

A COMPARATIVE STUDY OF INDUSTRIAL AND  
CONSUMER SALES COMMUNICATIONS  
PROCESS: THROUGH PRINT  
ADVERTISEMENTS

By

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Submitted to the Faculty of the  
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Oklahoma State University  
in partial fulfillment of  
the requirements for  
the Degree of  
MASTER OF SCIENCE  
July, 1986

Thesis

1986

V694c

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Submitted to the Faculty of the  
Graduate College of the  
University of Illinois at Urbana-Champaign  
in partial fulfillment of the  
requirements for the  
M.A. Degree in  
History  
1986



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## PREFACE

I wish to express my sincere appreciation to my adviser and teacher, Dr. Walter J. Ward. I am grateful to him for his guidance, kindness and patience. I shall always fondly cherish the intellectual experience shared with him during the course of the graduate program.

I also wish to express my thanks to Dr. William Steng for enriching my intellectual growth and widening my thought process. Appreciation is also expressed to Dr. Ed Paulin.

I wish to thank Kiran Racherla for his friendship and, especially, for his invaluable help during the fall of '82, without which my graduate program may not have succeeded. I wish him all the best in the years to come.

Words cannot express my love and affection for my father A.V. Subbarao and my mother A. Sita, the best dad and the best mom in the world. Their confidence in me and their faith in the American educational process has brought me so far; I will strive to live up to their expectations.

Finally, I wish to dedicate this humble work of mine to the memory of my dear sister, A. Vasantha.

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## CHAPTER I

### INTRODUCTION

Advertising is sales-oriented mass communication. Selling is basically a form of communication, communication between the seller and the prospective buyers.

No product can be sold without communication. A prospect will not buy a product unless he has been communicated with--unless he has consciously or unconsciously gained a favorable impression about it. Buying must always involve some communicating by the seller.

This communication can be as personal and direct as when a salesman calls on the prospect to get the order. Or it can be as impersonal and indirect as when a package on a supermarket shelf --through its design, appearance, descriptive copy and/or price--induces the shopper to pick it up, put it in her cart and take it to the check-out counter. And it can be all shades between these two extremes. The only requirement is that it must truly communicate.<sup>1</sup>

Different types of businesses require different types of advertising. A business that sells goods and services directly to the public requires a particular kind of communications support. A business that sells goods and services to other businesses requires yet another kind of communications support. The seller's message depends on the receiver. It is essentially the differences in the nature and hence the needs and motives of the prospective buyer that give rise to

characteristically different problems and marketing approaches. These characteristics fall into two broad categories: industrial and consumer marketing.

#### Aim of the Study

The aim of this study is to trace the fundamental vein that runs through the fabric of both consumer and industrial advertising theory. In pursuance of this goal, this study made a comparative analysis of the key differences and similarities between industrial and consumer advertisements with a view to determine the following: What variables are common? Do they concur with the communications requirement for each category? What are the differences in the categories of advertisements?

This researcher believed that such an analysis would form the basis for further research and development of a general theory. Industrial and consumer sales communications then could be explained as particular cases of a general unified marketing communication theory.

Researchers in the field of marketing and advertising have made extensive studies of the process and effects of consumer advertising. But they largely have neglected industrial advertising. This is true even today. As Hanssens and Weitz observed in 1980,

Despite advertising's increasing importance in the industrial marketing mix, it has received limited research attention. Recent research on industrial advertising has been concerned with setting industrial advertising budgets (Lilien et al. 1970) The content and format of advertising campaigns have not been examined.<sup>2</sup>

Traditionally, industrial marketers have relied heavily on the salesperson. However, the rising costs of sales calls are compelling industrial marketers to resort to advertising as an economically viable and desirable alternative. Hanssens and Weitz acknowledged this emerging trend and further observed that:

A new breed of industrial marketers is winning ball games by using advertising to relieve the salesman of as much of his communications job as it can... The secret of efficient and profitable communication is to use cheap multiple communications to do as much of the job as they can do, and to use expensive individual communication only to the extent one must. The result is lower communications cost per sale or higher sales per dollar of communications costs.<sup>3</sup>

As an industrial copywriter in an advertising agency handling both industrial and consumer accounts, this researcher experienced a dearth of research material that identifies specific characteristics and variables related to effective industrial advertising functions. Although it is not possible to generalize the proven and effective precepts of consumer advertising to industrial advertising by an inductive process, this researcher believes that the wealth of investigative data on consumer advertising is bound to shed complementary light on industrial sales communication.

Contrary to the tenets of classical advertising theory, industrial and consumer advertising do not fall into two different watertight compartments. This myth is slowly giving way to an onslaught of research findings on buying behavior.

Despite popular belief, there are strong similarities between organizational and household buying behavior, especially in regard to buyers' expectations, perceptions and mixture of rational versus emotional choice criteria.

A census conducted by Industrial Marketing magazine, in its February, 1974 issue, reveals that the print medium accounts for nearly 75 percent of industrial advertising expenditure.<sup>4</sup> Apparently, print advertisement lends itself as the logical and most suitable medium for a comparative study of consumer and industrial advertising.

#### Industrial and Consumer Goods and Markets

Although communications requirements for the sale of industrial and consumer goods and services differ due to the characteristic differences of intended customers, several relationships qualify these distinctions. However, not all goods and services can be classified as either industrial or consumer items. Some products fall into both categories; for instance: typewriters, hand tools, automobiles, floor polish, sandpaper, and lawn tractors. Institutions such as hospitals, hotels, municipalities, and government agencies buy consumer goods in ways characteristic of industrial purchases.

Within the economic system itself there exists an interdependent relationship that reflects the relative inelasticity of demand for industrial goods and services. Sales of industrial goods cannot be increased by aggressive marketing strategies alone. Industrial markets move in lockstep with consumer

markets. According to Elder,

The demand for industrial goods is a derived or secondary demand and depends on the demand for consumer goods. Producers of tire-making machinery, for instance, cannot sell additional equipment to tire manufacturers, regardless of price inducements or sales pressure, if the existing equipment is sufficient to fill the demand for tires. On the other hand, if the demand for tires should exceed the capacity of existing machinery, tire manufacturers would place new orders for equipment even if prices were higher.<sup>5</sup>

#### Framework of Communications Process

This complex set of relationships and interdependence between industrial and consumer markets necessarily implies different advertising approaches within the basic sales communications framework.

Starch describes the sales communications framework as "the complete buying-selling process, including all steps from zero knowledge of and desire for the product to the actual purchase and possession of it."<sup>6</sup>

The final effect is the culmination of the entire process and leads to the purchase decision.

The process model--that attracts attention, arouses interest, impresses memory, and creates the conviction to produce the desired responses--operates across the economic system. From the initial purchase of raw materials/primary manufactured goods by manufacturers to the purchasing of end goods and services to the final consumer. (Henceforth, in the interest of brevity, all goods and services will be referred to as products.)

Although the process model remains unaltered to a large extent, the pattern of decision making varies across the economic system. It differs for consumer and industrial products.

Elder's comparative study showed that "most significant points of difference between industrial and consumer marketing is the dominance of rational buying motives in the former and of emotional motives in the latter field."<sup>7</sup>

Among industrial customers, the decision whether to buy or what to buy is usually based on tangible factors expressed in terms of dollars and cents. Among private consumers, the decision is based both on tangible and various intangible factors which cannot be quantitatively measured. However, Elder notes that "personality, family ties and pride of possession still are, and probably always will be, potent forces, particularly in the smaller business where the individual proprietor has not yielded to the impersonal, functionalized organization."<sup>8</sup>

Every person in the world is a consumer. Due to the diversity of human nature the behavioral mechanism that leads to the final purchase decision will tend to vary widely among individuals, as well as social and economic groups; even individuals vary their attitudes and social values across a time frame. McNeal vividly illustrates it, thus:

Consider Mrs. Consumer and her behavior towards clothing fashions. At one point in time she desires high necklines and low hemlines. She is regular Mrs. Modesty, while lower necklines are "bold and brazen."

At another point in time her neckline and hemline seem to be racing to meet each other at the middle, and more coverage of the skin is considered "old maidish" and "out of date."<sup>9</sup>

However, the apparent randomness and whimsical consumer behavior is in reality underscored by certain patterns that are set in motion by consumer reactions to advertising stimuli. These patterns can be related to factors that stimulate reactions within social/individual settings and determine consumer behavior. Social setting covers the social setting of individual end consumers and the equally complex intra-organizational industrial setting, where collective purchase decisions are made. Therefore, it is not necessary to develop consumer behavior models to match each and every category. All that is required is to identify the major factors or stimuli. By applying the pertinent stimuli, advertisers can evoke the desired response.

#### Decision Models

The modes of reception and analysis of sales communication differ between customers of industrial and consumer goods. The mechanism that leads to the purchase decision varies both in terms of duration and needs. However, the decision in its most basic form is a simple association between a stimulus and a response. Nicosia formulated a simple model in the following expression:<sup>10</sup>

$$Y = f(x) \text{ or } f(x, y, z)$$



Where  $x$ ,  $y$ ,  $z$  are independent variables or stimuli that can be controlled by the seller.

And  $Y$  represents the buyer's response.

Each independent variable influences the final decision in two ways--by virtue of its own attributes and in association with each other. Therefore, the seller must finetune each independent variable to obtain the optimum effect. This requires a clear understanding of the buyer's buying mechanism.

### Industrial Buying Process

The industrial seller's task according to the stimulus-response theory. is to stimulate potential buyers from a state of unawareness of need to the act of buying the product. This is analogous to most learning theories. Inputs of new sets of information disturb an individual's mental equilibrium. As a consequence, the individual seeks to restore his equilibrium. He achieves it with the requisite responses. The act of restoring the equilibrium is equivalent to earning a reward. The learning process does not take place without reward. Among industrial customers, reward is expressed in terms of economic benefits. Corey, a leading scholar in the field of industrial marketing strategy, states in no uncertain terms that industrial customers "are in business to make a profit or, in the case of government units or nonprofit institutions, to operate within budgets. Consequently, the dominant motivations are economic. They relate to price, availability of supply, and service."<sup>11</sup>

Economic consideration is of prime importance, but it is not the only one. As the buying decision is made by a group and not an individual, behavioral and organizational factors play a significant role in the buying model. Hence, the learning process operates at several levels and, therefore, the type of rewards vary with each level.

Most advertising texts contend that because of the influence of the formal organization, the large number of persons, the complex technical and economic factors, and the large sums of money involved, the industrial buying decision is totally rational and immune to factors that influence the private consumer. This belief further holds that a corporation acts as a monolithic block and corporate decisions are processed along highly structured lines, with well-defined and tangible goals. But Webster and Wind, in their organizational behavior model, assert that:

All organizational buying behavior is individual behavior in an organizational and interactional setting. Only individuals can define problems, decide, and act. Furthermore, it follows that all buying behavior is motivated by individual needs and desires, guided by individual perceptions and learning, in complex interaction with organizational goals.<sup>12</sup>

In essence, industrial advertisements must stimulate response from three functional groups: the operating group, the managerial group, and the financial group. For the purpose of this study, this researcher will divide the purchase decision into three phases:

1. Need recognition

2. Definition of characteristics, quantity of item needed and development of specifications
3. Acquisition and evaluation of proposals

The operating or the managerial group recognizes the need for a new product. The operating group usually perceives a need in terms of solving a production problem or increasing operating efficiency. The managerial group's perception of needs generally reflects expectations of future demands or corporate growth policies. In some instances, decline in sales stimulates a need for investments in capital goods. The managerial group may consider plant modernization as the only means of catching up with its competitors.

The purchase function in terms of the organization decision process includes identification and operationalization of the organization's objectives. Included in this set of objectives are motives that satisfy both collective corporate and individual decision maker's needs. The purchase decision is consummated through a process of conflict resolution by members of the decision making group.

#### Implicit Need Stimulation

All industrial purchases involve huge financial commitments. Therefore, even if the seller stimulates an awareness, the buyer cannot respond in a manner the seller desires. However, the seller can sometimes stimulate demand. He can achieve this by stimulating demand among end users. Webster illustrates this point in the following case:

Because demand for industrial products is derived demand, industrial marketers can sometimes stimulate demand for their products by stimulating demand for their customers' products... A manufacturer of a high barrier paper coating material used in food packaging found it necessary to work with paperboard manufacturers, paper coaters, packaging firms, food processors, and retail chains in order to develop the market for its product.<sup>13</sup>

Dupont has a long tradition in reaching out directly to the end users. Webster notes as a typical case where Dupont stimulated a demand for its customer's customer--a synthetic fiber manufacturer--with advertisements in the consumer media (See Appendix A).<sup>14</sup>

The advertisements showed an elegant woman in a synthetic fiber dress with the following caption and copy: Because it's time you did something for yourself. Qiana. Wear it and marvel that luxury like this can be practical, too.

The buyer sets the purchasing mechanism into motion after recognizing a need. The personnel in various functional groups consider the following objectives:

1. Availability when and where needed
2. Product quality consistent with specifications
3. Lowest price consistent with availability and product quality
4. Service to maximize the value of the product in use
5. Good long term vendor relations and source development

As the selling must be directly tied to the interest of different functional groups within the corporation, the advertisement must be informative enough to interest various personnel groups and yet retain coherence and general appeal.

Admittedly, not all industrial advertisements can hope to achieve this goal, but they must endeavor to strike an optimum balance.

Frequently, sellers target their ads at existing customers to reinforce their image and, in some instances, to compete for reorders. The seller's image plays another vital role in the communication process. It induces a passive end-consumer feedback effect. Industrial customers are sensitive to this effect. Therefore, sellers can exploit its potential to their advantage.

#### Industrial Markets

Print ads cater to a large market segment. This enables the message content to be general and broad in scope. However, even these broad markets fall into two categories: the vertical and the horizontal markets.

In vertical markets customers belong to one industry or group of industries; for instance, manufacturers of tubular aluminum products. As fabricators of this product, they have several characteristics--in terms of product requirements and production problem--therefore, the seller's message content needs to be closely focused.

In horizontal markets, customers belong to several unrelated industries. For instance, a company selling computer software sells to customers in such unrelated industries as banks, travel agencies, chemical processing plants and aerospace installations. Though the mathematical variables and

logical functions remain unaltered, each industry requires output generated in different formats with different mathematical procedures and operations. Therefore, the software packages are modified for customer requirements and special features are added or deleted. Hence, message content needs to be dispersed while remaining within the same matrix.

#### Risk: Product Classification

In both cases the advertisement must be informative with variations in content levels.

Advertising messages must also take into account the risk received by the decision makers in the organization. Because behind every purchase decision lies the risk factor, corporate and personal risk. Risks involved in making purchase decisions are present in two levels--high and low risks.

It is not possible for the seller to satisfy all parties in the organization. For example, if a supplier promises lower prices but is unable to adhere to strict delivery schedules, the production manager may view the supplier in a negative aspect even though the purchase manager may show a high level of interest in the economy factor. This is true, because in an organization each individual is rewarded for excellence in his specialized skills. This leads to different levels of satisfaction for each party, creating goal incongruencies. Hence, each party tends to minimize risk. Sheth summarizes this concept, thus:

Buyers do not tend to maximize the expected pay-off...but are inclined to minimize the risk they perceive a given situation entails. In other words, satisfying as opposed to optimizing is the buying objective. Risk itself is defined as the combination of perceived magnitude of adverse consequences and the degree of uncertainty faced by the buyer.<sup>15</sup>

Sheth hypothesizes that the greater the perceived risk in a specific buying decision, the more likely it will be that the purchase will be decided jointly by all persons concerned. Further, in another study he elaborates that for a first purchase or once in a lifetime capital expenditure, the probability of a joint decision by all parties concerned will be greater.

Low risk is defined, thus:

On the other hand, if the purchase decision is repetitive or routine, or is limited to maintenance products or services, the buying decision is likely to be delegated to one party.<sup>16</sup>

That is, in a low risk situation the degree of joint decision making decreases. Since risk is proportional to a quantum of decision making inputs by all parties concerned, products that fall into this category of decision making fall into the low risk type.

The industrial marketer, thus, can distinguish between two types of buying situations. Situations involving routine reorders--low risk and those that imply change in some respect for the customer--high risk. Corey defines the high risk situation as "involving a decision to buy a new product with possible implication for changing the quality of the buyer's

product or disrupting his production process.

For this study two risk situations will be associated with the product category. The purchase situations will be extended to the product categories. Industrial products in this study will be subclassified either as high risk or low risk products.

#### Task Orientation

The seller's communication is designed to arouse expectations of individuals in the purchasing organization. These expectations can be measured in terms of the perceived satisfaction of the decision-making group's explicit and implicit objectives. Expectations depend on each member's role function. Besides, "it cannot be ignored that the designated organizational buyer, though he is constrained by the organization's policy, is subject also to personal goals and aspirations in executing his organizational roles."<sup>17</sup> Although individual members of the decision making group seek to gratify personal expectations, they strive to rationalize and tie them to corporate goals. Hence, most of the goals sought by the decision makers are related explicitly to his/her task; while some are only implicitly related to immediate tasks. Thus, they are two types of expectations. Hence, the advertisement has to evoke two types of stimuli; task oriented and non-task oriented. The component variables contained in each set of the decision influencing variables (task and non-task) will be discussed later in this study.



## Consumer Buying Process

The seller of a consumer product has a task quite identical to that of an industrial seller. The task of leading potential buyers from a state of unawareness of need to the act of buying the product is a learning process. Although this process parallels that of the industrial buyer behavior, the concept of reward--the goal of the learning process is less explicit. Apart from the economic dimension, which is the most visible in the industrial context, reward is perceived in several dimensions with several implicit levels of meanings. Some of these dimensions defy quantification. In classical advertising literature these non-quantifiable aspects are clubbed together and termed as emotional and non-rational forms of reward. This implies that emotional motives are non-purposeful. Furthermore, rational and emotional goals are used as criteria for distinguishing between industrial and consumer buying processes. Consequently, the payment of a premium price for an automobile to stand out among others in a neighborhood seems to be non-rational.

But this inference is easily discarded when the concept of reward is viewed from a personal frame of reference. In the personal frame of reference behavior is observed from the point of view of the individual. According to psychologists Snygg and Combs, from the point of view of the behavior himself, behavior is caused. It is purposeful. It always has a reason. They further add:

When we look at other people from an external, objective point of view their behavior may seem irrational because we do not experience the field as they do. Even our own behavior may, in retrospect, seem to have been silly or ineffective. But at the instant of behaving the actions of each person seem to him the best and most effective that he can perform under the circumstances. If, at that instant, he knew how to behave more effectively he would do so.<sup>18</sup>

Hence, reward encompasses the wide personal field of the behavior and mirrors his sense of belongingness, self-concept, level of aspiration, interests, satisfaction and like concepts. And reward is rational from the consumer's point of view, so it may be inferred that evaluative criteria are not absolute, but rather relative constructs. They are not just rational or emotional, but rather reflect external objective or personal subjective fields of experience. That is, they branch out from the same source. In other words, different forms of evaluative criteria can ultimately be reduced to individual behavior.

Such an approach concurs with the earlier discussion on industrial decision process, where it was stressed that industrial behavior is really individual behavior in organizational and interactional setting. In consumer marketing literature the roles of husband, wife or children are discussed only on a product-by-product basis. In a study by Woodside and Willenberg, data indicates that the extent of husband-wife involvement varies considerably from product to product.<sup>19</sup> But the major contention that a high degree of attitudinal agreement between husband and wife is a prere-

quisite to purchase of most durable goods was supported.

Their study also showed that husbands appear to be more involved than wives in problem recognition of automobiles, lawnmowers, beer, television and gardening supplies. Wives appear to be more involved than husbands in problem recognition of automatic washing machines and cheese. Problem recognition for rugs/carpets usually tended to be a joint activity.

So, in a family setting, more than one individual contributes toward the decision process. Although the balance of power between husband and wife vary, husband/wife influence in the decision process also varies with the product under consideration. Yet, from the consumer marketer's point of view, even though a purchase can involve either a husband-dominated or a wife-dominated decision, there still remains some contribution by the other spouse. This means some form of collective decision-making mechanism. A pattern somewhat similar, at least in elemental structure, to that of an organizational design in the industrial buying process.

#### Task Orientation

Parallel to the industrial setting, consumer purchase behavior is related and depends on consumer's ability to fulfill the function of coping with the environment. Thibaut and Kelly define this as task behavior.

Task behavior is directed towards achieving goals within the family. They also define another functional role:

socio-emotional behavior.

Socio-emotional behavior is essential for maintenance of harmony within the family. The industrial analogy is intra-group cohesion. Socio-emotional or non-task behavior fulfills the function of coping with the subjective environment. This includes price and quality association, difficulty in judging product quality, need for social information sources. The guideline utilized to define and distinguish task and non-task factors is implicit rather than explicit and the following definition will be used as a frame of reference for this study: " In principle task behavior can be performed by any subpart of the group, and even can be delegated to persons who are not members of the group."<sup>20</sup>

The purchase decision in both families and corporate organizations is always preceded by a conflict situation that is associated with a problem or a pending issue. The decision-making group, by a process of consensus, overcomes or reduces the state of tension by assigning weight to task and non-task variables in an effort to reduce the state of tension and, thus, resolve conflict. Thus, the purchase decision culminates in a solution to the problem or satisfaction of a need or a set of needs.

Traditionally, task-oriented goals have been evaluated by husbands while wives assumed responsibility for satisfying non-task goals. This led to task-oriented specialization. However, in a modern family group--that is, in a marriage group per se--both spouses are task specialists and neither

spouse is a socio-emotional specialist alone.

### Product Classification

Consumer goods were first classified on the basis of consumer buying habits by Copeland.<sup>21</sup> He classified them as: convenience goods, shopping goods and specialty goods.

The definitions committee of the American Marketing Association defined them, thus:

1. Convenience goods - Those consumer goods which the consumer usually purchases frequently, immediately and with a minimum of effort.

2. Shopping goods - Those consumer goods which the customer, in the process of selection and purchase, characteristically compares in such basis as suitability, quality, price and style.

3. Specialty goods - Those consumer goods on which a significant group of buyers characteristically insist and for which they are willing to make a special purchase effort.<sup>22</sup>

However, the above definition is subject to some degree of overlapping. Holton underscores this point, thus:

Since items which are shopping goods for some consumers may be convenience goods for others, items which are shopping goods for some consumers may be convenience goods for others. Shopping goods can be defined accurately only from the standpoint of the individual consumer.<sup>23</sup>

Since this study places stress on individual behavior in the buying decision process, Holton's definition which is a refinement of that of the AMA, will be adapted. They

are:

1. Convenience goods - For the individual consumer, those goods for which the probable gain from making price and quality comparisons among alternative sellers is thought to be small relative to the consumer's appraisal of searching costs in terms of time, money and effort.

2. Shopping goods - For the individual consumer, those goods for which the probable gains from making price and quality comparisons among alternative sellers is thought to be large relative to the consumer's appraisal of the searching costs in terms of time, money and effort.

Holton's definitions are only an extension of the AMA definitions and cover the motivations of the consumer and explain why consumers "shop" for some goods.

Of course, this classification is not clear and unambiguous. But in this researcher's view they are the best possible method of classification. As Holton suggests, this classification is really a form of continuum from convenience goods to shopping goods.<sup>25</sup>

He further adds that the amount of comparison shopping increases as one moves from shoestrings to neckties to suits to dining room furniture. It may be noted that convenience goods are purchased frequently and parallels routine buying in the industrial field.

Some convenience goods may be perceived to fall into specialty goods; for example, bread, gasoline and other necessities. A man may "walk a mile for a camel," but a cigarette

can hardly be considered to warrant a willingness to make a special purchasing effort. Here the criteria for adding specialty goods into shopping goods will be "necessity" of making the purchasing effort, rather the willingness to make the special effort. Holton concludes that "specialty" goods classification overlap both groups and cannot be distinguished either from the shopping goods or those from convenience goods.<sup>26</sup> In the next chapter a product evaluative, product criteria buygrid will be developed and used to identify specialty products within either of the two categories.

Paralleling the industrial product classification, these two types of risk situations will be associated with consumer product category. Shopping goods will be associated with high-risk type of purchasing decisions and convenience goods will be associated with the low-risk type.

#### Buying Process: A Summary

The buying process in industrial and consumer settings can be reduced to special cases of a general decision process to enable a comparative study of industrial and consumer buying patterns. A study of buyers' decision processes involves application of various disciplines ranging from macroeconomics to family/group psychology. This study will focus on individual responses from the sales communication perspective.

In the physical world, wherever an electrical force

xists, it is always accompanied by a magnetic force acting in a mutually perpendicular direction. Electric and magnetic fields always coexist. By analogy, every individual making a purchase decision is subjected to task and non-task influences. The individual confronts task and non-task problems and synthesizes a buying solution, as these two influences are distinctly different.

Appendix B shows the juxtaposition of the individual's decision-making unit (the actual buying process) in the two fields of influence.

The specific component variables of task and non-task oriented fields will be identified and operationalized for the purpose of this study in the section on variables in the next chapter. The frequency of these variables in print advertisements will form the basis of analysis of these two--task and non-task--fields of influence.

#### Outline of Investigation

This thesis' investigation will approach the buying process in terms of the effect of task and non-task oriented fields on the two product categories. A detailed description of the scope of this investigation will be discussed below.

First, the product advertised will be identified and grouped under either industrial or consumer goods. It will be further subgrouped as:

1. High-risk industrial product
2. Low-risk industrial product



3. High-risk consumer product

4. Low-risk consumer product

The totally defined product advertisement will be content analyzed for task and non-task oriented advertisement stimuli. The frequency relationship between the two sets of variables, task and non-task stimuli, will be statistically analyzed at two levels: intra-group and inter-group. The first level will deal with intra-group analysis. This will establish a four-way statistical relationship within the industrial and consumer groups. Frequency data will be analyzed as follows: in subgroup low-risk, between task and non-task variables; among task and non-task variables, between high-risk and low-risk subgroups.

Level 1 (Industrial) includes:

Task in high risk X non-task in high risk

Task in low risk X non-task in low risk

Task in high risk X task in low risk

Non-task in high risk X non-task in low risk

Level 1 (Consumer) includes:

Task in high risk X non-task in high risk

Task in low risk X non-task in low risk

Task in high risk X task in low risk

Non-task in high risk X non-task in low risk

## ENDNOTES

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<sup>2</sup>Dominique M. Hanssens and Barton A. Weitz, "The Effectiveness of Industrial Print Advertisements Across Product Categories," Journal of Marketing Research (Vol. 17, 1980), p. 294.

<sup>3</sup>Ibid.

<sup>4</sup>Sally Strong, "Ad Budgets '74: Trend Is Still to Spend, Spend, Spend," Industrial Marketing, February 1974, pp. 57-62.

<sup>6</sup>Daniel Starch, Principles of Advertising (New York, 1970), p. 22.

<sup>7</sup>Robert F. Elder, Fundamentals of Industrial Marketing (New York, 1935), p. 7.

<sup>8</sup> Ibid.

<sup>9</sup>James U. McNeal, "The Nature of the Consumer," Dimensions of Consumer Behavior (New York, 1969), p. 7.

<sup>10</sup>Francesco M. Nicosia, "The Meaning of the Decision Process," Consumer Decision Process: Marketing and Advertising Implications (New Jersey, 1966), p. 9.

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<sup>12</sup>Frederick E. Webster, Jr., Industrial Marketing Strategy (New York, 1979), p. 37.

<sup>13</sup>Ibid., p. 11.

<sup>14</sup>Ibid.

<sup>15</sup>Jagadish N. Sheth, Consumer and Industrial Buying Behavior (New York, 1977), pp. 27-28.

<sup>16</sup>Jagadish N. Sheth, "A Model of Industrial Buyer Behavior," Journal of Marketing Research (Vol. 37, October 1973), pp. 50-56.

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- <sup>17</sup>Wilson Aubrey, "Industrial Marketing Research in Britain," Journal of Marketing Research (Vol. 6, February 1969), pp. 15-27.
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- <sup>22</sup>Ibid.
- <sup>23</sup>Melvin T. Copeland, Principles of Merchandising (New York, 1924), Chapters I-II.
- <sup>24</sup>"Report of the Definitions Committee," The Journal of Marketing (Vol. 13, October 1958), p. 53.
- <sup>25</sup>Richard S. Holton, "The Distinction Between Convenience Goods, Shopping Goods, and Specialty Goods," Journal of Marketing (Vol. 23, July 1958), p. 53.
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## CHAPTER II

### COMMUNICATION MODELS

#### Industrial Model

##### Introduction

This model simulates a communication process. Berlo defines a process as any continuous operation or a treatment.<sup>1</sup> The aim of this study is to recognize and relate the various segments of sequential operations triggered by an industrial sales communication, more specifically, industrial print advertisements.

The model studies the various inputs in a system of actions that lead to a buying decision. Such a model is commonly called the systems model. The objective of a systems model is "...to gain an understanding of the individual as a system of action through classifying relationships between inputs, motivational determinants and goal-oriented outputs."<sup>2</sup>

The end purpose of any sales communication is to influence the buying decision in a favorable manner. As Berlo points out, "purpose and audience are not separable." All communications behavior has as its purpose the eliciting of a specific response from a specific person or group of persons.<sup>3</sup>

An industrial advertisement's interaction with its audience--or organization--can be analyzed in terms of selective attention and emergence of conviction or change of attitude in the desired direction.

An interesting study of message strategy in industrial markets suggests that industrial marketers sometimes do not understand what is important to their audiences, or even who their audiences are. A sample of consulting engineers, architects, electrical contractors, and nonresidential building contractors assessed the relative strength of 48 distinct appeals, and revealed that advertisers were using appeals that were not particularly responsive to the needs and preferences of their specific audiences.<sup>4</sup>

#### The Target Audience

Corporate traditions, industry trends and the personality of the chief executive largely dictate the degree of functional responsibilities within a given organization. Although under ideal conditions need recognition can be attributed to a specific functional group, in reality the process of need recognition is highly diffused and evolves over an extended period of time. Hence, it will be more relevant to consider the entire decision-making unit in an organization as the target of an advertisement instead of a specific functional group.

### The Decision-Making Unit

Members of the decision-making unit work toward a common corporate objective. But during the decision-making process, group and individual goals are weighed and conflicts of interest resolved, ideally, in the interest of the corporation.

But group and individual interests are always held in sight by members of the decision-making unit. Although the sum total of each individual's goals is always nearly congruent to corporate objectives, each individual's total set of goals is unique. This can be attributed to the differences among individual expectations--expectations that satisfy explicit and implicit goals.

Sheth's industrial buyer model, based on the psychological world of the decision-makers, defines expectations as a measure of obtaining a profile of each supplier/brand in terms of satisfying the decision-maker's explicit and implicit objectives. Some of these objectives are related to the decision maker's tasks. Others satisfy his personal needs within the corporate structure. Thus, the decision maker's responses can be defined as both task-oriented and non-task oriented. Based on the task roles of decision makers, Webster and Wind assigned the following labels to members of the decision making unit.

1. Users
2. Deciders
3. Influencers

4. Buyers

5. Gatekeepers<sup>5</sup>

The gatekeepers control flow of information; influencers add information or decision criteria; buyers are responsible for the formal purchase agreements. Deciders select the vendors or brands of the product. The users are actual users--the production department. Distribution of these functions varies with organizations and more than one function may be assumed by a particular group.

An important corporate arm is the financial group, which in most corporations carry the utmost weight. This group probably has the highest impact on all corporate policies--especially at the need recognition phase--and directly or indirectly exerts influence on all the above five functions.

While recognizing this fact, it is proposed to divide the decision making unit into three main groups in order to relate the weights of advertising stimuli and repective responses. It is once again stressed that the various functional roles do tend to diffuse across group boundaries. The three groups identified for this model are:

1. Engineering
2. Purchasing
3. Production

The engineering department, in most cases, defines product characteristics and quantity of item needed and also develops and lays down specifications and guidelines. The purchasing personnel search and identify potential sources,

receive and initiate analysis of proposals. But in many industries with engineering orientations, the purchasing personnel's functions are often reduced to a clerical level. The production department is more concerned with delivery dates, supply quantities, after sales service and product quality in terms of adherence to previously agreed upon specifications. These evaluative criteria can be equated with individual expectations associated with a product. Expectations are defined specifically as "the individual's perception of the extent to which each vendor or brand can satisfy the individual's needs and purchasing objectives."<sup>6</sup> That is, expectations measure the perceived potential of alternative suppliers to the decision making group's explicit and implicit objectives. An overview of the objective grid is shown in Table I. These objectives are collated from the literature cited in general and from Professor Sheth's model in particular. Some expectations are unique to a particular group and others have a more common denominator. But these shared, product-related expectations receive different weights by each group. This leads to conflicts of interest. For instance, engineering may insist on pretesting and standardization, production on quantity of supply, and purchasing on price and location of seller. It also leads to perceptual distortion--the extent to which each group modifies information to adapt and fit to its own beliefs and value system.

The theory of cognitive dissonance suggests that an individual has cognitive elements about himself, his past



TABLE I  
EXPLICIT AND IMPLICIT EXPECTATIONS

	Engineering	Purchasing	Production
Product Quality	X	X	X
Delivery Time		X	X
Standardization	X		
Quantity of Supply		X	X
Engineering Pretesting	X		
After-sales Service		X	X
Price		X	
Reputation (image)	X	X	X
Company Size (seller)	X	X	X
Location		X	X
Shipping/Freight Cost			
Technical Expertise	X	X	X
Ease of Maintenance			
Finance Offered			
Technical Training Offered			

behavior, attitudes and his environments. If one cognitive element does not follow from another, they are said to be dissonant and arouse psychological tension called cognitive dissonance. Because cognitive dissonance is psychologically uncomfortable, the individual changes the dissonant cognitive element to reduce the dissonance.<sup>7</sup> Hence, to be effective, industrial advertisements must incorporate requisite stimuli to elicit responses commensurate with the estimated levels of dissonance that are likely to exist within the decision making unit.

This concept is further reinforced in the Webster and Wind model. They highlight the fact that individuals join organizations for reward. Rewards are given for accomplishing the organization's objectives and tasks. Clearly, there exists a relationship between individual's needs and his perception of how his performance in the buying decision process will be evaluated and regarded. Therefore, Webster and Wind state that individuals and not abstract organizations must be the targets of the marketing effort. Figure 1 illustrates the interactions between expectations, perceptions and decision makers in the field of advertising stimuli.

#### High Risk - Low Risk

The classification of a product depends on the degree of impact the buying decision has on the buying organization. This, in turn, is related to the complexity of the purchase decision in terms of the number of product evaluative criteria.

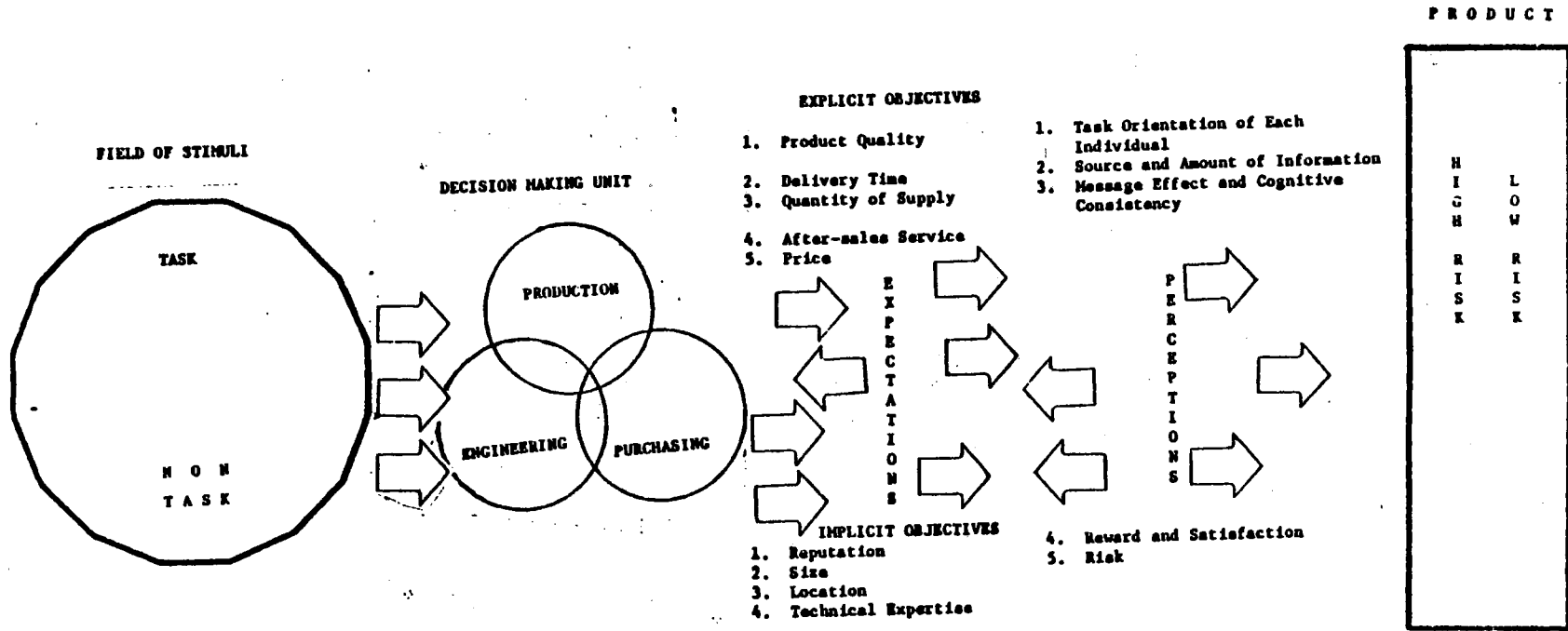


Fig. 1. Interaction Between Expectation Perception and Decision Makers

The magnitude of the problem solving process before arriving at the purchase decision reflects the "buyclasses" of the product. The concept of buyclass is useful for categorization of the product. A research report sponsored by the Marketing Science Institute has evolved a classification system based on the specifics of the selling task.<sup>9</sup> It is the buygrid frame.

Industrial purchasing can best be looked at as a problem solving process. From this review, three basic types of buying situations are significant: the new task, the straight rebuy, and the modified rebuy. Although the end result may be the same, each of these presents different purchasing problems.

The following buyclass qualifiers have been found relevant for this study and have been adapted from the MSI research findings.<sup>10</sup>

New Task. The following five criteria will be used to categorize a purchase decision as a new task decision:

1. Product need, not arisen before
2. Need occurs frequently
3. Little or no relevant experience
4. Need good deal of product information
5. Must seek alternative ways of solving problems

Straight Rebuy. The following four criteria will be used to categorize a purchase decision as a straight rebuy decision:

1. Product need recurs on a routine basis
2. Much experience exists
3. Little or no product information required
4. Represents bulk of purchases. Alternate problem solving ways not sought

Notified Rebuy. The following four criteria will be used to categorize a purchase decision as a modified rebuy decision:

1. Product need arises from new task or straight rebuy situations
2. Product need recurs or expands with new levels of operation
3. Additional product information needed
4. Buying alternatives are known, but vary

The MSI report findings suggest that modified rebuy occurs when buyers anticipate improvements in end products or significant cost savings, or when buyer organization is only partially pleased with current suppliers. Or, it could involve change in purchase company's buying requirements. That is, the nature of buyer requirements change. It could also involve adding to output capacity. This involves questions in timing as to when to replace capital equipment.

Such decisions affect the buyer company significantly. Therefore, for the purpose of this study, modified rebuy buyclass will be clubbed to the new task buyclass. Hence, in this study, industrial goods will be either classified

as belonging to the straight rebuy or the new task category.

Table II shows the buygrid model modified for this analysis, based on the MSI research report. This table has only two instead of the original three-column grid. This table also integrates the concept of high risk and low risk by relating the theory behind buyclass with the concept of risk introduced in Chapter I, the new task and the straight buy. The buy phase has seven stages:

1. Anticipation or need recognition entails policy questions, special studies by management and represents greatest difficulty for management in new task situations. It is a high risk situation. In straight buy situation, it is generally triggered by low shelf inventories or addition of special product features desired by customers or unsatisfactory performance of present equipment or partial redesign to market the product as a new product. This is a relatively less difficult decision and, hence, it is a relatively low risk situation.

2. In the new task situation, the question arises as to what types of goods and services should be considered. The precise analysis with performance and cost specification involving inputs from all departments. This is a job of difficulty and involves high risk. In straight buy situations it is a question of ascertaining the item on market that could do the job or merely re-specifying, based on past experience. There is no uncertainty as to whether it will do the job, no problem about how to use it. It is a relatively less risky or

TABLE II  
THE SEVEN PHASES OF BUYGRID

	New Task	Straight Buy
1. Anticipation or need recognition	High Risk	Low Risk
2. Determination of characteristics & quantity	High Risk	Low Risk
3. Description of characteristics and quantity needed	High Risk	Low Risk
4. Search for and qualification of potential sources	High Risk	Low Risk
5. Acquisition and analysis of proposal	High Risk	Low Risk
6. Evaluation of proposals and selection of suppliers	High Risk	Low Risk
7. Selection of an order routine	High Risk	Low Risk

routine decision.

3. In a new task, description of characteristics and quantity needed is a critical decision, since it involves people inside and outside the organization, and entails translation of needs into a particular solution. For example, source selection, price validation, inspection, etc. This is a high risk decision. In a straight buy situation, product characteristics description is already known, especially in routine rebuy situations where suppliers usually are already working closely with the specifiers. And so there is very little scope for error. This is a low risk decision.

4. In new task situations, search for suppliers of the required product may be extensive and qualifications of suppliers will involve extended considerations of product-value analysis, systems engineering and supplier reliability, both financial and technical. This is a high risk situation. In straight buys it usually involves identifying a supplier from a preferred/approved reference source list. It is a low risk decision.

5. In new task situations, acquisition and analysis of proposals involve a series of counter proposals, new offers and bargaining prices and altering specifications/price over extended periods of time. It is high risk decision. In straight buy situations it often involves checking a catalog or telephoning suppliers to obtain current prices and possible delivery dates. It is a low risk decision.



6. In a new task situation involving evaluation of proposals and selection of suppliers, it is usually a question of choosing from a narrowed down list of potentially acceptable suppliers, and also involves further bargaining or playing on the competitive spirit of suppliers to maximize the organization's interests. For large-scale and long-term investments it is a high risk decision. In straight buy situations this phase is almost predecided or does not exist. It is a low risk decision.

7. In new task situations, selection of an order routine involves careful preparation of systematic purchase monitoring process--troubleshooting, preparing status reports for user departments, receiving, inspection, approval of invoices for payment, and inventory management. It is a high risk situation. In straight buys, order routines play little or no significant role. It is a low risk situation.

Therefore, by relating the type of complexity assigned to a purchase decision, products will be classified under either high risk or low risk for the industrial buying model in this study.

#### Products Operationalized

Based on the theory developed, products will be operationalized and labelled under either of the two categories --high risk or low risk.

Industrial products are classified under a system developed initially for use within the U.S. government for

statistical purposes. The system available is the Standard Industrial Classification Manual (SIC).<sup>11</sup> The SIC code defines industries in accordance with the composition and structure of the economy and covers the entire field of economic activities. Each industry is assigned a two-digit major code on the basis of its major activity.

The Standard Industrial Classification is intended to cover the entire field of economic activities: agriculture, forestry, fishing, hunting, trapping, mining, construction, manufacturing, transportation, communication, electric, gas, sanitary services, wholesale and retail trade, finance, insurance, real estate, personal business, repair, and other services and public administration.

Webster classifies industrial goods under the following categories: construction, heavy equipment, light equipment, components and subassemblies, raw materials, processed materials, maintenance, repair, operating supplies, and services.<sup>12</sup>

The products for this study will be operationalized in two steps:

1. Logic valid inferences will be drawn from Webster's definitions and descriptions of the above-mentioned traditional categories.<sup>13</sup> These definitions/descriptions will be applied to the product evaluative criteria to arrive at a decision as to whether a particular product belongs to the high risk or low risk category.

2. Next, the SIC code assigned to a particular product category will be used to develop an extended/specific product

list for the study.

### Webster's Definitions/Descriptions

Based on these descriptions, inferences and conclusions are made regarding high risk categorization.

Construction and Heavy Equipment. Construction and heavy equipment almost always is shown on the customer's balance sheet as plant equipment, fixed assets to be depreciated over a period of years. The purchase of plant or major equipment is typically financed by borrowing for a period of time roughly equivalent to the expected life of the asset (factor 1).

Because these are technical products, according to Robins and others, the performance specifications stating what the product or service should do, or a composite specification of ideal attributes should be prepared.<sup>14</sup> This requires considerable inputs of time, and technical inputs from the major departments involved in the purchase function (factor 2).

The preceding decision forms the basis for precise and detailed descriptions (factor 3).

Seeking qualified suppliers is both time-consuming and expensive. Since the investment involves high risk, extensive consideration of supplier qualifications must be made through value analysis and systems engineering studies. Also, supplier reliability in terms of financial standing and ability to meet delivery schedules have to be ascertained (factor 4).

Acquisition and analysis of proposals immediately follow search and qualification or, in some cases, are done simultan-

ously with the search activity (factor 5).

Once a list of potential qualified suppliers has been agreed upon, a wide range of factors that includes price, terms of deliveries and distribution systems have to be optimized (factor 6),

Finally, a systematic monitoring and enforcing procedure for the terms of the purchase contract (order routine) must ensure a reliable information system that is current at all times (factor 7).

From the above product evaluative criteria analysis, it is concluded that construction and heavy equipment are high risk purchases and, hence, will be classified as high risk products. Table III shows that risk categorization grid. The SIC code numbers for these two categories are: C 15, C 16, C 20 and D 35.

Light Equipment, Components, Subassemblies, MRO. Light equipment consists of smaller pieces of equipment with typically lower purchase prices and often shorter life terms than heavy equipment.

Components and subassemblies are fabricated items and parts of a piece of equipment.

Maintenance, repair and operating supplies (MRO) are part of normal operations but do not become part of the finished product.

For light equipment, components and subassemblies problem recognition may arise because of low shelf inventory, partial redesign, or due to breakdowns of existing machinery.

TABLE III  
CLASSIFICATION OF CONSTRUCTION  
AND HEAVY EQUIPMENT

Product Evaluative Criteria	Inference	Conclusion
1. Anticipation/need recognition	Being fixed asset it involves long term assessment of need, apart from corporate risk due to heavy outside financing.	High Risk
2. Determination of characteristics and quantity needed	Major inputs from various dept. with high level of product policy implications.	High Risk
3. Description of characteristics and quantity needed	Such detailed descriptions of product features have irreversible effects on production and sales.	High Risk
4. Search for and qualification of source	Qualifying suppliers is expensive task. Consequences involve non performance factor.	High Risk
5. Acquisition and analysis of proposal	Derived from and followed almost simultaneously from above decision.	High Risk
6. Evaluation of proposals and selection of suppliers	Optimization of prices, delivery dates, other terms among the various qualified suppliers is a major decision process.	High Risk
7. Selection of order routine	Ensures proper monitoring and adherence to terms of purchase contract.	High Risk

For the above-mentioned categories, needs are obvious and recur periodically (factor 1).

Products are available in standard sizes and in cases of reorders specifications based on years of experience exist (factor 2).

Descriptions of characteristics are easily read off manuals; no decisions are involved (factor 3).

These items are mainly fungible, meaning there are many sources for each item (factor 4).

It is usually in the best interest of the buyer to encourage competition between two or more potential vendors and have alternative sources to obtain competitive pricing (factor 5).

One brand is easily substituted for another (factor 6).

Purchase is usually made on the basis of annual purchase contracts where a single vendor is given a blank order for a stated period of time (factor 7).

From the above product evaluative criteria, it is concluded that light equipment, components, subassemblies and MRO supplies are low risk purchases and, hence, will be classified as low risk products. Table IV shows the risk categorization grid. The SIC codes are D 34, D 36, D 38, D 28 and D 32.

Raw and Processed Materials. It is common to use the term "raw materials" to refer to basic materials as well as true raw materials. Processed raw materials are the basic ingredients of many manufacturing industries (factor 1).

TABLE IV  
 CLASSIFICATION OF LIGHT EQUIPMENT, COMPONENTS,  
 SUBASSEMBLIES, MAINTENANCE, REPAIR AND  
 OPERATING SUPPLIES

Product Evaluative Criteria	Inference	Conclusion
1. Anticipation/need recognition	Needs expected/or recognized based on past experience. Top management not involved.	Low Risk
2. Determination of characteristics and quantity needed	Characteristics already defined, quantity defined by user dept. Routine decision.	Low Risk
3. Description of characteristics and quantity needed	Characteristics descriptions rigidly laid. Quantity by current inventory levels.	Low Risk
4. Search for and qualification of source	Search unnecessary. In most cases a vendor list is maintained.	Low Risk
5. Acquisition and analysis of proposal	Competitive environment makes acquisition of data easy. Price and delivery dates only major criteria. No Analysis.	Low Risk
6. Evaluation of proposals and selection of suppliers	Items fall in generic goods category. Easy evaluation and selection.	Low Risk
7. Selection of order routine	Simple purchasing contract delivery dates and routine quality test. No major decision.	Low Risk

Raw materials are usually traded in markets where a market price is established by forces of supply and demand, forces that tend to be independent of individual buyers and sellers (factor 2).

Processed and raw materials tend to be undifferentiated (factor 3).

Therefore, description of characteristics is redundant. The scale of marketing these goods is large; the number of users is small and sale is usually made directly from maker to user (factor 4).

Since the product is undifferentiated, wherever more than one supplier is located, customers buy on the basis of service offerings (factor 5). Uninterrupted supply and standards of product quality and purity are very important, since failures in delivery or quality easily can shut down operations (factor 6).

From the above product evaluative criteria, although investment in raw materials is high in dollar terms, because they are basic and necessary ingredients with very little product differentiation, it is concluded that purchase decision is of a low risk nature. Hence, these products will be classified as low risk products. Table V shows the risk categorization grid. The SIC codes are A 08, B 10 and B 13.

Services. Banking, insurance, advertising, personnel and management consultancy are some of the more widely advertised services. Because these services are availed of to make major impact on a company's growth and financial well-



TABLE V  
CLASSIFICATION OF RAW AND  
PROCESSED MATERIALS

Product Evaluative Criteria	Inference	Conclusion
1. Anticipation/need recognition	Being basic ingredients, need recognition factor is redundant.	Low Risk
2. Determination of characteristics and quantity needed	Characteristics determined by nature. Quantity determined by plant capacity. Decision making.	Low Risk
3. Description of characteristics and quantity needed	Characteristics descriptions and quantity specification limited. No major decision.	Low Risk
4. Search for and qualification of source	Search unnecessary. Suppliers on basis of geographical proximity.	Low Risk
5. Acquisition and analysis of proposal	Price nearly standardized. Service only element of competition. No special effort by buyers required.	Low Risk
6. Evaluation of proposals and selection of suppliers	Delivery dates and quality important. But choice of suppliers restricted.	Low-Medium Risk
7. Selection of order routine	Restricted to delivery dates. All suppliers affected by weather factor. Limited decision making.	Low Risk

being, they will be assumed to involve high risk in the decision process. The SIC codes are H61, H 67, H 63 and I 73.

Products Included in Webster's Major Goods Classification.

1. Construction: Design and fabrication of buildings, drilling rig towers, cranes and chemical processing plants.
2. Heavy Equipment: Machine tools, turbines, computers, earth moving equipment.
3. Light Equipment: Power operated hand tools, forklifts, trucks, motors and jigs.
4. Components and Subassemblies: Small motors, semi-conductors, capacitors, integrated circuits.
5. Maintenance, Repair and Operating Supplies: Chain saws, abrasives, fuels, cleaning supplies.
6. Raw/Processed Materials: Logs, iron ores, corn, fish, crude oil, steel, acids, fats, solvents.
7. Property, life insurance, banking and consulting services (including engineering and architectural).

The products listed under Webster's major classifications are related to SIC codes to derive an expanded product listing. See Tables VI-XII.

TABLE VI  
 PRODUCT LISTING WEBSTER -  
 S. I. C. CODES

Webster's Group	S. I. C. Division	Major #	Descriptions (S. I. C.)
Construction	C	15	This division includes establishments primarily engaged in constructions.
Design and fabrication of buildings	C	16	Three broad types of construction activities are covered.
	C	20	(1) Building construction by general contractors. (2) Other construction by general contractors. (3) Construction by special trade contractors.
Drilling rigs and cranes	C	35	This division includes establishment engaged in mechanical, chemical transformation of materials or substances into new products. Construction machinery and equipment include: bulldozers, concrete mixers, cranes, dredging machinery, pavers, power shovels.

TABLE VII  
 PRODUCT LISTING WEBSTER -  
 S. I. C. CODES

Webster's Group	S. I. C. Division Major #	Descriptions (S. I. C.)
Heavy equipment	D      35	Extrusion, forming, forging machine tools, metal forming types, drilling, milling, electronic computing equipment electronic computers, computer peripheral equipment and components intended for use in computer systems. Also included are robotics, and agricultural machinery.

TABLE VIII  
 PRODUCT LISTING WEBSTER -  
 S. I. C. CODES

Webster's Group	S. I. C. Division Major #	Descriptions (S. I. C.)
Light equipment	D      34	Fabricated metal products. Includes: hand and edge tools, hand saws, blades. Metal forgings stampings. Automotive stamping, metal services, plating and polishing. Screws, bolts, rivets, washers, small ammunition and fabricated wire products.

TABLE IX  
 PRODUCT LISTING WEBSTER -  
 S. I. C. CODES

Webster's Group	S. I. C. Division	Major #	Descriptions (S. I. C.)
Components and sub- assemblies	D	36	Electric & electronic equipment. Electrical industrial apparatus. Includes: motors, generators, controls, and related devices.
	D	38	Instruments - engineering and scientific measuring and control devices.
	D	36	Solid state devices: MOS and silicon devices. Capacitors, resistors, power supplies.
			Distribution transformers, feeder, voltage, regulators lighting, transformers, and control panels.
	D	38	Surveying instruments, bacteriological lab instruments. Analysers and industrial process type controls.

TABLE X  
 PRODUCT LISTING WEBSTER -  
 S. I. C. CODES

Webster's Group	S. I. C. Division	Major #	Descriptions (S. I. C.)
Maintenance Repair and Operating supplies:			
Lubricants	D	29	Petroleum refining and related industries. Tires, inner tubes, rubber plastic hoses. Lubricating oils.
Abrasives	D	32	Asbestos, cement products, building materials. Glass pressed, blow. Ceramics

TABLE XI  
 PRODUCT LISTING WEBSTER -  
 S. I. C. CODES

Webster's Group	S. I. C. Division	Major #	Descriptions (S. I. C.)
Raw materials			
Processed materials			
logs	A	08	Timber, forest products and services.
Iron ore	B	10	Metal mining: iron ore, copper ore, lead and zinc ores.
Crude oil Petroleum	B	13	Oil and gas extraction crude petroleum, natural gas, and gas field services.



TABLE XII  
 PRODUCT LISTING WEBSTER -  
 S. I. C. CODES

Webster's Group	S. I. C. Division Major #	S. I. C. Major #	Descriptions (S. I. C.)
Services:			
Banking	H	61	Credit agencies, not engaged in deposit banking Business credit institutions
		67	Investment banking.
Insurance	H	63	Accident, fire, marine, insurance carriers.
Services			
Miscellaneous	I	73	Business services: Advertising, Personnel, data processing, management consultancy, security.

### Task and Non-Task Stimuli: Variables

Organizational behavior is goal-oriented. Goals may be held for one's self or shared among several persons. Organizations have multiple goals and included among them are personal and social needs of its members. A pioneering study at Western Electric Company's Hawthorne Works shed new light on the importance attached to the individual's satisfaction in an organization. The study inferred that organizational goals can be divided into two categories:

An industrial organization may be regarded as performing two major functions, that of producing a product and that of creating and distributing satisfaction among the individual members of the organization.

...The industrial concern is continually confronted, therefore, with two sets of major problems: (1) problems of external balance, and (2) problems of internal equilibrium. The problems of external balance are generally assumed to be economic, that is, problems of competition, adjusting the organization to meet change in price levels, etc. The problems of internal equilibrium are chiefly concerned with the maintenance of a kind of social organization in which individuals and groups, through working together, can satisfy their own desires.<sup>16</sup>

These two major sets of problems can be classified as task and non-task. The resolution of these two sets of problems culminate in the buying decision. Therefore, sales communication must take cognizance of these two major problems or "tension zones" faced by members of the decision-making unit and contribute to the problem solving process. The stimuli or component variables in these two sets will be labeled as task and non-task variables. Webster and Wind define these

two sets of variables, thus:

Organizational buying behavior models can be categorized as "task" or "non-task" models. Task models are those emphasizing task-related variables (such as price), whereas non-task models include models that attempt to explain organizational buying behavior based on a set of variables (such as the buyer's motives) which do not have a direct bearing on the specific problem to be solved by the buying task, although they may be important determinants of the financial purchasing decision.<sup>17</sup>

### Non-Task Variables

In this study, eight non-task variables are identified, defined, operationalized and recorded on a nominal scale.

They are:

1. Image
2. Ego Enhancement - dyadic
3. Environmental I - physical
4. Environmental II - non-physical
5. Work Simplification
6. Personal Risk Reduction
7. Innovation
8. Creativity and Pleasure

Image. Cyert and March, in their behavioral theory of the firm, suggest that apart from the single universal organizational goal of profit maximization, business organizations make decisions with the aim to maximize the security level of the organization; that is, to ensure the probability that the organization will survive over the indefinite future.<sup>18</sup> This is the concept of "satisficing," according to which

managerial decisions seek satisfactory rather than optimum solutions. They further state:

To all appearances, at least, uncertainty is a feature of organizational decision-making with which organizations must live. In the case of the business firm there are the deliveries of suppliers, the attitudes of shareholders, the behavior of competitors, the future actions of government agencies, and so on.<sup>19</sup>

Hence, members of the decision-making unit are motivated to reduce the amount of risk perceived in the buying situation. This means buying from a qualified supplier--qualification is based on such factors as financial strength, management ability, years in business, size and quality of production facilities--that is, to do business with well-known, reputable and established suppliers.<sup>20</sup> These factors can be summed to reflect the corporate reputation or image. Elements of risk and uncertainty are tied to the prestige enjoyed by the sellers. A significant and elaborate study was conducted at the Harvard Business School by Levitt to determine whether a company's generalized reputation or corporate image affects its ability to sell its products.<sup>21</sup> To the question, "Does corporate or institutional advertising by industrial product companies pay?" his study showed that for complex industrial products or materials, a company's generalized reputation does, indeed, have an important bearing on how its sales prospects make buying decisions. The amount of risk to which the individual decision-maker is exposed in a buying or rejection decision proved to be a vital factor in his/her decisions. His findings also indicate a

proportional relationship between the company's reputation and its "source effect."

Source effect is defined as the relation between the prestige of a source and its influence on communication effectiveness. Levitt developed this concept from an earlier study by Hovland and Weiss.<sup>22</sup> Their findings showed that identical information associated with a source of "higher trustworthiness" created significantly greater degree of change of opinion than when presented by an "unworthy" source.

Levitt summarized the Hovland and Weiss study and defined source effect, thus:

A newspaper editorial identified to one group of Americans as emanating, say, from The New York Times and to another group of Americans as emanating, say, from Pravda would, on the basis of the Hovland-Weiss findings, lead one to expect that a change in audience opinion is in the direction advocated by the editorial would be greater for those who believed it was a New York Times editorial than those who believed it to be a Pravda editorial.

In other words, the audience's feelings about the credibility of the message source helped determine the persuasive effects of the message itself" the greater the prestige or the more believable the message source, the more likely that it will influence the audience in the direction advocated by the message. The less prestigious or believable the source, the less likely that it will influence the audience in the direction advocated by the message. This phenomenon is now generally referred to as 'source effect.'<sup>23</sup>

Levitt, thus, infers that if in their private lives people such as businessmen and engineers exhibit source effect and audience initiative in response to political communications and propaganda, they should do so in a business

environment to advertising and direct sales presentation. Hence, according to Levitt, the company has an image and this image is created by company advertising.<sup>24</sup> He stresses that source effect works powerfully in industrial selling, by citing a famous McGraw-Hill advertisement (See Figure 2) of a stern-looking purchasing agent facing the reader from behind his desk and saying:

I don't know who you are.  
 I don't know your company.  
 I don't know your company's product.  
 I don't know what your company stands for.  
 I don't know your company's customers.  
 I don't know your company's record.  
 I don't know your company's reputation.  
 Now--what was it you wanted to sell me?<sup>25</sup>

Moral: Sales start before your salesman calls--  
 with business publication advertising.<sup>25</sup>

The amount of perceived risk in a buying situation relies heavily on "the non-task variables of the buyer's self-confidence and the perceived credibility of the communication source as variables which explain the purchasing behavior."<sup>26</sup> In high risk situations, technical personnel play a very crucial role. Levitt's findings indicate that technical personnel are more susceptible to source effect than might be expected. They show:

-Under high risk conditions the technically more sophisticated audience displayed a considerably greater susceptibility to the more prestigious company than the technically less sophisticated audience.

-In situations where most was at stake (high risk) where technical sophistication most clearly helped, those who had it seemed to rely on it less and were more inclined than those who did not have it to rely

*"I don't know who you are.  
I don't know your company.  
I don't know your company's product.  
I don't know what your company stands for.  
I don't know your company's customers.  
I don't know your company's record.  
I don't know your company's reputation.  
Now—what was it you wanted to sell me?"*



**MORAL:** Sales start *before* your salesman calls—with business publication advertising.

Fig. 2. Source Effect

on source prestige to make their decisions.<sup>27</sup>

This finding is contrary to widely-held assumptions of the business community, which believes that the greater the customer's product sophistication or competence, the less he is influenced by the seller's reputation. Hence, it is inferred that the importance of making the market aware of a company's image is as crucial as that of promoters' product characteristics.

Corporate image reflects the quality of the product. However, the term "quality" is very ambiguous. Howard describes quality as not being necessarily the finest or highest grade, but the best quality from the purchaser's point of view.<sup>28</sup> Quality buying implies satisfying the purchaser's expectations regarding the particular characteristics and functions of the goods they are buying. Therefore, it is necessary to describe/specify the product accurately. The method of description ordinarily used may be listed as follows:

1. Brand
2. Specification (physical/chemical characteristics, maintenance and method of manufacture, performance, blue print, market grade, sample)

Description by brand name implies proven performance, integrity and reputation of the supplier. In certain instances, description by brand name is absolutely necessary.<sup>30</sup>

Such instances are:



1. When either because manufacturing process is a secret one or because the item is covered by a patent, specifications cannot be laid down.
2. When specifications cannot be laid down with sufficient accuracy by the buyer because the vendor's manufacturing process involves intangible labor quality. This is called "workmanship" or "skill" and cannot be defined with any exactness.

Brand description is most appropriate to finished commodity, but semi-finished goods like steel, bar copper, and steel tubing are purchased under brand names from well-established manufacturers. Quality also includes service, for service is a part of a product attribute offered by the vendor. Service reputation is an integral aspect of corporate image, and is differentiated from details on service range, which is mostly task-oriented in nature.

In a research survey conducted by the Dupont Corporation to measure brand awareness and perception of quality due to industrial advertising, it was found that even when respondents were unaware of a particular brand they were willing to guess about the quality of the product.<sup>31</sup> The research concluded that those who say "low quality" are expressing a negative image. That is, the quality of a brand is viewed as a form of the general quality of the corporate image. Therefore, when a product is specifically mentioned as the product of a particular corporation's R&D efforts or manufacturing process, or when its name is presented in close physical

dyadic determinants in the decision-making process. Since endorsers usually experts or very popular and successful personalities with high visibility ratings in their fields, members of the decision-making unit try to relate them to their own career goals and personal and social aspirations.

Advertisers should consider the type of endorser in advertising their product. There are three major types of endorsers: professionals/experts, typical users and celebrities.

Some of their persuasive attributes that influence attitude change are:

1. Trustworthiness
2. Expertise
3. Similarity
4. Attractiveness
5. Likeableness<sup>34</sup>

Trustworthiness is an important factor in enhancing source credibility. For high risk situations--financial, physical performance--a successful high status professional/expert can generally be assumed to be a trustworthy source, as he would possess the requisite expertise.

Similarity is a strong appeal. Weighland remarks that many small firms ride the coattails of larger firms by accepting their purchase decisions, since it is easier and quicker and less expensive to follow the purchasing decisions of industry leaders. This makes good business sense since usually operating problems are nearly similar to those of the

proximity to corporate name or logo, in this researcher's view it can be considered a brand name product.

Corporate image is also reinforced by mentioning the presence of experienced R&D, design and manufacturing personnel on the company's engineering team, long-standing reputation, proof of past performance, size of company, extent of product line in that industry slot, guarantees and assurances and volume claims of market acceptance.

Ego Enhancement - Dyadic. Members of the decision-making group have certain self-concepts. The ego enhancement model recognizes that the organizational buyer is an individual with a self-concept "that is as valuable to him as the next fellow's."<sup>32</sup> Buying group members see the industrial seller as a source of their ego gratification. This is a dyadic relationship which, according to Webster and Wind, emphasizes the personal relationship between the buyer and the salesman.<sup>33</sup> They borrowed empirical research on dyadic interaction from insurance sales research. This study showed that the probability of a sale was higher to the extent that the prospect and the salesman had similar characteristics. That is, buyers showed preference for a salesman who is "like me." This concept can be extended from the salesman to the advertising message. Advertising copy that makes positive, success-oriented claims such as: we are number one; we are the leaders; the largest; the best, or layouts that show awards for excellence can be integrated into the dyadic relationship.

Also, endorsement advertisements reinforce both ego and

leading firm.

Apart from seeing parallels in industry, members of the decision-making unit may be collectively inclined to look up to "role models," just as would individuals in personal lives. To cite an example, the Department of Health, Education and Welfare installed certain pollution control devices for incinerators on 154 federal buildings in New York Chicago, and Philadelphia with the expressed purpose they might serve as examples for others.<sup>39</sup>

Hence, endorsement from industry leaders or government agencies, as being satisfied with a particular product, is a very powerful decision-making determinant.

Celebrities are generally considered to be attractive and likeable. Celebrity ads have high recall ratings and a trend exists to use celebrities more frequently than in the past.<sup>40</sup> Where brand names play a major role, advertisers should use celebrities.

Environmental I - Physical. Environmental determinants of the buyer's decision are quite broad and have been defined to cover the general social-cultural-economic-technological-political environment.<sup>41</sup> The organization takes into account the culture or sum of shared meanings that characterizes a society. These meanings have polarized emotional cues. Organizational members adhere to certain corporate role perceptions; for example, in many industrial executive groups no member even drives a car as expensive as that owned by the chief

executive.<sup>42</sup> It is inferred that members take into account factors that may affect the corporate social audit. An important consideration is the workers' union. Weigand points out certain aspects of labor-management negotiations that have implicit influence on the buying behavior.<sup>43</sup>

Unions persistently have centered on a certain amount of attention to nonwage agreements since virtually the time when labor began to exercise its power. In earlier years, unions influenced the installation of safety equipment through their negotiating power and lobbying. But in more recent years, management has been just as eager as unions to install equipment that would reduce insurance rates and injury claims. Unions increasingly have been able to turn their attention to issues that make work more comfortable for the employee. For example, one of the subjects negotiated during the 1967 Teamsters' strike was the airconditioning of truck cabs.

In situations that involve heavy operating and process equipment, worker safety and comfort can be assumed to be fairly visible determinants of the buyers' decision-making process.

Environmental II - Nonphysical. Economic and political trends have direct bearing on price and general availability of goods. Buyers respond to these two forces in two general patterns.<sup>44</sup>

1. The decision to buy or not to buy depends on expectation with respect to stability of price levels.

2. The decision on how much and from whom to buy depends on current availability in respect to future needs of the buyer and other firms.

These decisions are influenced by political controversies on pollution, consequent governmental policy stands--translated in terms of rigid regulations and trade barriers such as import quotas which, in turn, help to generate a form of corporate sponsored nationalism/patriotism. In instances where buyers' firms are facing foreign competition, they are more likely to respond favorably to a sales message that includes "Made in U.S.A." from a prospective seller.

Claims on energy efficiency and attempts at natural resources substitution also conform to politico-economic forces.

Work Simplification. Members of the decision-making unit seek to accomplish their goals by optimizing their efforts wherever possible. Since they are under pressure to meet purchase deadlines, they try to reduce routine steps in the initial phases of the buying process, such as initiating contacts and setting into motion preliminary inquiries for potential sources. This is analogous to the consumer tendency to increase shopping convenience. These are known as convenience costs.<sup>45</sup>

Advertisers can satisfy these needs by offering to arrange quick product demonstrations, coupons for receiving technical brochures, tailored products for buyers' specific

needs. Problems of communications between the buyers and the sellers can be simplified further by listing toll-free numbers and addresses of branch offices that are geographically ideal for prospective ad readers. This especially is important in the purchase of flexible (nonstandard) parts.<sup>46</sup>

Personal Risk Reduction. Individuals of the decision-making group tend to harmonize their personal goals with that of the organization. That is, the performance of the purchasing function is motivated by a desire to obtain more power and status within the organization.<sup>47</sup> They are, therefore, wary about making errors during the decision-making process. When such emotional fears cause decision inertia, then such inertia can be resisted only through subjective appeals. Also, when personal risk decisions extend to products and services that are objectively alike, the buyer's final decision is based more and more upon subjective factors that affect individuals.<sup>48</sup> If we assume there are two purchasing roles--one for the organization and one for himself--then, an element of the message must be concerned with individual interests. Fear of ridicule due to a wrong decision can be reduced by stressing the guarantees of good faith, and emphasizing satisfied and enthusiastic users of the product.

Appeals to fears of being left behind should be tapped. Information on how competition is taking advantage will induce the individual to believe that it is to his personal advantage to ride with the trend. He can take credit for

contributing to the right decision and also obtain personal satisfaction. The motivation to want to do a good job in the interest of corporate mobility appeals to the gambling instinct and, to an extent, overcomes purchase inertia.

Innovation. Since buying organizations are a part of the social system, they are always selectively attentive and receptive to new technology and new product characteristics. Although adopting an innovation is potentially risky, the ability to tolerate risk may be related to such "subjective" factors as management aggressiveness, optimum revenues and desire for growth.<sup>49</sup>

Specifically, the reasons are:

1. Innovation leads to reduction in average total cost per unit
2. Increase in total revenue due to increased demand for the finished product because of improved product quality or differentiation
3. Increase in average revenues per unit because innovation permits an increase in price.<sup>50</sup>

Advertising messages that stimulate positive responses for product/technology innovation efforts are:

1. Laboratory evaluation results
2. Pilot test runs
3. Training of personnel
4. Other services that increase customer competence.<sup>51</sup>

For instance, a company selling plastic resins for use



in paper coating may also provide information on coating formulations and application techniques. Small firms that cannot afford extensive research programs are likely to value such offers very much.

Creativity. Members of the decision-making unit can be assumed to have achieved higher than average economic and social status. This implies they have attained "acceptable" levels of satiation of physiological, safety and esteem needs. Further, they can be assumed to belong to an elite group within the organization. In fact, according to Sawyers, industrial buyers want to be addressed as managers--"The Management Man."<sup>52</sup>

The management man's preponderant need is that of self-actualization. Copeland studied buying motives for industrial goods through an exhaustive analysis of industrial advertisements and published a list of motives in 1924. Listed among the advertising appeals even at that early date were "pleasure" and "creativity."<sup>53</sup>

The appeal to the management man's managerial courage and creativity is illustrated by two advertisements (See Appendix

The ad "They dig a lake to float a boat that never sails" talks about a breakthrough in rubber conveyor belts for a highly specialized application. This achievement opens up possibilities for others in the market to solve their hitherto unfeasible technical barriers. Similarly, the ad "Too hot

to handle but it travels on rubber" talks about special heat resisting rubber--a product slot at that time at the frontier of technology. They offer an opportunity and challenge to creative instincts.

The Management Man (member of DMU) has a wide perspective. As Sawyer states:

He is a 'big' man and if a successful 'big' man, thinks big, he may, indeed, be the most imaginative and courageous man in the organization. He, perhaps, more than anyone else, can be intrigued by a novel proposition. So the kind of advertising which he will read will be big. He won't read the details, but he will venture into 'blue sky.' He knows everybody else will check the specs; he knows also that most of the others in the place don't have his vision.<sup>54</sup>

As urgent economic needs are quenched, higher needs are created, e.g., pleasures. Based on laboratory experiments and extensive industry-wide research, a theory of management was developed at the Massachusetts Institute of Technology's School of Industrial Management, which sought to explain whether managers are born or made.<sup>55</sup> This theory--Theory Y--is a somewhat modeified synthesis of Maslow's hierarchy of effects in the industrial scenario.

Theory Y suggests that the management man will derive personal pleasure by voluntarily utilizing his capacities, knowledge, skills and ingenuity for corporate success.

The salient points of Theory Y are:

1. Physical and mental effort in work is as natural as play or rest. The average human being does not inherently dislike work, and work may be a source of satisfaction.

2. External control and threat of punishment are not the only means for bringing about effort towards organizational objectives. Man will exercise self-direction and self-control in the service of objectives to which he is committed.

3. Commitment to objectives is a function of rewards associated with their achievements. The most significant of such rewards, e.g., the satisfaction of ego and self-actualization needs, can be direct products of effort directed toward organizational objectives.

4. The capacity to exercise a relatively high degree of imagination, ingenuity, and creativity in the solution of organizational problems is widely, not narrowly, distributed in the population.

An advertising stimulus that offers a chance to be innovative and to take risks while contributing to probable future developments on the frontiers of technology aims directly at "felt needs" for new knowledge and improved skills and is an important stimulus in managerial education regarding the product/product range of the advertising company. Hence, an appeal that offers opportunity for creativity plays an important role in industrial decision-making process.

#### Task Variables

This study treats seven task variables. They are:

1. Price

2. Reliability
3. Service
4. Product Specification
5. Finance (Offered by Seller)
6. Ease of Operation/Maintenance
7. Availability

Price. Price is generally considered to be the most critical informational cue in triggering the industrial buying process, because an organization is strongly motivated to maximize its profits. According to this widely held hypothesis, the seller with the lowest price tag should be the most acceptable prospective seller. Therefore, in a free and competitive economy the buyer, not the seller, should decide the price. But the dollars and cents do not speak for themselves. The subjective evaluation of price on product evaluation is manifold. Price is best defined as a product design target, not an estimate of the equilibrium point on the demand and supply curves for existing products. This would seem to assign price a role in the competitive strategy subsidiary to product design.<sup>57</sup>

The demand for a product is not just a demand for the physical product, but also for a set of buyer-perceived satisfaction of needs. These satisfactions may not represent an inherent characteristic of the product; rather, they may be associated with it through some terms and manner of sale.<sup>58</sup> Naturally, it can be expected that this perceived

set of satisfactions will differ from buyer to buyer. Therefore, according to Wasson, two unlike objective products may compete directly from the viewpoint of some market segments. This means the price totally reflects the product bundle of perceived values, and that the price tag by itself does not carry the total weight. This could be the reason why industrial sellers do not usually advertise the actual figures--price in dollars and cents per unit of product--but rather, mention price in terms of lower production costs, higher efficiency, or make a somewhat relative price statement such as "low price."

Also, buyers tend to view prices with some kind of reference expectation in mind. In some instances, this means prices must be in the same uniform level as substitute products. From the seller's point of view, such prices are labelled maintenance prices.<sup>59</sup> These prices discourage the buyer from switching to substitutes. This is especially true in new markets where new applications are constantly being tried. For instance, plastics and aluminum have replaced steel components in automobile, refrigerator and container markets. Steel has lost these markets permanently. It is generally believed that if steel had remained at "maintenance price," it would have discouraged product switching, as the cost of teaching workers new skills required for substitutes would have left too thin a margin.

In some categories, leasing is preferred to outright purchase, as leasing frees working capital. In several cases

leasing may be the only means to acquire the products, and so information on availability of leasing is a crucial product-price cue.

For products where list prices are available, price cutting or discounts are possible. Discounts also are offered in other forms, such as quantity discounts, functional discounts and discounts to meet competition.<sup>60</sup>

Quantity discount means reduced unit price for increased purchase quantities. Functional discounts are offered by middlemen or dealers, and these discounts play a more important role in consumer markets. Discounts to meet competition are very flexible and reflect changes in market conditions and are rarely mentioned as specific figures in industrial advertisements.

Reliability. An important component of sales messages, especially for the operating group, is product reliability; that is, consistent dependability of performance. The product should have sound proof of meeting basic generic capabilities. Such information, rather than being redundant, is really reassuring. Information on how the item is made, incorporating proven latest technology and the high quality of material components assure prospects that breakdowns will be minimal and stoppages for replacing components will be spread well apart, thus achieving operating economy through reliability. Product confidence also is enhanced by mentioning good track record.

Since market requirements change, reliability also includes versatility in terms of adaptability within a reasonable performance range.

Service. A full and compact after-sales and technical service program is an important stimulus. The total sale covers the physical product and service. Service is a key variable in product differentiation, especially when product quality is nearly the same in a given range, and a good service reputation is a strong protection against aggressive pricing, and for establishing long-term customer relationship.

The format of basic service program messages may include information and assurance on:

1. Efficient order handling
2. Keeping delivery promises
3. Efficient installation
4. Maintenance service
5. Skilled repair capability
6. Technical leadership and engineering and design services in new product and high risk situations and in stable technology state.

For instance, even for fasteners and abrasives, advice on optimum product specifications makes major operating cost differences.

Service quality improves by:

1. Knowledgeable and experienced sales personnel for developing customer product lines and offering tailor-made solutions

2. Helping the customer sell his product by advertising end-user applications.

Product Specification. Product specification ensures that they buyers get accurate description--physical and performance characteristics--of the product being advertised.

Such specifications include information on:

1. Physical characteristics
2. Whether advertised products meet standardized industry requirements or are made to specifications
3. Tolerance range
4. Packaging and shipping classifications
5. Energy parameters, e.g., electric power, temperature, speed, quietness, etc.
6. Storage, expiration dates
7. Materials uses
8. Quality control standards
9. Adaptability

Financing. The ability to offer finance or financing service is a key factor in tilting a favorable decision. This is more so in the capital goods market. Sales financing generally takes the form of credit extension, usually expressed in terms of specified number of days. Sellers also offer to arrange financing through financial institutions, both in-house and external.

Ease of operation/maintenance. Engineering and production personnel who are actually concerned with the product



on a daily basis place weight on ease of operation and maintenance. Besides general assurances on ease of operation and maintenance, this variable could include information on:

1. Durability in use
2. Economy in operation
3. Time and labor saving in operation
4. Ease in handling
5. Automatic operation
6. Protection from irreparable loss in operation
7. Simplicity in operation
8. Resistance to elements, corrosion, friction, etc.

Availability. Product availability affects productivity and investment decisions. This variable affects organizational risk factors. Interruption in product flow would mean downtime losses and also ties up finances due to the necessity of maintaining high inventory levels. Assurance on availability includes information on:

1. Ability to meet limited volume but high frequency orders/reorders
2. Ready local supply
3. Ready stock of product range
4. Convenient and close location
5. Personal service, when needed.

These non-task and task variables will be operationalized in Chapter III for coding purposes.

## Consumer Model

### Introduction

Similar to the industrial communications model, consumer communications will be treated as a systems model. In its most skeletal form, the advertising message is registered by the members of the decision-making unit. This information interacts with personality characteristics and previous memory and, consequently, with values and attitudes. This individual-processed information, in turn, serves as an input for the common group thinking unit. A sequential series of individual-group throughputs lead to the final decision output.

The component elements of the consumer communications process model parallels that of the industrial communications process model. These elements will be identified, defined, and operationalized during the course of this section.

### The Target Audience

Almost everyone in a society is brought up in a family and eventually forms a family of his own. No man is an island. The singles and the swingers evolve from a family and synthesize their own expectations, values and attitudes from it. Their value orientations are simultaneously vectored towards and from the family. Considerable consumer data, including much of the information compiled by the United States Bureau of the Census, are reported in terms of the family.<sup>61</sup> Consumer products are mostly marketed for family

members. This is reflected by the products themselves:

Over 90 percent of American cars seats between four to six persons; refrigerators are about 11 cubic feet in size; home washers handle about nine pounds of laundry; milk is sold in quarts and half gallon containers.<sup>62</sup>

Consumer behavior is, to a large extent, influence by the family structure, even though quite a few products are purchased to satisfy the immediate needs of individuals. Their perceptions are influenced by their family values. Chronologically, an individual in a family passes through different stages of a family household. Each family household is a spending unit. According to the Survey Research Center at the University of Michigan, consumer buying behavior is influenced by seven family stages:

1. The young singles
2. Young marrieds with no children
3. Young marrieds with children under six
4. Young marrieds with children over six
5. Older married with children
6. Older married with no children
7. Older single.<sup>63</sup>

This leaves only two spending unit categories outside the family household. The young singles are mostly in the transition stage, about to form families of their own. Only the older singles are outside the family household.

The family consists of father, mother, and children. In today's society, the nuclear family is the rule rather

than the exception. In nuclear families, role conventional-ity is slowly giving way to role sharing. This can be attributed to greater economic freedom achieved through a larger proportion of gainfully employed housewives. Role sharing implies greater intra-family interaction in the decision-making process, with decision inputs from father, mother and, to a relative situational extent, from children. Hence, the familial decision-making unit structurally resembles the industrial decision-making unit. In this study, the family and its members will be considered as target audiences for consumer print advertisements.

#### The Decision-Making Unit:

##### As Function of Needs (Macro Level)

Although conceptually the nuclear family serves as a benchmark of this study, it is recognized that the family evolves chronologically, as do its needs, and further familial groups fit into different slots within the socio-economic matrix. Therefore, the decision-making unit in the consumer products market will be treated as a set of multi-level units. Each unit will be identified as a function of a specific set of needs in the life-cycle/economic class spectrum.

#### Chronological Cycle

Chronologically, the family evolves from the new family phase. This involves massive expenditure un terms of new

housing, furniture, appliances. At this phase, both spouses are highly susceptible to learning stimuli. They are in the process of establishing their identity, often choosing brands and styles quite different from their parents. Because of social diversity and geographical mobility inherent in the economic system, American nuclear families attempt to supplement the task of achieving social recognition through intensive spending patterns. Status symbols serve to reflect social status. The reason status symbols are emphasized in American life, according to Myers and Reynolds, is because each family stands alone and people impress acquaintances and accidental neighbors with houses, clothing and cars to demonstrate their values, role and personality.<sup>64</sup>

Wells and Gubar have suggested a chronological categorization of the family cycle. Boone and Kurze have correlated consumer age groups with merchandise purchased.<sup>65</sup> From their findings, a joint trace of family life cycle-consumption pattern may be deduced.

A complete nuclear family with youngest child at preschool age is usually low in liquid assets. Members of this group are interested in new products and prefer advertised products. They are in the market for baby food, toys, nursery furniture, medicines/vitamins, practical household appliances and, most importantly, the housing market. This is Phase I in the family cycle.

By the time the youngest child reaches school age (the eldest nears teen age) the family income is much better with

both spouses in the job market. Members of this group are less influenced by advertising and are more interested in larger volume units of products and multiple unit deals. They are in the market for clothing, sports equipment, phonograph records, school supplies, food, cosmetics and used cars. This is Phase II.

As children become young adults, with some still dependents, the family is at its financial peak. More homemakers and older children are in the job market. At this stage, they are relatively hard to influence with advertising. They are in the market for new, more tasteful furniture, larger homes, bigger automobiles and second cars, non-necessary appliances, recreational equipment, dental services, and magazines. This is Phase III.

When all the children leave home (empty nest) and retirement approaches, the family is in the market for recreational items, travel, medical services, medical appliances, home improvement products, gift products for young marrieds and self education packages.

To the bachelor belong the economically independent adult "children" who have left the family. They have few financial burdens. They are recreation-oriented and fashion opinion leaders. They are in the market for equipment for the mating game, cars, vacations, basic kitchen equipment, and basic furniture.

This cyclic nature of familial evolution encompasses the entire spectrum of consumer products consumption. The

consumption pattern of each of the five family phases deduced for this study is shown in Table XIII.

### Economic Hierarchy

The economic status of a family determines, to a large extent, its social class. Although social stratification is not very rigid, there exists a definite class hierarchy.

Hodges identified a five-tier hierarchy.<sup>66</sup> It is as follows:

Upper upper and lower upper	0.2 %	%
Upper middle	10 - 15	%
Lower middle	35	%
Upper lower	35 - 40	%
Lower lower	15 - 20	%

To the upper upper belong the aristocracy--old families with inherited wealth. The lower upper are actually wealthier than the upper upper, but cannot claim equal lineage. They consist of top business management and high income professionals. The upper middle class consists of professionals, independent businessmen and corporate executives. According to Berkman and Gilson, they exert more influence on the marketplace than their numbers might suggest, and most marketers gear product development and promotion for them.

The lower middle class consists of smaller businessmen, salesmen, clerical workers, foremen, etc. The upper lower class consists of blue-collar workers. The lower middle and upper lower class together comprise approximately 70 percent of the population.

TABLE XIII  
THE PHASES OF THE FAMILY LIFE CYCLE

LIFE CYCLE	PRODUCTS: A TIME FUNCTION OF NEEDS
<p style="text-align: center;">I</p> <p>Complete nuclear family, youngest child at preschool</p>	<p>Nursery furniture, baby food, toys, non-name brand furniture, medicines, chest rubs, cough, cold syrups, practical household appliances, snack food, dolls, wagons, sleds, skates, breakfast food.</p> <p>Housing, automobiles, insurances, auto repairs and services.</p>
<p style="text-align: center;">II</p> <p>Youngest child reaches school eldest in teens</p>	<p>Clothing, sports equipment, school supplies, cosmetics, (low priced/domestic), cleaning material, low cost musical equipment, video games.</p> <p>Entertainment (stereo, Hi-fi, T.V., home computers, housing, automobiles, insurance.</p>
<p style="text-align: center;">III</p> <p>All children adults, with some still dependent</p>	<p>Non household appliances</p> <p>Tasteful name brand furniture, (high ticket) larger homes, bigger autos, recreational equipment, home computers, educational software, dental services, insurances.</p>
<p style="text-align: center;">IV</p> <p>Empty nest approaching retirement</p>	<p>Health products, sleep, digestion and home improvement products</p> <p>Travel medical services, medical appliances, gift products, self education.</p>
<p style="text-align: center;">V</p> <p>Bachelor stage</p>	<p>Basic kitchen equipment: refrigerators, stoves, basic furniture, non-name brand (low ticket)</p> <p>Recreation, fashion clothing, other equipment for mating game.</p>



Hill, in an analysis of the family goods inventory, classified products into time-saving, time-filling and comfort-providing categories.<sup>67</sup> While time-saving products meet functional needs, time-filling and comfort-providing products reflect satiation of self-esteem and self-actualization needs. The quantum of these needs rise with the family's ranking in the socio-economic class structure. The following is a selected product listing that reflects satiation of these two levels of needs:

Arts, antiques, hobbies and models. Entertainment electronics, home computers, sporting, automobiles, aviation, boating, yachting, travel, fishing, hunting, photography; home decoration services, bridal fashion, and women's fashion, beauty and grooming, gourmet food, liquors, performing arts and music.

Figure shows the decision-making unit at the macro level, representing life-cycle/economic-hierarchy.

#### Decision-Making Unit: Operational Level

The roles of husband and wife in consumer decision-making differs with the social status and phase of family life cycle. From a substantial review of empirical studies, Komarovsky concluded that joint involvement during the decision-making process is a curvilinear function of social class.<sup>68</sup> The degree of joint involvement for low income families is low; it is high for middle income families, and low for high income families. Decisions involving both

husband and wife are defined as syncratic decisions, and decisions involving husband only or wife only are defined as autonomic decisions. Some purchase decisions involve greater involvement by one or the other party. They are either husband dominant, or wife dominant, decisions. Finally, children also participate in the decision-making process either directly or as passive dictators.

To summarize, there are four major types of decisions: autonomic, syncratic, husband-dominant and wife-dominant.

Each type of decision seeks to satisfy needs of the family. Members of the decision-making unit attain need satisfaction by meeting or striving to meet both task and non-task goals. Goals are set by individuals' motivation which, in turn, can be associated with individual expectations with the product. These expectations are influenced by individual perceptions of the product, which is nearly the same as product evaluative criteria, that is, attainment of task and non-task goals. According to Myers and Reynolds, individual behavior can be explained in terms of motives. Motives channel behavior toward goals.<sup>69</sup> They define motives as the point of convergence of an individual's needs and those of his group and society. The hierarchical motivational theory of Maslow postulates five sets of goals which involve basic needs. They are physiological, safety, love (belongingness, group affiliation, acceptance), esteem and self-actualization.<sup>70</sup>

Since in modern American society, physical needs are

largely satisfied, marketing management, according to Maslow, should largely concern itself with the higher needs of social, ego and self-actualization motives. He also qualified his theory by stating, "In some instances, one set of motives may be partially satisfied, while another is largely satisfied."<sup>71</sup>

These goal-oriented motives seek to state needs corresponding to task and non-task goals. Needs may be classified as instrumental and expressive.<sup>72</sup> Instrumental needs are mainly economic or a means to express needs which are valuable in themselves.

#### Perception

Consumers' expectations and goal prioritization depend, to a great extent, on association of a product with a particular need in their frame of reference, that is, the consumer perception of instrumental and expressive expectations. Perception is defined as the way in which an individual processes and interprets external stimuli. According to Berkman and Gilson, the role of perception is to change cognitive structures to accommodate new information. They define cognitive structures as beliefs, ideas, attitudes which the consumer uses to distinguish and make sense out of different stimuli in the environment.<sup>73</sup> Perception, then, becomes part of cognitive structure. Perception of each individual's task orientation depends on one's self-image (as one sees oneself) and looking glass image (as one thinks others look at him/her).

Depending on the type of decision-making role (autonomic, syncretic, etc.), each member of the decision-making group perceives the product as optimally fulfilling a set of either instrumental or expressive needs/expectations. The following example amplifies such a perception:

. . . A vodka brand might be priced lower than the rest and be promoted on the basis that as a shrewed consumer, you know that all vodkas are alike. Buy Siberian vodka because it is cheaper and spend the money you save on good caviar.<sup>74</sup>

The operative idea is the consumer's self-concept about being a shrewed individual, his self-confidence in his competence and his perception of those close to him regarding his ability and the ability to know the real worth of a product.

Consumers' self-concept has an element of the ideal self-image (the way one would like to be). The looking glass image and ideal image orient the consumer to a certain reference group to which he perceives a close sense of identification or desire to belong.

Reference groups are those to which an individual identifies to the point where the reference group becomes a standard, a norm, a point of reference for him. In effect, the individual 'refers' to such groups for his standards of behavior and even for his goals and personal values.<sup>75</sup>

Consumers change their cognitive structures to conform to their perceptions of reference groups' cognitive sets. Such changes reflect both self perceptions and object perceptions.

Boone and Kurtz illustrate the function of ideal self as serving a personal set of objectives associated with the image to which he aspires.<sup>76</sup> They add that the college graduate on the way up the organization ladder at the bank hides his love for bowling and, instead, takes up golf (his concept of the typical sport of a banker).

In a laboratory study on preferences of different brands of beer, the process of object perception was studied.<sup>77</sup> In the study, beer drinkers were asked to rate their preferred brands, others on the basis of such physical characteristics as aroma, bitterness, carbonation, strength, sweetness, etc., in a labeled test. In the labeled test, they assigned superior ratings to "their" brand over the others. This indicates that even physical product attributes are subject to perceptions.

Indirect message effects perceptually affect product evaluative cognitives. When emotions and feelings favored by consumers are perceived to be associated with the product message a cognitive consistency is sustained. This consistency maintains consonance with the message. Humorous and sex appeals or other visually appealing nonverbal cues in the message format aid in maintaining consistency with the consumers' state with the consumers' state of mind and are perceived favorably. Cognitive consistency is enhanced by editorially compatible environment. This is automatically achieved most of the time due to demographic media selection, good reproduction and color.

Consumers perceptions are considered positive when the message presents an easily assimilated list of rewards associated with the product. This also facilitates the pace of the learning process and aids in message retention.

Product: High Risk - Low Risk

Similar to industrial classification, consumer product classification depends on the extent and complexity of the decision-making process. Every consumer decision process involves risk perception. Concern for self-image and opinion of others reflects a desire to reduce psychosocial risk. A product's potential utility spells performance risk. Ambiguity in equating price to not so readily quantifiable quality aspect means taking a financial risk. Risk perception plays a crucial role in responding to both task and non-task advertising stimuli.

In the preceding chapter, consumer products were shown to fall into three broad categories: convenience products, shopping products and specialty products. However, in this study, depending on the nature of consumer behavior toward each specialty product, specialty products will be assigned to either convenience or shopping category. In this study, 11 product category evaluative factors have been developed from the landmark Copeland study and from the mainstream of current marketing thought in general.<sup>78</sup> The product category grid incorporating the category evaluative criteria is shown in Table XIV.

TABLE XIV  
 CONSUMER PRODUCTS: CATEGORY EVALUATIVE GRID

EVALUATIVE FACTOR	CONVENIENCE	SHOPPING
1. Time interval between recognition of wants & definition of demand	Prompt	Evolves gradually
2. Satisfaction of want as function of time	Prompt	Can be delayed
3. Time of search as function of unit price	Minimal	Extended proportionately
4. Frequency of purchase	High	Infrequent
5. Total effort expended in the purchase process	Minimal	Considerable
6. Consumption as a function of time	Immediate	Staggered on a continuum
7. Nature of demand	Regular & continuous	Staggered on a continuum
8. Quality	Standardized & generic	Variable & unique
9. Price	Standardized	Variable
10. Magnitude of purchase outlay	Relatively low	Relatively high
11. Retailer reputation	Insignificant	Significant

From the table, it can be seen that decision-making inputs for the products classified as convenience products are essentially of a low risk type. Such products are purchased frequently, needs are defined easily and satisfaction is immediate. Price and quality are not very important considerations. Therefore, products characterized by the convenience type of factors will be categorized as low-risk products. Also from the table, products classified as shopping products are associated with decision-making inputs of a relatively high risk nature. Specialty goods that meet this type of product evaluative criteria will be categorized as high risk products.

Products Operationalized:

High Risk - Low Risk

Nine general product groups that broadly represent consumer consumption patterns have been selected for this study.

They are:

1. Household non-electrical I
2. Household non-electrical II
3. Household food
4. Household electrical
5. Household electronics and cars
6. Personal effects
7. Finance/services
8. Recreational
9. Glamour/gracious living



On the basis of the product evaluative parameters derived in Table XIV, the selected products have been classified into the two categories: high risk and low risk (See Tables XV - XXIV).

TABLE XV  
HOUSEHOLD NON-ELECTRICAL I

EVALUATIVE FACTOR	INFERENCE	CONCLUSION
1. Time interval between recognition of wants & definition of demand	Prompt	Low risk
2. Satisfaction of want as function of time	Prompt	Low risk
3. Time of search as function of unit price	Minimal	Low risk
4. Frequency of purchase	High	Low risk
5. Total effort expended in the purchase process	Minimal	Low risk
6. Consumption as a function of time	Immediate	Low risk
7. Nature of demand	Regular & continuous	Low risk
8. Quality	Standardized & generic	Low risk
9. Price	Standardized	Low risk
10. Magnitude of purchase outlay	Relatively low	Low risk
11. Retailer reputation	Little consequence	Low risk

Products: Detergents, soaps, toothpaste, mouthwash, shaving cream, razor, aftershave lotions, colognes, shampoo, deodorants, sanitary napkins, wraps, sandwich bags.

TABLE XVI  
HOUSEHOLD NON-ELECTRICAL II

EVALUATIVE FACTOR	INFERENCE	CONCLUSION
1. Time interval between recognition of wants & definition of demand	Evolves gradually	High risk
2. Satisfaction of want as function of time	Can be delayed	High risk
3. Time of search as function of unit price	Extended proportionately	High risk
4. Frequency of purchase	Infrequent	High risk
5. Total effort expended in the purchase process	Considerable	High risk
6. Consumption as a function of time	Staggered on a continuous basis	High risk
7. Nature of demand	Staggered on a continuous basis	High risk
8. Quality	Variable and unique	High risk
9. Price	Variable	High risk
10. Magnitude of purchase outlay	Relatively high	High risk
11. Retailer reputation	Significant consequence	High risk

Products: Carpets, nursery, living and bedroom furniture, paints, gardening equipment (mechanical), plants, seeds, and fertilizers.

TABLE XVII  
HOUSEHOLD FOOD PRODUCTS

EVALUATIVE FACTOR	INFERENCE	CONCLUSION
1. Time interval between recognition of wants & definition of demand	Prompt	Low risk
2. Satisfaction of want as function of time	Prompt	Low risk
3. Time of search as function of unit price	Minimal	Low risk
4. Frequency of purchase	High	Low risk
5. Total effort expended in the purchase process	Minimal	Low risk
6. Consumption as a function of time	Immediate	Low risk
7. Nature of demand	Regular & continuous	Low risk
8. Quality	Standardized & generic	Low risk
9. Price	Standardized	Low risk
10. Magnitude of purchase outlay	Relatively low	Low risk
11. Retailer reputation	Little consequence	Low risk

Products: Breakfast foods, snack food, baby food, frozen dinners, juices, coffee, tea, canned foods, oil, pet (cat, dog) foods.

TABLE XVIII  
HOUSEHOLD ELECTRICAL

EVALUATIVE FACTOR	INFERENCE	CONCLUSION
1. Time interval between recognition of wants & definition of demand	Evolves gradually	High risk
2. Satisfaction of want as function of time	Can be delayed	High risk
3. Time of search as function of unit price	Extended proportionately	High risk
4. Frequency of purchase	Infrequent	High risk
5. Total effort expended in the purchase process	Considerable	High risk
6. Consumption as a function of time	Staggered on a continuous basis	High risk
7. Nature of demand	Staggered on a continuous basis	High risk
8. Quality	Variable and unique	High risk
9. Price	Variable	High risk
10. Magnitude of purchase outlay	Relatively high	High risk
11. Retailer reputation	Significant	High risk

Products: Dishwasher, vacuum cleaner, clothes dryer, electrical range, refrigerator.

TABLE XIX  
HOUSEHOLD ELECTRONICS/CARS

EVALUATIVE FACTOR	INFERENCE	CONCLUSION
1. Time interval between recognition of wants & definition of demand	Evolves gradually	High risk
2. Satisfaction of want as function of time	Can be delayed	High risk
3. Time of search as function of unit price	Extended proportionately	High risk
4. Frequency of purchase	Infrequent	High risk
5. Total effort expended in the purchase process	Considerable	High risk
6. Consumption as a function of time	Staggered on a continuous basis	High risk
7. Nature of demand	Staggered on a continuous basis	High risk
8. Quality	Variable and unique	High risk
9. Price	Variable	High risk
10. Magnitude of purchase outlay	Relatively high	High risk
11. Retailer reputation	Significant	High risk

Products: Home computers, color television, stereo equipment, cameras, cars.

TABLE XX  
PERSONAL EFFECTS

EVALUATIVE FACTOR	INFERENCE	CONCLUSION
1. Time interval between recognition of wants & definition of demand	Prompt	Low risk
2. Satisfaction of want as function of time	Prompt	Low risk
3. Time of search as function of unit price	Minimal	Low risk
4. Frequency of purchase	High	Low risk
5. Total effort expended in the purchase process	Minimal	Low risk
6. Consumption as a function of time	Immediate	Low risk
7. Nature of demand	Regular & continuous	Low risk
8. Quality	Standardized & generic	Low risk
9. Price	Standardized	Low risk
10. Magnitude of purchase outlay	Relatively low	Low risk
11. Retailer reputation	Little consequence	Low risk

Products: Shoes, cuff links, cigars, cigarettes, beer, low ticket perfumes, gum, pop, candy.

TABLE XXI  
HOUSEHOLD FINANCIAL/SERVICES

EVALUATIVE FACTOR	INFERENCE	CONCLUSION
1. Time interval between recognition of wants & definition of demand	Evolves gradually	High risk
2. Satisfaction of want as function of time	Can be delayed	High risk
3. Time of search as function of unit price	Extended proportionately	High risk
4. Frequency of purchase	Infrequent	High risk
5. Total effort expended in the purchase process	Considerable	High risk
6. Consumption as a function of time	Staggered on a continuous basis	High risk
7. Nature of demand	Staggered on a continuous basis	High risk
8. Quality	Variable and unique	High risk
9. Price	Variable	High risk
10. Magnitude of purchase outlay	Relatively high	High risk
11. Retailer reputation	Significant	High risk

Products: Home mortgage, charge cards, savings, investments, medical, dental, and life insurance.



TABLE XXII

## RECREATION

EVALUATIVE FACTOR	INFERENCE	CONCLUSION
1. Time interval between recognition of wants & definition of demand	Evolves gradually	High risk
2. Satisfaction of want as function of time	Can be delayed	High risk
3. Time of search as function of unit price	Extended proportionately	High risk
4. Frequency of purchase	Infrequent	High risk
5. Total effort expended in the purchase process	Considerable	High risk
6. Consumption as a function of time	Staggered on a continuous basis	High risk
7. Nature of demand	Staggered on a continuous basis	High risk
8. Quality	Variable and unique	High risk
9. Price	Variable	High risk
10. Magnitude of purchase outlay	Relatively high	High risk
11. Retailer reputation	Significant	High risk

Products: Travel (above \$100), airline, ocean line, overseas resorts, yachts, boats, aviation, imported wines, expensive whiskeys, vodka, liquers, gourmet foods, and restaurants.

TABLE XXIII  
GLAMOR/GRACIOUS LIVING

EVALUATIVE FACTOR	INFERENCE	CONCLUSION
1. Time interval between recognition of wants & definition of demand	Evolves gradually	High risk
2. Satisfaction of want as function of time	Can be delayed	High risk
3. Time of search as function of unit price	Extended proportionately	High risk
4. Frequency of purchase	Infrequent	High risk
5. Total effort expended in the purchase process	Considerable	High risk
6. Consumption as a function of time	Staggered on a continuous basis	High risk
7. Nature of demand	Staggered on a continuous basis	High risk
8. Quality	Variable and unique	High risk
9. Price	Variable	High risk
10. Magnitude of purchase outlay	Relatively high	High risk
11. Retailer reputation	Significant	High risk

Products: Women's fashion clothing, beauty grooming products, expensive lingerie, bridal fashions, mens' fashion clothing, arts, antiques, music, and the performing arts.

TABLE XXIV  
COMPREHENSIVE CONSUMER PRODUCT  
CATEGORIZATION

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Low Risk	High Risk
Non-electrical I	Non-electrical II
Food	Electrical
Personal effects/consumables	Electronics/cars
	Financial services
	Recreation
	Glamor/gracious living

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### Task and Non-Task Stimuli: Variables

In this study, the consumer communication process has eight non-task variables and seven task variables. This is similar to the industrial process. These variables will be identified and defined with respect to the consumer decision-making unit. As will be seen, these variables are similar, if not totally identical, to those in the industrial model.

#### Non-Task Variables

This study treats eight non-task variables. They are:

1. Image
2. Ego Enhancement - Dyadic
3. Environmental I - Physical
4. Environmental II - Nonphysical
5. Work Simplification
6. Personal Risk Reduction
7. Innovation
8. Creativity and Pleasure

Image. Credibility of the source of communication or the source effect depends on the overall image projected by the organization that sells the product, and the image associated with the product. This image of the company and/or product is related to the consumer's motivation to cope with the problems of the real world. Since problems are mostly composites of tangible factors, consumers look for tangible measures in an image. Therefore, the image is

essentially founded on concrete suggestability factors. Ideally, the image should communicate a persuasive message of trust and likeability. This is achieved through brand names, guarantees, proven performance and established service records.

Consumers' fears of post-purchase dissonance are reduced by comparative product evaluations, and comparisons of market shares and product lines. The company's size and general reputation also serve to reinforce consumers' trust.

A product image is developed around a brand. A brand is recognizable in the form of a name, term, sign, symbol or design, and is used to identify the product of a firm in a distinct and undisputable manner.<sup>79</sup> Brand names trigger relevant images. Satisfactory product performance leads to brand loyalty and positive corporate image. A positive image in turn, is triggered by a popular brand. For the consumer, brand allows repeat purchases of satisfactory products as they identify favored brands with uniform quality. Belief in quality is enhanced by guarantees and warranties. Guarantees offer broad promises concerning manufacturers' responsibilities for defective products. Warranties specify the exact terms offered by the manufacturer. Therefore, warranties are both selling points and means of product differentiation.<sup>80</sup>

Because a warranty covers a period of time, it allows for hidden defects to surface. This helps to further improve consumers' perceptions of the product/company image.

Perception of quality also improves with proof of proven performance. In several product categories, image depends, to a great extent, on the type of after-sale service. Consumers' perceptions of the quality of after-sale service is related closely to the quality of the product itself. This perception can be improved by mentioning the efficiency and reliability of the dealer-provided and constantly updated training programs.

Image also is established by comparison. Prasad found that claim recall of a comparative advertisement, when comparison is explicit, is higher than those of "Brand X" advertisements.<sup>81</sup> In comparative advertising, competing brand names are identified and mentioned frequently in a point-by-point comparison. Comparative advertising aids in differentiating and reinforcing corporate image.

Ego Enhancing - Dyadic. Consumers have certain self-concepts that serve to satiate their ego needs. These ego needs have much in common with Maslow's hierarchy of needs. These needs are arranged from lower needs to higher order needs.<sup>82</sup> Apart from physiological and safety motives are the ego needs for love, belongingness, and esteem.

Love needs encompass the need for affection and affiliation for warm, satisfying and fulfilling human interactions with family, friends and other groups.<sup>83</sup> Products that offer opportunities to enhance the prospects of marriage or improve the joy of parenthood or other traditional love--fulfillment institutions cater to this need.

These opportunities are met by aiming appeals to appearance, to look more beautiful, to lose weight, or attraction to the opposite sex, such as, "Your perfume turns me on."

Individual motivations to cope with psycho-social problems is manifested in the need for belongingness. Consumers seek to integrate some of these ego enhancing determinants in their consumption patterns. This implies incorporation of values of a specific group--the reference group. Consumers need not necessarily belong to the reference group. The group may merely serve as a comparison point, aspiration group, or a group whose perspective he/she assumes to be his own.<sup>84</sup> Also, an individual can adopt a reference group to which he cannot belong. The golfer can identify with Jack Nicklaus by buying MacGregor golf clubs. Reference group influence is strong when possession of a product differentiates one group from another through expressive values. While in the case of cars, brand differentiation is based at least on real differences in product attributes, cigarettes belong to a group of products in which it is hard to differentiate one brand from another.<sup>85</sup> Wherever reference group influence is operative, advertisements must stress the kinds of people who buy the product. This reinforces the existing stereotype of such users. According to a research study by Lazarsfeld, market leadership among women comes from the group classified as wives.<sup>86</sup> Product endorsement by members of socially accepted groups alleviate doubts and uncertainties involved in self judgment regarding a purchase. Thus,

"social reality" of a consensus plays a very important role for the individual.<sup>87</sup> People of a lower socioeconomic class adopt or try to adopt the value structure of a higher social' class. This is the trickle down effect.<sup>88</sup> The trickle down effect is oriented toward status mobility. Product endorsement or modelling by members of upper status groupsaid in meeting the need for belongingness.

The self esteem need manifests itself through a desire for prestige, self-respect, feeling of importance or usefulness to society.<sup>89</sup> Positive success-oriented claims such as "We are number one," "the largest," "the best manufacturer/corporation," etc., help to establish a dyadic ego enhancement relationship with the consumer. After all, success evokes emulation.

Environmental I - Physical. One level of environmental determinants of buyer decisions cover the socioeconomic and socio-technological aspects. Maslow's second hierarchical need for safety can be treated at two levels: fear and security. The fear stimuli are relevant because they urge the consumer to avoid unpleasant economic consequences, as in the case of insurance of life and property, protection against physical harm, as in the case of safety belts in cars, or social consequences in the case of birth control pills. This is the fear of "uncertain" socioeconomic environmental implications, possibilities of accidents, sickness and death.

The socio-technological aspect of preventive security



needs are evolving along with a new and growing concern for general health. A significant trend is the demand for replacement of synthetic food additives for natural processes. They are underscored by the craze for the "real," the "natural," the "fresh," and the "healthy" selling elements. Product attributes such as reduced pollution and reduced consumption of natural resources are perceived to contribute toward a healthier and safer environment. These are important buyer determinants, among the increasingly environmentally conscious consumers. In addition, other package and product usage safety devices, such as child-proof medicine bottles, can be considered to meet safety needs.

"Ecologically preferred" product packaging including biodegradable wrappings, returnable glass containers, and similar features state a corporate concern for keeping the economic system in balance with the ecological system.

Environmental II - Nonphysical. The second level of environmental determinants of buyer decisions cover the socio-political aspect. As the thrust for economic growth is sliding from a production focus to that of a service focus, many American jobs are going abroad. Products advertised as "Made in America, by Americans" or those that implicitly mention/compare products with imports make a strong appeal to patriotism. Good corporate citizenship is also reflected in commitment to social problems. According to Berry and Hessel, community involvement is an important

marketing tool because consumers consider it as an additional criterion in making certain purchase decisions.<sup>90</sup> An example is TV commercial endorsement of Ford automobiles by a black engineering staff member. This trend replaces the "Aunt Jemima" concept.

Work Simplification. The purchase decision is always wrought with anxiety with respect to acquisition and processing of information. Hence, any attempt to facilitate transfer of information by the seller can only have a positive bias toward the advertised product. Quick product demonstrations, mail-in coupons, and offers of personalized information service will alleviate consumers' anxiety levels and help them to simplify their decision process.

Personal Risk Reduction. Every purchase decision is inherently perceived to involve some amount of risk. Bauer introduced the concept of risk perception. According to him, an individual can respond to and deal with risk only as he perceives it subjectively. He adds that certain unpublished data indicate

. . . the prospective automobile buyer often goes into a state of virtual panic as he reaches the point of decision, and rushes into his purchase as an escape from the enormity of the problem.<sup>91</sup>

This is because each purchase is oriented to some set of buying goals, and uncertainty regarding the attainment of his/her goals causes perception of risk. According to Cox,

the amount of risk perceived consists of two general goals. They are the amount at stake in the purchase decision and the individual's feeling of subjective certainty that he/she will win or lose.

The amount at stake can be represented in terms of loss of money because of product function failure; it could be loss of time because of the futility of search time; it could mean loss of ego, the need to avoid ridicule and "loss of face" and loss of prestige, especially when the product has high expressive value, as in the instance of an evening dress, perfume, or other social status symbol like an automobile. It could also mean the sheer frustration of being aware of one's inability to achieve a desired set of objectives.

Desire for risk reduction rises with the risk level of the desired product. In a study conducted among housewives in New York and Cleveland, Cox found that perceived risk rating by homemakers did increase for high risk products. They gave high perceived risk ratings for kitchen furniture, women's handbags, blouses, sweaters, girdles, men's sport shirts, regular shirts--products with typical expressive value. They gave low perceived risk ratings for women's housedresses, stockings, kitchen utensils and bed linen. This data shows that perceived risk is a major behavioral determinant. Consumers seek to reduce perceived risk by relying on past experience and seeking information on probable consequences of buying the potential product.

Cox's findings also show that homemakers claim they can

reduce risk perception when they are sure about the color, size or other physical characteristics of the product, or when the item is well described. Although this study was conducted with respect to telephone purchases, it reinforces the already discussed theory.

It can be inferred that the following advertising information will help potential consumers to reduce their risk perception.

Also, it can be inferred that guarantees of good faith and offer to return money if dissatisfied and emphasis on satisfied and enthusiastic product usage help to reduce personal risk. In addition to ego enhancement, endorsement by early product innovators (early users) helps to reduce risk perception by those who follow the leaders. Doctors tended to follow the lead of respected colleagues early in the life history of a new drug, when adequate information was lacking. It is interesting to note that even medical doctors try to reduce their risk involvement when they are ignorant about a particular drug due to dearth of information. Also, offers of free samples helps to reduce the uncertainty element.

Innovation/New Products. Unlike industrial products, consumer products are rarely totally new and innovative. Exceptions to this rule are ballpoint pens and polaroids. Most consumer products are new in the sense that they are improved or have minor innovations. In fact, totally innovative consumer products diffuse into the consumption

patterns only after the early adaptors show the way. In most cases, the buying determinants are new ingredients, flavors, features, product sizes, or new applications. For instance, Lysol, a bathroom disinfectant, has been successfully promoted as an all-purpose disinfectant. On the other hand, credit cards can be considered as a total innovation. In any case, the appellation "new" always arouses consumer interest and encourages them to try out a new product.

Creativity and Pleasure. At the highest level of needs product attributes transcend the physical functional role and promise the consumer an opportunity to rise to his/her height of pleasure and creativity. At the apex of Maslow's hierarchy are the needs motivated by a desire to form and maintain warm and harmonious and emotionally satisfying relations with others; the need to enhance the personality; to gain prestige; to gain recognition; and to satisfy the ego through the domination of others.

Products from toothpaste to sports cars promise love and affection. Marketing appeals made to women (especially young girls) rely on this motive when they mention the possibility of finding a mate through the purchase of pretty clothing, perfume, and body-care products. Many products useful to newlyweds are presented in an aura of marriage and wedded bliss. Silverware, china, new furniture and appliances, honeymoon vacation trips, and even easy-to-follow cookbooks are in this category.

Sexual appeals made both covertly and overtly are strong, if not always up to the generally accepted social norms. The advertisement by National Airlines where several attractive stewardesses posed above the headline "Fly Me" was viewed by many as a sexual euphemism.

The urge to gain prestige and recognition is manifested in the drive to acquire products that satisfy these motives rather than being an end in themselves.

Product attributes that promise or seem to promise satiation of such needs are to rival and surpass others, form friendships and participate in groups (for example, Coca Cola is often shown as part of happy social situation), to be the center of attention, etc.

Hedonism and self-indulgence have become respectable motives of the "Me" generation, mostly members of the "Yuppies," members of the younger, well-educated, upper socioeconomic class. The main theme is "I am a good friend to myself, and I like to do whatever makes me feel good."

#### Task Variables

The task variables price, reliability, service, product specification, finance (offered by seller), ease of operation/maintenance, and availability are very similar to that of the industrial model. Therefore, the same definitions hold true.

Physical Variables: Industrial  
And Consumer

The physical characteristics of print advertisements have an impact on attention arousal and information retention. A wide range of physical characteristics are discussed in advertising literature. In this study, six physical characteristics will be examined. These variables are applicable to both industrial and consumer print advertisements. They are:

1. Size
2. Color
3. Bleed
4. Product illustration
5. Headline
6. Sex appeal

Size and Color

It stands to reason that the probability of arousing reader attention increases with the size of the advertisement and the number of colors present in the advertisement. Pollman and McBain found that readership scores increased with increase in size and number of colors. However, they also found that the cost per reader increased as much. Starch, on the other hand, found that half-page direct response advertisements produced 70 percent as many coupon returns as a full-page advertisement. At present, no

absolute correlations have been established.

### Bleed

The term bleed is applied when printed design extends to the trimmed edge of a page, leaving no margin. Bleed seems to extend the area covered by the advertisement and perhaps, marginally, increase the physical impact as opposed to a white margin.

### Product Illustration

Product Illustration is very important, at least for two major reasons. One, as the reader scans through the pages, the product catches his attention even if he is not reading the copy. This is especially true when he is in the market or is likely to need a specific product. This will stop his attention and encourage him to read the copy. Secondly, in some product categories, good product illustrations speak for themselves more than a whole page of body copy.

### Headline

There are many types of headlines as there as advertisements. As general myth in the copy departments of advertising agencies is that headlines make or break an advertisement. While a clever, witty headline, or one with a subliminal message, may attract initial attention, and perhaps ad club awards, a good headline is one that contains a unique



selling point. In this study, only those headlines that contain at least one of the 15 task or non-task variables will be identified and recorded as a headline.

### Sex Appeal

Sex appeal can manifest itself either in the form of illustrations or as suggestive copy. In this study, sexually oriented illustrations alone will be coded, more specifically "decorative" female models. Reid and Soley found that ad recognition/attention improves with the portrayal of a female "decorative" model. They defined such a model, thus:

Decorative model ads are those which include an attractive female whose primary activity is to adorn the product as a sexual or attractive stimulus. An example of a decorative model is a scantily clothed woman reclining on the roof of an automobile.<sup>92</sup>

Their findings also indicate that this does not necessarily imply that the reader will read the body copy. This finding is strengthened by Steadman's research. He investigated the effect of sexualness of models on readers' reactions to advertisements. In his experiment, he chose females in various stages of undress, considered by a male panel to show varying degrees of overt sexual suggestiveness. The results showed:

1. Brand recall immediately after exposure was not affected by the type of picture used in the ad.
2. Sexual photographs, after seven days, had negative

effects on brand identification compared with nonsuggestive photographs.

### Copy Readability

The ease or difficulty with which advertising copy can be read is a measure of its readability. At General Motors Corporation, a computer program, STAR, was developed to evaluate the readability of shop floor manuals. The program is based on a readability test developed by Rudolf Flesch. According to Flesch, comprehension depends not only on the skills of the reader, but also on the way words are set down. The Flesch Reading Index is rated on a scale of 0 to 100. The score can also be equated with the Reading Grade Level. A score of 100 means the material is easy to read, while 0 means the material is very difficult. It is calculated by the following parameters:

1. Frequency of sentence in the sample
2. Frequency of words
3. Frequency of syllables.

Flesch based his test of reading ease on counting the average syllables per word and words per sentence. He found that the higher the syllable count and the longer the sentence, the harder it is to grasp the meaning of it.

The STAR program counts syllables by counting vowels using these rules:

1. A final "E" is not counted except when preceded by an "L."

2. If "L" is preceded by a vowel, the final "E" is not counted.
3. A final "ED" is not counted, except when preceded by an "E," "T," "D," or "L." "LED" is not counted if preceded by a vowel.
4. A final "ES" is not counted, except when preceded by an "E," "S," "Z," or "L." "LES" is not counted if preceded by a vowel.
5. If double vowels are found, they are counted as one syllable.

The STAR program was adapted for the IBM/3081D at the Bureau of Media Research and Services, Oklahoma State University.

Advertising copy from a random sample of ads analyzed in each category of industrial and consumer ads will be processed, and mean Flesch readability indexes evaluated.

## ENDNOTES

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## CHAPTER III

### RESEARCH DESIGN

An advertisement is a processed information capsule of communications stimuli. These stimuli are unique. Therefore, they can be identified as discrete component elements or variables and analyzed for message content. This method of content analysis is independent of both the communicator and the audience. Paisley defined this research methodology as follows:

Content analysis is a phase of information processing in which communication content is transformed through objective and systematic application of categorization rules, into data that can be summarized and compared.<sup>1</sup>

Berelson, pioneer in content analysis techniques, summarized content analysis as a means of tapping the communications process model. In essence, content analysis asks the question: what is being communicated?

In the communication process a central position is occupied by the content. By communication content is meant that body of meanings through symbols (verbal, musical, pictorial, plastic, gestural) which make up the communication itself. In the classic sentence identifying the process of communication--"who says what to whom, how and with what effect"--a communication content is the what.<sup>2</sup>

In a very broad sense, this thesis is a comparative study of "what is being said" in industrial and consumer

print advertisements. How many variables, task and non-task, are common? How many are unique? Are the frequencies of similarities and differences statistically significant to agree with the constructs of the communication model developed in the previous chapter?

In any given print advertisement being analyzed, the "what is being said" is defined as the sum total of the discrete component variables (task and non-task) defined in the previous chapter. The presence or absence of the variables represented by a binary state of "1" or "0" will be recorded in a coding sheet. A specimen sheet is shown in Figure 3. The same rules will apply for the third set of variables, physical variables. The variables were developed and defined on a theoretical basis in the previous chapter; in the next section of this chapter they will be operationalized or defined for the purpose of coding.

Berelson also notes three distinct decisions concerning content analysis. They are choosing the media, selecting the samples in the media to be examined and finally isolating the relevant content within the specific issue and titles. In content analysis, regardless of the specific method, the investigator must question reliability. In simple terms, reliability means repeatability with consistency of results.

Janis and others define reliability, thus:

For purposes of content analysis, we define reliability as the degree of correspondence between two sets of frequencies of nominal data based on the results of analysis of the same communications by two independent groups of analysts.<sup>3</sup>



Errors likely to bear on reliability are random numbers rather than constant errors. Budd, Trop and Donohew suggest a method to correct random errors, as outlined by Stempel.

Stempel suggests computing a correlation coefficient of results of two coders who coded the same material. To correct for random errors likely in frequency tabulation, a contingency table should be test run to determine coder reliability.<sup>4</sup>

Also, according to Sempel, reliability in content analysis is a problem that the individual researcher must solve to his own satisfaction within the limits of his study design and resources.

#### Task Variables Operationalized

1. Price: Price mentioned indirectly in terms of lower production costs; higher efficiency; low price; price comparison either direct or implicit; information on leasing; price cut rates; discounts.

2. Reliability: Performance record specified in detail; versatility, adaptability within reasonable performance range; information on how product is made, high quality raw materials and production technology; incorporation of proven/latest technology.

3. Service: Efficient order handling; keeping delivery promises; efficient installation; maintenance/skilled repair capability; technical consultancy; end user applications; well-spread and reputable dealer network.

4. Product Specification; Accurate description of physical characteristics; information with respect to standards and requirements; tolerance range; packaging and shipping classifications; energy parameter such as electric power, temperature; noise levels; storage; expiration dates; materials uses; quality control standards; adaptability.

5. Financing; Offer financing; credit arrangements; credit extension.

6. Ease of Operation: Durability in use; economy in operation; time and labor saving in operation; ease of handling; automatic operation; protection from irreparable loss in operation; simplicity in operation; resistance to elements, corrosion, friction, etc.

7. Availability: Ability to meet limited volume but high frequency reorders; ready local supply; fast delivery; constant stock of full product range; convenient close locations; readily available personal service.

#### Non-Task Variables Operationalized

There are eight non-task variables. Advertising copy and headlines will be examined for each advertisement to see if information classified under each variable is present. If the information relevant to that variable is present, then a "1" will be recorded for that variable; if not, a "0" will be recorded for that variable.

1. Image: Corporate size; the word "quality" mentioned explicitly; comparative or superlative adjectives modifying

the product or company; service record; proof or record of past performance; R&D efforts; manufacturing technology; design experience; description of production facilities; financial strength; management ability; industry leadership; experienced technical personnel; product name in close physical proximity to corporate name/logo; brand identification; specification of patents; extent of product line; guarantees, assurances; volume claims of market share; credible after-sale service record; comparison of product features and performance record explicitly by name rather than Brand "X."

2. Ego Enhancement - Dyadic: Positive success-oriented claims, such as "We are #1; the leaders; the largest; the best;" awards/tokens of recognition; endorsements by experts, popular and successful personalities; typical users; professionals; customer listing, especially the large and prestigious corporations and government agencies; features that offer to enhance beauty, help to lose weight and increase attractiveness to opposite sex.

3. Environmental I - Physical: Features that enhance work area safety and comfort; features that reduce health hazards and have positive ecological implications; urging customers to avoid unpleasant economic consequences, such as uninsured death and property loss; features that reduce chances of accidents, sickness and death; product features with package and usage safety devices; biodegradable containers/wrappings; reusable packaging; synthetic food additive replacements, especially descriptors such as "the real," "the

fresh," and "the healthy."

4. Environmental II - Non-physical; Call to patriotism; "Buy American," "Save American jobs;" conservation and saving devices on consumption of imported energy and resources; natural resources substitution in consumption pattern; reduction of pollution; mentioning or illustrating presence of productive personnel from minority members of community, on corporate payroll.

5. Work Simplification: Quick product demonstrations; coupons for receiving technical brochures and offers to tailor products to buyers' specific needs; encouragement of buyer-seller communications; toll-free telephone numbers; branch office addresses close to target audience locations; and offers of personalized information service.

6. Personal Risk: Proof of satisfied and enthusiastic product usage; information on customers' competition taking advantage; offers to customers to do a good job in the interest of corporate recognition; urge customers to keep up with industry trends and avoid becoming obsolete; offers of good faith such as "Money back if not satisfied;" also, offers of free samples or product "tryouts."

7. New Product/Innovation: New product as a news item by itself; factors qualifying new products/modification re-introductions; lab evaluation tests; pilot test runs; technical assistance in plants; training of personnel; other services to increase customer confidence/competence. New ingredients, flavors, features, product sizes, or new applications.

8. Creativity/Pleasure; Address customer as "Management Man;" offer opportunity to be creative/innovative; appeal to "Think big," "Take risk," and "Set the trends in your industry;" product features that enhance the personality; offer satisfaction of aesthetic desires, improve self-esteem, prestige in community, to be smart and be known to act smart; to overwhelm and dominate others; to improve the chances in the mating game; to improve the probability of sexual encounters; to make "the self" feel good and to "self-indulge."

#### Physical Variables Operationalized

1. Size: Advertisement sizes will be recorded in three categories. Ads of one page or more will be coded as "1" while ads less than one page and greater than quarter page will be coded as "2" and the rest will be coded as "3."

2. Color: Black and white ads will be coded as "0;" one-color ads as "1;" two- or more color ads as "2," and the rest as "3."

3. Bleed: Ads with bleed will be coded as "1" and ads without bleed will be coded as "0."

4. Product Illustration: An ad with a product illustration will be coded as "1" and ads without any product illustration will be coded as "0."

5. Headline: Advertisements that incorporate at least one of the task or non-task variables will be coded as "1." Other types of headlines will be coded as "0."

6. Sex Appeal (Illustration): Advertisements that have



female models with the function of only adorning the ad and not otherwise related to product/product usage will be coded as "1;" others will be coded as "0."

### Media

In Chapter II, seven sets of product groups were operationalized and classified under two types of risk categories-- high risk and low risk. From this preliminary product list a subset of products have been randomly selected from each of the seven groups. Print advertisements for these products will be analyzed in this study. The publications corresponding to these products are given in the media list (See Appendix

The Standard Rate and Data Service publication on consumer magazines was used, and magazines in the following classifications were stratified.

### Statement of the Problem

The aim of the study is to build a general theory of sales communication in the print media. The different types of stimuli operating on the individuals involved in the buying decision process for the two major types of products/markets and their subcategories will be answered by the following research questions. Also, since these stimuli in the print media are manifested in the verbal form or in written language, as opposed to the varied forms available to the electronic media, such as sound, color, animation, etc., the ease or difficulty of the medium of information dissemi-

nation--in other words, the language--is significant. Therefore, research questions will also seek to establish relationships between reading comprehension ratings of advertising copy and the four product categories.

As stated in Chapter I, the empirical data will be obtained by research questions at two levels, the intra-category and the inter-category data.

#### Level I

1. Do high risk industrial product advertisements stress more on task-oriented decision variables, compared to nontask-oriented decision variables?

2. Do low risk industrial product advertisements stress more on task oriented decision variables compared to nontask oriented decision variables?

3. Do high risk industrial product advertisements stress more on task oriented decision variables compared to low risk industrial product advertisements?

4. Do high risk industrial product advertisements stress less on nontask oriented decision variables compared to low risk industrial product advertisements?

5. Do high risk consumer product advertisements stress more on task oriented decision variables compared to nontask oriented decision variables?

6. Do low risk consumer product advertisements stress more on nontask oriented decision variables compared to task

oriented decision variables?

7. Do high risk consumer product advertisements stress more on task oriented decision variables compared to low risk consumer product advertisements.

8. Do high risk consumer product advertisements stress less on nontask oriented decision variables compared to low risk industrial product advertisements?

#### Level II

9. Do high risk industrial product advertisements stress more on task oriented decision variables compared to high risk consumer product advertisements?

10. Do high risk consumer product advertisements stress more on nontask oriented decision variables compared to high risk industrial product advertisements?

11. Do low risk industrial product advertisements stress more on task oriented decision variables compared to low risk consumer product advertisements?

12. Do low risk consumer product advertisements stress more on nontask decision variables compared to low risk industrial product advertisements?

#### Readability

13. Is the reading grade equivalent of high risk industrial product advertisement copy higher compared to low risk consumer product advertisement copy?

14. Is the reading grade equivalent of high risk consumer product advertisement copy higher compared to low risk consumer product advertisement copy?

15. Overall, is industrial advertising copy more difficult to read than consumer product advertising copy?

16. Is there a linear relationship between the frequency of nontask variables and advertising copy readability?

#### Test Statistic

The variables are distributed binomially. These are, therefore, binomial parameters of interest. Let them be  $p_1$  and  $p_2$ . We wish to test that they are equal:

$$H_0 : p_1 = p_2$$

$$H_1 : p_1 \neq p_2$$

We assume that the normal approximation to the binomial applied.

Let two random samples of sizes  $n_1$  and  $n_2$  be taken from two independent binomial populations, and let  $\hat{p}_1 = X_1/n_1$  and  $\hat{p}_2 = X_2/n_2$  be the estimate of the corresponding binomial parameter. Now, if the null hypothesis is true, then using the fact that  $p_1 = p_2 = p$ , the random variable

$$Z = \frac{\hat{p}_1 - \hat{p}_2}{p(1-p) \left[ \frac{1}{n_1} + \frac{1}{n_2} \right]}$$

is distributed approximately  $N(0,1)$ . An estimate of the com-

mon parameter  $p$  is  $\hat{p} = \frac{X_1 + X_2}{n_1 + n_2}$ .

The test statistic for  $H_0: p_1 = p_2$  is then

$$z_0 = \frac{\hat{p}_1 - \hat{p}_2}{\hat{p}(1-\hat{p}) \left[ \frac{1}{n_1} + \frac{1}{n_2} \right]}$$

If  $z_0$  is greater than  $z_{\frac{\alpha}{2}}$ , or if  $z_0$  is less than  $-z_{\frac{\alpha}{2}}$

the null hypothesis is rejected.

## ENDNOTES

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<sup>3</sup>Ibid.

<sup>4</sup>Irving L. Janis, "The Reliability of Content Analysis Technique," Public Opinion Quarterly, Vol. 7, No. 2 (1943), p. 292.

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## CHAPTER IV

### FINDINGS

Four hundred print advertisements were content analyzed, one hundred under each of the four types--industrial low risk, industrial high risk, consumer low risk, and consumer high risk. The test statistic used for measurement of consistency of the variables with nominal measurement level of "1" and "0" for the presence or absence of each of the seven task, eight non-task and six physical variables is the Kuder-Richardson-Hoyt reliability coefficient. This test statistic was adapted for mass communications research methods by Dr. Walter J. Ward at the Bureau of Media Research and Services, Oklahoma State University. A Fortran source code run on the IBM 3081D is listed in Appendix C.

The acceptable coefficient is 0.70 reliability. The computed values for low risk industrial products advertisements is 0.9007; for industrial high risk product advertisements, 0.9259; for consumer low risk product advertisements, 0.8477; for consumer high risk advertisements, 0.91085. These high values show that the variables were not ambiguous and that the coding procedure did identify and separate the variables or advertising stimuli correctly.

Overall, empirical data indicate that the theoretical

models seem to describe advertising, as practiced today, fairly well. Figure 4 shows a block histogram of the total frequency count of task and non-task advertising stimuli for each of the four product categories. The frequency counts for the two types of variable are represented, thus:

Task = Frequency of, Price+Reliability + Service +  
Product Specification + Finance + Ease of  
Operation + Availability

Non-Task = Frequency of, Image + Ego + Environment I +  
Environment II + Work Simplification +  
Personal Risk Reduction + Innovation +  
Creativity/Pleasure

Table XXV shows intra-category frequency data, difference as a percentage in excess of the lower frequency and test statistic for statistical significance at the chosen confidence interval of 0.05.

Question 1. Do high risk industrial product advertisements stress more task-oriented decision variables compared with non-task-oriented decision variables?

The frequency count for task-oriented decision variables is 281, or 40.14 percent, and for non-task variables it is 351, or 43.80 percent, a frequency difference of 70 counts. This difference is not statistically significant at 0.05 confidence interval.

In high risk industrial product advertisements, more stress is not placed on task-oriented decision variables; that is, both task and non-task variables are equally distributed.

Question 2. Do low risk industrial product advertisements stress more task-oriented decision variables compared



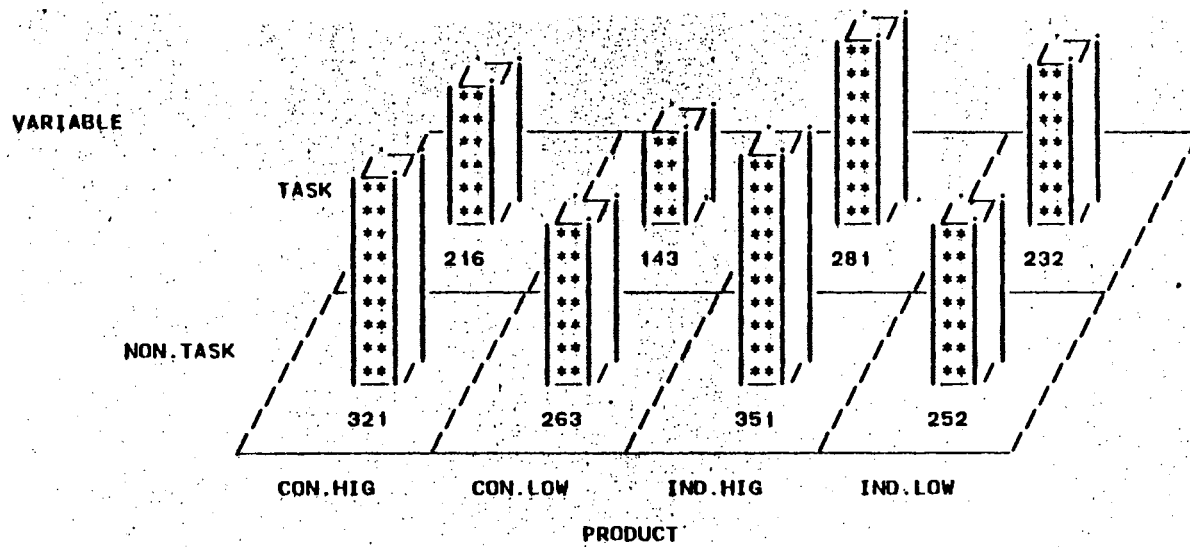


Fig. 4. Frequency Overview of Advertising Stimuli

TABLE XXV  
INTRA-CATEGORY FREQUENCY DATA

Product/Var	Product/Var	Test Stat	Significant (0.05)	% Exceeds Lower Freq
1. Ind.High Task: 281	Ind.High N.Task: 351	1.462	No	
2. Ind.Low Task: 232	Ind.Low N.Task: 252	0.2638	No	
3. Ind.High Task: 281	Ind.Low Task: 232	2.72	Yes	21.1%
4. Ind.High N.Task: 351	Ind.Low N.Task: 252	5.14	Yes	39.3%
5. Con.High Task: 216	Con.High Task: 321	3.7	Yes	48.6%
6. Con.Low Task: 143	Con.Low N.Task: 263	5.18	Yes	83.9%
7. Con.High Task: 216	Con.Low Task: 143	4.5	Yes	51.0%
8. Con.High N.Task: 321	Con.Low N.Task: 263	3.02	Yes	22.0%

with non-task-oriented decision variables?

The frequency count for task-oriented decision variables is 232, or 33.14 percent, and for non-task variables it is 252, or 31.50 percent, a frequency difference of 20 counts. This difference is not statistically significant at 0.05 confidence interval.

In low risk industrial products, more stress is not placed on task-oriented decision variables; that is, both task and non-task decision variables are equally distributed.

Question 3. Do high risk industrial product advertisements stress more task-oriented decision variables compared with low risk industrial product advertisements?

The frequency count for task-oriented decision variables in high risk industrial product advertisements is 281, or 40.14 percent, and in low risk industrial product advertisements it is 232, or 33.14 percent, a frequency difference of 49 counts. This difference is statistically significant at 0.05 confidence interval.

Task-oriented decision variables in high risk industrial product advertisements exceed those in low risk industrial product advertisements by 21.10 percent.

Question 4: Do high risk industrial product advertisements stress less on non-task-oriented decision variables compared with low risk product advertisements?

The frequency count for non-task-oriented decision variables in high risk industrial product advertisements is 351, or 43.80 percent, and in low risk industrial product advertise-

ments it is 252, or 31.50 percent, a difference of 99 counts. This difference is statistically significant at 0.05 confidence interval.

High risk industrial product advertisements do not stress less on non-task-oriented decision variables relative to low risk industrial product advertisements. In fact, non-task variables in high risk industrial product advertisements exceed those in low risk industrial product advertisements by 39.30 percent.

Question 5. Do high risk consumer product advertisements stress more task-oriented decision variables compared with non-task-oriented decision variables?

The frequency count for task-oriented decision variables is 216, or 30.80 percent, and for non-task variables it is 321, or 40.13 percent, a frequency difference of 105 counts. This difference is statistically significant at 0.05 confidence interval.

High risk consumer product advertisements do not stress more on task-oriented decision variables; in fact, non-task-oriented decision variables exceed task-oriented variables by 48.60 percent.

Question 6. Do low risk consumer product advertisements stress more non-task-oriented decision variables compared with task-oriented decision variables?

The frequency count for non-task-oriented decision variables is 263, or 33 percent, and for task-oriented variables it is 143, or 20 percent, a frequency difference of 120

counts. This difference is statistically significant at 0.05 confidence interval.

Low risk consumer product advertisements stress more non-task-oriented decision variables relative to task-oriented decision variables. Non-task decision variables exceed task-oriented decision variables by 83.9 percent.

Question 7. Do high risk consumer product advertisements stress more task-oriented decision variables compared with low risk consumer product advertisements?

The frequency count for task-oriented decision variables in high risk consumer product advertisements is 216, or 30.80 percent, and for task-oriented variables in low risk consumer product advertisements it is 143, or 20.43 percent, a frequency difference of 73 counts. This difference is statistically significant at 0.05 confidence interval.

High risk consumer product advertisements stress more task-oriented decision variables relative to low risk consumer product advertisements. Task-oriented decision variables in high risk consumer product advertisements exceed those in low risk consumer product advertisements by 51 percent.

Question 8. Do high risk consumer product advertisements stress less non-task-oriented decision variables compared with low risk consumer product advertisements?

The frequency count for non-task-oriented decision variables in high risk consumer product advertisements is 321, or 40.13 percent, and for those in low risk consumer product advertisements it is 263, or 32.88 percent, a fre-

quency difference of 58 counts. This difference is statistically significant at 0.05 confidence interval.

High risk consumer product advertisements do not stress less non-task-oriented decision variables relative to low risk consumer product advertisements. In fact, non-task-oriented decision variables in high risk consumer product advertisements exceed those in low risk consumer product advertisements by 22 percent.

The inter-category frequency data is shown in Table XXVI.

Question 9. Do high risk industrial product advertisements stress more task-oriented decision variables compared with high risk consumer product advertisements?

The frequency count for task-oriented decision variables in high risk industrial product advertisements is 281, or 40.14 percent, and for those in high risk consumer product advertisements it is 216, or 30.80 percent, a frequency difference of 65 counts. This difference is statistically significant at 0.05 confidence interval.

High risk industrial product advertisements stress more task-oriented decision variables relative to high risk consumer product advertisements. Task variables in high risk industrial product advertisements exceed those in high risk consumer product advertisements by 30 percent.

Question 10. Do high risk consumer product advertisements stress more non-task-oriented decision variables compared with high risk industrial product advertisements?

The frequency count for non-task-oriented decision

TABLE XXVI  
INTER-CATEGORY FREQUENCY DATA

Product/Var	Product/Var	Test Stat	Significant (0.05)	% Exceeds Lower Freq
9. Ind.High Task: 281	Con.High Task: 216	3.6	Yes	30.0%
10. Con.High N.Task: 321	Ind.High N.Task: 351	1.52	No	
11. Ind.Low Task: 232	Con.Low Task: 143	5.42	Yes	62.2%
12. Con.Low N.Task: 263	Ind.Low N.Task: 252	0.58	No	

oriented variables in high risk consumer product advertisements in 321, or 40.13 percent, and for those in high risk industrial product advertisements it is 351, or 43.80 percent, a frequency difference of 30 counts. This difference is not statistically significant.

High risk consumer product advertisements do not place more stress on non-task-oriented decision variables relative to high risk industrial product advertisements. That is, non-task-oriented decision variables are equally distributed in both high risk industrial product advertisements and high risk consumer product advertisements.

Question 11. Do low risk industrial product advertisements stress more task-oriented decision variables compared with low risk consumer product advertisements?

The frequency count for task-oriented decision variables in low risk industrial product advertisements is 232, or 33.14 percent, and for those in low risk consumer product advertisements is 143, or 20.43 percent, a frequency difference of 89 counts. This difference is statistically significant at 0.05 confidence interval.

Low risk industrial product advertisements stress more task-oriented decision variables relative to low risk consumer product advertisements. Task-oriented decision variables in low risk industrial product advertisements exceed those in low risk consumer product advertisements by 62.20 percent.

Question 12. Do low risk consumer product advertisements stress more non-task-oriented decision variables compared with



low risk industrial product advertisements?

The frequency count for non-task-oriented decision variables in low risk industrial product advertisements is 252, or 31.50 percent, and for those in low risk consumer product advertisements it is 263, or 32.80 percent, a frequency difference of 11 counts. This difference is not statistically significant.

Low risk consumer product advertisements do not place more stress on non-task-oriented decision variables relative to low risk industrial product advertisements. That is, non-task decision variables are equally distributed in both low risk consumer and industrial product advertisements.

Contrary to widely held belief regarding "emotional" and "rational" motives, but in keeping with the theoretical constructs of the industrial buying model described in Chapter II, empirical data in this research lends credence to the contention that the industrial buying process involves complex organizational task and non-task oriented expectations and goals. This contention can be inferred if we assume that advertising, as practiced today, at least partially responds to the "real world environment" in the industrial buying situation. As seen in Question 1, both task-related tangible qualitative factors expressed in terms of dollars and cents and various non-task intangible qualitative factors related to the individual's function in an organization, play a complementary role in the communications mix of high risk industrial products.

Similarly, results to Question 2 show that in low risk industrial product advertisements, task-related variables do not play a dominant role. Equal weight is assigned to both task- and non-task variables. This is easily explained on the basis of the industrial buyer decision model. As the buying decision is made by a group and not by an individual, behavioral organizational factors have to be satisfied. Reward is measured not only in terms of economic objectives, but also in terms of the group members' subjective value system. This subjective value system applies not only to the individual, but also to the component group within the decision-making unit to which the individual belongs. I

In addition, the three major component groups considered in this study bring into the social matrix what Berlo calls "group maintenance." The component groups are as follow:

1. Those involved in need recognition
2. Those involved in the definition of characteristics, quantity of item needed and development of specifications
3. Those involved in the acquisition and evaluation of proposals.

As stated earlier, some of these functions overlap group membership.

Group maintenance is the second dimension of group goals. Berlo adds this dimension to productivity or task accomplishment, the other dimension of group goals. Also, the decision-making unit has to take into account promotive interdependence. According to Berlo, the interdependence of goals is promotive

to the extent that one member cannot attain his goal unless the other members do, too. Since attainment of a goal by one person is related to the attainment of that goal by other persons, no single type of communications stimuli can play a totally contrient role. Since modern corporations do not operate in a totally contrient situation--the role of single family-held corporations are steadily decreasing--it can readily be inferred that a wide variation of advertising stimuli is a necessary condition for ensuring successful sales communications capsules. Therefore, industrial sales communications must apply the entire gamut of sales stimuli.

On this basis, the equal importance of both task- and non-task variables in both high risk and low risk industrial products advertising is clearly explained. In the process it seriously undermines the myth of the dominance of the so-called "rational motives" in industrial advertising. To summarize,

To summarize, in the industrial buying context, because of this complexity, it can be expected that no single type of factor group, that is, task-related variables alone, can completely contribute toward the decision-making process.

### Industrial

Low: The histogram in Figure 5 shows the frequency percentage of task and non-task variables in low risk industrial product advertisements. The frequency cum Chi Square table at the 0.05 confidence interval are shown in Tables XXVII and XXVIII.

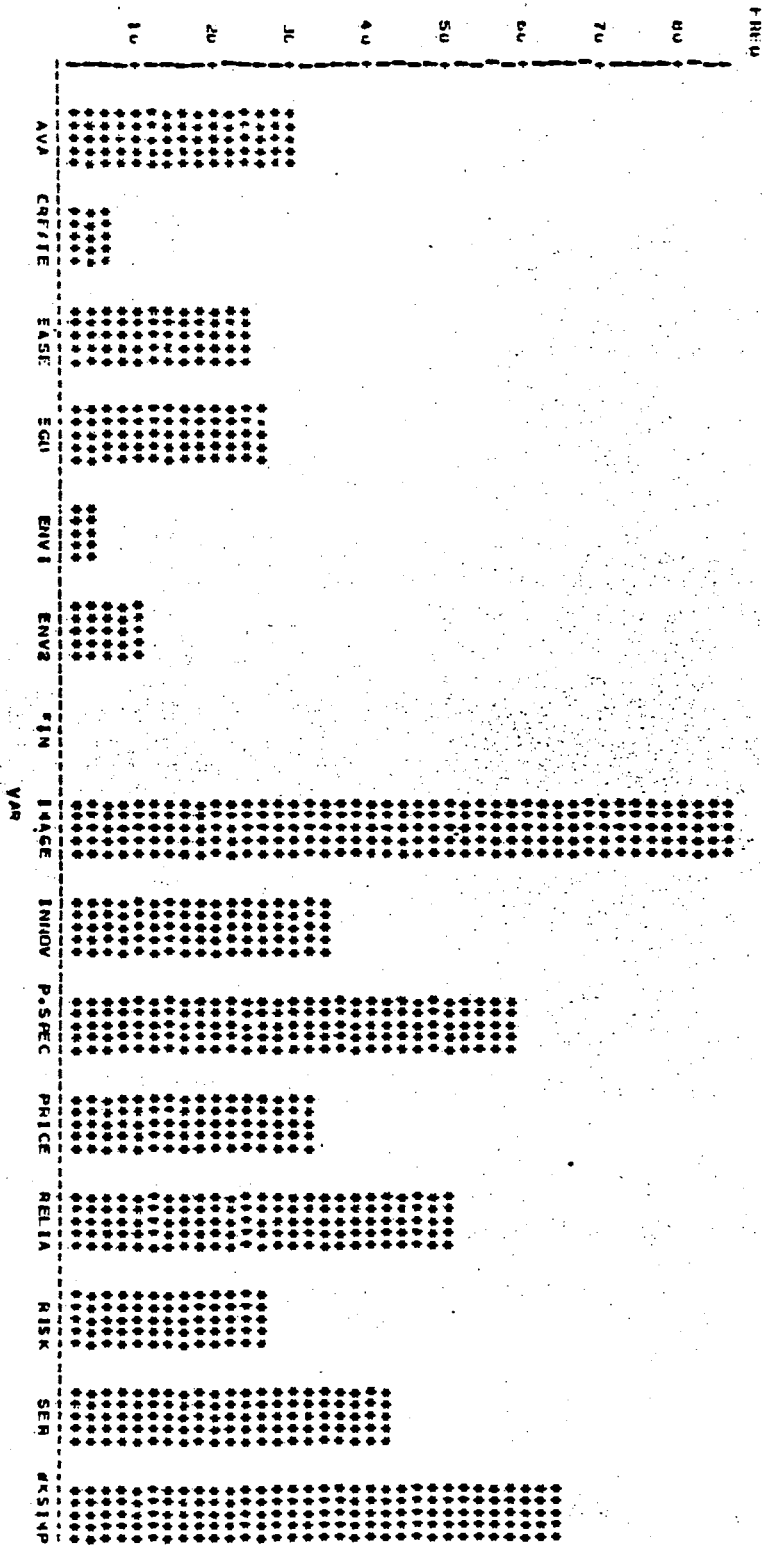


Fig. 5. Histogram: Industrial Low Risk, Ads

TABLE XXVII  
 NON TASK VARIABLES FREQUENCY:  
 INDUSTRIAL PRODUCTS

Variable	Freq. Low Risk	Chi. Sq. 0.05 Low Risk	Signi- ficant Differ?	Freq. High Risk	Chi.Sq. 0.05 High Risk	Signi- ficant Differ?
Image	85 %	49.00	Yes	90 %	64.00	Yes
Ego	25 %	25.00	Yes	52 %	0.16	No
Env I	4 %	.....	...	25 %	25.00	No
Env II	9	.....	...	12 %	.....	...
Wk. Simp	64 %	7.8	Yes	63 %	6.76	Yes
Risk	25 %	25.00	Yes	56 %	1.14	No
Innov	34 %	10.24	Yes	36 %	8.82	Yes
Creativ	6 %	.....	...	17 %	43.56	Yes

TABLE XXVIII

TASK VARIABLES FREQUENCY: INDUSTRIAL PRODUCTS

Variable	Freq. Low Risk	Chi. Sq. 0.05 Low Risk	Signi- ficant Differ?	Freq. High Risk	Chi.Sq. 0.05 High Risk	Signi- ficant Differ?
Price	31 %	14.44	Yes	40 %	4.0	Yes
Reliabili	49 %	0.04	No	73 %	21.16	Yes
Service	41 %	3.24	No	47 %	0.36	No
Specs	58 %	2.56	No	62 %	5.76	Yes
Finance	0 %	.....	.....	3 %	.....	...
Ease	23 %	29.16	Yes	40 %	4.0	Yes
Availa	30 %	16.00	Yes	16 %	46.24	Yes

Non-Task: The frequency occurrence of 5 out of 8, or 63 percent of the non-task variables measured are statistically significant. They are ranked in terms of their occurrence in the advertisements analyzed.

1. Image
2. Work Simplification
3. Innovation
4. Risk Reduction and Ego

These ranked as the top four non-task variables constituting the core of the non-task variables used on low risk industrial product advertising.

Task: The frequency occurrence of 3 out of 7, or 43 percent, of task variables measured as statistically significant. They are ranked in terms of their occurrence in the advertisements analyzed.

1. Price
2. Availability
3. Ease of Operation and Maintenance

These three ranked as the top three task variables constituting the core of the task variables used in low risk industrial product advertisements.

High: The histogram in Figure 6 shows the frequency percentage of task and non-task variables in high risk industrial products advertisements. The frequency cum Chi Square table at the 0.05 confidence interval are shown in Tables XXVII and XXVIII.

Non-Task: The frequency occurrence of 4 out of 8, or

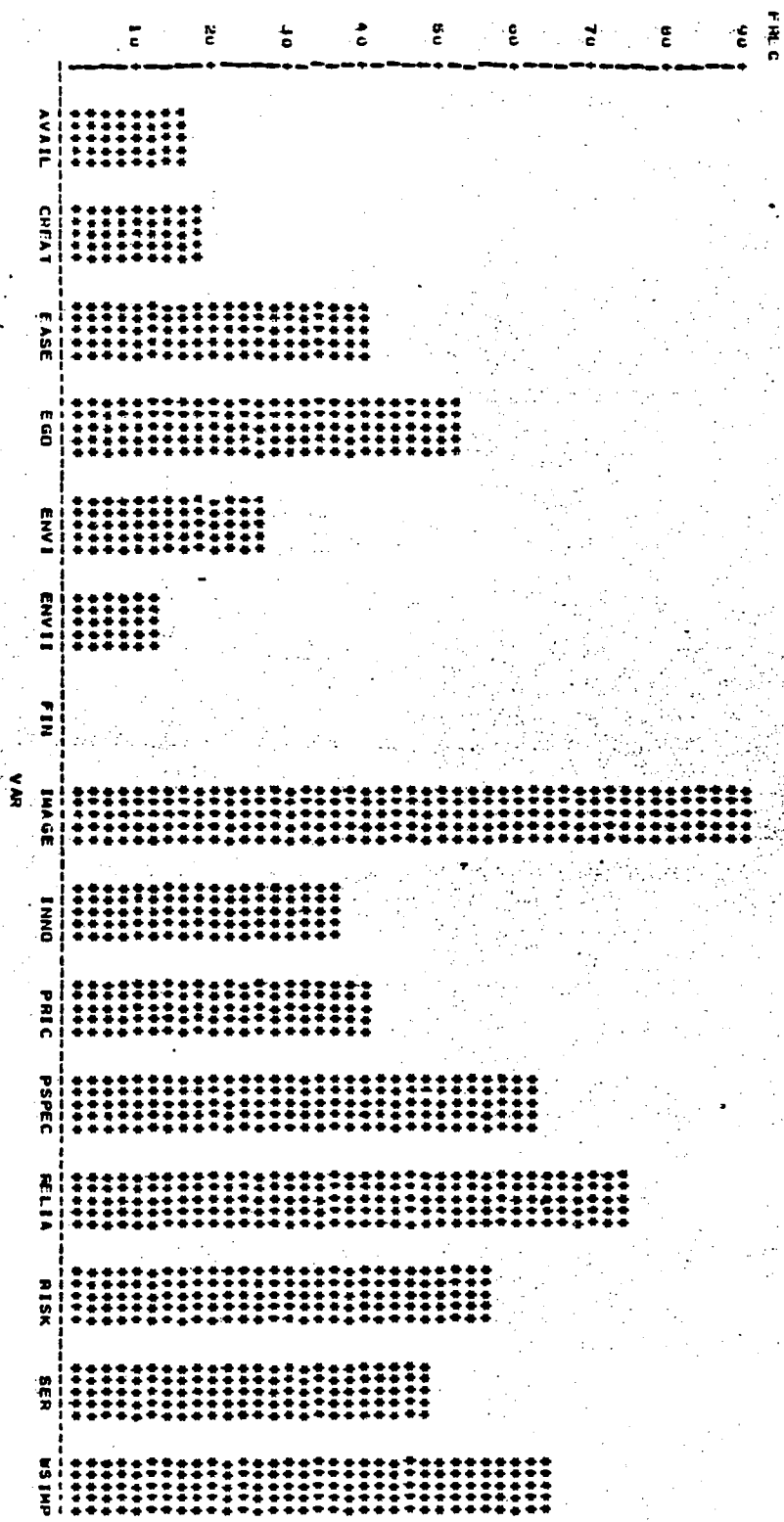


Fig. 6. Histogram: Industrial High Risk, Ads



50 percent of the non-task variables measured, are statistically significant. They are ranked in terms of their occurrence in the advertisements analyzed.

1. Image
2. Work Simplification
3. Innovation
4. Creativity

These four ranked as the top four non-task variables constituting the core of the non-task variables used in high risk industrial product advertising.

Task: The frequency occurrence of 5 out of 7, or 71 percent, of the task variables are statistically significant. They are ranked in terms of their occurrence in the advertisements analyzed.

1. Reliability
2. Specifications
3. Price and Ease of Operation and Maintenance
4. Availability

These four ranked as the top four constituting the core of the task-related variables in high risk industrial product advertising.

The others, which occur randomly, can be inferred to apply to certain specialized products; for instance, environment (physical) and environment (non-physical) apply to mostly chemical, fuel-related and electronic products and, perhaps, could possibly be considered core variables in that product category.

The variable service, which is present in nearly 40 percent of the advertisements analyzed, applies only to certain types of products. The variable finance is rarely, if ever, used in industrial product advertisements. This could be attributed to several reasons: one, the complex nature of financial arrangements, which sometimes include credit extension, might overlap into the region of price cutting and involve legal issues; second, because most of the advertisements were analyzed from 1983 publications, the impact of the post recession/recovery due to Reaganomics can be attributed to the poor frequency occurrence of this variable. It could also be an attempt by advertisers to divert attention from a sales feature that is beyond their present reach. Task and non-task variables in both high and low risk products are nearly normally distributed around image, which has the highest modal frequency.

As the risk involved increases, so does the complexity of the decision process. As results to Questions 3 and 4 indicate, the importance of both task and non-task variables are directly proportional to risk. High risk industrial product advertisements have 39.3 percent more non-task and 21 percent more task variables than low risk industrial products. Again, the higher percent of non-task oriented advertising stimuli, 39.3 percent, reinforces the concept that the industrial purchase function is multi-dimensional and reflects a much greater proportion of individual members' needs as opposed to the classical monolithic and impersonal

industrial advertising concepts. The higher the investment and risk, the wider the range of input variables required to make a purchase decision. Once again, this is diametrically opposed to the concept that in very high investment decisions a very narrowly structured path is followed.

High x Low. Figure 7 illustrates the dispersion curve to describe the difference between low risk and high risk industrial products' non-task advertising stimuli.

Non-Task. As can be seen from the curve, the non-task variables that exhibit the least dispersion in frequency of occurrence are:

1. Image
2. Work Simplification
3. Innovation

These three variables do not statistically differ in the frequency of occurrence in their respective sample populations. They are present in the core non-task advertising stimuli in both high and low risk industrial products. Hence, they can be inferred to constitute the core non-task stimuli in industrial advertising.

The frequency occurrence of the variable creativity/pleasure is negligible in low risk product advertising, but 17 percent of high risk product advertisements make this appeal, to the chief or the management man. This difference is significant statistically. This can be attributed to the greater scope for creativity in high risk purchase decisions.

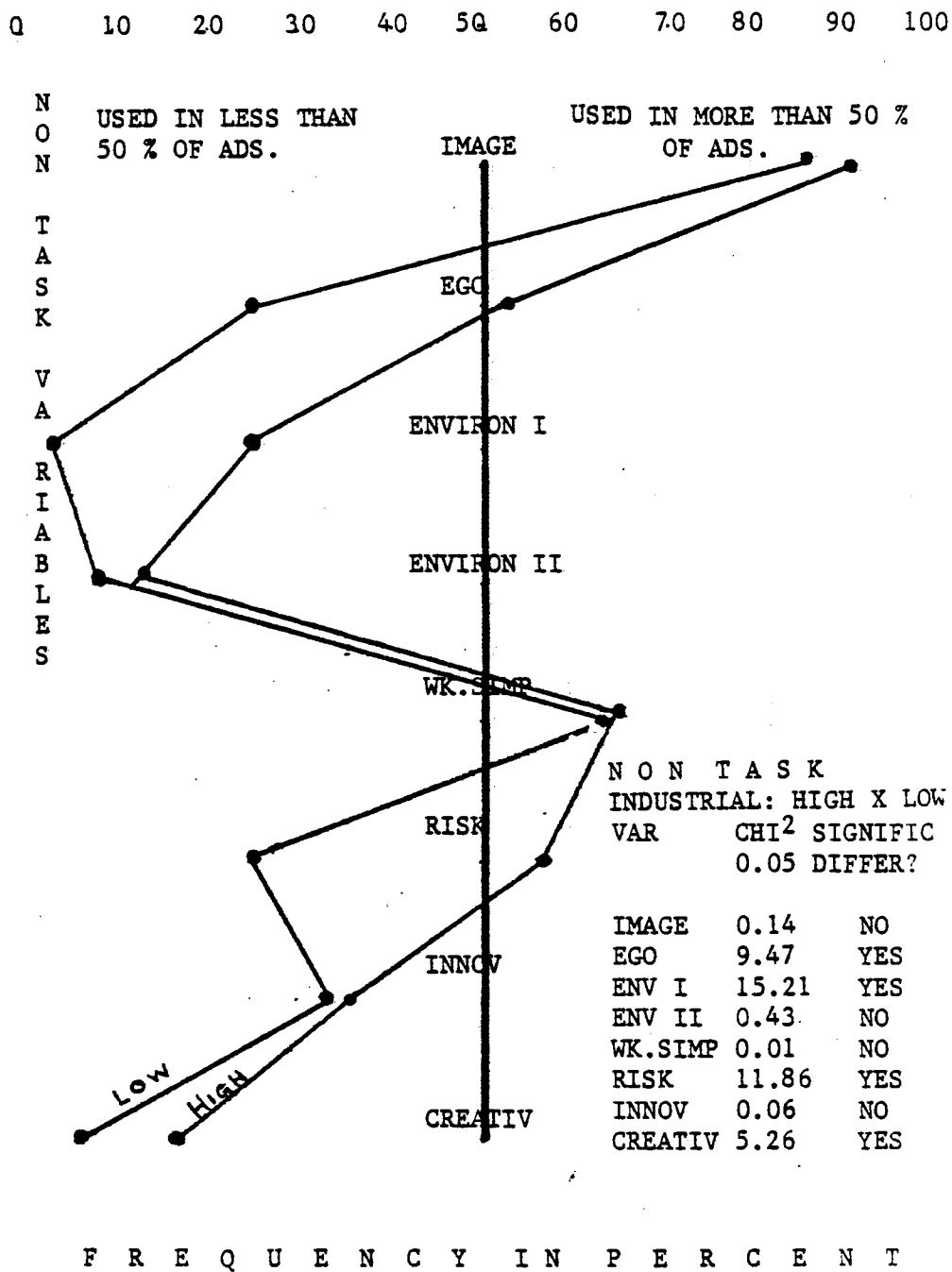


Fig. 7. Frequency in Percent of Industrial Nontask Variables

As can be expected the appeal to help reduce personal risk in the purchase decision process is significantly higher in high risk products, by about 45 percent. Similarly, the variable Environment I is significantly higher in high risk advertisements by nearly six times. The frequency of the variable Ego in high risk advertisements is higher by about 48 percent.

Task. The dispersion curve for task variables shows the least dispersion in frequency of occurrence for:

1. Price
2. Service
3. Specifications

These three variables can be considered to constitute the core task variables in industrial advertisements; the variable Service is not significant at the 0.05 level, but is significant at the 0.10 level of confidence interval in the low risk category. The frequency of the variable Availability is twice in the low risk category. Because many periodically consumable supplies and parts are grouped in the low risk category, keeping inventory at optimum levels is a prime concern. Therefore, ready availability is a positive attribute associated with a dependable supplier. Ease of maintenance and operation is stressed twice as much in the high risk category, where most products are sophisticated and high technology-oriented. The variable Reliability has 67 percent more frequency occurrence in the high risk category, where by nature of the scale of operations and investments, product

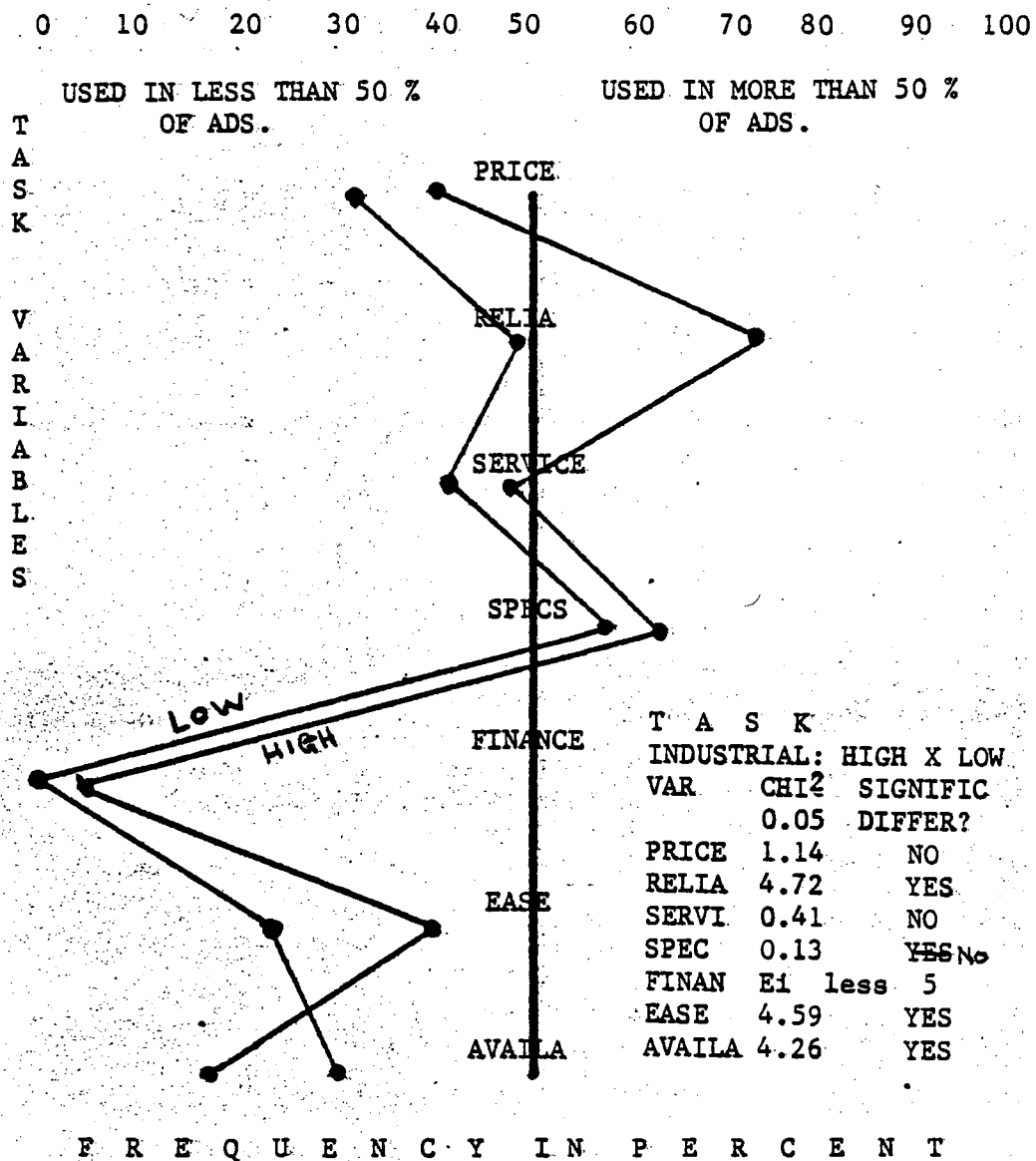


Fig. 8. Frequency in Percent of Industrial Task Variables

operational reliability carries considerable weight.

### Consumer

In high risk consumer advertisements, the role of non-task advertising stimuli exceed those of task. High risk products in classical advertising literature are referred to as "hard" or consumer durables because they involve considerable investments in terms of the family budget; in some instances they represent an investment for a lifetime, or at least for as long as a decade. Examples of such products are homes and expensive furniture. Once again, empirical data in this study reveals that substantial investment decisions do not involve price and product features only as the major evaluative criteria. The consumer attempts to reduce his state of tension while solving complex purchase problems by increasing his expectancy for the quantum of decision variables, while processing the sales message. Also, the investment-function role of the product represents only one dimension of the product's role. Another dimension of the product function is to fulfill the consumer-perceived role, or the consumer-assigned product attribute/need. That is,

Consumers have an enormous capacity for acquiring motives, and these numerous motives often manifest themselves in simultaneous clusters rather than single-file entries. Thus, the purchase of most goods probably does not involve a single motive, but because of the complex symbolic significance of goods, they are purchased to satisfy multiple motivators.

In life insurance, for instance, it has been found that

most coverage does not reflect income and family situation, but rather guilt and esteem. And a life insurance policy involves a high risk purchase decision. Similarly, results to Question 6 show that non-task variables exceed task variables in the low risk category, where products are designed to meet not only immediate biological and security needs, but also symbols. A hair spray is also a symbol for charm and sex appeal, and maybe a status symbol for the bathroom sink.

Low. The histogram in Figure 9 shows the frequency, percentage of task and non-task variables in low risk consumer product advertisements. The frequency cum Chi Square table at the 0.05 confidence interval are shown in Tables XXIX and XXX.

Non-Task. The frequency occurrence of 4 out of 8, or 50 percent, of the non-task variables measured are statistically significant. They are ranked in terms of their occurrence in the advertisements analyzed.

1. Image
2. Ego
3. Creativity
4. Innovation

These four ranked as the top four non-task variables constituting the core of the non-task variables used in low risk consumer product advertising.

Task. The frequency occurrence of 5 out of 7, or 71



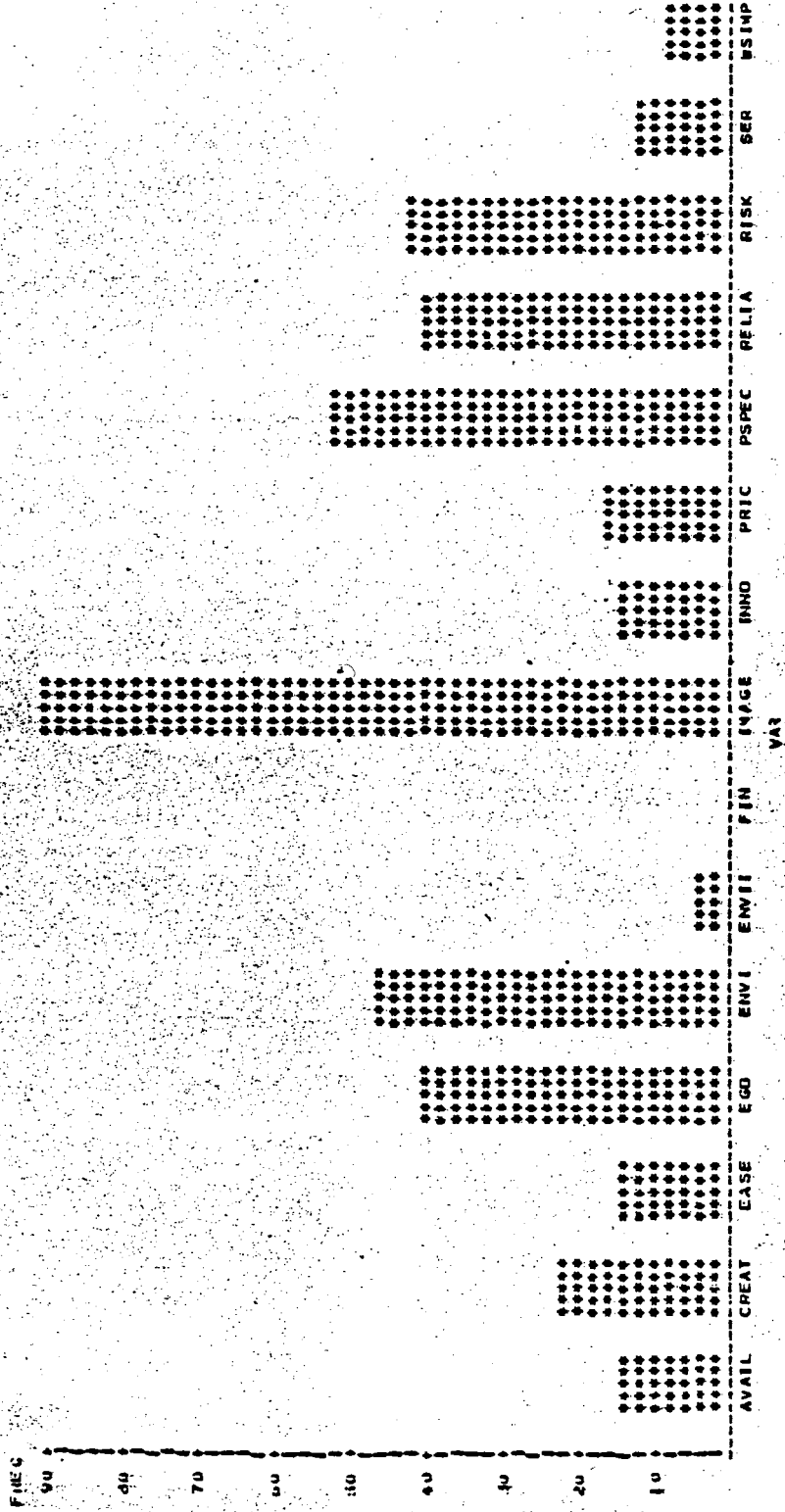


Fig. 9. Consumer Low Risk. Ads

TABLE XXIX  
 NON TASK VARIABLES FREQUENCY:  
 CONSUMER PRODUCTS

Variable	Freq. Low Risk	Chi. Sq. 0.05 Low Risk	Signi- ficant Differ?	Freq. High Risk	Chi.Sq. 0.05 High Risk	Signi- ficant Differ?
Image	89 %	60.84	Yes	87 %	54.76	Yes
Ego	40 %	4.00	Yes	48 %	0.16	No
Env I	46 %	0.64	No	20 %	36.00	Yes
Env II	4	.....	...	19 %	38.44	Yes
Wk. Simp	8 %	.....	...	39 %	4.84	Yes
Risk	41 %	3.24	No	39 %	4.84	Yes
Innov	14 %	51.84	Yes	29 %	17.64	Yes
Creativ	21 %	33.64	Yes	40 %	4.00	Yes

TABLE XXX  
 TASK VARIABLES FREQUENCY: CONSUMER PRODUCTS

Variable	Freq. Low Risk	Chi. Sq. 0.05 Low Risk	Signi- ficant Differ?	Freq. High Risk	Chi.Sq. 0.05 High Risk	Signi- ficant Differ?
Price	16 %	46.24	Yes	28 %	19.36	Yes
Reliabili	39 %	4.84	Yes	44 %	1.44	No
Service	11 %	60.84	Yes	25 %	25.00	Yes
Specs	51 %	0.04	No	57 %	1.96	No
Finance	0 %	....	....	3 %	....	...
Ease	13 %	54.76	Yes	27 %	21.16	Yes
Availa	13 %	57.76	Yes	32 %	12.96	Yes

percent, of task variables measured are statistically significant. They are ranked in terms of their occurrence in the advertisements analyzed.

1. Reliability
2. Price
3. Ease and Availability
4. Service

These four variables ranked as the top four variables constituting the core of task variables used in low risk consumer product advertising.

High. The hitogram in Figure 10 shows the frequency, percentage of task and non-task variables in high risk consumer product advertisements. The frequency cum Chi Square table at the 0.05 confidence interval are shown in Tables XXIX and XXX.

Non-Task. The frequency occurrence of 7 out of 8, or 88 percent, of non-task variables measured are statistically significant. They are ranked in terms of their occurrence in the advertisements analyzed.

1. Image
2. Creativity
3. Work Simplification and Risk Reduction
4. Innovation
5. Environment I
6. Environment II

These six ranked as the top six variables constituting

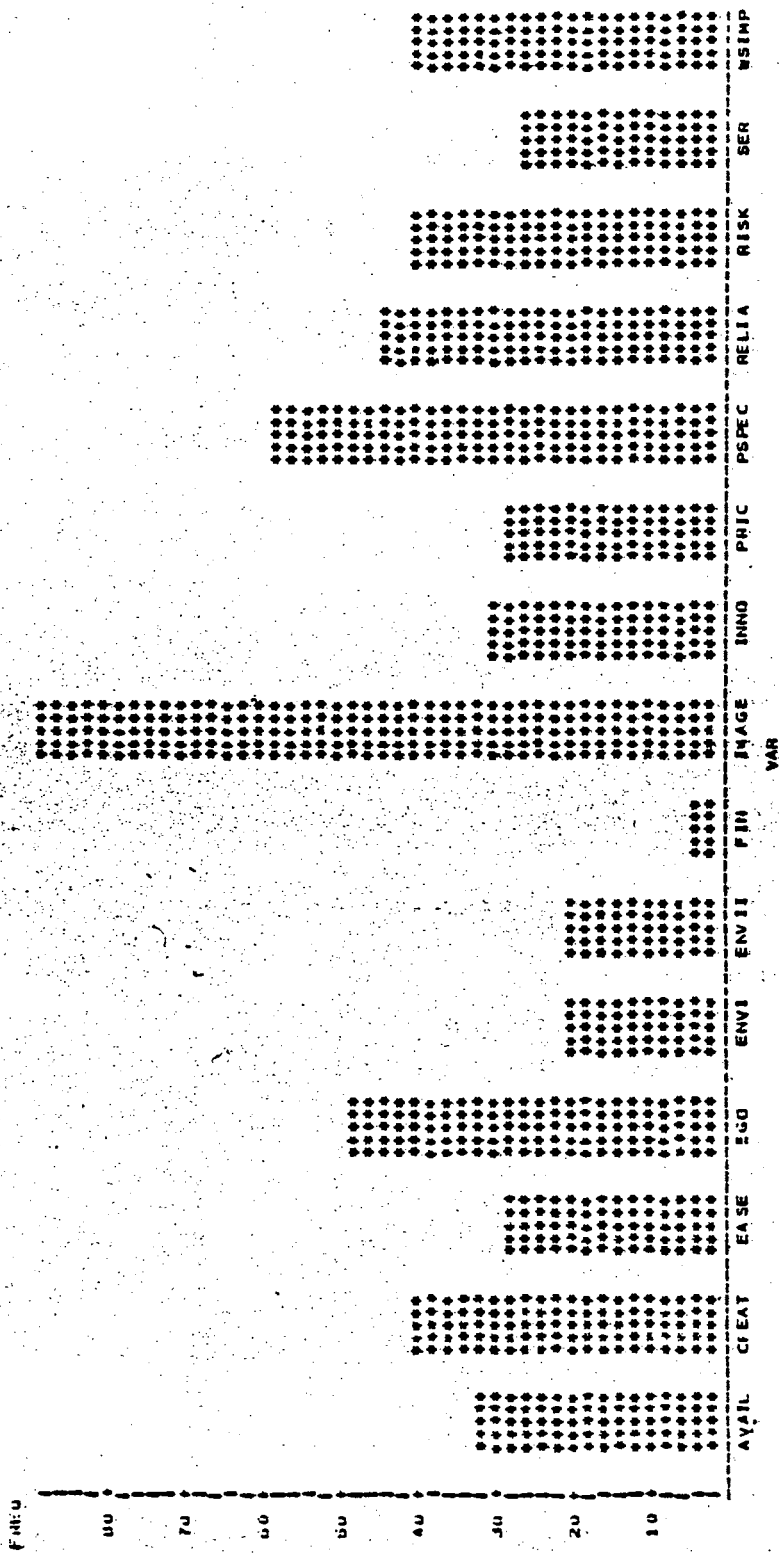


Fig. 10. Consumer High Risk, Ads

the core of non-task variables used in high risk consumer product advertising.

Task. The frequency occurrence of 4 out of 7, or 57 percent, of task variables measured are statistically significant. They are ranked in terms of their occurrence in the advertisements analyzed.

1. Price
2. Service
3. Ease
4. Availability

These four ranked as the top four variables constituting the core of task variables used in high risk consumer product advertising.

In the low risk consumer category, the non-task variable Risk Reduction is significant at the 0.01 level of confidence, with a frequency occurrence of 41 percent. The type of risk involved with this category of product purchase is mostly social risk, as in the instance of deodorants. The other variables, Environment I, Environment II, and Work Simplification, which occur randomly, are product specific. The variable Work Simplification has a negligible frequency of occurrence, as can be expected in the low risk category.

In the low risk category, the task variables Product Specification and Finance have negligible frequency. Products in this category are purchased periodically and are very familiar with very little distinguishable differences in

specifications. The variable Finance is not relevant in this category.

In the high risk consumer product category, the non-task variable Ego occurs randomly. However, the variable Ego is present in 37 percent of the ads with the variable Work Simplification, and in 37 percent of the ads with the variable Risk Reduction. The Chi Square values at 0.05 level of confidence are 3.0 and 10.096, respectively. This is a significant correlation between the variable Ego and the variables Work Simplification and Risk Reduction.

#### High x Low

Parallel to industrial data, consumer data also indicate that as the risk involved increases, so does the complexity of the decision process. This is reflected in Questions 7 and 8. The frequency of both task and non-task variables is proportional to risk categorization. High risk consumer product advertisements have 22 percent more non-task variables than low-risk product advertisements, and 51 percent more task variables than those in low risk product advertisements.

Non-Task. Figure 11 illustrates the dispersion curve to describe the differences between low risk and high risk consumer products' non-task advertising stimuli. As can be seen from the curve, the non-task variables that exhibit the least dispersion in frequency of occurrence are:

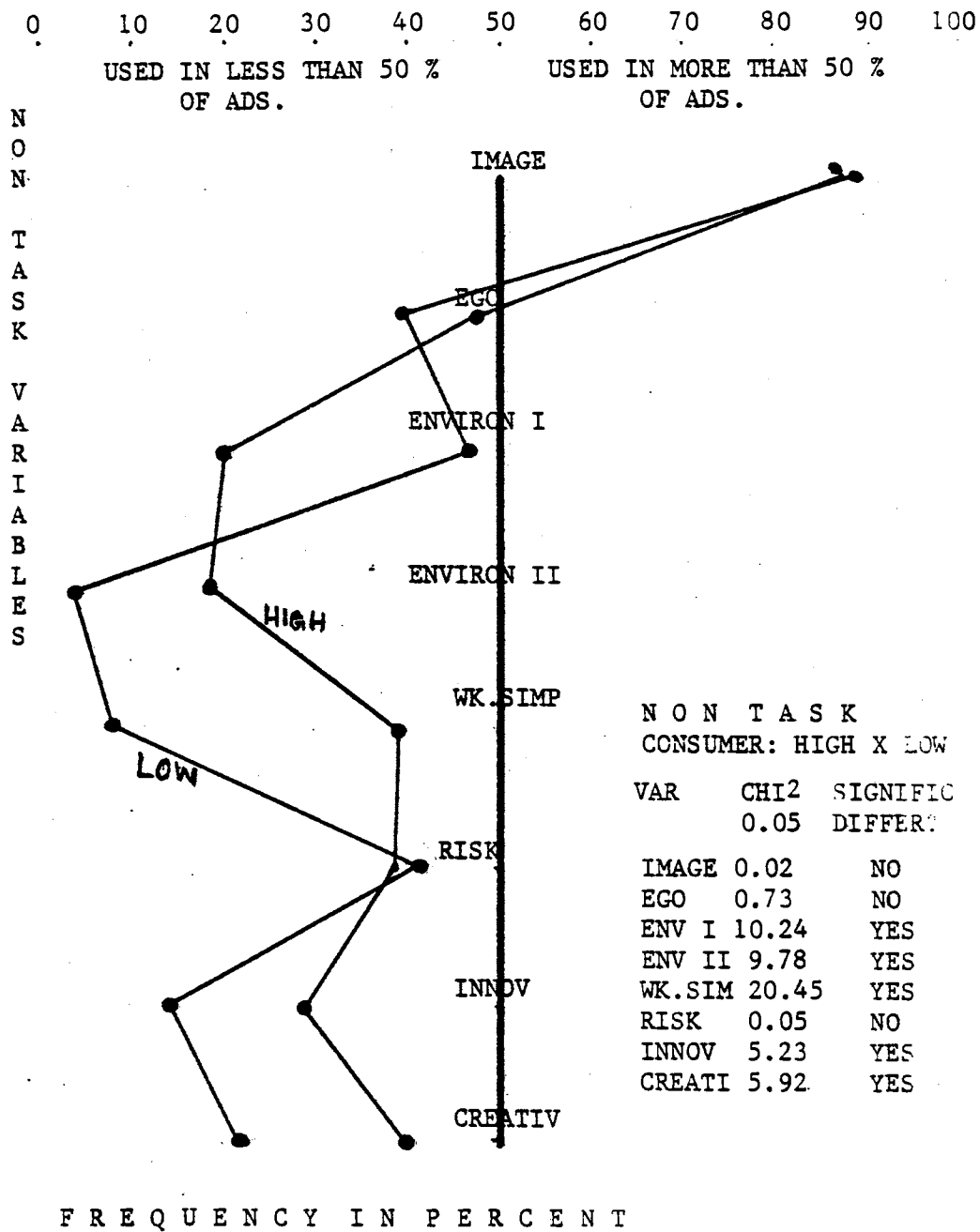


Fig.11. Frequency in Percent of Consumer Nontask Variables



1. Image
2. Ego
3. Risk Reduction

These three variables do not statistically differ in the frequency of occurrence in their respective sample populations. They are present in the core non-task advertising stimuli in both high risk and low risk consumer products. Hence, they can be inferred to constitute the core non-task stimuli in consumer product advertising.

The variable Creativity in the high risk category is present in 40 percent of ads and in only 21 percent of the low risk category. This statistically significant difference parallels the industrial category, where the appeal to creativity rose with the product risk. The variable Innovation is present in 29 percent of the high category and in only 14 percent of the low risk category. However, in industrial advertising this variable did not differ among the risk categories. The variable Work Simplification is present in 39 percent of the high risk and 8 percent of the low risk category. There was no significant difference for this variable in industrial advertising. Concern for physical environmental issues are exhibited in low risk products more than in high risk; the frequencies are 46 percent and 20 percent, respectively. This can be explained only on the premise that consumers respond to environmental issues only when they are not inconvenienced too much. Perhaps it suggests that consumers are willing to buy a hair spray with a lower ionization factor,

a recyclable can of pop, or soap with bio-degradable chemicals, but are not willing to consider this issue while buying an automobile with lower emission standards.

Task. Figure 12 illustrates the dispersion curve to describe the difference between low risk and high risk consumer products' task advertising stimuli. As can be seen from the curve, the task variables that exhibit the least dispersion in frequency of occurrence are:

1. Price
2. Reliability
3. Product Specification

The three variables, Price, Reliability and Specifications, constitute the core of task variables in consumer ads.

The variable Availability is present in 30 percent of the high risk ads and in 13 percent of the low risk ads. This is the exact opposite of industrial ads, where high risk ads had a higher percentage of this variable. The variable Ease of Operation and Maintenance has a frequency of 27 percent in the high risk and 13 percent in the low risk category, as can be expected. The variable Service has a frequency of 25 percent in the high risk and 11 percent in the low risk category, also an understandable frequency occurrence.

Results for Question 10 show that there is no statistically significant difference in frequency of non-task variables between high risk industrial and high risk consumer product advertisements. Also, results for Question 12 show

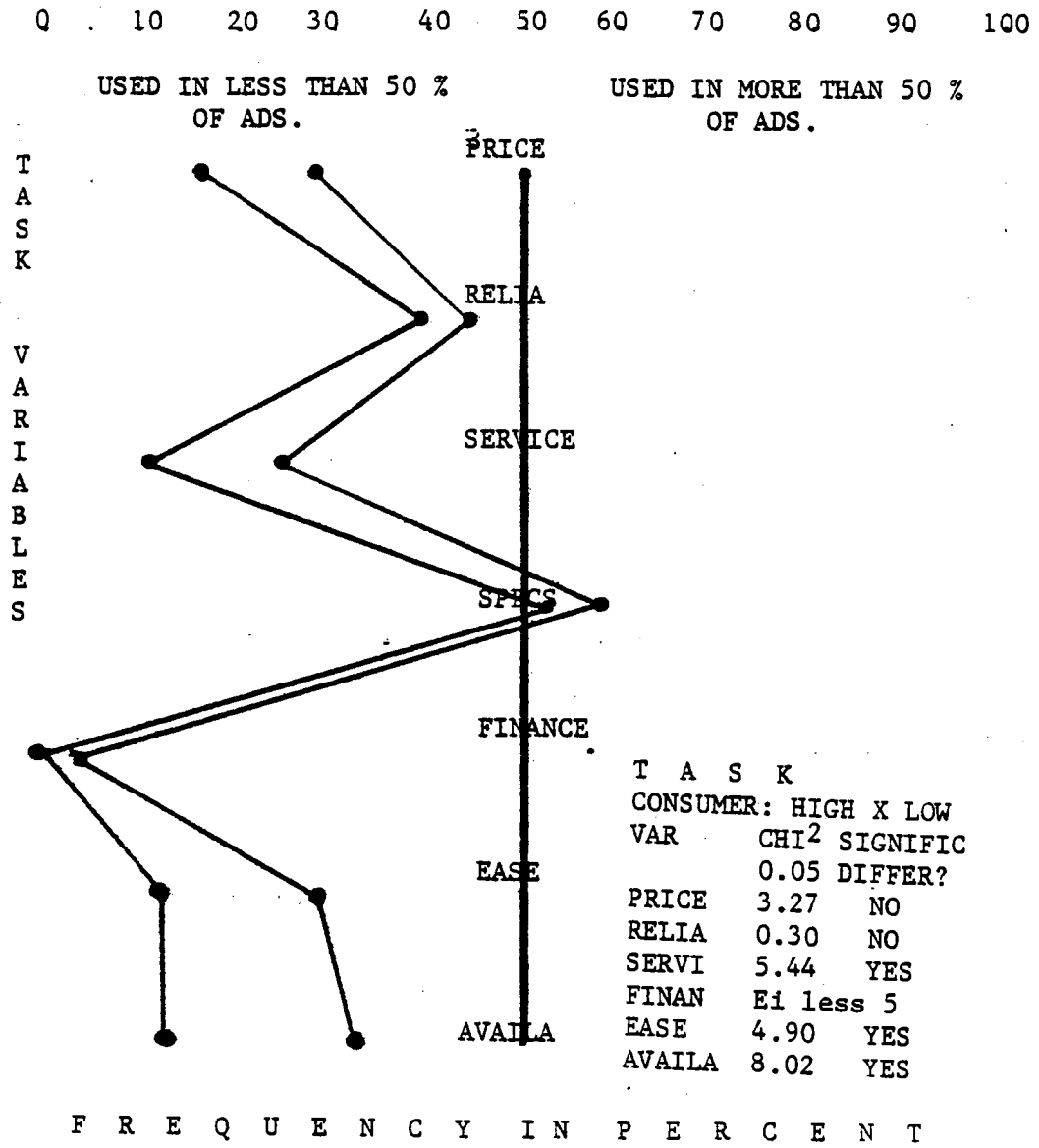


Fig.12. Frequency in Percent of Consumer Task Variables

that there is no statistical difference in frequency of non-task variables between low risk industrial and low risk consumer product advertisements. This implies that non-task advertising stimuli are considered equally important in both industrial and consumer advertisements.

Results for Question 9 show that task variables in industrial high risk advertisements exceed those in high risk consumer product advertisements. Also, results for Question 11 show that the frequency of task variables in low risk industrial products exceed those in low risk consumer product advertisements.

As inferred earlier, the industrial buying process is complex because

... complexity in the buying decision process reflects several factors: the influence of the formal organization itself; the large number of persons involved; the complex technical and economic factors that must be considered; the environment in which the firm operates; and the frequently large sums of money involved in the transaction.

Because this task is important, the same man who, as a consumer, settles for plain shaving cream if he can't find lemon-lime, will be unwilling, as an industrial buyer, to accept a bolt with threading 30 to the inch when his specifications call for 28.

Table XXXI shows the frequencies of task variables in low risk industrial and consumer product advertising. In the low risk category the following task variables in industrial product advertising exceed those in consumer product adver-

TABLE XXXI

TASK: INDUSTRIAL X CONSUMER (LOW)

Variable	Ind.Low	Cons.Low	Chi.Sq	Significant Freq Differ?
Price	31 %	16 %	47.9	Yes
Reliability	49 %	39 %	1.14	No
Service	41 %	11 %	17.31	Yes
Specifications	58 %	51 %	0.45	No
Ease of Oper. & Maintenance	23 %	13 %	2.78	No
Availability	30 %	13 %	6.72	Yes

TABLE XXXII

TASK: INDUSTRIAL X CONSUMER (HIGH)

Variable	Ind.High	Cons. Low	Chi.Sq	Significant Freq Differ?
Price	40 %	28 %	2.12	No
Reliability	73 %	44 %	7.19	Yes
Service	47 %	25 %	6.72	Yes
Specifications	62 %	57 %	0.21	No
Ease of Oper. & Maintenance	40 %	27 %	2.52	No
Availability	16 %	32 %	5.33	Yes

tising:

1. Price
2. Service
3. Availability

In the high risk category the following task variables in industrial ads exceed those in consumer ads:

1. Reliability
2. Service
3. Availability

The core task variables in industrial ads that differ from those in consumer ads are Service and Availability. As Webster points out, the product in industrial selling is a variable and not a given; the given in industrial marketing is the customer, his needs and wants.

The resulting data to the twelve questions clearly indicate that industrial and consumer advertising differ, not in the elemental content of sales communication structure, but in the degree or intensity of component communications elements.

13. Does the level of difficulty of reading advertising copy, measured in terms of the Flesch index, differ between high risk industrial and low risk industrial product advertising? How about high risk and low risk consumer copy?

The mean Flesch index for high risk industrial product copy is 53.98; for low risk industrial copy, 60.32. For high risk consumer copy it is 76.78; for low risk consumer copy, 67.79.

The higher the Flesch index, the easier the readability. Table XXXIII shows the results of a single factor analysis of variance. The probability of obtaining mean scores as different as those among high risk industrial, low risk industrial, high risk consumer, and low risk consumer would occur by chance less than once in 100.

A gap test was run to find if statistically significant differences exist between industrial high risk and low risk, consumer high risk and low risk; industrial high and consumer high risk; industrial low and consumer low risk advertising copy. The results are shown in Table XXXIV.

As can be seen from Table XXXIV, advertising copy can be ranked in terms of ease of readability as follows:

1. Consumer high risk (Flesch index: 76.78)
2. Consumer low risk (Flesch index: 67.79)
3. Industrial low risk (Flesch index: 60.32)
4. Industrial high risk (Flesch index: 53.98)

The Flesch index converted to high school grade level equivalent reading skills is shown in graph form in Figure . High risk consumer product advertising copy is equivalent to three decimal places above the seventh grade (Grade 7.3). It is the easiest copy.

Low risk consumer product advertising product copy is equivalent to the reading skills expected of an individual who has been halfway through the eighth grade in high school. This is the next easiest copy.

Overall, as may be expected, consumer advertising copy



is much easier to read than industrial advertising. In industrial situations, members of the decision-making unit are generally better educated. In fact, in a modern corporation executives are inevitably college graduates or graduates of professional institutions.

From the data we infer that because of the greater dissonance involved in the purchase of high risk consumer products, high risk consumer product advertising copy is written to make information as easy to comprehend and as explicit as possible. It would seem that less pain is taken in writing copy for low risk consumer product advertisements.

Among industrial copy, low risk product copy is equivalent to nearly twelfth grade (Grade 11.8). High risk purchase decisions in industry are clinched by high power executives, who are mostly among the highest educated in most corporations, especially in high-tech industries where many executives hold graduate and doctoral degrees.

From the research findings of this study it may be deduced that sales communications for industrial and consumer products, both high risk and low risk, can be structurally broken down and represented as a function of non-task and task variables. Figure 13 shows a structured representation of non-task and task variables in any given advertisements.

In a given advertisement, these variables can either have the value 1 or 0. The value "1" if they are present; the value "0" if they are not present. Let "y" represent the expected response by the decision-making unit due to a

TABLE XXXIII  
FLESCH INDEX: ANOVA

Source of Variance	df	Sum of Squares	Mean Square	F-Ratio	Probability of occurring by chance
Between groups	3	2873.45	957.82	8515.18	0.01
Within groups	36	4.05	0.11		0.01
Total	39	2877.5			

TABLE XXXIV  
FLESCH INDEX: GAP TEST

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S.E. = 0.1483	DF = 36	F = 2.46	Alpha = 0.01	Critical Difference = 0.364
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Ind.High (53.98) minus Ind.Low (60.32) = -6.34	p. less than 0.01
Con.High (76.78) minus Con.Low (67.79) = 8.99	p. less than 0.01
Ind.High (53.98) minus Con.High(76.78) = 22.8	p. less than 0.01
Ind.Low (60.32) minus Con.Low (67.79) = 7.47	p. less than 0.01

---

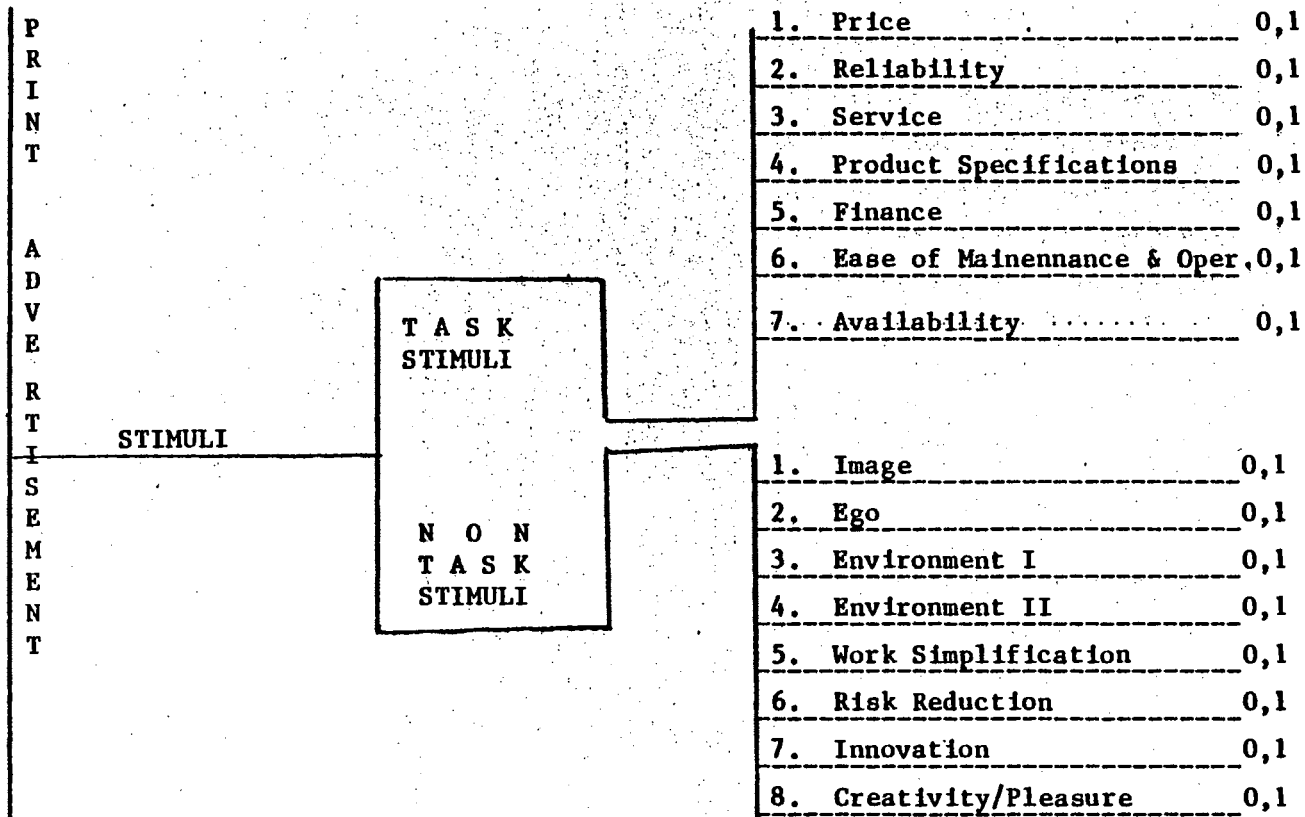


Fig.13. Print Advertisement: Structural Representation

print advertisement. Then, the nontask and task stimuli, controlled by the seller, are the independent variables that affect "y." That is, "y" is a function of nontask and task variables. Using this binary notation, the value "1" is assigned to a variables that has a statistically significant frequency count, that is, if the presence of a variable in that sample is statistically significant. The value "0" is assigned to statistically insignificant frequency counts.

Using the above notation, teh sales communication equation for an average or atypical low risk industrial product advertisement derived from this research study can be written as:

$$\begin{aligned}
 Y_{IL} &= f \text{ Image (1) + Ego (1) + Env I (0)} \\
 &= \text{Env II (0) + Wk Simp (1) + Risk (1)} \\
 &+ \text{Innov (1) + Creativity (0) + Price (1)} \\
 &+ \text{Relia (0) + Service (0) + Specs (0)} \\
 &= \text{Finance (0) + Ease (0) + Ease (1) + Avail (1)} \\
 &+ C \text{ (where C = correction factor, or the} \\
 &\text{particular combination of other task and nontask} \\
 &\text{variables unique to a particular advertising need)}
 \end{aligned}$$

The equation for high risk industrial product advertisements is:

$$\begin{aligned}
 Y_{HL} &= f \text{ Image (1) + Ego (0) + Env I (1) + Env II (0)} \\
 &+ \text{Wk Simp (1) + Risk (0) + Innov (1)} \\
 &+ \text{Creativity (1) + Price (1) + Relia (1)} \\
 &+ \text{Service (0) + Spec s (1) + Finance (0) + Ease (1)} \\
 &+ \text{Avail (1) + C}
 \end{aligned}$$

The equation for low risk consumer product advertisements is:

$$\begin{aligned}
 Y_{CL} = & f \text{ Image (1) + Ego (1) + Env I (0) + Env II (0)} \\
 & + \text{Wk Simp (0) + Risk (1) + Innov (1)} \\
 & + \text{Creativity (1) + Price (1) + Relia (1)} \\
 & + \text{Service (1) + Specs (0) + Finance (0)} \\
 & + \text{Ease (1) + Avail (1) + C}
 \end{aligned}$$

The equation for high risk consumer product advertisements is:

$$\begin{aligned}
 Y_{CH} = & f \text{ Image (1) + Ego (0) + Env I (1) + Env II (1)} \\
 & + \text{Wk Simp (1) + Risk (1) + Innov (1) +} \\
 & + \text{Creativity (1) + Price (1) + Relia (0)} \\
 & + \text{Service (1) + Specs (0) + Finance (0)} \\
 & + \text{Ease (1) + Avail (1) + C}
 \end{aligned}$$

Let  $NT_1$ , through  $NT_8$ , represent the nontask variables, Image through Creativity. Let  $T_1$  through  $T_7$  represent the task variables Price through Availability. Now, above four equations were representative of each product category, the general equation of advertising stimuli for print advertisements can be represented as follows:

$$Y = k_{NT_j} = k_{T_i}$$

$$j=1 \quad i=1$$

$$\text{with } k=8 \quad L=7$$

The sales communications equation for a particular product advertisement can be arrived at by plugging in the

requisite task and nontask variables. This is done by assigning the values "0" and "1," as the case may be.

## CHAPTER V

### RECOMMENDATIONS AND CONCLUSIONS

This study attempted to unify sales communications as practiced in industrial and consumer markets by developing the purchase decision models.

Both the industrial and consumer models were treated by the same set of variables. These variables explained the entire gamut of sales stimuli and measured the varying intensity of each variable; intensity is seen as being proportional to the frequency of the respective variable.

The sales communication equation developed in the previous chapter can be used as a yardstick to measure any print advertisement from one unique perspective. In a very general way, the value of the "Y" function - an arithmetic count - can serve to test or explore the communications potency of any given print advertisement. The purpose of such a test may be more in the nature of diagnostic rather than creative treatment.

#### Recommendations

An attempt was made to relate copy readability or the Flesch index to each type of task and non-task variable. A general multiple regression model was run with the Flesch score as dependent variable and the frequency of task and



non-task variables as the independent variables. The "F" ratio was not found significant even at the 15 percent confidence level. The "BLUE" values or the best linear unbiased estimates did not lend themselves to any meaningful interpretation or fall into an explainable pattern. This researcher attributes the "bad fit" to the diversity of the products analyzed. It may be reasonable to expect that a Flesch score for a given genre of products may throw light within that specified product category. If, for instance, ads for men's wear were content analyzed and the Flesch scores recorded, then the ease or difficulty of a given set of task and non-task variables can be determined. Then, in the next stage, the variable or the stimuli with the low beta values can be identified as creating "high noise" or "static" and appropriate remedial measures can be taken by the copy department. This problem may be researched for each set of product categories.

Similarly, the frequency for specific types of task and non-task variables, significant for each product category, can be researched and a table or data base may be built. This will aid in creating more effective ads.

Further, because of the macro-scale of this study, some variables incorporated several closely allied sets of stimuli. A more detailed study at sub-macro level for each risk category is bound to shed a wealth of complementary data for fine tuning the sales pitch. For instance, the variable image can be split into several non-task variables appropriate to a

given product range and more subtle nuances of this set of stimuli can be determined and exploited profitably. This approach is equally applicable to task variables.

Although six physical variables were developed, it was found that due to the diversity and range of products analyzed no significant patterns of identity emerged. Overall, the following inferences can be drawn:

1. The use of a unique selling proposition or U.S.P. in the headline is more prevalent in consumer rather than in industrial ads. This is true for both types of risk categories.

2. Consumer ads seem to stress more on product illustration than industrial ads. The frequencies for low risk and high risk consumer ads were 99 percent and 90 percent; for low risk and high risk industrial ads, 67 percent and 71 percent, respectively.

3. Illustration of explicit sexual themes in ad layout was greater in consumer ads. The frequencies were 28 percent and 18 percent in low and high risk consumer ads, respectively. The frequency in the industrial category was negligible.

4. Although the variable color was subdivided into three levels, no discernible data was gathered. Again, this can be attributed to the range of the study.

5. Similarly, the variables bleed and size did not shed any information relevant for interpretation.

These physical variables, however, can be used at sub-macro level analysis, and should be incorporated as they have

direct bearing on production costs of ad layouts.

### Conclusions

It is the belief of this researcher that by using the same set of task and non-task variables a framework for further study in terms of a general communications model can be identified. This study may be deemed to have succeeded in terms of formalizing the variables and laying down certain distinct and discernible rules for risk categorization. But the variables identified by a theoretical model need to be tested dynamically on the field. Some kind of feedback from the message receiver will help to establish whether the variables are interpreted by the receiver in the mode they are intended. An experimental study in a "test market" or an academically simulated "test market" should shed interesting data. Such data will be of vital use in adapting or significantly altering the theoretical model built by this static empirical study.

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APPENDIXES

APPENDIX A  
HOW INDUSTRIAL DIFFER FROM  
CONSUMER MARKETING

# Qiana®

*Because it's time you did something nice for yourself.*

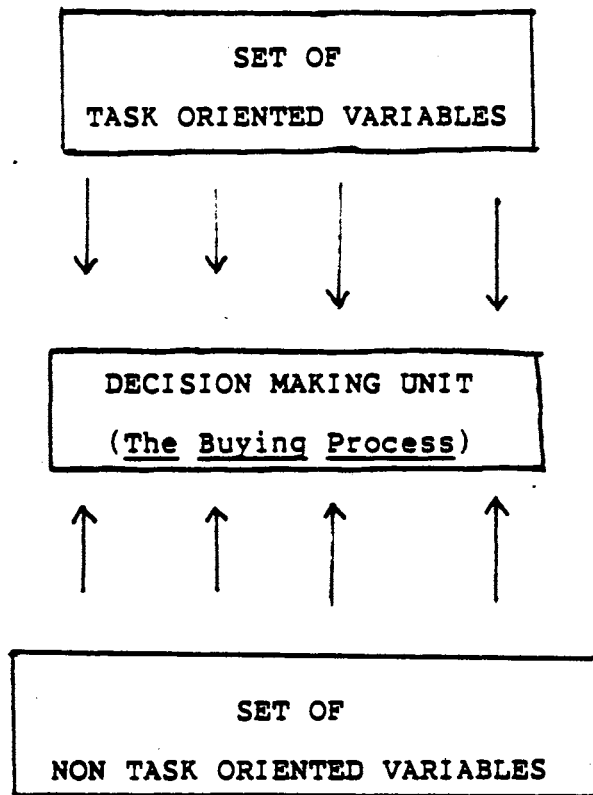


On foot registered trademark. On foot mark does not indicate or suggest



"Qiana". It's a most fabulous feeling to touch and to wear. Wear it and marvel that luxury like this can be practical, too. Shows: Satevich dressing by Felts Arbeco. In shimmering folds of woven Qiana® nylon.

APPENDIX B  
SALES COMMUNICATION  
STIMULI FIELDS



APPENDIX C  
FORTRAN SOURCE CODE

```

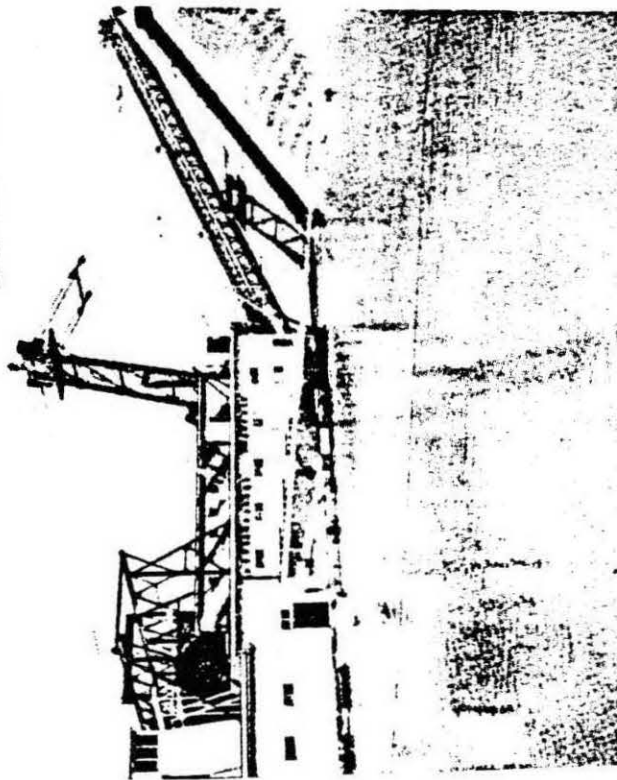
$JOB          .TIME=(0.5)
1  DIMENSION A(102,23)
2  CHARACTER L(80),BL
3  DATA BL /'1'/
4  READ,IR,IC
5  DO 10 J=1,IR
6  READ (5,6) (L(I),I=1,80)
7  6  FORMAT (B0A1)
8  DO 20 K=1,IC
9  IF (L(K) .EQ. BL) GO TO 40
10 A(J,K)=0.0
11 GO TO 20
12 40 A(J,K)=1.0
13 20 CONTINUE
14 10 CONTINUE
15 SUM=0.0
16 DO 50 I=1,IR
17 DO 60 J=1,IC
18 SUM =SUM+A(I,J)
19 60 CONTINUE
20 A(I,J)=SUM
21 A(I,J+1)=SUM**2
22 SUM=0.0
23 50 CONTINUE
24 SUM=0.0
25 M=IC+2
26 DO 70 I=1,M
27 DO 75 J=1,IR
28 SUM=SUM+A(J,I)
29 75 CONTINUE
30 A(IR+1,I)=SUM
31 A(IR+2,I)=SUM**2
32 SUM=0.0
33 70 CONTINUE
34 STP4=A(IR+1,IC+2)/FLOAT(IC)
35 STP5=A(IR+2,IC+1)/FLOAT(IC*IR)
36 STP6=A(IR+1,IC+1)-STP5
37 STP7=STP4-STP5
38 SUM=0.0
39 DO 80 I=1,IC
40 SUM=SUM+A(IR+2,I)
41 80 CONTINUE
42 STP9=SUM/FLOAT(IR)
43 STP10=STP9-STP5
44 STP11=STP6-STP7-STP10
45 STP12=STP7/FLOAT(IR-1)
46 STP13=STP11/(FLOAT(IR-1)**2)
47 STP14=STP12-STP13
48 PRINT,STP4,STP5,STP6,STP7,STP9,STP10,STP11,STP12,STP13,STP14
49 STP15=STP14/STP12
50 PRINT,'THE KODER-RIGHARDSON-HOYT REL. COEFF.',STP15
51 STOP
52 END

```

APPENDIX D  
APPEAL TO MANAGEMENT MAN



*Advancements in*  
**B.F. Goodrich**  
**FIRST IN RUBBER**



**They dig a lake to float  
a boat that never sails**

**B.F. Goodrich** FIRST IN RUBBER



**Too hot to handle  
but it travels on rubber**

APPENDIX E  
MEDIA LIST

CONSUMER PUBLICATIONS

<u>MAGAZINES</u>	<u>CLASS</u>	<u>ISSUED</u>	<u>AVG. PD. CIRC.</u>	<u>PUBLISHER'S EDITORIAL PROFILE</u>
Better Homes and Gardens	24	Monthly	8,088,226	Edited for husbands and wives who have a serious interest in home and family as the focal point in their lives. Covers in depth food and appliances, building and handyman, decorating, gardening and new product information.
House and Garden	24	Monthly	1,000,518	Devoted to decoration, design. Commentary on gardens, food and wine included.
Good Housekeeping	49	Monthly	5,489,934	Edited for homemakers. Interests: food, household appliances, home maintenance. Regular column on medicine, consumer problems, hard fact information.
Ladies' Home Journal	49	Monthly	5,134,649	Edited for today's woman. Service and feature material on food, decorating, health, diet, beauty, fashion.
Money	22	Monthly	1,115,484	Magazine of personal finance. Subjects that concern affluent men and women: returns on investment, saving, increasing earning power.

CONSUMER PUBLICATIONS (Continued)

<u>MAGAZINES</u>	<u>CLASS</u>	<u>ISSUED</u>	<u>AVG. PD. CIRC.</u>	<u>PUBLISHER'S EDITORIAL PROFILE</u>
Readers' Digest	22	Monthly	17,900,290	General interest, non-fiction reading magazine for entire family.
Time	36A	Weekly	4,464,228	To readers of all ages and both sexes. World's important news every week.
Sports Illustrated	36A	Weekly	2,360,025	Sports, recreation, and active leisure. Special department includes sports equipment.
Fortune	8	Fortnightly	674,566	Edited for management. Topics include personal investment, after-hour activities for executives.
Forbes	8	Biweekly	709,986	Edited for management, professional and private investors. Topics include the economy, funds, stocks, money markets.
Cosmopolitan	49	Monthly	2,926,060	Edited for young single or married women. Covers clothes, beauty, arts, emphasis on the world outside the home.

CONSUMER PUBLICATIONS (Continued)

<u>MAGAZINES</u>	<u>CLASS</u>	<u>ISSUED</u>	<u>AVG. PD. CIRC.</u>	<u>PUBLISHER'S EDITORIAL PROFILE</u>
Playboy	30	Monthly	6,501,324	Edited for men. Contemporary values and lifestyles. Topics include men's fashion, travel, sports, food, drink, automobiles, home electronics.
Vogue				Edited for women who consider fashion a way of life. Topics include fashion, beauty, health, home furnishings.
Rolling Stone		25 times/yr	780,715	Edited for young adults. Emphasis on popular music, features include audio, hi-fi, records.

INDUSTRIAL PUBLICATIONS  
Construction

Civil Engineering	41	Monthly	72,716	Edited for professionals involved in design, production, material specification, operation and maintenance of construction projects.
Concrete	41	Monthly	19,743	Edited for individuals responsible for manufacture, sale, distribution and use of ready-mix concrete.

INDUSTRIAL PUBLICATIONS (Continued)  
Construction

<u>MAGAZINES</u>	<u>CLASS</u>	<u>ISSUED</u>	<u>AVG. PD. CIRC.</u>	<u>PUBLISHER'S EDITORIAL PROFILE</u>
Materials Engineering	85A	Monthly	105,199	Edited for professional materials handling function and specifies equipment needs. Includes bulk handling.
Marine Engineering/Log	83B	Monthly	12,358	Edited for executives.
Drilling		13 times/yr	27,421	Edited for mid- to upper management involved in drilling, completion well servicing
Heavy Equipment				
Modern Machine Shop	88	Monthly	106,022 (unpaid)	Edited for production executives in metal working plants.
Metal Progress	83	Monthly	44,987	Edited for readers who specify and approve fabricating machinery, forging and casting forms and shapes.
Computerworld	5A	Weekly	119,589	Covers development of new products and services.
Farm and Power Equipment	44	Monthly	12,621	Articles and surveys on agriculture equipment.

INDUSTRIAL PUBLICATIONS (Continued)  
Light Equipment

<u>MAGAZINES</u>	<u>CLASS</u>	<u>ISSUED</u>	<u>AVG. PD. CIRC.</u>	<u>PUBLISHER'S EDITORIAL PROFILE</u>
Hardware Age	62	Monthly	16,570	Edited for retailers, distributors and manufacturers
Purchasing Magazine	70A	Bimonthly	97,433	Edited for purchasing professionals. Topics include sources of supplies, new products.
Motor	6	Monthly	125,417	Edited for professional mechanics.
Nature	132A	Weekly	24,254	Edited for biologists.
Components and Subassemblies				
Refrigeration	125	Monthly	1,331	Edited for owners and operators of ice plants and other operations.
Electric Light and Power	39	Monthly	42,006	Edited for U.S. electric utility market. Topics include technical features and equipment.
Electronic Design	40	Biweekly	109,239 (unpaid)	Edited for individuals responsible for design and specification of electronics components.

INDUSTRIAL PUBLICATIONS (Continued)  
Components and Subassemblies

<u>MAGAZINES</u>	<u>CLASS</u>	<u>ISSUED</u>	<u>AVG. PD. CIRC.</u>	<u>PUBLISHER'S EDITORIAL PROFILE</u>
Electronics	40	Bimonthly	100,778	Topics include technological news, features, new products and developments.
Maintenance, Repair and Operation				
Fleet Owners	96	Monthly	106,105 (unpaid)	Edited for fleet owners. Topics include equipment and maintenance planning.
Ceramic Industry	26	Monthly	4,240	Topics include new products, new literature.
Building Supply News	19		36,067	Topics include annual buyers' guide.
Glass Industry	57A		1,887	Directed to individuals involved in purchasing, development and marketing of glass products.
Raw Materials/Processed Materials				
Forest Industries	82	Monthly	24,158	Edited for those engaged in forestry, logging and raw materials.
Timber Harvesting	82	Monthly	18,936	Edited for those engaged in harvesting, managing timber.



INDUSTRIAL PUBLICATIONS (Continued)  
Raw Materials/Processed Materials

<u>MAGAZINES</u>	<u>CLASS</u>	<u>ISSUED</u>	<u>AVG. PD. CIRC.</u>	<u>PUBLISHER'S EDITORIAL PROFILE</u>
The Oil Daily	111	Daily	6,281	Topics include current trends, finance and marketing.
World Oil	111	14 times/yr	33,781	Topics include exploration and sales.
Pipeline and Gas Journal	111	14 times/yr	19,206	Topics include oil and gas issues.
Iron Age	88	36 times/yr	109,014 (unpaid)	Edited for producers and manufacturers of primary metals and fabricated metal products, among others.
Services				
Wall Street Journal	20	Daily	1,959,873	Edited for business, government, banks, leaders. Topics include daily business and economic news.
Fortune	20	Fortnightly	674,566	Edited for management. Topics include personal investment, after-hour activities for executives.
Forbes	20	Biweekly	709,986	Edited for management, professional and private investors. Topics include the economy, funds, money markets.

INDUSTRIAL PUBLICATIONS (Continued)

<u>MAGAZINES</u>	<u>CLASS</u>	<u>ISSUED</u>	<u>AVG. PD. CIRC.</u>	<u>PUBLISHER'S EDITORIAL PROFILE</u>
			Services	
BusinessWeek	20	Weekly	857,600	Published for management. Topics include news, ideas, trends that have impact on business and the economy.
Advertising Age	1	Weekly	79,417	Edited for national advertisers.
Madison Avenue	1	Monthly	1,031,193	Edited for national advertisers.

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Source: Standard Rate and Data Service, Vol. LXVII, No. 5 (May 12, 1985).

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