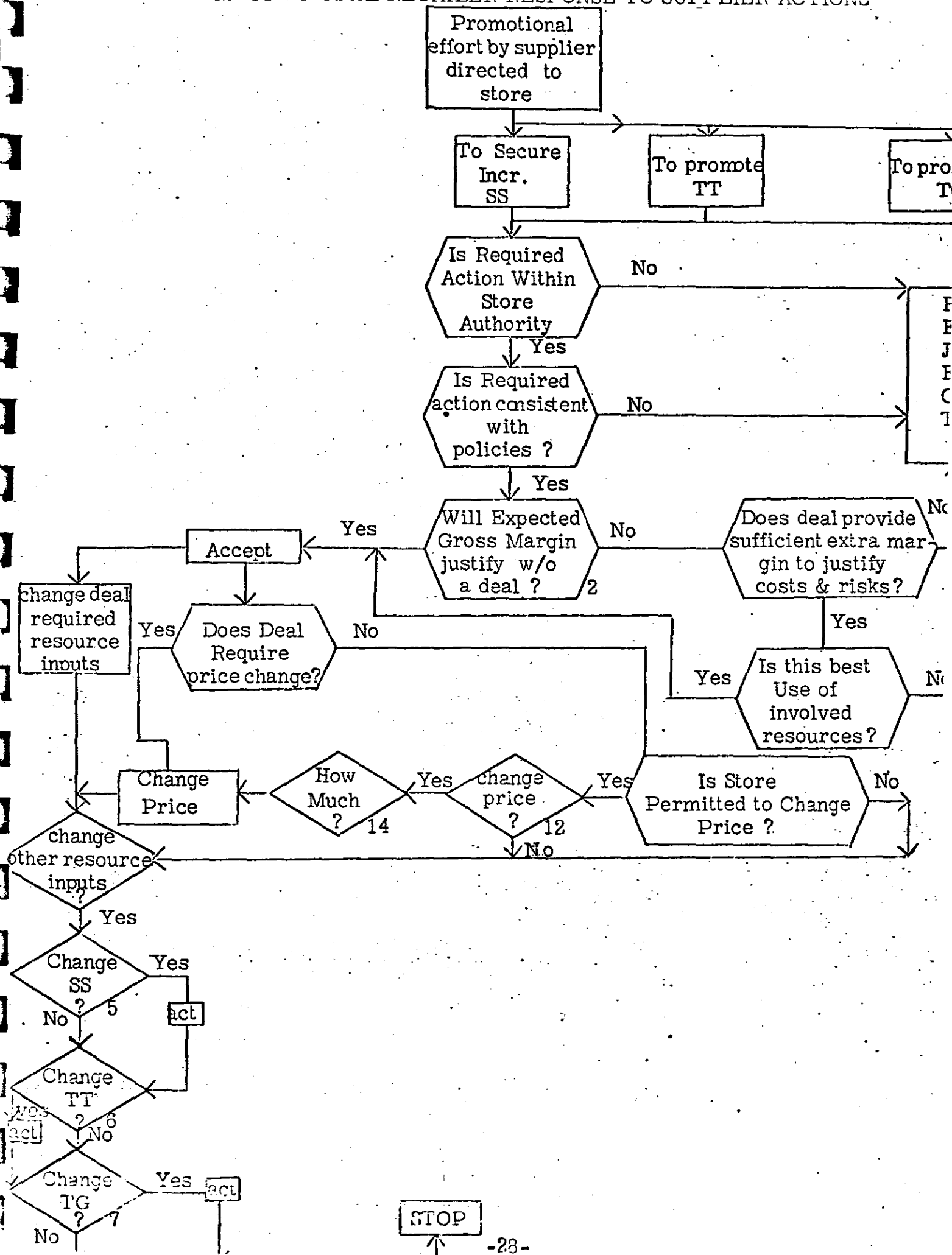
MACRO MODEL RETAILER RESPONSE TO SUPPLIER ACTIONS



MACRO MODEL RETAILER RESPONSE TO SUPPLIER STIMULI



MACRO MODEL RETAILER RESPONSE TO SUPPLIER ACTIONS



STOP

Information Requirements for Macro Retailer Response to Supplier Actions
(Figures 8 - 13)

1. Under what circumstances do CW require store to carry an item?
What criteria does CW use to determine mandatory product?
How does management obtain data to apply criteria?
What is the substance of the mandate? (e.g., how much, how long)
2. How do store personnel estimate effects of additional item on total sales and gross margin?
3. What criteria for substitution within line?
How and by whom are criteria determined?
How are criteria changed?
How and by whom are criteria applied?
4. How much prospective gross margin is required for addition?
How, by whom, and upon what criteria is this determined?
5. What criteria used to allot facings?
How and by whom are criteria determined?
How and by whom are criteria changed?
How and by whom are criteria applied?
6. What criteria for TT promotion?
How and by whom are criteria determined?
How and by whom are criteria changed?
How and by whom are criteria applied?
7. What criteria for TG promotion?
How and by whom are criteria determined?
How and by whom are criteria applied?
8. What criteria for assuming new functions?
9. What criteria for adding to catalog? How and by whom are criteria determined? Changed? Applied?
10. Under what circumstances does headquarters or other coordinating wholesaler remove from an authorized list?
11. Is change of sales price made mandatory by
 - a. Headquarters controlling store?
 - b. Coordinating wholesaler action (e.g., voluntary chain sponsor? co-op group management)
 - c. Brand owner (e.g., via "Fair Trade"?)Under what circumstances do (a) and (b) act?

12. What criteria does store employ for price changes?
13. What criteria does store employ for drops of an available item?
14. What rules for determining amounts of price changes?
(E. g. , pass on cents change; maintain % markon; cut by ¢, raise by markon %).

III. SOME RESEARCH HYPOTHESES DERIVED FROM THE INTERACTIVE MARKETING MODEL

A close examination of the consumer and retailer models, which illustrate two parts of a comprehensive interactive marketing model, suggests a large number of unknown variables and relationships. The partial lists of information requirements, which were compiled for each of the models, indicate quite clearly how little is known about the complex marketing system for even a single frequently purchased household product. Scattered information might exist on some of the variables and relationships. Yet, what is needed is better understanding of the overall process which should be reflected in specific research hypotheses and a method for determining which hypotheses to study first.

Despite the inevitable importance of the managers' and researchers' subjective evaluation in determining which research hypothesis to test, both can benefit from a somewhat formal organization of alternative research proposals. Such an organization can be derived from the interactive marketing model and is illustrated next. The assumed objective of the marketing studies is the improvement of the manufacturer's understanding of the marketing system, so as to enable him to design "better" marketing strategies. Despite the limiting nature of this assumption similar analysis can be applied for other participants in the marketing process.

The first step in selecting an hypothesis to be tested calls for determining the basic object of analysis. Should it be the consumer, the retail store or the wholesaler? Obviously this decision depends

on the firms' current problems. If one of the firm's major problems is, for example, the uncertainty concerning the effectiveness and utility of its consumer advertising strategy, it is quite reasonable to make consumers the basic unit of analysis. On the other hand, if the firm is concerned with its sales and market share position, it might be that the most appropriate unit of analysis is the retail store.

Let us assume the latter situation and illustrate the use of the interactive marketing model as a framework for research utilizing this example. Given the firm's concern over its market share, one can state a specific research objective such as an attempt to explain the variation of market share (M/S) for a given brand (i) among retail outlets.

Following the establishment of a research objective, the second step in selecting a research hypothesis is the development of a model specifying the various relevant research hypotheses and the assumptions underlying them. For example, the M/S_i variations among retail outlets can be attributed to either of the following explanations:

1. Variation of customers, i. e., customers with high propensity to buy the given brand patronize some type of stores while customers with low propensity to buy the given brand patronize other stores. Carried to the extreme this explanation assumes that the in-store promotion has no effect on consumers' brand selection behavior.
2. At the other extreme variations in M/S can be explained by variation of "in-store" variables. I. e., all stores have relatively heterogeneous customers with respect to their preference for the given brand. Yet, the stores differ as to the effectiveness of their in-store promotion and environment for the sales of the given brand.
3. In view of some empirical evidence on both the close

relation between choice of stores and customer type (Pierre Martineau's study on social class and spending behavior)⁷ and the effect of in-store variables on a product's sales (Keith Cox's study on effectiveness of shelf space, for example).⁸ The most realistic explanation of M/S variations among stores is the one which is somewhere between the two extremes, i. e., variation of M/S among stores is probably a function of both the stores' customers and the in-store variables.

Despite the "realism" of the third explanation, it seems to be more operational to study first the two extreme situations. Each of these explanations is in turn expanded to suggest specific research hypotheses which can be related to particular marketing decisions. Some of the macro research hypotheses derived from the first explanation of M/S variations among retail stores are:

1. 1. Different stores through their traffic-generating promotion and image attract customers with different usage behavior (heavy vs medium vs light users for example), brand loyalty, buying situations, customer socio economic characteristics, etc.)
1. 2. The decision to buy a given brand is influenced primarily by mass media and other "outside the store" communications.

Concerning the second explanation, possible research hypotheses are:

2. 1. Changes in the "traffic tapping" promotion for brand i can change its M/S.
2. 2. Changes in the shelf space of brand i can change its M/S.
2. 3. Changes in the price of brand i can change its M/S.

Given these hypotheses, any combination of them or a similar list of hypotheses, the third step in the selection of a specific research

⁷Pierre Martineau, "Social Classes and Spending Behavior", Journal of Marketing XXIII, October, 1958, pp. 121-130.

⁸Keith K. Cox, "The Responsiveness of Food Sales to Shelf Space Changes in Supermarkets," Journal of Marketing Research, May, 1964, pp. 63.

hypothesis calls for a subjective decision as to the one hypothesis which is likely to provide the firm with the greatest pay-off. Such a decision requires both a good understanding of the overall interactive marketing model and familiarity with existing relevant empirical findings. The latter suggests, for example, which hypotheses have already been studied and with what results. If the firm had already conducted a number of price studies, it might be advisable to examine the potential usefulness of evaluating the other hypotheses. Familiarity with a shelf space study, for example, which suggested the advantages of a premium space (near the cash out counter) might attract the manager's attention to the shelf space hypothesis and lead him to investigate this area. Yet, prior to the commitment of funds to the investigation of this hypothesis, it is desirable to evaluate it in view of the overall interactive marketing model. More specifically, assume that one decides to study the shelf space hypothesis, the question still remains: How can the manufacturer induce the retailer to give his brand more and better shelf space? It is at this issue that a close analysis of the retailer model is of the greatest value. Similarly the question can be posed as to what the manufacturer can do to elicit the cooperation and support of his distributors (wholesalers) in his attempt to get improved retail shelf space.

Suppose that these analyses indicate that there is no way of getting improved retail shelf space. It is then quite obvious that there is no justification for undertaking a shelf space study. On the other hand, if the analysis of the shelf space within the context of the interactive marketing models indicate X ways of getting improved shelf space,

research attempting to establish the effectiveness of various changes of shelf space on sales is appropriate.

SUMMARY AND IMPLICATIONS

The implications of the current attempt to develop and use an interactive marketing model (IMM) as a framework for research are both for marketing managers and researchers.

The marketing manager can hopefully gain a better understanding of his marketing system by using an interactive marketing model which states explicitly the variables of the system and their interrelationships. Furthermore, the use of IMM as a framework for research increases the marketing manager's involvement in the research process. To be operational, the model requires that the marketing manager and the researcher interact to specify which of the hypothesized relationships are known and which are controversial and require some additional investigation.

For the researcher it is quite evident that the interactive marketing model is a useful guide for research. By making interrelationships explicit, the conduct of research studies dealing with various elements of decision variables as applied to each of the various actors should be more easily structured in the light of the interrelationships which exist. If cet. par assumptions are to be made, they can be made with understanding of the nature and acceptability of the simplification thus introduced.

The model presented also suggests specific direction for future work: extension of the model to include wholesalers and manufacturers;

and research on retailer and consumer behavior to test selected hypotheses derived from the model such as those suggested in Part III. In addition to the benefits to be derived from such studies in their own right, such tests will aid in evaluating the utility of the model as a research aid.