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HAYES, Harry Michael, 1926-
THE EFFECTIVE SALESMAN OF ELECTRIC DISTRIBUTION EQUIPMENT AS PERCEIVED BY BUYERS IN THE ELECTRIC UTILITY INDUSTRY.

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Business Administration

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THE EFFECTIVE SALESMAN OF ELECTRIC DISTRIBUTION EQUIPMENT AS PERCEIVED BY BUYERS IN THE ELECTRIC UTILITY INDUSTRY

by

Harry Michael Hayes

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Business Administration)
in The University of Michigan
1977

Doctoral Committee

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ACKNOWLEDGEMENTS

The list of people to whom I am indebted for help in conceptualizing and conducting this research is long indeed. Here I can only briefly acknowledge the help received from some of many who contributed so much.

To my committee chairman, Professor Charles N. Davisson go special thanks. His interest in industrial marketing provided the much needed encouragement to undertake this study. His availability for counsel, his help in clarifying concepts and his patient and thorough review of early drafts of this dissertation were invaluable. To other members of my committee, Professors Thomas C. Kinnear, Howard Schuman and B. Joseph White, many thanks, not only for specific advice, generously given, but for the added perspective you brought to this study.

Members of industry were generous with their help. A financial grant from the National Association of Purchasing Management provided welcome assistance. Robert Lundgren, Executive Vice President of The Detroit Edison Company, not only encouraged the study but used his good offices to encourage a high response rate to the questionnaire. Numerous individuals in The Cleveland Electric Illuminating Company, The Detroit Edison Company, Ohio Edison Company and the Public Service Company of Colorado were tremendously helpful in the pilot study. Many friends of long

standing at General Electric helped in the development and refinement of the questionnaire. Finally, over 250 individuals in the electric utility industry provided the data without which the study would have been impossible.

Although I am indebted to many, my biggest debt is to my wife, Neola Jean. Without her help in typing innumerable drafts this dissertation would not have been completed. Without her support, understanding and encouragement the venture would not have been undertaken.

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CHAPTER I

INTRODUCTION

The Problem

Analyzing the role of the salesman is perhaps one of the most perplexing problems in marketing. As Webster[1] says:

> "What makes a successful salesman" has been one of the most frequently asked and incompletely answered questions in marketing.

The incompleteness of the answer, however, is not due to lack of study and research. According to Miner:[2]

> In terms of investigations and volume of published results there is little question but what the salesman is one of the most extensively studied men in the business world.

The number of persons involved in saleswork -- 5,624,900 according to the 1970 Census of Population -- and the wide range of the nature of saleswork -- from the sale of sophisticated computer systems to simple consumer goods transactions at retail -- indicate the difficulty in developing a universal answer as to "What makes a successful salesman." Indeed, considering the question at such a general level makes it literally impossible to answer. The variety of possible interactions between all salespeople and their customers and the variation in the nature of the selling task across various categories of products

and markets are such as to suggest that selling is not one homogeneous occupation. It is the generality of the question (at least in part) that results in the incompleteness of the answer.

In addition to the size and complexity of the subject of saleswork, another factor hampers efforts to understand it. This is the dynamic nature of the salesman's role in the marketing program. As firms adopt the marketing concept,[3] the nature of their sales approach must change. Salesmen must be more perceptive as to customer needs. It is no longer appropriate to "sell what's easiest for the factory to build." Salesmen are also required to shift from a volume orientation, where any incremental sale is welcome, to a profit orientation where certain orders are more attractive than others, regardless of volume. Shifts of this kind in the nature of saleswork suggest the need for continued study of selling effectiveness.

No single study will answer the question "what makes an effective salesman," even if the inquiry is restricted to one market and one product. Nevertheless, understanding of selling effectiveness will be enhanced by studies of saleswork in specific markets that reflect the customer's, or buyer's, point of view. This dissertation reports the results of a study which focuses on one market, the privately owned electric utility industry; one line of products, electric distribution equipment; and which investi-

gates buyers' preferences for various aspects of salesman behavior, knowledge, competence and personal relations and buyers' perceptions of the effectiveness of the salesmen who call on him.

Importance of the Research for Marketing Knowledge

Few studies have attempted to investigate buyers' preferences for salesman behavior or their perceptions of selling effectiveness. Fewer studies have investigated the nature of saleswork in a specific capital goods market and no study was found concerning the nature of selling to the electric utility industry, the largest capital goods market in the United States. This dissertation should add substantively to the accumulated body of knowledge regarding the sale of capital goods.

Importance of this Research for Marketing Management

Personal selling is the major element in the promotional mix for capital goods. For the marketing manager this means that decisions as to organization of the sales force, selection, assignment and training of salesmen are critical with regard to the effectiveness of the overall marketing effort. To a large degree these decisions are made based on the marketing manager's understanding of the selling task and on his expectations as to customer reac-

tions to various sales approaches. These understandings and expectations, in turn, are largely based on a blend of personal experience, sometimes limited, and intuition. Because this study draws on knowledge gained from a broad spectrum of buyers it should provide a more factual basis for the understandings and expectations for the market studied. In addition, the results may be useful for other products and markets that have characteristics similar to the one studied.

Importance of the Research to Purchasing Management

It has been suggested that "Buying is Marketing Too!"[4] and that purchasing managements should develop strategies to actively "market" the attractiveness of their firms' business to potential suppliers. This is one way of protecting against shortages, broadening buyers' range of choice, increasing competition for their business, and so forth. Since the salesman is the primary, and sometimes only, contact the buyer may have with his suppliers he is a key element in the "marketing strategy" developed by the buyer.

To be effective a "marketing strategy" for purchasing must be based on the realities of the salesman's role. It should reflect the kind and amount of influence the salesman can exert on his own firm and stress possible ways for purchasing to increase this influence. In addition, such a strategy must take into consideration not only the salesman's interface with the purchasing function but also the sales-

man's interface with other functions in the firm.

To the degree that a purchasing manager has a better understanding of how others in his own firm, and buyers in all firms, perceive the role of the salesman he will have a broader and more realistic base of knowledge on which to develop his "marketing strategy."

Plan of the Dissertation

The plan of the dissertation is best described in terms of the objectives of each chapter. These are outlined as follows:

(1) The pertinent literature is reviewed in Chapter II to develop the rationale for the basic approach of this research, and to develop the rationale for two models of expected relations. Two hypotheses are presented in Chapter II. In addition, the reasons for selecting the electric utility industry and electric distribution equipment as the market and product line to study are detailed.

(2) The electric utility industry, its purchasing practices, the structure of supply of electric distribution equipment, and supplier sales approaches are described in Chapter III.

(3) The development of the questionnaire used in the survey is described in Chapter IV. Certain expected relations are identified, in the context of the models and hypotheses described in Chapter II.

(4) The sample is discussed in Chapter V. Organizational and personal characteristics of respondents are described and related to the sample.

(5) Buyer preferences for salesman behavior, knowledge, competence and personal relations are analyzed in Chapter VI. The effect of certain aspects of the buyer's organizational and personal characteristics on these preferences are compared to the expected relations as identified in Chapter IV.

(6) The relation of buyer preferences for salesman behavior, knowledge, competence and personal relations to their perceptions of selling effectiveness is examined in Chapter VII. Actual relations are compared to the expected relations identified in Chapter IV.

(7) The implications of this analysis for overall marketing knowledge, marketing management and purchasing management are detailed in Chapter VIII. Suggestions for future research are included in this chapter.

Footnotes

[1]Webster, Frederick E., Jr., "Interpersonal Communication and Salesman Effectiveness," Journal of Marketing, 32 (July 1968).

[2]Miner, John B., "Personality and Ability Factors is Sales Performance," Journal of Applied Psychology, 46 (February 1962): 6-13.

[3]Rewoldt, Stewart H., James D. Scott and Martin R. Warshaw, Introduction to Marketing Management, Homewood, Illinois: Richard D. Irwin, Inc., 1977, Third Edition, p. 125.

[4]Kotler, Philip and Sidney J. Levy, "Buying is Marketing Too!" Journal of Marketing, 54 (January 1973): 54-59.

CHAPTER II

THE LITERATURE AND THE RESEARCH APPROACH

"What is it that makes a salesman effective?" is one of the most complex and persistent questions in marketing. Embedded in it are all the aspects of selling; the situation, the personality and family background of the salesman, his persuasiveness, knowledge, closing skill, empathy and ego drive; the product, the nature of the customer, the relations between salesman and customer and so forth. Still further, the definition of effectiveness itself must vary. To the salesmanager, effectiveness may be synonymous with orders secured. To the marketing manager, however, effectiveness may be measured more broadly and may include profitability, market research activities or development of competitive intelligence. To the customer, effectiveness may be equated with responsiveness or with technical competence or other factors not necessarily related to order volume.

The question persists not only because of its complexity but because of its dynamic nature. Changes in the structure of commercial institutions, in purchasing practices and in the very nature of the exchange process, as a transition is made from a selling orientation to a marketing

orientation, insure that at least some "answers" will change over time and circumstance.

Concurrent with the changes in the nature of the buying/selling process, there has been a marked shift in the literature on selling and salesmanship. In 1963, Evans[1] wrote, "Literally thousands of books and articles have been written about sales techniques but invariably these deal only with the salesman's point of view." Perhaps stimulated by Evans' study, and certainly stimulated by the increased interest of behavioral scientists in "selling," the shift has been away from a unidimensional consideration of selling (salesman's point of view) toward a dyadic, or buyer-seller interaction, point of view.

A concomitant of this shift has been the increasing interest in the salesman's "role" as a useful concept for analysis of determinants of salesman performance. Role conflict, both inter- and intra- organizational, has been postulated as impairing the effectiveness of the sales force. The major cause of role conflict has, in turn, been ascribed to role ambiguity, much of which stems from lack of knowledge as to the various role expectations held by customers. According to Hise, "The salesman is often the victim of inadequate or nonexistent information. Most of this occurs in his relationship with customers."[2]

There is increasing interest in including the buyer in studies of selling, by considering buyer-seller interaction, and in the salesman's role as it might be defined by buyers. However, few studies have explicitly attempted to develop buyers' views of salesmen. A review of the literature indicates that the primary formal source of role norms continues to be the salesman's firm; through formal sales training, managerial coaching and performance appraisal. The salesman learns buyer role expectations primarily through direct contact with buyers. This presents problems because of limited opportunity and possible lack of interpretive skill.

This chapter reviews some of the approaches used in studying saleswork and selling effectiveness as well as some of the classification schemes that have evolved from these approaches. Following this review, the chapter will develop the basic concepts used in this research, the hypotheses as to expected relations and the research approach used.

The Unidimensional Approach (Salesman's Point of View)

The Evans'[3] study has been identified as a major turning point in selling studies; turning away from the unidimensional approach, or salesman's point of view, toward an approach focusing on the interactions in the buyer-seller dyad. Whether Evans deserves full credit for ini-

tiating this change in study approach is perhaps debatable. For instance, it was in the late 1950s that John McCarthy introduced Sales Situation Management at General Electric, a sales training course with major emphasis on study of the customer as a person, with all its attendant psychological implications, designed to improve the salesman's ability to relate to the customer on a personal basis.

Who gets credit for initiating the change, however, is not as important as the fact that the emphasis indeed shifted. Nevertheless, the unidimensional approach has been and continues to be a source of insight into sales effectiveness.

The unidimensional approach seems to be based on two main premises. First is the premise that there exists some unique blend of personality characteristics that results in sales success. Implicit in this premise, if taken to the extreme, is the belief that a successful sales personality can, with appropriate knowledge, sell anything. Selling, therefore, could be studied in general, without regard to the specific situation. Closely related to the notion of predicting sales success as a function of personability characteristics is the idea of relating sales success to family background, education experience and other historical data or what is called "life history experience." The second premise views the customer as a passive element in the selling process. In essence, com-

munication is seen as flowing one way. To the degree that there is any concern with customer reaction to the sales story it is primarily one of how to deal with customer objections. Specifically, there is little emphasis on probing to determine customer needs and expectations.

The Sales Personality

An extreme point of view reflecting the sales personality premise is presented by Mayer and Greenberg[4] who contend that only two ingredients determine sales success, regardless of selling situation; empathy, or the ability to anticipate another's reactions, and ego drive, or the desire to achieve solely for intrinsic rewards. (While the concept of empathy does recognize the buyer, it tends to assign him a reactive rather than interactive role and in the context used by Mayer and Greenberg this is seen as still reflecting the salesman's point of view).

Miner[5] identifies a number of other studies which successfully correlated personality measures and sales performance. However, he concludes that there is no universal sales personality and states:

> It has been clearly established that the various sales occupations do not form a homogeneous whole, that an effective predictor for one type of saleswork may be of little value in a somewhat different sales situation.

Life history measures have had some success in predicting sales success. However, a review by Cotham[6] reported conflicting results and he contends that use of such

measures should be carefully examined on a firm-by-firm basis and in the context of specific performance criteria.

Interest in personality tests and life history measures will undoubtedly continue despite disagreement as to their interpretation and usefulness. It should be noted that their main use has been predictive rather than explanatory. In other words, given that Salesman A performs better than Salesman B, this basically confirms (or fails to confirm) a prediction. The tests do not give insight into why this is so and particularly do not give any insights into the dynamics of the buyer-seller interaction. In this sense, personality and life history measures are primarily of interest for selection of salesmen but provide little guidance for salesmen training and development, for assignment, or for organization of the selling effort.

Other studies have investigated aspects of selling closely related to personality and life history. Attention has been addressed to the question of motivation and appropriate compensation plans for salesmen.[7] A recent investigation related elements of job satisfaction to sales performance.[8] Currently, concepts of expectancy theory are being applied to the study of selling effectiveness.[9] In common with personality tests, however, these studies focus on the salesman and do not consider his interaction with the customer. They are useful for designing compensation plans and for designing certain satisfaction producing

elements into the sales job. They still do not provide insight as to how improved performance is to be achieved.

Persuasion and Attitude Change

In recent years there has also been considerable interest in the application of psychological findings regarding persuasion and attitude change to the selling process. The now classic article by Hovland and Weiss[10] on source credibility, the work of Kellman[11] on compliance, internationalization, identification and sources of power and the work of various psychologists on order of presentation, one or two sided arguments and ways to present conclusions[12] all impacted on the thinking regarding "effective communication" in selling. While much of what was learned had implications for salesmen and selling, it also had the effect of confirming one-way communication as "the" way of communication with an audience. As late as 1963, Bauer[13] expressed concern regarding this orientation. Specifically, he contended that:

> The big failure in communications research to this point has been that the audience has not been given full status in the exchange relationship: his intentions have not been given the same attention as the intentions of the communicator.

Building on communications research, but taking into account the concerns expressed by Bauer, Levitt[14] conducted what appears to be the first research of some of these issues utilizing businessmen as subjects in an experimental

selling situation. In addition to investigating the issues of source effect and sleeper effect, message effect and communicator effect, the research was designed to investigate to what extent there is an audience effect; that is how does the competence and task of the audience impinge on communication effectiveness and how is audience persuasability related to audience learning and to audience self-confidence in its own reactions to the message.

Although Levitt's study took the audience into consideration to a far greater degree than had been done previously, it should be noted that the actual communication in the experiment was one way and that the audience was not able to interact with the communicator. Still further, the experiment did not provide for any consideration of possible personal relationships between the communicator and individuals in the audience. Hence, while the study produced interesting and, indeed, surprising results,[15] it still had a strong unidimensional approach. The study does, however, identify the need to know more regarding buyer's views on source credibility and the importance placed on the salesman's knowledge of his product and its application.

Personal Attractiveness

Peripheral to questions of personality traits and persuasiveness is the importance of liking or being liked.

One stereotype of the salesman, in the Willie Loman tradition,[16] depicts the salesman engaging in pathetic maneuvers to enhance his personal attractiveness. In a more palatable form, Dale Carnegie[17] promises that being liked will increase one's ability to influence others. In the literature on selling there are some who hypothesize that, as price and product become more standardized, likeableness of the salesman increases in importance as a determinant of supplier selection. Despite the prevalence of the view that personal friendship between salesman and buyer is desirable there is little direct evidence as to precisely how it increases selling effectiveness.

This section has indicated some of the questions concerning selling effectiveness that are not answered by the unidimensional, or salesman's point of view, approach. Work in the area of personality characteristics suggests they are situation specific in terms of predictive ability. Little is known, however, about actual buyer-seller interaction in specific situations. Most communication experiments have not provided for an ongoing dialog between buyer and seller. Many questions are unanswered therefore, concerning persuasiveness and effective communication, both in informal situations where there is two way communication and in interactions over time; typical of most industrial selling situations where buyer-seller acquaintances are usually of long standing. Despite widespread belief that

personal friendship is a valuable determinant of selling success there is little precise evidence as to the effect it has on the selling situation.

The Interactive Approach

The Evans[18] study has been widely identified as a major turning point in approaches to the study of selling, but it is interesting to note that it did not focus on the actual interaction between buyer and seller. Rather, the study considered the match of personal characteristics (physical, educational, religious, etc.) between salesmen and customers and the attitude of the customer toward the salesman after the call. Evans found that successful dyads (i.e., buyer-seller interactions that resulted in a sale) were more similar on personal characteristics than unsuccessful dyads. Similarly, the general attitude of customers to the salesman after the call was more favorable for successful dyads. While this strongly confirms that interaction between salesman and customer influences the outcome of the attempted sale, it does not develop insight as to precisely what happened during the interaction and only broadly determined the customers' views of the salesman's behavior during the call.

If the salesman has the opportunity to select his customers, the results of the Evans study suggest that calling on prospects similar to the salesman will increase

sales success. In many sales situations, however, the salesman cannot "select" his customers. Most industrial buying situations involve multiple buying influences. Once the sales assignment is made the salesman calls on individual buyers as dictated by the customer's organization. Opportunities to match salesman and buyer on personal, religious or physical characteristics are limited. On the other hand, the salesman does have under his control the ability to "match" his behavior to customer expectations. A recent study[19] found such "matching" had an effect on sales performance (as will be described in the next paragraph).

The number of times the Evans study is referenced in the literature would suggest that it has been followed by a large number of further studies which would shed light on unanswered questions and provide additional insight into the selling process. Unfortunately this is not the case. In a review of interaction studies by Davis and Silk[20] in 1971 only four studies beyond Evans are described. Three of the studies involved products sold at retail in essentially "one-shot" situations. As a result they shed little light on questions regarding the long term buyer-seller relationship typical of industrial sales. The fourth, by Tosi,[21] investigated sales by 40 wholesale drug salesmen to 103 retail pharmacists; a situation in which long term

relations between buyer and seller can be expected and in which the buyer is called on by a number of competing salesmen and so has the opportunity to contrast various sales approaches.

Tosi hypothesized that role consensus, or the extent to which buyer and seller agree on appropriate sales behavior, and expectation level, or the difference between a buyer's view as to "ideal" behavior and expected salesman actual behavior, would relate to sales performance. The two measures of sales performance used were: (1) the share of the customer's business obtained and (2) the number of other suppliers also serving the customer. Role consensus was found to have no effect on either measure. Expectation levels did not effect the share of business obtained but did effect the number of suppliers. The greater the difference between the buyer's view of ideal behavior and his expectations as to the salesman's actual behavior the more firms he tended to deal with. In the drug industry, to the degree that the salesman can conform to the buyers' behavioral expectations it appears he can expect to have fewer competitors. A broader implication is that buyer expectations as to salesman behavior is a fruitful area for investigation.

In a somewhat different vein, Thompson[22] discusses the role of the salesman based on direct observations of 140 salesmen representing 27 different companies in actual

selling situations. His study included salesmen of both tangible and intangible consumer products as well as industrial goods and he observed that both salesmen and prospects usually play a limited number of roles and at a constant and low level of organismic involvement or intensity. He concludes that one way for the salesman to increase his effectiveness is to increase his role repertoire and then to play a larger number of roles and at a more varied level of intensity. Thompson does not, however, define what specific roles would be most appropriate or how their appropriateness might vary as a function of different selling situations.

Although there is some evidence to suggest the importance of meeting customer expectations regarding specific behavior, or roles, and some evidence to suggest that the salesman should have a large role repertoire, it remains an area in which there has been little definitive investigation. The next section will consider this in more detail.

The Unidimension Approach (Customer's Point of View)

At first glance, nothing would seem more logical than to ask the customer what makes a salesman effective for him. Why, then, has more of this not been done? Although this must be a matter of conjecture, at least two reasons may be involved. First, there is the problem that the customer may not be able to articulate useful information. His reactions to a salesman may be at a subconscious

level and research methods may not be available to elicit them. A concomitant of this is the notion that, in many instances, respondents will "tell more than they know."[23] That is, they will look at their behavior and generate plausible but fictitious explanations for it. Second, there is the problem of intent. Rightly or not, there is at least some feeling that buyers will respond to questions regarding selling effectiveness in self-serving or rationalizing ways. For instance, salesmen feel they might be told that a high level of service is most important; when in fact it is not evaluated in the purchasing decision.

Although customer views on selling effectiveness are taken with a grain of salt, they are widely solicited on an informal basis. A popular event at a sales meeting is a respected customer stating his views on selling effectiveness. The sales manager will frequently probe his customers as to how his men are performing and how they might improve. The salesman himself will often ask the customer "How am I doing?"

Although not frequently reported, customer views are also solicited on a more formal basis. The Tosi study has already been mentioned in this regard. A study "How Buyers Rate Salesmen" was commissioned by Sales Management Magazine and was published in the January 15, 1971, issue. The introduction made the case for the study as follows:

> Until signs show up in the order books, sales managers must rely on call reports and regular -- but more often occasional -- escorted sales calls to tell them what really goes on when salesmen and customer meet. Seasoned managers know that both methods have their pitfalls.

The results, based on questionnaires returned by 100 respondents, were of considerable general interest. However, the cross section of firms studied was so broad as to raise inevitable questions as to appropriate selling behavior in specific situations, taking into account personal characteristics, organization structures, product lines and so on.

The unidimensional approach, from the customer point of view seems to have promise as a way of increasing insights into selling effectiveness but has not yet been well investigated.

The Selling Situation and Organizational Buying

As suggested by Cotham,[24] the question of sales personalities is best considered in the context of a specific situation and much effort has been devoted toward establishing categories which provide useful classification systems for narrowing the focus of sales studies. The most obvious classification system is the product; life insurance, real estate, used car, etc. While such classification may differentiate the selling task there is the possibility that the product is the only difference and that the selling skills required in many product situations are actually the same. On the other hand, if the selling

skills required for one product are widely different severe limitations are imposed on the generalizability of studies restricted to one product. Hence, various other classification systems have been suggested.

A classification system that avoids product categories has been proposed by Kirkpatrick[25] utilizing four categories according to the purpose of the buyer as follows:

(1) Selling to wholesalers or retailers where the buyer is purchasing the goods for resale.

(2) Selling to purchasing agents who are predominantly concerned with satisfying the needs of a variety of organizational objectives.

(3) Selling to professionals such as doctors or architects who specify a product which is actually purchased by a patient or client.

(4) Selling to ultimate consumers who buy essentially for their own use.

Another classification scheme has been developed by Newton[26] and proposes four categories of sales work according to the purpose of the seller as follows:

(1) Trade selling, concerned primarily with increasing business from customers by providing promotional assistance, either to some element of the distribution channel or to a manufacturer purchasing for resale.

(2) Missionary selling, where the objective of the

sales force is to increase sales by providing its direct customer, such as wholesalers, with personal selling assistance to indirect customers, such as retailers.

(3) Technical selling, which attempts to increase business from existing customers by providing technical service and assistance.

(4) New business selling, concerned primarily with obtaining new accounts for the firm.

Still another classification scheme is suggested by the nature of the organizational buying task and a BUYGRID[27] model has been proposed which develops three categories as follows:

(1) New Task, or the purchase of a product completely new to the firm involving many decision makers and buying influences.

(2) Modified Rebuy, or the purchase of a product which has been purchased before but for which changes are contemplated to the extent that several decision makers and buying influences may be involved.

(3) Straight Rebuy, or the purchase of a product which has been purchased many times in the past and is of such a nature that the decision process is straightforward and involves relatively few decision makers or buying influences to the extent that the purchasing process is automatic or routine.

Classification according to the nature of the goods or services is closely related to product classification. Consumer goods are sometimes classified as convenience, shopping or specialty.[28] Kotler proposes that industrial goods can usefully be classified as (1) raw materials, which enter the product completely, or (2) capital goods, which can be thought to partially enter the product, or (3) as supplies which do not enter the product at all.[29] In many instances these are useful categories for consideration of sales work.

Regardless of the category, or categories, chosen as being most appropriate for analysis of a particular selling task, the approach of most studies is to take the product (or service) as given. That is, the elements of the marketing mix are considered to be static and the salesman's task is seen to focus on convincing the customer that the salesman's product or service will provide desired benefits and features and so should be purchased, as is. Feedback from the buyer is elicited primarily to find out how product attributes can be portrayed as benefits in the buyer's particular situation.

In organizational buying, and particularly in the purchase of capital goods, the marketing mix is, or can be, much more flexible. Price is variable, either through negotiation or because of volume considerations and can vary regionally as a function of competition or geography. Product characteristics are not totally standardized. Large

purchasers have the "clout" to demand and get special product features. Special terms and conditions can be negotiated. Wide varieties of delivery plans can be arranged such as direct factory shipments, shipment from regional or local warehouse stocks or even consigned stocks. The salesman has the opportunity to play a much larger part in the overall marketing effort than in the traditional view. Thus the degree to which he can personally influence the marketing mix suggests another dimension for classifying the selling task.

The Research Approach and Hypotheses

The Research Approach

The preceding sections have developed a conceptual framework within which various approaches to the study of selling effectiveness can be considered. Schematically, this can be portrayed as shown in Figure 2-1.

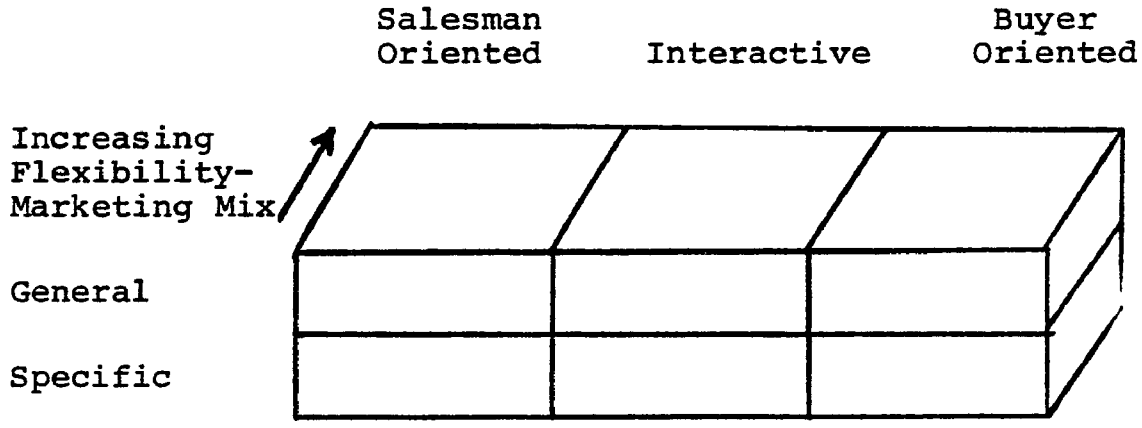


Figure 2-1. Approaches to Studies of Selling Effectiveness

Models of selling effectiveness based on interactive studies relate most closely to the actual selling situation and, all else being equal, should be most useful in developing an understanding of selling effectiveness. The interactive situation, however, presents serious obstacles for research, not the least of which is the reluctance of practitioners to participate in studies to the degree that may be necessary for in-depth investigation. Evidence from the few interactive studies conducted indicates that buyers' perceptions of salesmen can be helpful in developing a better understanding of the interactive situation. However, little buyer oriented investigation has been done.

Conceptually, models of selling effectiveness based on the general approach have the broadest applicability. On the other hand, there is considerable evidence to suggest that the selling task is sufficiently situation specific that great emphasis on generality may be inappropriate. Given the broad range of aspects of the selling task, it appears that selection of specific category or classifications of sales work, seen by the researcher to be appropriate for the specific investigation, is most likely to produce useful results. In any event, practical limitations on research are such that any study will have to be situation specific to a degree and judgments will have to be made regarding the generalizability of any findings.

No studies have been found which specifically consider the degree to which salesmen can influence the variables in the marketing mix. If, however, the nature of the transaction is such that the marketing mix is indeed variable and that certain aspects of the transaction must be negotiated, or varied in some way, the role of the salesman, and buyer expectations regarding his behavior, will be significantly different from the case where the marketing mix is fixed.

The area selected for investigation here is Buyer Oriented-Specific. The research considered the views of buyers in one industry (electric utility) regarding salesmen for one line of products (electric distribution equipment). This product category is one generally associated with a flexible marketing mix. Within this area, the thrust of the investigation is to develop:

(1) better insight into buyer role expectations for salesmen (i.e., preferences for salesman behavior, a concept which is expanded here to include preferences for salesman knowledge, competence and personal relations as well as behavior per se),

(2) how such role expectations or preferences change as a function of the buyers' situation and

(3) how these role expectations or preferences relate to selling effectiveness, as perceived by the buyer.

The next sections will develop the conceptual models used to guide the research and the hypotheses concerning the expected relations.

Buyer Preferences for Salesman Behavior, Knowledge, Competence and Personal Relations

The desirability that the salesman play the role expected of him by the buyer has been identified in the studies by Tosi and Evans. Thompson believes that the effective salesman needs not only a large role repertoire but that he needs to be able to play the roles at various levels of intensity. In the same vein Sarbin[30] has suggested the desirability of a large number of roles saying:

> It is a widely accepted postulate that the more roles in a person's repertory, the "better" his social adjustment -- other things being equal.

There are at least two concerns for the salesman attempting to implement these concepts: first, to define an achievable role repertoire and, second, to know which role is appropriate in a given set of circumstances. As Webster says:[31]

> Nevertheless, the ability to sense how the prospect expects him to behave and how the prospect is reacting to what he says is an important determinant of how the salesman plays his role.

He goes on to say:

> Where more than one person is involved in the buying decision (e.g., a purchasing agent and an engineer) the salesman may be faced with conflicting role expectations. Once again, the ability to sense and

resolve conflicts in buyers' role expectation is an important determinant of his behavior.

To define all possible roles a salesman might include in his repertoire, and to consider all factors that might determine which role or behavior is most appropriate in a given circumstance, is beyond the scope of this dissertation and quite possibly is an impossible task for any research. This research is limited to investigating four dimensions of the salesman's role, identified here as salesman factors. These four are broadly defined as follows:

(1) Behavior, defined here to include certain aspects of salesman behavior representative of the major activities normally associated with salesman calls on buyers in the electric utility industry

(2) Knowledge, on the part of salesman, regarding both his product and other aspects of his job, seen to establish a context for behavior or seen to be associated with certain role norms, per se

(3) Competence, closely related to behavior but with emphasis on the skill with which various activities are actually carried out

(4) Personal relations, which establish a context for behavior or for which there may be specific expectations as role norms.

Each of the above factors can be more specifically defined by questions as to the importance a buyer places on various aspects of each factor. These importance ratings,

or preferences, can then be used to establish a preference hierarchy broadly defining the expectations that a group of buyers, taken in aggregate, has as to how the salesman plays his role.

Ultimately the salesman has to relate to each buyer as an individual; an individual who undoubtedly has a unique set of preferences regarding salesman behavior. It is here that empathy and intuitions may finally determine the degree of sales success. Insights as to how preferences regarding the salesman's role vary as a function of certain broad aspects of the buyer's situation may improve the salesman's ability to empathize in individual situations and should provide a better understanding of the nature of the selling task.

The first hypothesis developed here is based on the assumption that certain aspects of the buyer's situation will influence his preferences regarding the salesman's role. In essence, the premise is that knowing certain things about a given buyer of either a personal or organizational nature a better prediction can be made regarding his preferences for the salesman's role. More precisely, the hypothesis is stated as follows:

HYPOTHESIS 1.

Given a buyer's stated preference (rank ordered in terms of importance) for certain aspects of a salesman's behavior, knowledge, competence and personal

relations (Salesman Factors) these preferences will vary as a function of certain aspects of the buyer's personal and organizational situation (Buyer Factors).

The relations implicit in this hypothesis can also be presented diagrammatically as shown in Figure 2-2. Again, the concept is that certain buyer factors or aspects of the buyer's personal organizational situation can be identified which will enhance understanding of preference patterns for certain aspects of various salesman factors which, taken together, help to define his role.

The specific aspects of the salesman factors and of the buyer factors considered in this research are identified in detail in Chapter IV, together with the rationale for their selection. Also presented in Chapter IV are certain predictions as to the effect of some buyer factors. The next section of this chapter will develop the second hypothesis.

The Relation of Buyer Preferences for Salesman Behavior, Knowledge, Competence and Personal Relations to Perceptions of Selling Effectiveness

In any study of selling the ultimate concern is the salesman's effectiveness. How he plays his role is seen to be the primary determinant of this effectiveness. As a principal actor in the buyer-seller relation the buyer's views regarding the salesman's role are important in de-

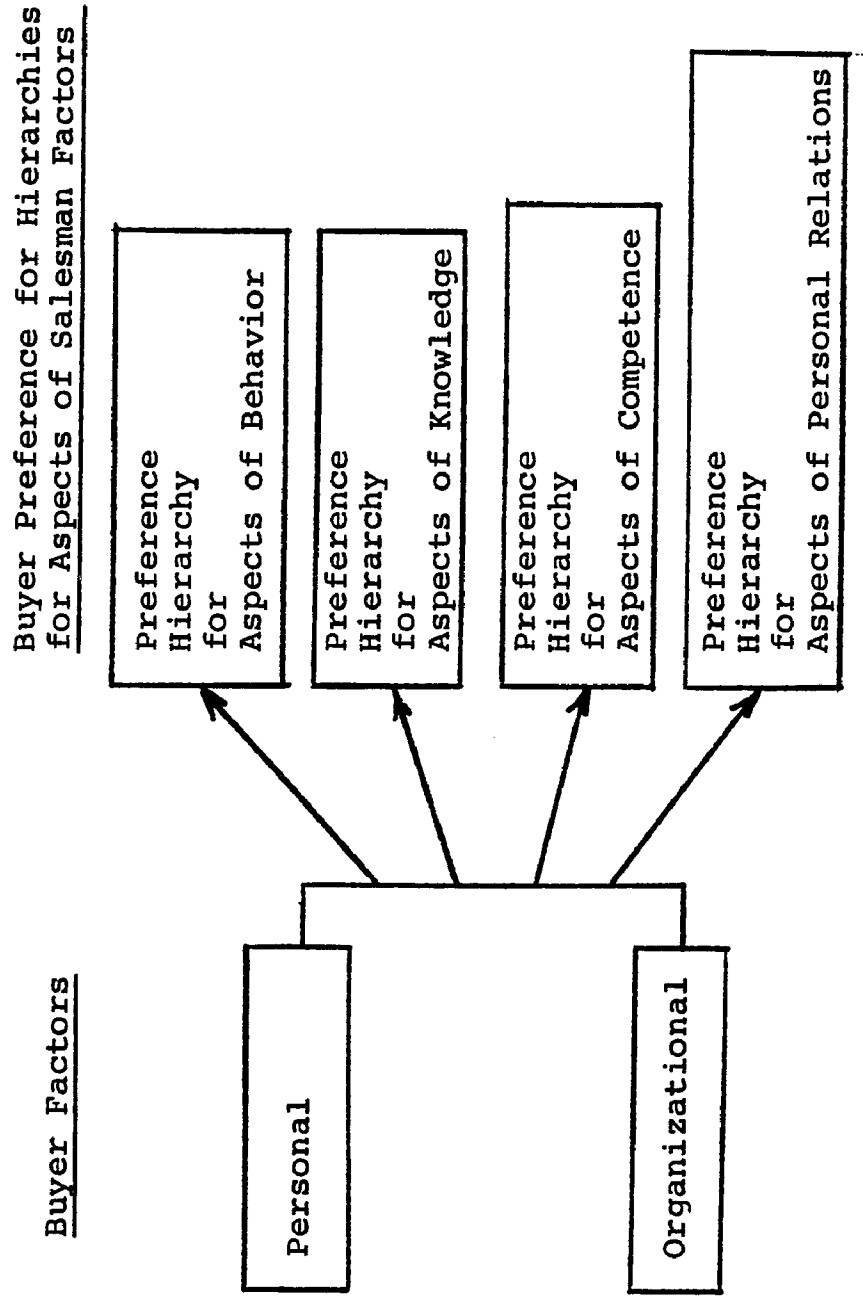


Figure 2-2. Relationship of Buyer Factors to Preference Hierarchies for Aspects of Salesman Factors (Model 1)

veloping an understanding as to how role relates to effectiveness. Three questions arise, however. First, what frame of reference should be established? That is, should buyers be asked their views with regard to salesmen in general; or, for some specific subset of salesmen, e.g., the top ten percent. Second, some buyers hold salesmen, generally, in high regard and consider them very effective. Others do not. Should buyer's role expectations be differentiated based on their perceptions of selling effectiveness? Third, given the ambiguity of the concept of selling effectiveness, how should it be defined?

The approach taken was to attempt to identify those aspects of the salesman's role that vary with perceptions of selling effectiveness for salesmen in general. That is, as buyers increasingly perceive salesmen, as a group, to be effective, are there aspects of the salesman's role, i.e., salesman factors, which vary in importance with perceptions of selling effectiveness and which, therefore, seem to be dimensions on which effectiveness is differentiated.

This approach is essentially integrative in nature and buyer's perceptions of selling effectiveness may well be determined by factors other than how the salesman plays his role such as culturally determined stereotypes, previous work experience of the buyer and so forth. Still further, the approach cannot determine causality. Identification of certain dimensions which relate to selling effectiveness

may also reflect cultural bias or previous work experience. Considering the nature of the industry to be investigated, however, there is reason to expect a fair amount of objectivity and that views on selling effectiveness will be based to a considerable degree on observations of salesmen and so on evaluation of their role in the exchange process.

Normal measures of selling effectiveness such as dollars of sales or performance ratings by sales managers are inappropriate for this research. These measures relate to specific individuals whereas this research is concerned with salesmen considered in aggregate. From the buyer's standpoint, on the other hand, the concept of selling effectiveness can be very individually specific, reflecting the wide variety of needs that different buyers attempt to satisfy by interacting with salesmen.

It was necessary to develop a measure of perceived selling effectiveness that would allow buyers to define it in their own terms for salesmen in general. At the same time the measure must reflect certain aspects of the selling task which influence the purchasing process and which ultimately translate into sales dollars. The development of such an index is described in detail in Chapter IV.

The second hypothesis is based on the assumption that there is a relationship between salesman factors and perceptions of selling effectiveness and that this relationship

is influenced by certain buyer factors. More precisely the hypothesis is stated as follows:

HYPOTHESIS 2.

Given a buyer's stated preference for certain aspects of a salesman's behavior, knowledge, competence and personal relations (Salesman Factors):

(1) these preferences will explain perceived selling effectiveness (PSE) and

(2) the nature and degree of the explanation will vary as a function of various aspects of the buyer's personal and organizational situation (Buyer Factors).

The relations implicit in this hypothesis and the influence of buyer factors can also be presented diagrammatically as shown in Figure 2-3. Again, the concept is that certain salesman factors will be important, or salient, in explaining perceived selling effectiveness; they will correlate with it most strongly and this relationship will vary according to certain aspects of the buyer's personal or organizational situation.

Analysis of the findings of this part of the research is presented in Chapter VII. The next section will review the rationale for selecting the electric utility industry and electric distribution equipment as the industry and product line to be investigated and will describe the survey design.

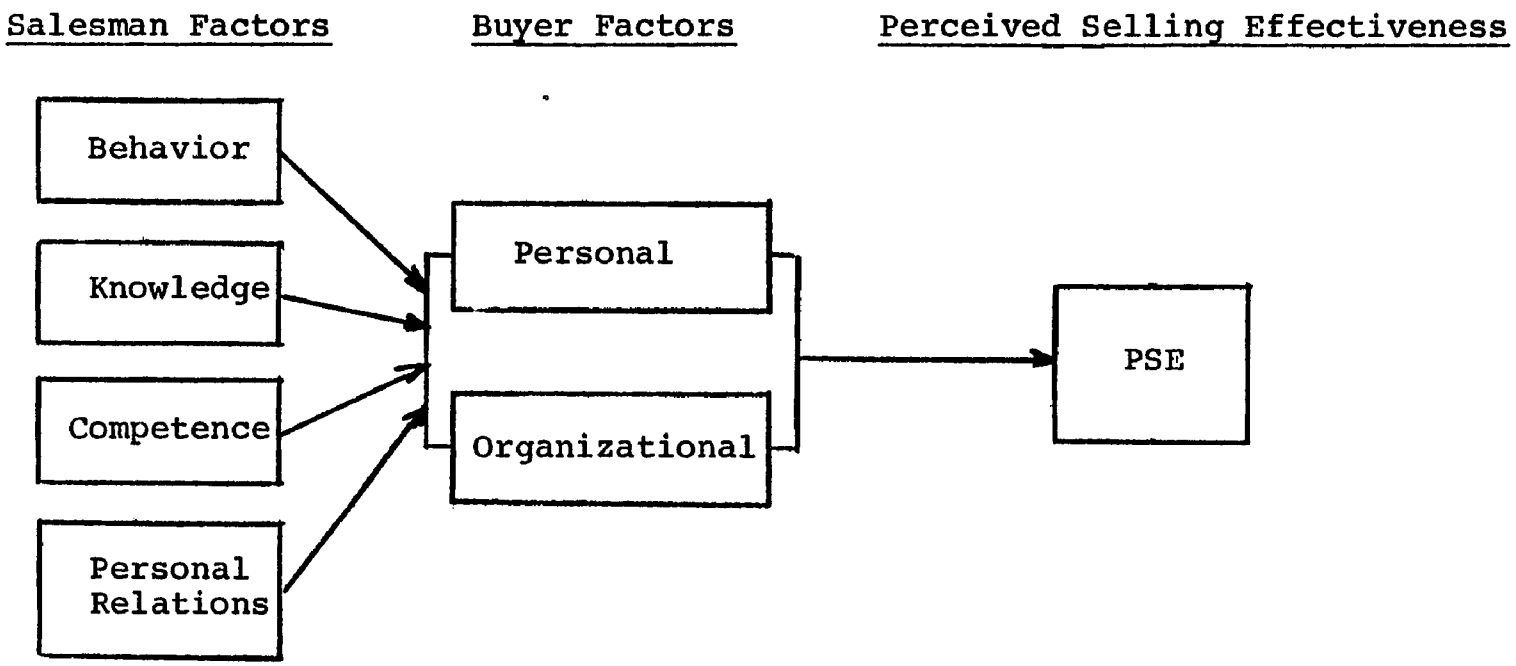


Figure 2-3. Relationship of Salesman Factors, Buyer Factors and Perceived Selling Effectiveness (Model 2)

The Area of Investigation and Data Collection

The hypotheses and models of expected relations obviously take on meaning only in some well defined context. For this research perceptions of buying influences in privately owned electric utilities regarding salesmen of electrical distribution apparatus were investigated utilizing a survey research design.

Selection of the Electric Utility Industry

As used in this investigation, buying influences, or buyers, were defined as individuals in the purchasing, engineering or operating functions of privately owned electric utilities who can exert some degree of influence on some aspects of the overall buying decision and who have a substantial amount of contact with salesmen for the products involved. Although individuals in other functions occasionally exert influence on the purchase of distribution equipment such occasions are infrequent and the functions listed include close to 100 percent of the influence normally exerted.

Selection of the electric utility industry as the area for investigation was certainly influenced to a considerable degree by this researcher's knowledge of the industry and his contacts in it which greatly facilitated the proposed research. More importantly, however, the nature of the industry makes it particularly suitable for the research conducted. As an industry it is the largest pur-

chaser of capital goods in the United States and the focus of this study is on capital goods. Because of the size of the industry in total, and the size of individual companies within it, it is assiduously "sold" by a host of companies. As a result, individuals in purchasing, engineering and operating functions have a significant amount of contact with salesmen, maximizing the probability that a survey research design would contact respondents who, indeed, have a reasonably well defined set of role expectations for salesmen.

Selection of Electric Distribution Equipment

The product category "electrical distribution apparatus" includes such items of equipment for the electric distribution system as distribution transformers, capacitors, fuse cutouts, surge arresters and street light luminaires. In broad terms these items can be described as high volume, moderately complex flow or shelf type goods that are either manufactured to order in quantity or that are purchased from local or regional warehouse stocks. The products are highly standardized on certain performance characteristics by various industry standards but, in many instances, other characteristics are variable. As a product class there is considerable flexibility in product design and in pricing policies and delivery arrangements as well. A full line of distribution apparatus is manufactured by

General Electric, Westinghouse, McGraw-Edison and Allis Chalmers. In addition, a number of single or narrow line manufacturers such as RTE, Central, Standard, S&C, Ohio Brass, Duncan and Sangamo compete vigorously in the market.

In general, electric distribution apparatus seems well suited for the research conducted. The complexity of the product requires considerable product and application knowledge on the part of the salesman. Many utilities have sophisticated evaluation systems for determining award patterns and it is reasonable to expect that salesmen should be knowledgeable in evaluation techniques, utility purchasing philosophies, engineering economics and even utility accounting practices. On the other hand, there are instances when product offerings and price are so similar that buying decisions could be decided by a flip of a coin, allowing for the possibility of non-task elements to influence the sale.

There exists, then, a wide range of possible behaviors for the salesman and it is not totally clear how these are viewed by buying influences. Still further, some utilities will typically buy the manufacturer's standard offering while others are strongly committed to obtaining equipment which has a substantial degree of customization to their requirements. Hence, there exists substantial opportunity for the salesman to influence the product offering and marketing size.

Data Collection

A survey was conducted using a questionnaire to collect the data necessary to analyze buyer preferences for the various aspects of salesman behavior, knowledge, competence and personal relations and to analyze buyer perceptions regarding selling effectiveness. The questionnaire was mailed to the purchasing manager in 136 privately owned electric utilities in the contiguous United States. Each purchasing manager was asked to select three respondents in his company, one each from the purchasing, engineering and operating functions, who met certain broad criteria as to contact with salesmen and influences on the purchasing process. Responses were received from 250 buyers, for a response rate of 61 percent. Of the responses received, only one was judged unsuitable for analysis.

The sample characteristics are described in Chapter V. The next chapter will describe the electric utility industry and its suppliers and establish the context for the development of the questionnaire, described in Chapter IV.

Footnotes

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CHAPTER III

THE ELECTRIC UTILITY INDUSTRY AND ITS SUPPLIERS

The electric utility industry provides a unique opportunity to study buyers' role expectations for capital goods salesmen. The first section of this chapter will review those characteristics of the industry that make it particularly appropriate for this research. The second will describe the utility industry and its purchasing practices. The third section deals with suppliers of electric distribution equipment and their sales approaches to the utility industry. The fourth section will identify certain unique aspects of the relationship between the industry and its suppliers.

The Electric Utility Industry and This Research

Expenditures for new plant and equipment by this industry are the largest, by a substantial margin, of any segment of U.S. industry. As shown in Table 3-1, privately owned electric utilities spent almost 19 billion dollars on new plant and equipment in 1976, 61% more than the petroleum industry, the next largest segment, and 16% of total industry expenditures. The purchasing activities associated with this high level of expenditures involve large numbers

TABLE 3-1

EXPENDITURES FOR NEW PLANT AND EQUIPMENT BY U.S. BUSINESS
(Billions of Dollars)

	1975	1976 (Preliminary)
All Industries	112.78	121.23
Manufacturing	47.95	52.98
Primary Metals	5.99	5.88
Petroleum	10.51	11.74
Non-Manufacturing	64.82	68.25
Electric Utilities (Privately Owned)	17.00	18.94

Source: Survey of Current Business, United States Department of Commerce/Bureau of Economic Analysis. January, 1977, Volume 57, Number 1.

of individuals in the purchasing, engineering and operating departments of the utility companies and require a high degree of professional skill in their execution. This purchasing activity, in turn, requires substantial contact with the manufacturers supplying the industry and most of this contact is with the manufacturers' salesmen. As a result of frequent, and usually ongoing, contact with salesmen, buyers in this industry have the opportunity to develop a well defined set of role expectations for salesman behavior, knowledge, competence and personal relations and to develop personal perceptions regarding selling effectiveness. In informal discussions with buyers it was clear that they do have well defined role expectations and perceptions of effec-

tiveness regarding salesmen and that they would feel comfortable with questions asking them to indicate those role expectations and perceptions.

Homogeneity in the Electric Utility Industry

On a number of dimensions the utility industry is substantially homogeneous. Accounting practices are standardized by the Federal Power Commission's Uniform System of Accounts. Financial practices are generally similar. External financing is relied on heavily to provide funds for expansion. Capital structures tend to have similar patterns of common equity, debt and preferred stock with common equity generally ranging from 30 to 50% of total capitalization. Financial objectives are also similar. Steady growth in earnings is considered of vital importance to attract new capital. Return on equity targets are in the range of 12 to 14% and regulation of earnings by state regulatory bodies tends to equalize earnings, or at least put similar ceilings on attainable earnings.

The similarities in corporate objectives, the limitations of financial options and the essentially identical nature of the basic business, i.e., generation, transmission, distribution and sale of electric power suggest that the activities directed at accomplishing corporate objectives will be very similar for all utilities and this is the

case. Although organization form will vary, primarily due to the nature of the utility's service area, the basic tasks for purchasing, engineering and operating functions, as well as finance and marketing, vary little from one utility to another. Because of the non-competitive nature of the industry (i.e. electric utilities generally operate in franchised territories to avoid duplication of facilities) few practices are considered proprietary as regards the purchasing, engineering and operating functions. Trade association meetings and industry standardizing committees provide frequent opportunities for exchange of views on almost every aspect of purchasing, engineering and operating practices; reinforcing the tendency for these practices to be homogeneous.

This homogeneity with regard to the nature of the basic task associated with each function has two advantages for a study of selling effectiveness. First, within each function, the homogeneity reduces the probability that the nature of the task affects buyer role expectations for salesmen, thus allowing examination of the influence of other factors which otherwise might be obscured by the influence of task. Second, it provides a common frame of reference regarding certain buyer factors whose influence was investigated. In cases where respondents were asked to make subjective judgments regarding organization characteristics, this common frame of reference reduces the possi-

bility of classification error.

Diversity in the Electric Utility Industry

Just as the homogeneity of the industry has certain advantages for this research, so does its diversity, particularly with regard to geography and size. Privately owned electric utilities operate in 47 of the 48 contiguous states (Nebraska is the exception) providing the opportunity to investigate the effect of geography on buyer role expectations and perceptions regarding selling effectiveness. The industry includes small utilities, such as Home Light and Power Company with 1974 revenues of approximately 8 million dollars, as well as very large utilities, such as Consolidated Edison Company of New York with 1974 revenues in excess of 2 billion dollars.[1] This provides an interesting opportunity to examine the effect of size on buyer role expectations. Still further, and as will be described in the section on the purchasing process, some aspects of purchasing practices do vary from one company to another, despite the basic similarity in objectives, providing the opportunity to examine the implications of these differences.

Holding Companies in the Electric Utility Industry

A general characteristic of much of the utility industry is the local nature of its management; that is, most

utilities headquarter in the area which they serve. Management decisions, therefore, are made in the context of local influences and personnel in the organization tend to reflect whatever cultural patterns predominate in the area. Engineering, purchasing and operating staffs are physically close to the physical plant of the utility and so forth. The exception to this general characteristic is the holding company organization.

Today, holding companies are regulated by the Public Utility Holding Company Act of 1935, designed to correct alleged financial abuses which led to financial failures of utilities in the 1930s. The basic thrust of the act was to change the nature of holding companies from many tiered financial pyramids to smaller entities. The typical holding company organization today consists of two or more operating companies, a parent financial organization and, usually, a service organization; structured to provide various management services to the parent and/or the operating companies. In some instances these services are essentially those of a consulting engineer, limited, perhaps, to major power plant projects. Alternatively, these services can be comprehensive to the extent that engineering and purchasing functions as they apply to the distribution system are assigned to the service company and the operating company does, indeed, just operate.

Generally, service organizations are physically re-

mote from the actual utility plant. For a study of factors that affect buyer's role expectations for salesmen the existence of holding companies provides the opportunity to investigate the influence of physical remoteness on such role expectations.

Public Agencies in the Electric Utility Industry

The term "electric utility industry" is frequently used synonymously with "privately owned utilities" or with "public utilities" and is used in this context in this dissertation. It should be noted however that this is an ownership classification of the broad activity of generation, transmission, distribution and sale of electric energy and many other entities are also engaged in this activity. These other entities can be broadly classified "municipal, state and power district systems," "cooperative," and "Federal agencies." Taken together capital expenditures in 1976 by these entities were estimated at slightly in excess of 8 billion dollars;[2] hence, buyers in these organizations also have substantial contact with salesmen.

The organization purposes and structures of these entities, however, are very different from those of the privately owned segment of the industry. Still further, individual organizations are generally much smaller, at least for municipals and cooperatives. In contrast to the 217

privately owned utilities, 511 municipals reported operating results to the Federal Power Commission in 1974[3] and 939 cooperatives were reported as borrowers from the Rural Electrification Administration as of January 1, 1976.[4]

Investigating views of buyers in these organizations would have added substantially to the complexity of the research question and contacting buyers in such a large number of organizations was beyond the resources available for this dissertation. The investigation, therefore, was limited to just the privately owned segment of the industry.

Characteristics of the Electric Utility Industry

The Distribution System

The distribution system of an electric utility is generally defined as that portion of the total system serving residential and commercial customers and those industrial customers not served directly from the transmission system. Physically, the main elements of the distribution system include the ubiquitous distribution lines found on most of the country's streets or alleys, the protective equipment involved in protecting the system against conditions of overcurrent and overvoltage, the transformers which transform power from the distribution voltage, such as 13,200 volts, to a utilization voltage, such as 120/240 volts, insulated cable used at either voltage level and the electric watthour meter used to measure energy use. Al-

though the overhead system predominates, much recent construction has been underground, increasing the use of insulated cable and padmounted transformers. Other elements of the system include capacitors for power factor correction, streetlight luminaires, in those cases where municipalities do not provide street light service, voltage regulators to maintain proper equipment operating voltage and a wide variety of miscellaneous materials.

Before the advent of nuclear power and the imposition of severe air emission standards on coal fired power plants the distribution system represented the major capital investment for the industry, typically in the neighborhood of 40% of the total investment. Current expenditures for distribution plant and equipment represent a much smaller proportion of the total but in absolute dollars are still large, ranging from $1,770,000,000 in 1966 to a peak of $3,405,000,000 (23% of total expenditures) in 1974.[5]

Data are not available on actual purchase expenditures for distribution equipment, per se, i.e., separated from the cost of construction. Estimates of such purchases range from 20 to 40% of total expenditures, depending on the precise definition of distribution equipment and on the nature of the industry construction mix. For instance, some utilities consider substations as distribution plant while others classify them as transmission equipment and in some years line relocation work or reconductoring may result in

higher than normal expenditures on labor. It seems reasonable to estimate that 1974 expenditures were in excess of one billion dollars.

Organization structures of utilities with regard to the distribution system vary considerably. However, whatever structure is used, the generic terms of purchasing, engineering and operating are widely used to describe the basic functions necessary to the construction and operation of the system. Broadly, the responsibilities of each function are as follows:

(1) The engineering function is responsible for design of the system and this responsibility includes approval of materials that may be used in construction of the system.

(2) The purchasing function is responsible for procurement of approved materials at the lowest evaluated cost, consistent with the construction needs of the company and is sometimes responsible for inventory or stores.

(3) The operating function is responsible for construction, operation and maintenance of the system and may also be responsible for inventory or stores.

The Purchasing Process

Although there are many variations the basic approach of most utilities to the purchase of electric distribution equipment is to invite bids based on written descriptions

of the items or specifications from a list of pre-qualified suppliers. Hence, there are two basic steps in the process. First, the qualification of suppliers, usually considerably in advance of actual purchase and, second, the evaluation of bids or quotations received from suppliers in response to the utility's invitation.

Qualification of Suppliers. The procurement policies and practices of the Ohio Edison Company are reasonably typical of industry practices. In describing these policies and practices to the Federal Power Commission in 1970[6] the company identified the factors it considered in qualifying suppliers to include, but not be limited to:

(1) Financial responsibility
(2) Capacity to fulfill requirements
(3) Technical competence
(4) Management competence, attitudes and policies
(5) Relevant past and present labor relations
(6) Reasonable proximity when shipping charges and prompt delivery, servicing or follow up are considerations
(7) Concern for rendering good, reliable service
(8) Honesty and fairness.

The company stated that it encouraged the evaluation of new suppliers as long as adding them did not result in an excessive number of suppliers. Still further, unsatisfactory performance, such as furnishing defective equipment,

can lead to removal of the supplier from the approved list.

For most utilities responsibility for initiating action to qualify a supplier can be assigned to purchasing or engineering but the actual approval is usually an engineering responsibility. In some instances authority rests with a standards engineer or with an engineer specifically assigned responsibility for a certain product or group of products. Inputs to the qualification decision are solicited from purchasing and operating but the final decision is strictly an engineering one. In other instances, authority rests with a standards committee giving representatives from purchasing and operating a direct vote on qualification decisions.

Determining the Contract Award. The Consumers Power Company, with criteria similar to Ohio Edison's for qualifying suppliers, stated its evaluation criteria for contract awards to include:[7]

(1) Price, and price adjustment provisions if any

(2) Technical considerations

(3) Conformance to bid specifications (alternates will be encouraged if the bidder has also bid to the specifications)

(4) Warranties and other commercial terms

(5) Bidder's personnel and organizational structure

(6) Research and development effort

(7) Desirability of utilizing more than one source of supply.

In addition to the above criteria, utilities may evaluate supplier's past shipping or delivery performance and equipment failure rates, as well as intangibles such as service, research and development activities and manufacturer's support of industry objectives. In some instances utility buyers may evaluate the salesman himself, his service to various parts of the organization and his ability to influence his firm.

For most utilities the responsibility for determining contract awards based on criteria used is assigned to the purchasing function. Some contract award decisions may be made by purchasing with no formal inputs from the other functions. In some instances purchasing has direct knowledge of all factors and the competence to evaluate them (in many utilities individuals in the purchasing function are trained engineers). In other instances inputs regarding at least some of the criteria are made by engineering and operating on an informal basis. Alternatively, pertinent criteria may be evaluated using sophisticated computer programs to combine objective and subjective judgments of personnel in all functions according to well defined decision rules.

The formality of the purchasing process can also vary. The norm is a fairly formal system with written bids or quotations and relatively little discussion of the quo-

tation after it is submitted except for purposes of clarification. In some utilities the system approaches the formality of a sealed bid routine requiring rigid adherence to procedures and specifications with no opportunity for discussion. In other utilities the opportunity exists for discussion of quotations after they are submitted and in some instances the opportunity exists for active negotiations.

The trend in recent years has been toward annual contracting or blanket awards. Essentially, the utility estimates its requirements for a given product for the coming year and solicits quotations for the quantity estimated. A blanket order is placed with one or more suppliers indicating the anticipated quantity that will be released against each order. Several benefits are seen for this approach. The larger quantities are believed to result in more favorable prices. Generally, the order is protected against price increases for a specified time period. A more thorough evaluation can be made if the award decision is made only once each year. Annual orders may allow suppliers to better schedule their production and so forth.

Despite the trend toward annual awards, there are drawbacks to the approach. A commitment to buy for a year may be a disadvantage if material prices drop. Estimates of annual requirements may be inaccurate and may mislead suppliers, either as to price or expected volume. Annual commitments may preclude taking early advantage of new designs

from competing suppliers. Some utilities prefer, therefore, to purchase on some other schedule than annual; sometimes quarterly and sometimes day to day as specific needs arise.

Modeling the Purchasing Process

The variety of factors that are considered for both product approval and purchase awards, and the variety of ways in which evaluation of these factors can be made, indicates the difficulty of precisely defining the buying influence or influences. The pattern of buying influence can vary substantially depending on the product, the extent of previous experience with it, personal relations between individuals in the different functional areas, corporate policy and organization. In some instances purchasing may well have total influence. In other instances engineering may have substantial, if not total, influence. Operating influence is most frequently exerted after the original purchase based on bad experience with a product, e.g., high failure rates. Operating influence, however, can be exerted prior to first use -- particularly with regard to ease of maintenance and safety.

Influence on the purchasing process can vary across management levels as well as across functions. In some utilities authority for decision making, with respect to either product approval or contract award, is restricted to upper or middle management. Lower levels have little input

other than to present the facts on which the decision will be made. In other cases, lower levels in the organization are asked to gather facts and to make recommendations. These recommendations are generally followed but sometimes are overruled with management becoming actively involved in reformulating the original recommendations. Last, some utilities push the decision making authority to the lowest possible level and seldom, if ever, overrule decisions or become involved in the process.

This brief description of purchasing processes suggests the variety of individual buying situations that may arise and the difficulty of making generalizations about the decision making process. Many models have been developed which have attempted to represent the industrial buying process, but the generality of the problem led Webster and Wind to conclude:[8]

> Despite the intuitive appeal and scattered evidence in favor of these somewhat similar descriptive models, there is no way to identify the one "true" decision-making process that exists in all organizational buying decision processes. Furthermore, it is most likely that such a universal decision-making process does not exist -- primarily because of differences in organizational characteristics, the people who are involved in the various stages, the given buying situation, and the importance of the given task.

The utility purchasing process, while more structured than for industry in general, is nevertheless complex and variable. It is not likely that a universal process exists, even for this homogeneous industry. The challenge for the

salesman calling on electric utilities is not only to adapt his role to reflect individual buyer preferences but to understand his customer's decision making processes. Only then can he expect to develop appropriate selling strategies and tactics.

Manufacturers of Electric Distribution Equipment

The product classification "electric distribution equipment" used here includes distribution transformers, voltage regulators, capacitors, lightning arresters, fuse cutouts, reclosers, switching equipment, street light luminaires, insulators and insulated cable. This section will describe some of the manufacturers of this equipment, their marketing strategies and their approaches to the utility market.

Manufacturers can be broadly categorized as full line, such as General Electric, Westinghouse and McGraw-Edison, or as single or narrow line, such as RTE Corporation, Sangamo Electric Company or Ohio Brass Company. The full line companies manufacture all, or practically all, distribution products and also manufacture products for the transmission system. In the case of General Electric and Westinghouse, turbine-generators and nuclear reactors for the generation of electric power are also manufactured.

Within the classification of electric distribution equipment the largest product category is distribution

transformers with actual shipments of 472.4 million dollars in 1972[9] and an estimated market of 644 million dollars in 1974.[10] Data are not available for all the other categories but 1972 capacitor shipments were 41.4 million dollars, fuse cutout shipments were 31.0 million dollars and voltage regulator shipments were 111.4 million dollars.[11] The dominant single line manufacturer is RTE, currently the third largest manufacturer of distribution transformers after General Electric and Westinghouse, the major full line manufacturers. As many as thirty other manufacturers compete aggressively for some of the distribution transformer business or for other distribution products.

Marketing strategies of the manufacturers vary considerably. Full line manufacturers, and some of the large single line manufacturers compete actively for orders from all utilities. Full line manufacturers tend to emphasize application engineering, basic research and development and cooperative efforts with utilities in support of industry objectives, as well as product quality and ability to supply. Product development or specialized maintenance assistance tends to be emphasized by the large single line manufacturers. Smaller manufacturers may concentrate sales efforts on a regional basis and in some instances emphasize willingness to build specials, in contrast to the larger manufacturers who emphasize standard items.

For all manufacturers, the prevalent sales approach is direct through company representatives or manufacturers' agents. Distributors are seldom used as a channel to reach the privately owned utility market (although this is the major channel used to reach the REC/Municipal market). Salesmen are assigned accounts and are expected to call on appropriate buying influences in all functions of the utility.

In most instances the salesman is responsible for the sale of all of his company's distribution products. Through the 1950s General Electric and Westinghouse salesmen were responsible not only for the sale of distribution equipment but also for the sale of generation and transmission equipment. Because of the diversity of product knowledge required by this approach, product specialists were located in district offices. These specialists supported the efforts of the general salesman by offering the customer highly specialized product knowledge. In many instances, they also developed close specialized contact with various individuals in the utility organization.

This approach raised concerns about divided responsibility. In addition, there was growing concern that it did not provide balanced representation of all the products assigned to the general salesman, particularly with regard to distribution products. There was also some belief that the growth in market share of single line manufacturers was due to their more focused sales approach in which responsi-

bility for securing orders and for providing specialized product knowledge was assigned to one individual. In the 1960s both General Electric and Westinghouse reorganized their sales forces to narrow the scope of product responsibility for individual salesmen. Today most distribution products are sold by salesmen with no other product responsibility.

From the manufacturers standpoint it is considered critical that the salesman be knowledgeable about both his products and his customers. Because of the emphasis on product knowledge, and the technical nature of the products, the majority of salesmen in this industry have engineering degrees or engineering backgrounds. Larger manufacturers vigorously recruit new engineering graduates to enter their sales training programs. Design engineers in all companies who show evidence of aptitude for sales work are given opportunities to move into sales departments. Smaller manufacturers will occasionally hire salesmen out of a utility organization thus gaining not only product knowledge but special insight into the utility's decision making process.

Manufacturer-Utility Relations

It is beyond the scope of this dissertation to fully delineate the relations between utilities and their suppliers but their uniqueness is suggested by Sultan:[12]

> Buyer and seller relations in the electrical industry are an exotic brew, combining elements of Thomas Edison's engineering genius, Samuel Insull's financial swashbuckling and Oedipus' parent child rivalry.

Although this statement may be most appropriate with regard to turbine-generators, it is not inappropriate with regard to distribution equipment. Much of today's environment for the purchase of distribution equipment is conditioned by earlier events. Edison's founding role and early association with General Electric and the financing of utility expenditures by both General Electric and Westinghouse established this unique relationship. Throughout much of the industry's existence it has relied heavily on manufacturers for product research and development, for application assistance, particularly as regards new technology, and as a source of highly trained manpower. Manufacturers, recognizing the dependence of their growth on increased use of electricity, have encouraged and supported utility marketing efforts to promote additional consumption of energy.

During the early industry years relations between manufacturers and utilities developed with little influence from external events. Growth was stimulated through technological improvements which made possible frequent cost and price reductions in the kilowatt hour. Increased consumption of electricity provided opportunities for economies of scale and these economies were passed on in further price reductions. Little limit was seen for growth as utilities

doubled in size every eight to ten years. New manufacturers, attracted by the prospect of unbounded growth, entered the business. From 1940 to 1960, the number of manufacturers of distribution transformers grew from twelve to twenty-seven.[13] Two major events, however, were destined to significantly change the relations between manufacturers and utilities; environmental concerns and antitrust.

Environmental concerns first affected the distribution equipment manufacturers. In the late 1950's the appearance of the ubiquitous overhead distribution system, seen by some as a clear sign of progress, became the target of much discontent. For almost the first time, utilities were feeling substantial pressure from external sources on a national basis about their construction practices. Products from traditional manufacturers were not available to permit utilities to respond to these pressurers. As these pressures increased, utilities took a more active role in identifying product needs. Regional groups were formed to collectively present these needs to manufacturers. Smaller manufacturers, with less commitment to established products, capitalized on the opportunity to supply these new needs. Traditional market shares and established manufacturer-utility relations shifted.

If there was an Oedipus relation between the traditional suppliers and the utilities it ended with "The

Incredible Electric Conspiracy."[14] Discovery of the extent of price fixing activity on the part of almost all suppliers of apparatus, mechanical as well as electrical, changed all aspects of the relations between buyers and sellers. The purchasing process was particularly affected as purchasing managers sought ways to increase competition between manufacturers and to increase their control of the purchasing process.

In this changed purchasing climate the nature of the selling task also changed. Traditional relations could not be counted on to influence contract awards. Changing product needs were affecting the lists of approved suppliers. Patterns of influence were changing as utility managements responded not only to their own concerns, stemming from antitrust revelations, but to increased scrutiny by regulatory bodies. The new climate presented new challenges but it also presented new opportunities.

The salesman's opportunity to influence the outcome of the purchasing process can be thought of as a range. The lower limit, or floor, of this range is that amount of business which the salesman can secure with, literally, no effort. The upper limit, or ceiling, is that amount of business which represents the maximum amount the salesman can secure through his own efforts. This ceiling can be exceeded only by favorable extraneous factors or "windfalls."[15]

In this context, the new climate of utility-manufacturer relations substantially expanded the salesman's opportunity range. The questionnaire discussed in the following chapter is designed to enhance understanding as to what efforts on the part of the salesman will increase the likelihood that his results will be near the top of his opportunity range.

Footnotes

[1]Federal Power Commission, "Statistics of Privately Owned Electric Utilities in the United States, 1974."

[2]Electrical World, March 15, 1977, p. 39.

[3]Federal Power Commission, "Statistics of Publicly Owned Electric Utilities in the United States, 1974."

[4]Moody's Public Utility Manual, 1976, New York: Moody's Investors Services.

[5]Electrical World, March 15, 1977, p. 39.

[6]"Procurement Policies and Practices of Ohio Edison Company," mimeographed statement filed pursuant to §50.1, Subchapter E, Chapter I of Title 18 of the Code of Federal Regulations.

[7]Consumers Power Company, Jackson, Michigan, "Procurement Policies and Practices," undated.

[8]Webster, Frederick E., Jr., and Yoram Wind, Organizational Buying Behavior, Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1972, p. 31.

[9]1972 Census of Manufacturers -- Industry Series, ITC 72(2)-36A, Electrical Measurement and Distribution Equipment.

[10]Annual Report, RTE Corporation, 1974.

[11]1972 Census of Manufacturers -- Industry Series, ITC 72(2)-36A, Electrical Measurement and Distribution Equipment.

[12]Sultan, Ralph G.M., Pricing in the Electrical Oligopoly, Volume 1, Boston: Harvard University Press, 1974, p. 1.

[13]Backman, Jules, The Economics of the Electric Machinery Industry, New York: New York University Press, 1962, p. 66.

[14]Smith, Richard Austin, "The Incredible Electrical Conspiracy," Fortune, April 1961.

[15]Webster, Frederick E., "Rotionalizing Salesman's Compensation Plans," Journal of Marketing, 30 (January 1966): 55-58.

CHAPTER IV

QUESTIONNAIRE DEVELOPMENT AND SUMMARY OF EXPECTED RELATIONS

The final form of the questionnaire which was used as the research instrument to test the hypotheses developed in Chapter II is reproduced in Appendix A. This chapter will explain in more detail the concepts of salesman factors, buyer factors, and perceived selling effectiveness as they relate to the models developed in Chapter II and also as they relate to the questionnaire. Having elaborated these basic concepts, this chapter will examine the expected relations between buyer and salesman factors and expected relations between salesman factors and perceived selling effectiveness.

The Models and the Questionnaire

Two models were presented in Chapter II to indicate the nature of expected relations between buyer factors, salesman factors and buyer perceptions of selling effectiveness. Model 1 provides a framework for developing a better understanding of buyer preferences for salesman factors (i.e., buyer role expectations) and how these preferences vary depending on the buyer's personal or organizational situation. Model 2 provides a framework for developing a

better understanding of the relation of buyer preferences for salesman factors to their perceptions of selling effectiveness and how these relations vary depending on certain buyer factors.

The questionnaire described in this chapter was designed to develop data suitable for two analytical approaches. First, items are included in the questionnaire for specific individual analysis. This enables development of a preference hierarchy for items within each salesman factor. Changes in the hierarchy as a function of buyer factors can then be analyzed. Second, items can be combined to construct indexes to permit analysis of the relation between salesman factors and perceived effectiveness.

The following sections will outline the rationale for selection of the questionnaire items relating to salesman factors, buyer factors and perceived selling effectiveness.

Salesman Factors

Behavior

The most important part of the salesman's job is his direct contact with the customer. It is this direct contact that provides the opportunity to tailor presentations to the individual situation, to immediately respond to questions, to probe for reactions and so forth. It is during this direct contact that the salesman has the opportunity to vary his behavior according to his perceptions of what is necessary or appropriate.

There is no question that some salesmen are more skillful than others in doing the "right thing" in the customer's office. Advice on what that right thing is varies widely, however. Practitioners speak from their own experience. The sales manager with a technical background will advise emphasis on engineering matters. The sales manager with a business background will advise emphasis on economic matters. Behavioral scientists, on the other hand, propose a broad framework of understanding within which the salesman's skill, intuition and sense of customer rapport guide his behavior.[1]

This research focused on an area between the specific advice of successful practitioners and the general advice of behavioral scientists. Buyer preferences were developed for various aspects of salesman behavior which are generally associated with the sale of distribution equipment. This was done by asking buyers to indicate the relative importance to them that the salesman discuss, or emphasize, certain subjects; selected to be representative of a range of relevant subjects.

Primary emphasis for questionnaire item selection was in the area of discussing product, price and shipment. Items relating to discussing general business matters, industry trends, routing activities and personal matters were also included as were items relating to formal and informal presentations.

An initial list of items was generated from a review of the literature with particular reliance on Stroh[2] and Thompson.[3] This list was reviewed with a number of sales engineers and district managers in the General Electric Company. The final list of items (see Figure 4-1) was based on

Abbreviated Description	Questionnaire Reference Section III. Question:
Importance of discussing or emphasizing:	
Product detail	1
Product application	2
Product economics	3
Product operation	4
Price and price policies	5
Terms and conditions	6
Personal matters	7
General industry matters	8
Product trends	9
Order status	10
Forthcoming requirements	11
His company's activities	12
Other parts of buyer's company	13
Technical services	15
Purchasing philosophies	18
Evaluation techniques	19
Importance of making routine calls	14
Importance of making formal presentations	16
Importance of making informal presentations	17

Figure 4-1. Final list of items included in the salesman behavior factor

a pilot study in July-August 1976 and subsequent debriefing of individual respondents at The Cleveland Electric Illuminating Company, Ohio Edison Company and Public Service Company of Colorado.

It should be noted that all items in the questionnarie were reviewed in the same manner. The final version of the questionnaire was tested in December, 1976 with six individuals at the Detroit Edison Company.

Knowledge

Typically the general advice to a salesman is to be as knowledgeable about every aspect of his customer's business as is humanly possible, but in particular, to be completely knowledgeable about every aspect of his product. On the other hand, given the technical nature of electric distribution products and the heavy reliance on factory experts to provide specialized knowledge there is some reason to question whether this commonly accepted advice is valid from the standpoint of many customers. That is, is product knowledge important, per se, or is it sufficient to be able to provide knowledge, generally obtained from other sources? The first objective, therefore, is to determine the relative importance buying influences place on aspects of product knowledge.

Beyond specific product knowledge the salesman has an almost unlimited spectrum of knowledge possibilities. Much of his knowledge acquisition is dictated by the requirements of specific circumstances. Conversely, acquisition of knowledge in some areas is almost totally discretionary with the salesman. The second objective, therefore, is to determine the relative importance buyers place on other, or non-

product, areas of knowledge.

In total, ten items regarding various areas of knowledge were included in this factor and are listed in Figure 4-2.

Abbreviated Description	Questionnaire Reference Section V. Question:
Importance of knowledge about:	
Product detail	1
Product application	2
Industry purchasing practices	3
Engineering economics	4
Utility financial practices	5
General industry matters	6
Contractual matters	7
Buyer company's requirements	8
Salesman company's capabilities	9
Salesman competition	10

Figure 4-2. Final list of items included in the salesman knowledge factor.

Competence

In order to develop a researchable definition of competence it was necessary to narrow the concept to five specific areas. The first two reflect Mayer and Greenberg's contention that the two basic requirements for salesman success are empathy and egodrive.[4]

Empathy. To completely investigate buyer's feelings about the importance of empathy was beyond the scope of this research. The concept was approached by asking buyers to indicate the importance of the salesman's sensitivity to certain job related aspects of the buyer-seller relationship. Based on the results of the pilot study, questions were in-

cluded which asked the buyer to indicate the relative importance he placed on the salesman's sensitivity to the buyer's time situation and to his level of understanding.

Egodrive. While egodrive is a far more complex concept than just overt aggressiveness it can be approached by asking questions regarding the importance of aggressiveness and persuasiveness in salesmen. Low absolute levels of importance are almost guaranteed, given the negative stereotype of the "pushy" salesman and a general aversion on the part of most buying influences in this industry to being "sold." However, the pilot study revealed that buyers do vary the importance placed on aggressiveness and persuasiveness. Questionnaire items were included to determine if any buyer factors accounted for this variation.

Communication skills. The third area of competence selected for investigation deals with communication skills. It is generally accepted that skillful communication is associated with selling effectiveness. It is not known, however, in what circumstances the importance of communication skills might vary. Still further, communication skill for salesmen is generally assumed to apply to oral communication. Little is known as to the relative importance of written communication skill. Questions were included concerning the importance of both oral and written communication skill.

Reliability. Reliability was the fourth area selected for investigation. Universally, high importance is

placed on reliability. Reliability, however, has a number of components. One is reliability of action, or will the salesman do what he says he'll do. Another is credibility, or the extent to which the salesman's statements can be relied on. Questionnaire items were included to consider these two components as well as the relative importance of overall reliability to other aspects of salesman competence.

The last competence area is concerned with the salesman's ability to get information, as opposed to providing information by virtue of his own knowledge, per se. Questions were included on the importance of responsiveness, which has a connotation of time, as well as the specific importance of the salesman's ability to get answers.

In summary, 10 items were included in the competence factor as shown in Figure 4-3.

Abbreviated Description	Questionnaire Reference Section IV. Question:
Importance of:	
Credibility	1
Reliability	2
Aggressiveness	3
Ability to get answers	4
Sensitivity to time	5
Sensitivity to level of understanding	6
Persuasiveness	7
Responsiveness	8
Oral communication skill	9
Written communication skill	10

Figure 4-3. Final list of items included in the salesman competence factor.

Personal Relations

Belief that friendship and other aspects of personal relations influence the purchasing decision is widespread. Little is known, however, as to how, precisely, good personal relations are translated into orders. The question is difficult to research. It is a sensitive area and there is reluctance to discuss some aspects of it. Socially acceptable statements can obscure meaningful information.

Research difficulties notwithstanding, personal relations is a pervasive aspect of selling. Even limited knowledge gained may be important to better understanding of selling effectiveness. In this research three aspects of personal relations were considered for investigation; aggrandizement, friendship, and the nature of buyer-salesman relations. Four items relating to friendship and the nature of relations were included in the final list of items for this factor as shown in Figure 4-4. Selection of these items is discussed in the following sections.

Abbreviated Description	Questionnaire Reference Section VI. Question:
Degree of friendship	1
Amount of initiative	2
Perception of relative status	8
Openness of relation	9

Figure 4-4. Final list of items included in the salesman personal relations factor.

Aggrandizement. As described by Webster and Wind,[5] the self aggrandizement model envisions a situation where the buyer utilizes his position to enhance his income and/or obtain personal favors from ventors. Closely related to this model is that of ego enhancement where the buyer in some way incorporates his "emotional response" into his purchasing decision.

No attempt was made to examine this aspect of buyer-seller relations for two reasons. First, it is clear that any questions relating to desire for personal aggrandizement would have such socially acceptable answers that responses would be meaningless. Second, and far more important, there is little evidence to support these models. Informal discussions with many buyers indicate almost unanimous rejection of the contention that buying decisions or professional judgment as to product adequacy can be influenced by such appeals. This does not suggest that such appeals are not made, and in some instances accepted, but even in these instances it is not clear as to how, if at all, the buying decision itself is, or could be, influenced.

Friendship. In most industrial selling situations, and particularly in the utility industry, the long term nature of buyer-seller relations provides the opportunity for enhancement of personal relations leading to the possibility of development of personal friendships. To some buyers this is seen as a natural estate or condition which does not sug-

gest either impropriety or undue influence but, rather, establishes an environment of mutual trust and interdependence within which transactions are carried out more advantageously and effectively for both parties.

Other buyers have a very different point of view and see personal friendship leading to relationships serving self aggrandizement and ego enhancement. Buyers with this point of view are more likely to look for an arms length relationship with salesmen.

Although there are overtones of "favoritism" associated with personal friendships there does not seem to be any reluctance on the part of buyers to discuss this aspect of buyer-seller relations. Therefore, it was decided that a question in this area could develop meaningful data.

Nature of Relations. Whether or not personal friendship develops between buyer and salesman, another question arises concerning the nature of the relation that exists when buyer and seller are engaged in normal business transactions. While personal friendship may enhance the openness of business relations between buyer and seller it is clearly possible to have open relationships and free exchange of information without personal friendship. Conversely, it is possible to have restricted relations with minimum exchange of information despite personal friendship. A nonverbal question to measure the desired openness of relations was developed based on work by Loevinger and Snoek.[6]

Another aspect of personal relations is the feeling as to one's relative status to another person. This is a difficult question to ask in direct form and a nonverbal measure developed by Ziller[7] and used in other marketing studies[8] was included.

Last, a question was included concerning buyer preference for relations with salesmen on an initiating-responding dimension.

Buyer Factors

The study of buyer factors requires any researcher to look for ways to move from the general model (which includes all buyers and so must envision every possible response to every possible stimulus) to the specific model where one salesman is interested in the responses of one buyer. The problem is -- can research identify certain personal characteristics of the buyer, either of a demographic or pschographic nature, or of his organizational situation that will guide the salesman in anticipating buyer reactions to various aspects of behavior, skill, competence and personal relations.

In selecting buyer factors it was determined that the investigation should be limited to factors or items which were easily and readily identifiable to salesmen in their regular calls on buyers. Despite the current level of interest in psychographics in the consumer behavior field,[9]

and its growing level of interest in the field of industrial buying behavior,[10] items of this nature have not been included. The questionnaire is limited to personal and organizational buyer factors.

Personal

Items included in the personal factor are listed in Figure 4-5. Essentially the items fall into four categories as briefly described in the following paragraphs. Although this is predominantly a male occupation an additional item was included to ascertain the sex of respondents.

Abbreviated Description	Questionnaire Reference Section I. Question:
Buyer's functional area	1
Amount of managerial responsibilities	2
Number of salesmen who call on buyer	4
Frequency of contact with salesmen	5
Length of time buyer has known most salesmen	6
Amount of time spent with salesmen	7
	Section IX. Question:
Length of time buyer has been with his company	1
Length of time buyer has been in his function	2
Years of schooling completed	3
Area of education	4
Does buyer have Master's degree	5
Sex of buyer	6
Involvement in new buy activities	7
Involvement in straight rebuy activities	7
Involvement in modified rebuy activities	7

Figure 4-5. Final list of items included in the buyer personal factor.

Nature of the Work. The most readily identifiable personal characteristic is the buyer's organizational role, i.e., purchasing, engineering or operating and it was expected that this category would have the most explanatory power in predicting buyer responses to salesmen. Closely associated with the organizational role is the nature of the buying task. To elicit the respondents description of his task, questions were included using the BUYGRID concept.[11]

The buyer's degree of managerial responsibility is also readily identifiable. A question was included to ascertain the mix of managerial and functional work.

Contact with Salesmen. No evidence could be found in the literature to indicate what effect should be expected as to buyer reactions to salesmen as a function of degree of contact. Nevertheless, the amount of contact buyers have with salesmen varies widely, several items are included to determine if this influences the buyer-seller relation.

Education. Both level and area of education are readily observable personal characteristics which may differentiate buyer's responses to sales behavior. In most utilities, an engineering degree is the norm for individuals in the engineering function. In the purchasing function, however, the educational background varies more widely and in all three functions there are many individuals who do not

have a college degree. Items were included in this category to indicate the level and area of education of respondents.

Experience. The last personal category includes items concerning the buyer's experience. This is seen as having two components: first, respondent's time with his company and, second, respondent's time in his function. Items are included to measure both components.

Organizational

Items included in the organizational buyer factor are listed in Figure 4-6. Main areas of interest are the size

Abbreviated Description	Questionnaire Reference
	Section VIII. Question:
Number of connected meters	1
Geographic location	2
Purchasing mix	3
Sophistication of evaluation practice	6
Formality of purchasing procedure	7
Salesmen are specifically evaluated	8
Size of headquarter city	9
Growth, relative to industry average	10
	Section X. Question:
Holding company affiliation	1
Locus of holding company buying influence	2

Figure 4-6. Final list of items included in the buyer organizational factor.

of the utility, its geographic location, the nature of the utility's purchasing practices and the possible effect of

being part of a holding company. These areas are briefly elaborated in the following paragraphs.

Size. As described in Chapter III electric utilities range in size from companies with literally only a few customers to such giants as Commonwealth Edison, Pacific Gas and Electric and Consolidated Edison, each with more than 2,000,000 connected customers. Depending to a degree on load growth and other factors, such large utilities are also the largest purchasers of distribution equipment. The interest is in the effect that dollar volume of purchases has on buyer-seller relations and all respondents were asked the number of connected meters as a surrogate for purchasing expenditures.

Geographic Location. There is at least some evidence that geography may play a role in influencing buyer-seller relations. A recent study suggests that basic value orientations of consumers can be expected to vary across geographical regions when various socio-cultural influences exist.[12] Hence, an item on geographic location was included to determine if there are similar effects for industrial buyers.

Nature of Utility Purchasing Practices. There is wide variation in utility purchasing practices, particularly as regards the sophistication of the evaluation system for determining the contract award and the degree of use of blanket orders or annual contracts. In addition, there can be considerable variation in the formality of the purchasing

process. All of these are seen as possible causes for differentiating buyer's responses to salesmen and items are included to elicit respondents' assessments of their companies' practices in these areas.

Holding Company. Items are included to ascertain, first, if the respondent is part of a holding company organization, either with the parent/service company or with an operating company and, second, how the respondent perceives the split in purchasing influence between the parent/service company and the operating company(s).

Growth and Headquarter City. Utility growth patterns have varied widely in recent years. This, in turn, could effect the utility's purchasing expenditures, the tempo of its activity and the general climate within which decisions are made and activity takes place. Hence, respondents were asked to compare the growth of their companies to the industry average.

While most large utilities are headquartered in large cities, and vice versa for small utilities, this is not always the case. As it generally appears that the life style of individuals varies as a function of community size, it was felt the size of the headquarter city might be another measure of socio-cultural differences which, in turn, could lead to different buyer responses to salesmen. Hence a question as to the size of the respondent's headquarter city was included.

Perceived Selling Effectiveness

As indicated in Chapter II several items were developed to define the concept of selling effectiveness. The items finally selected are listed in Figure 4-7.

Abbreviated Description	Questionnaire Reference
Global rating of effectiveness	Section I. Question 9
Global rating of influence	Section II. Question 11
	Section VI. Questions:
Reliance on salesmen for information	1
Buyer's view of nature of sales work	2
Global rating of problem solving	6
Influence on marketing mix	(Composite. See Figure 4-8)

Figure 4-7. Final list of items included in measure of perceived selling effectiveness.

Effectiveness Per Se. In Chapter II reference was made to the ambiguity which surrounds the concept of effectiveness. That is, from the customer's standpoint, is the effective salesman the one who secures the order or, possibly, the one who most helps the buyer make a good purchasing decision even if this means a purchase from a competitor? Is the effective salesman one who responds when requested and so assumes a relatively passive role or one who assumes considerable initiative. In addition to ambiguity, there is the further problem of conflict between a buyer's concept of effectiveness and the concept held by

salesmen or sales management. For instance, the salesman who is successful in negotiating an order at a high price may be seen very differently by his customer versus his company.

The ambiguity of the concept of effectiveness suggested that respondents should be allowed to broadly assess this concept in the context of their own definition. In the pilot study respondents indicated no difficulty with such a question and so the final questionnaire included a global question concerning salesman effectiveness.

Influence. Despite the possible conflict of effectiveness measures between buyer and sellers there seems to be no argument that part of the salesman's job is to influence the purchasing decision. In other words, there is agreement that a salesman's function is to exert influence on the buyer and so a global question was included which asked respondents to indicate the overall influence they feel salesmen can exert on the buying decision.

Marketing Mix Influence. While there is general agreement and understanding that the job of the salesman is to influence the purchasing decision there is less understanding of the role the salesman plays, or can play, in influencing his company to modify its position or offering. Hence, a composite measure was necessary to adequately describe this concept to respondents.

The approach was to (1) identify ten areas of supplier performance generally considered to be salient in making the purchasing decision, (2) ask the respondent to weight each area in terms of its relative importance to other areas and (3) to indicate the degree to which salesmen are perceived to be able to influence their companies to modify or improve in each area, given a gap between the offering and buyer needs. Items selected for inclusion were based on two studies of attribute importance in industrial buying decisions,[14,15] modified to fit the characteristics of distribution products. Briefly, the complexity of the industrial buying decision involves more than just matters of price, product and shipment. A number of items relating to other facets of the buying decision were included. The final list of items for this composite measure is shown in Figure 4-8.

Abbreviated Description	Questionnaire Reference Section II. Question:
Manufacturer's reputation	1
Manufacturer's flexibility	2
Terms and conditions	3
Price and price policies	4
Technical services	5
Product features	6
Product quality	7
Shipment	8
Prepurchase information	9
Postpurchase information	10

Figure 4-8. Final list of items included in the composite measure of influence on the marketing mix.

Source of Information. Studies of new product development and diffusion of information[15] indicate that salesmen in industrial markets are a primary source of new product information. Still further, most of the literature regarding the selling process focuses on communication and, presumably, this generally relates to new products, or at least to products that are new to the individual buyer. The salience of this aspect of selling activity led to the inclusion of a question as to the degree to which respondents rely on salesmen for product information.

Problem Solving. Another aspect of the selling job which may be seen to define effectiveness is problem solving. Much of the literature on selling technical products[16] suggests this is a primary responsibility of the salesman. Many industrial manufacturers define the job of a sales engineer in terms of problem solving. Hence, a question was included asking respondents to indicate the degree to which they felt distribution salesmen are "problem solvers."

Nature of Sales Work. Last, an item was included which asked respondents which of a series of statements defining the nature of sales work most nearly agreed with their perception of selling. The statements were designed to portray an expanding view of the role of the salesman in terms of his acting as a communication link and as an influencer.

Expected Relations

It is recognized that the hypotheses stated in Chapter II are extremely broad and that they encompass a sufficiently large number of relations that it is almost inevitable that some of these relations will prove to be statistically significant. The justification for this broad approach is, first, that there is no general theory, or data from other studies, to guide the development of more specific hypotheses and, second, that much of the value of this research will derive from providing empirical data in what is a relatively unexplored area. However, certain relations can logically be predicted based on knowledge of the industry involved and concepts in related fields and the rest of this chapter will discuss the relations expected for the two models.

Preferences for Salesman Factors (Model 1)

This model is based on buyer's preferences for various items making up the salesman factors. That is, buyers are asked to rate the relative importance of a wide range of items. These ratings can then be averaged and rank ordered to establish a preference hierarchy, within each salesman factor, based on the aggregate sample responses. The aggregate preference pattern can then be analyzed for various categories (Buyer Factors) and tests of significance can be made to determine what inferences can be drawn for changes

in preferences as a function of the selected categories.

Because of the large number of relations that could be estimated (1075 for all 25 buyer items and 43 salesman items) the approach is to predict relations for groups of items making up salesman factors. The expected relations are shown in Table 4-1 with items essentially grouped along the lines followed in describing the questionnaire development.

Using the upper left cell as an example, the table is read that the predicted relation is that respondents in the engineering and operating functions will feel it is more important for the salesman to talk about his product than will respondents as a whole. Similarly, using the fourth row, third column cell as an example, the prediction is that respondents in the West and South will feel it is more important for the salesman to talk about personal matters than will respondents as a whole.

As constructed, Table 4-1 offers the opportunity to predict 60 relationships, of which 30 have actually been predicted. In general, it is expected that the respondent's function will influence the largest number of salesman factors (and that it will have the largest explanatory power). Geography, size and purchasing practice are expected to influence a number of factors, although not as strongly, and education, experience and amount of contact are expected to be the least important predictors.

TABLE 4-1

SUMMARY OF EXPECTED RELATIVE PREFERENCES FOR GROUPED ITEMS OF SALESMAN FACTORS AS A FUNCTION OF SELECTED BUYER FACTORS

Salesman Factors/ Grouped Items	Buyer Factors: Function	Education	Geography	Size	Purchasing Practice
Behavior/Product discussion	Engineering, Operating[a]	Engineering		Small	
/Price discussion	Purchasing	Other (Non-engineering)		Large	
/General discussion	Purchasing, Operating				
/Personal discussion	Engineering, Operating		West, South	Small	Informal
Competence/Reliability					
/Empathy					
/Communication Skill				Large	Formal
/Aggressiveness	Purchasing		Northeast	Large	
Knowledge/Product	Engineering, Operating	Engineering	West	Small	Informal
/General	Purchasing	Other			
Personal Relations/Friendship	Engineering, Operating		West, South	Small	Informal
/Openness			West, South	Small	Informal

[a]Read that buyers in engineering and operating functions will place higher importance on the salesman discussing aspects of product than will buyers as a whole.

Explanation of Perceived Selling Effectiveness (Model 2)

This model essentially states that knowledge of the importance buyers place on certain salesman factors will explain the degree to which they feel salesmen are effective and that the relations between salesman factors and selling effectiveness as perceived by buyers will vary as a function of their personal and/or organizational situation. It is important to note, however, that this hypothesized explanatory power is not equated with causality. For instance, given the finding that high importance placed on general knowledge is strongly associated with high ratings of selling effectiveness it cannot be said that salesmen who score high on general knowledge actually are effective. It is possible that such a relation could be interpreted to mean that a buyer who for other, and unknown, reasons sees salesmen as effective is merely stating a belief that they should be knowledgeable in a number of general areas. This may be a subtle distinction, given that the ultimate hope is to provide information to salesmen that will improve their ability to interface with buyers but it is important to limit the inferences that can be drawn as to effectiveness and influence, per se.

Having established the foregoing concept, the relationships expected in connection with Hypothesis 2 can be considered in more detail. As with the first hypothesis,

the second is sufficiently broad that some relations will inevitably be found that are statistically significant. The same general rationale is felt to justify the approach and the expected relations are shown in Table 4-2.

TABLE 4-2

SUMMARY OF EXPECTED RELATIONS OF GROUPED ITEMS OF SALESMAN FACTORS TO PERCEIVED SELLING EFFECTIVENESS (PSE) AS A FUNCTION OF SELECTED BUYER FACTORS

Salesman Factors/Grouped Items	Buyer Factors		
	Function	Geography	Size
Behavior/Product discussion	Engineering[a]		Large
/Price discussion	Purchasing		
/General discussion	Purchasing		
/Personal discussion			Small
Competence/Reliability			Small
/Empathy			
/Communication Skill	Purchasing		
/Aggressiveness			
Knowledge/Product	Engineering	West, South	Small
/General	Purchasing		
Personal relations/Friendship		West, South	Small
/Openness			

[a]Read that for respondents in the engineering function the importance placed on product discussion will be salient in explaining PSE.

Using the same grouping for items within salesman factors as in Table 4-1, the expectation is that only certain groups of items will explain PSE and that these groups, in turn, will vary depending on certain buyer factors. For this model, only buyer factors of function, geography and size are considered. Of the 36 possible relations 13 are

predicted.

The analysis of data to explore the relations associated with Hypothesis 1 and Model 1 will be discussed in Chapter VI and the analysis of data to explore the relations associated with Hypothesis 2 and Model 2 will be discussed in Chapter VII. The following chapter will describe the approach to selecting the sample, response rate and the characteristics of the sample which will set the stage for the data analysis chapters.

Footnotes

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[14]Wind, Yoram, P.E. Green, and P.J. Robinson, "The Determinants of Vendor Selection: The Evaluation Function Approach," Journal of Purchasing, 4 (August 1968): 29-41.

[15]Ozanne, Urban B. and Gilbert A. Churchill, "Adoption Research: Information Sources in the Industrial Purchasing Decision," Proceedings, Fall Conference, American Marketing Association, 1968, 352-9.

[16]Alexander, Ralph S., James S. Cross and Richard M. Hill, Industrial Marketing, Homewood, Illinois: Richard D. Irwin, Inc., 1967, Third Edition.

CHAPTER V

THE SAMPLE

The questionnaire described in Chapter IV was used in a mail survey of a sample of buyers in the privately owned electric utility industry. This chapter will describe the sampling procedure and then will describe the distribution of respondents on certain characteristics and compare some of these distributions to known distributions of these characteristics in the sample.

The Sampling Procedure

Three objectives were established for the sample. First, it should be representative of buying influences in the electric utility industry. Second, it should include respondents in each of a number of categories (i.e., buyer factors as defined in Chapter IV) so that the effect of these categories could be analyzed. Third, it should be sufficiently large to facilitate comprehensive analysis. The approach taken to meet these objectives was a multistage judgmental design[1] as described in the following paragraphs.

The first step, or stage, was to develop a list of all privately owned electric utility organizations (i.e., independent companies and operating, parent or service companies associated with holding company organizations). All

privately owned utility organizations in the contiguous United States were candidates for inclusion in the sample, subject to exclusion because of certain organization characteristics.

Individuals in independent utilities with less than 25,000 meters and in operating companies with less than 100,000 meters were judged to have insufficient contact with salesmen for the purpose of this research. Organizations smaller than these indicated minimums were excluded from the sample.

Some operating companies have organization structures that do not include all three functions of purchasing, engineering and operating. Some parent or service organizations have no involvement with any aspect of the purchase of distribution products. Where either of these situations was known to be the case the organization was also excluded from the sample.

The final list of organizations, or primary sampling units, included 107 independent companies, 21 operating companies and 8 parent or service companies (See Appendix B).

The second stage of the sample included the three functional areas of interest; purchasing, engineering and operating. The objective was to have individuals in each function equally represented in the sample; both to facilitate analysis and to recognize the fact that individuals in

each function have considerable influence on the overall buying decision.

The third stage of the sample was the individual respondent, or unit of analysis. Within each function, one individual was selected who met two criteria defining him as a buying influence; first, that he has a reasonable amount of influence on some aspect of the overall buying decision, such as product evaluation or vendor selection and, second, that he has contact on a fairly regular basis with at least five salesmen for distribution products.

From the definition of buying influence it is clear that it would be impossible to definitively enumerate all individuals in the utility industry who meet the definition. This ruled out the possibility of a true probability sample. The approach taken, however, is judged to result in a representative sample from which useful inferences can be made.

There is no list of "buying influences" in the electric utility industry. Still further, at least tacit approval of each utility organization was considered important in order to insure a good response. Recognizing these considerations, questionnaires were mailed to the purchasing manager in each organization in the sample. A transmittal letter (See Appendix C) explained the study, solicited the purchasing manager's support and asked him to select a respondent in each function who met the criteria established for buying influences.

The letter and questionnaires were mailed in February, 1977. By April 15, 1977, 250 completed questionnaires were returned of which 249 were suitable for analysis. This response rate was judged to be good and the number of response responses facilitated analysis.

Distribution of Respondents

One of the objectives of the sample design was equal representation of each function. In the actual responses purchasing and engineering were slightly overrepresented at 38% and 37%, respectively. Operating was slightly underrepresented at 25%. A better balance would have been desirable but this imbalance was not judged to be a problem.

As will be discussed in Chapter VI, the effect of function on buyer role expectations is so strong that it cannot be considered as merely one of a number of buyer factors. Rather, function appears to define three separate populations. The distribution of respondents, therefore, needs to be considered for each function. In the following sections distribution of respondents is presented by function as well as in aggregate.

Distribution of Respondents on Known Characteristics (Buyer Factors)

The distributions of respondents on buyer factors of utility size, geography, nature of organization are profiled in Table 5-1. The distributions of responses, closely

TABLE 5-1

DISTRIBUTIONS OF QUESTIONNAIRE RESPONSES AND KNOWN SAMPLE DISTRIBUTIONS, IN PERCENT,[a] FOR SELECTED ORGANIZATIONAL BUYER FACTORS, IN AGGREGATE AND BY FUNCTION

Buyer Factors	Primary Sampling Units N = 136	Aggregate Responses N = 249	Purchasing Responses N = 93	Engineering Responses N = 90	Operating Responses N = 61
Utility Size (Meters)					
<500,000	68	65	64	59	66
500,000-1,000,000	18	20	21	16	23
>1,000,000	14	15	15	15	11
Geographic Area					
Pacific and Rocky Mt.	14	13	15	13	10
East No. Cent. and West No. Cent.	34	34	32	34	32
West So. Cent., East So. Cent, and So. Atlantic	28	26	26	27	28
Middle Atlantic & New Eng.	24	27	27	26	30
Nature of Respondents Organization					
Independent Utility	79	78	79	77	77
Operating Company	15	17	16	17	18
Parent and/or Service Company	6	5	5	6	5

[a]Percentages rounded to total 100%.

approximated distributions in the sample, both in aggregate and by function. On the basis of the comparisons of these distributions the responses are judged to be representative of the sample.

Distribution of Respondents on Other Characteristics (Buyer Factors)

In Chapter IV twenty-five buyer factors were identified for investigation as to their effect on buyer role expectations. The distribution of twenty of these factors in the sample was not known. Still further, nine of these twenty factors were found to have no effect on buyer role expectations (as will be discussed in detail in Chapter VI) and will not be discussed here. Distributions of responses on the remaining eleven factors are profiled in Tables 5-2, 5-3, and 5-4.

Distribution of Responses for Organizational Buyer Factors (Table 5-2)

The distribution of responses describing the sophistication of evaluation practices varies across functions. Respondents in engineering judge evaluation to be less sophisticated than do respondents in purchasing and operating. It may be that engineering respondents define evaluation in narrow terms and tend to equate evaluation with quantitative methods whereas purchasing and operating respondents tend to take a broader view of evaluation and apply more subjective

TABLE 5-2

DISTRIBUTION OF QUESTIONNAIRE RESPONSES, IN PERCENT,[a] FOR SELECTED ORGANIZATIONAL BUYER FACTORS IN AGGREGATE AND BY FUNCTION

Buyer Factors	Aggregate Responses N = 249	Purchasing Responses N = 93	Engineering Responses N = 90	Operating Responses N = 61
Sophistication of Evaluation Practice				
Low	27	20	34	23
Medium	47	52	44	57
High	26	28	22	30
Are Salesmen Specifically Evaluated				
Yes	32	42	29	24
No	68	58	71	76
Formality of Purchasing Practice				
Formal	77	87	67	77
Informal	23	13	33	23
Growth, compared to industry average				
Same	53	49	55	54
Above	37	39	36	38
Below	10	12	9	8

[a]Percentages rounded to total 100%.

judgments.

The distribution of responses to the question "Are salesmen specifically evaluated?" also varies. The purchasing response must be considered "correct" considering that purchasing normally administers the evaluation process. However, disagreement as to what is specifically evaluated, and the apparent disagreement on defining the concept of evaluation, may be a matter of concern for purchasing management. Given the importance of evaluation in the purchasing process, this may suggest the need for efforts to develop a more uniform understanding of the concept and how it should be implemented.

Respondents differ in classifying the formality of their purchasing practices. This difference is consistent with the task difference between functions, particularly purchasing and engineering. Utility purchasing policies are designed to minimize negotiation when competitive bidding is used to determine the contract award. Opportunities for negotiation can be reduced by increasing the formality of the purchasing process. Particular emphasis is placed on avoiding price negotiation, primarily a purchasing concern. This could explain the higher percentage of purchasing respondents who classify their purchasing process as formal. Conversely, less emphasis is placed on avoiding negotiation of product features, primarily an engineering concern.

Distribution of Responses for Personal Buyer Factors (Table 5-3)

These data are presented without comment as general information regarding the mix of certain personal buyer factors; in aggregate and by functions.

Distribution of Purchasing Influence in Holding Company Organizations (Table 5-4)

There is good uniformity across functions on estimates of the locus of buying influence between operating companies and parent and/or service companies. However, it should be noted that the sample is not representative of all holding company organizations. Hence, this distribution of responses should not be generalized to the larger population of holding companies.

TABLE 5-3

DISTRIBUTION OF QUESTIONNAIRE RESPONSES, IN PERCENT,[a] FOR SELECTED PERSONAL BUYER FACTORS, IN AGGREGATE AND BY FUNCTION

Buyer Factors	Aggregate Responses N = 249	Purchasing Responses N = 93	Engineering Responses N = 90	Operating Responses N = 61
Involvement in New Buy Activity				
>50%	22	2	39	29
<50%	78	98	61	71
Involvement in Straight Rebuy Activity				
>50%	44	64	21	34
<50%	56	36	79	66
Time the respondent has known most salesmen				
0-2 years	17	13	19	22
3-5 years	57	59	57	51
over 5 years	26	28	24	27
Respondent's Area of Education				
Engineering	75	37	100	95
Other	25	63	0	5
Respondent has a College Degree				
Yes	81	64	98	80
No	19	36	2	20

[a]Percentages rounded to total 100%.

TABLE 5-4

DISTRIBUTION OF QUESTIONNAIRE RESPONSES, IN PERCENT,[a] FOR LOCUS OF PURCHASING INFLUENCE IN HOLDING COMPANY ORGANIZATIONS, IN AGGREGATE AND BY FUNCTION

Purchasing Influence Predominatly	Aggregate Responses N = 52	Purchasing Responses N = 19	Engineering Responses N = 19	Operating Responses N = 13
With the parent and/or service company	62	63	63	62
With the operating company	38	37	37	38

[a]Percentages rounded to total 100%.

Footnotes

[1]Babbie, Earl R., Survey Research Methods, Belmont, California: Wadsworth Publishing Company, 1973, p. 106.

CHAPTER VI

THE RELATIONSHIP BETWEEN BUYER FACTORS AND BUYER PREFERENCES FOR SALESMAN BEHAVIOR, KNOWLEDGE, COMPETENCE AND PERSONAL RELATIONS

The purpose of this Chapter is to analyze the relationships between the various buyer factors and individual items within salesman factors to determine the degree to which various personal and/or organizational aspects of a buyer's situation affect his preference for a salesman's behavior, knowledge, competence and relations. The first section of the chapter will outline the analytical strategy. The second section will present and comment on the findings. The final section will summarize the findings.

The Method of Analysis

The nature of expected relationships, as shown in Model 1, defines the various items making up the salesman factors as dependent variables and the buyer factors as independent or predictor variables. Treating the dependent variables as intervally scaled and the independent variables as categorical, analysis of variance provides a useful way to examine the relations between the variables and was used in this analysis.

The values of the dependent variables were the buyers' responses to 7-point and 9-point scale questions. It is recognized that, strictly speaking, such responses are ordinal in nature. That is, it cannot be proved that they have interval properties. The justification for treating them as interval in nature is based on the contentions of several researchers.

Nunnally points out that, although interval properties of such scale responses cannot be proved, neither can they be disproved. Still further, he states that the equal interval assumption about intervals that may not be exactly equal causes little change in analytical results, particularly for product moment correlation and analysis of variance. He contends, therefore, that it makes little sense "to sacrifice powerful methods of analysis just because there is no way of proving the claimed scale properties of the measures."[1]

In a similar vein, Andrew and Withey[2] and Labovitz[3] present extensive evidence contrasting analytical results based on the interval scale assumption versus the more rigorous ordinal assumption. They conclude that the differences in results are so slight that there is no empirical reason not to take advantage of the more powerful tools generally considered appropriate for intervally scaled data.

The predictor variables were treated as categorical with categories established in three ways. First, some

categories were defined so that only the respondent's knowledge was involved in selecting a category. In the second case, respondents were asked to select appropriate categories from a well defined list that required some judgment as to the most appropriate definition. In the third case, the respondents were asked to estimate the degree to which some quantity existed and these estimates were then used to establish such categories as Low, Medium, High or Formal, Informal and so forth. It is recognized that these subjective judgments increase the possibility of error in assignment of individuals to categories. The nature of the utility industry, however, is such as to minimize this error, particularly within functions. As described in Chapter III, the similarity of the tasks across companies, attendance of utility personnel at a wide variety of local, regional and national trade association meetings and participation in a wide variety of intra-industry committee meetings all suggest that respondents have a relatively homogeneous frame of reference and that error in assigning individuals to categories will be minimal.

In determining categories to be used in the analysis there was the further problem of establishing them in a way that made both conceptual sense and that resulted in a reasonable number of respondents in each category. A primary concern was to obtain roughly equal numbers of respon-

dents in each of the three function categories and this requirement is met. For the other predictors, the number of respondents in each category presumably parallels the actual distribution in the industry, although the actual distribution is unknown. In some instances this resulted in good balance between categories. In others, the number of respondents was low in some categories which limited some of the analysis, particularly with regard to possible interaction. In view of the large number of predictor variables involved, however, this limitation, while undesirable, was inevitable and is accepted as a given in this research.

The basic analytical tool used to examine the effect of buyer factors on buyer preferences for items making up the salesman factors of behavior, knowledge, competence and personal relations was one way analysis of variance (ANOVA). Given the large number of relations to be investigated (i.e., the effect of 25 buyer factors on 43 items) and the possibility of interaction the analysis consisted of a number of steps. The ANOVA algorithm used will be described briefly and then the steps in the analysis will be outlined.

The ANOVA algorithm used is a statistical package in the Michigan Interactive Data Analysis System (MIDAS).[4] In addition to testing the null hypothesis that column, or group, means are equal, using the F-statistic to indicate the statistical significance, the program also calculates an

eta squared statistic (BSS/TSS) which is an indicator of the explanatory power of the predictor variable. The algorithm also provides statistics which make possible the comparison of a group means for all pairs of groups. In essence, having found a predictor that has a statistically significant relationship to a dependent variable, the paired comparison facilitates interpretation as to the degree that observed group means are different by calculating the difference and performing a t-test on all groups, taken a pair at a time. The significance of the difference for group means will be presented (where appropriate) together with the group means, the significance of the F-statistic and the calculated value of eta squared.

The steps in the analysis were as follows:

1. A one way ANOVA was made for each of 25 predictor variables and 43 dependent variables for a total of 1075 combinations of relations.

2. Results of step one were tabulated and 160 relations that were significant at $p < .05$ were included for further analysis.

3. In terms of the number of dependent variables affected, and explanatory power, the most important predictor is the buyer's function. Of the other predictors, or buyer factors, it was observed that many might be highly correlated with function (e.g., individuals in the purchasing function spend more time with salesmen and have the most

salesmen calling on them) suggesting possible interaction. Because of the dominant effect of function a check was made for interaction between function and other predictors where both function and another predictor had a significant effect on a dependent variable.

In essence, this considered the effect of the other predictors, controlling for function. This was accomplished by running a series of one way ANOVAs using each predictor in combination with buyer function. An examination was made of the t-statistics for differences of group means of the predictor within each category of buyer function. If no differences were found that were significant at the $p < .05$ level the effect of the predictor was considered to have been eliminated. Of the 133 relations examined in this manner 61 were eliminated by controlling for function.

4. The nature of the emerging pattern of relations indicated that the effect of function was so large relative to the other predictors that further analysis of the effect of these other predictors should be made on each buyer function separately. In essence, it appeared the three occupations should be treated as three separate populations. A series of one way ANOVAs was again run testing each predictor (previously found significant) on each category of function. Relations that were not significant at the $p < .05$ level were eliminated leaving 31 relations of interest, in addition to the specific effects of function.

The above procedures do not check for all possibilities of interaction; however, limitations of the sample in terms of number of respondents in various categories precluded further search. Judging the observed relations on a content basis it is concluded that any remaining interactions are unlikely to materially affect the observed relations and the remainder of the chapter will present and comment on the findings.

Buyer Preferences for Salesman Factors

The first part of this section will give a brief overview of the findings of the analysis. Following the overview, the data will be presented with more detailed comments, arranged by salesman factors of behavior, knowledge, competence and personal relations.

The profile of buyer preferences for salesman factors is highly task oriented. Price, product and shipment are the most important items for the salesman to talk about. In the area of knowledge, buyers place the highest importance on the salesman's knowledge of product and his company's capabilities. Considering competence, the salesman's most important characteristics are his reliability and credibility, closely followed by his knowledge on where to go to get answers and his responsiveness to buyer requests. As a whole, buyers know salesmen primarily as business acquaintances with only some familiarity with their outside inter-

ests and personal ambitions. They want a fairly open and easy relationship with salesmen, as opposed to a formal arms length relationship. They prefer salesmen to be initiators, although not too much so.

It was expected that the most influential buyer factor would be function. This expectation was confirmed to such an extent that the analytical strategy was modified and the three functional categories were treated as three separate populations. The other buyer factors were then analyzed for their effect on buyer preferences in each separate function.

With respect to the other, or non-function categories, the most important predictors are: (1) those having to do with the nature of the purchasing process, (2) the size of the utility, (3) the education of the respondents, and (4) the length of time spent in function.

Several buyer factors have no effect on buyer preferences; geography, the managerial versus the functional nature of the respondent's work and the purchasing mix (i.e., day to day procurement versus annual contracting). On the other hand, several buyer factors had an effect on the aggregate sample but dropped out completely when controlled for function. These included frequency of salesman calls, the number of salesmen who call and the time spent with salesmen.

In general, most of the relationships were found to

be linear. The notable exception was the influence of the size of the utility. In almost all cases, these relations were found to be curvilinear. Individuals in medium size utilities placed less importance on most items than did respondents in either small or large utilities which is somewhat puzzling. The nature of the sample is such that the number of respondents in the medium and large categories is relatively small; hence, the observed relations may be an artifact of the sample calling for some caution in drawing conclusions as to the effect of size. The relationship is so persistent, however, that it must be considered and a possible explanation for this effect is offered in the next section.

Buyer Preferences for Salesman Behavior

The data concerning behavior are presented in Tables 6-1 through 6-4. A similar format is followed for data concerning competence, knowledge and personal relations and the explanation of the format used in this section will apply to the following sections as well.

Table 6-1 lists the mean importance ratings for all behavior items, both in aggregate and for each function. The means are rank ordered by importance (aggregate) and the effect of function on each item is tabulated in terms of explanatory power (eta squared) and statistical significance. In addition, pairs of categories whose difference

TABLE 6-1

MEAN IMPORTANCE RATINGS — SALESMAN BEHAVIOR ITEMS
GRAND MEAN AND MEANS BY BUYER FUNCTION

Rank and Item	Grand Mean N=242	Means by buyer function			Eta squared [a]
		Purchasing N=93	Engineering N=89	Operating N=60	
1. Product Operation	6.69	5.76	6.96	7.70	.18[b]
2. Product Detail	6.54	5.61	7.30	6.85	.16[b] (EO)
3. Price	6.50	8.01	5.24	6.03	.34[b]
4. Product Economics	6.32	6.17	6.48	6.33	N.S.
5. Status of Orders	6.26	7.06	5.47	6.20	.12[b]
6. Product Application	6.22	4.68	7.29	7.02	.30[b] (EO)
7. Technical Services	5.85	5.41	6.37	5.75	.05[b] (PO)
8. Product Trends	5.79	6.59	5.29	5.29	.13[b] (EO)
9. Forthcoming Requirements	5.52	6.15	4.80	5.62	.10[b] (PO)
10. Terms & Condistions	5.40	7.46	3.73	4.67	.42[b]
11. General Activites -- His Company	5.40	5.60	5.33	5.18	N.S.
12. Routine Calls	5.36	5.51	5.36	5.13	N.S.
13. Informal Presentations	5.06	4.83	5.20	5.20	N.S.
14. Evaluation Techniques	5.01	5.51	4.52	4.98	.05[b] (PO, EO)
15. Your Company Activities	4.66	5.50	3.99	4.36	.11[b] (EO)
16. Formal Presentations	4.50	4.58	4.50	4.39	N.S.
17. Purchasing Philosophies	3.80	4.91	2.70	3.70	.22[b]
18. General Industry Matters	3.80	4.13	3.61	3.56	.03[c] (EO)
19. Personal Matters	2.18	1.95	2.31	2.33	N.S.

Scale used: 9 = Most important to discuss or emphasize.

Dashed lines indicate difference of adjacent means is significant at $p < .05$

N.S. = not significant

[a] t test of column means difference for designated pair(s) not significant at $p < .05$ (P = purchasing, E = engineering, O = operating)

[b] F-ratio significant at $p < .01$

[c] F-ratio significant at $p < .05$.

difference is not significant at $p < .05$ are also identified.

t-tests were run on the grand means for all adjacent pairs of items. The dashed lines in Table 6-1 indicate breaks that are significant at $p < .05$. This does not mean that all items between dashed lines are tied in terms of rank order but it does given an indication of a significant change in the respondents' view or frame of reference toward the item.

Table 6-2 is presented essentially for convenience in considering the rank order of items arranged by function. Dashed lines are again used to indicate significant breaks. Tables 6-3 and 6-4 list those behavior items that are affected by various buyer factors for purchasing and engineering functions, respectively.

Aggregate Buyer Preferences for Salesman Behavior

Buyers, in aggregate, place almost equally high importance on discussing product, price and shipment; confirming the strong task orientation of the respondents (Tables 6-1 and 6-2). Technical services and product trends are closely associated to product, price and shipment and these are ranked next in order of importance for discussion.

When more general discussion subjects are considered, the task orientation still persists. Considerable importance is placed on discussions of new business or forthcoming requirements, contractual matters, general activities

TABLE 6-2

MEAN IMPORTANCE RATINGS -- SALESMAN BEHAVIOR ITEMS RANKED BY FUNCTION

Rank	Function: Purchasing		Function: Engineering		Function: Operating	
1	Price	8.01	Product Details	7.30	Product Operation	7.70
2	Terms & Conditions	7.46	Product Application	7.29	Product Application	7.02
3	Status of Orders	7.06	Product Orientation	6.96	Product Details	6.85
4.	Product Trends	6.59	Product Economics	6.48	Product Economics	6.33
5	Product Economics	6.17	Technical Services	6.37	Status of Orders	6.20
6	Forthcoming Requirements	6.15	Status of Orders	5.47	Price	6.03
7	Product Operation	5.76	Routine Calls	5.36	Technical Services	5.75
8	Product Details	5.61	General Activities His Company	5.33	Forthcoming Requirements	5.62
9	General Activities His Company	5.60	Product Trends	5.29	Product Trends	5.29
10	Evaluation Techniques	5.51	Price	5.24	Internal Presentations	5.20
11	Routine Calls	5.51	Informal Presentations	5.20	General Activities His Company	5.18
12	Your Company Activities	5.50	Forthcoming Requirements	4.80	Routine Calls	5.13
13	Technical Services	5.41	Evaluation Techniques	4.52	Evaluation Techniques	4.98
14	Purchasing Philosophies	4.91	Formal Presentations	4.50	Terms & Conditions	4.67
15	Informal Presentations	4.83	Your Company Activities	3.99	Formal Presentations	4.39
16	Product Application	4.68	Terms & Conditions	3.73	Your Company Activities	4.36
17	Formal Presentations	4.58	General Industry Matters	3.61	Purchasing Philosophies	3.10
18	General Industry Matters	4.13	Purchasing Philosophies	2.70	General Industry Matters	3.56
19	Personal Matters	1.95	Personal Matters	2.31	Personal Matters	2.33

Scale used: 9 Most important to discuss or emphasize,

Dashed lines indicate difference of adjacent means is significant at $p < .05$

of the salesman's company and on routine calls which tend to be associated with such discussions.

Theoretical or philosophical discussions on such subjects as evaluation methods and purchasing philosophies are relatively unimportant as are more general industry or company discussions. Presentations per se are also relatively unimportant, although informal presentations are preferred over formal ones.

The extremely low level of importance placed on discussion of personal matters is surprising. The level is lower than expected even after making allowance for the fact that there is some aspect of a "right answer" to the question. This may well indicate that the buyer in this industry who will chat about personal matters with the salesman may well be doing so out of politeness, not out of interest or desire.

Effect of Function on Buyer Preferences for Salesman Behavior

The effect of function is clearly indicated by the number of items whose importance changes with the function categories. As indicated in Table 6-1, thirteen of the nineteen items are affected and for most items the explanatory power (i.e., the degree to which the predictor explains variations) is high.

The sharpest differentiation regarding preferences

for salesman behavior is between engineering and purchasing. Respondents in these functions see all thirteen affected items differently. Operating respondents tend to have the same view as engineering respondents on product matters but on technical services, forthcoming requirements and evaluation techniques their view is more similar to that of purchasing respondents.

The preferences of operating respondents for all items (not just behavior) are unaffected by other buyer factors; either personal or organizational. This may reflect the fact that the role of operating in the purchasing process is more reactive than active. Alternatively, it may reflect the more general nature of operating work. In either case, various aspects of the salesman's work would be less salient, hence buyer preferences might be less subject to the influence of other factors.

The significant differentiation observed for the effect of function underscores the task orientation of the respondents and the degree to which the nature of the task determines their preference for salesman behavior. The break lines in Table 6-2 indicate that respondents in the three functions also differ in the way they group these items; eight groups for engineering versus five for purchasing and four for operating. This indicates that engineers tend to think about salesmen in more discrete terms and that individuals in purchasing and operating tend to

think more in terms of a continuum, suggesting that salesmen should find it easier to sense when they are talking about the "right thing" to buyers in engineering.

Purchasing Preferences for Salesman Behavior. The expected relations from Table 4-1 are confirmed. Purchasing respondents place highest importance on price and price related matters and their interest in price is much higher than for engineering and operating. The greater importance attached to terms and conditions was expected but the high absolute level was not. In the past, purchasers and sellers alike tended to treat contractual matters as a necessary but unproductive matter. Initiatives in the area came largely from legal staffs. The high rating may indicate purchasing has moved to a more active role in the area.

The expectation that purchasing's interest in general topics would be higher than other functions is confirmed for task related items such as trends and forthcoming requirements as well as evaluation techniques, purchasing philosophies and general industry matters. This expectation was based on the supposition that purchasing takes a broader view of the business than do the other functions. The data seem to confirm this supposition.

The interest of purchasing respondents in product matters is consistent with the nature of the purchasing task. That is, purchasing respondents place highest importance on discussing economic aspects of the product. However, the

very low level of importance placed on discussing application considerations of the product is surprising. This may reflect the fact that purchasing decisions are based on tangible aspects of the product and their economic implications and indicate that application considerations do not come into the actual purchase decision. In addition, it may indicate that the complexity of application requires more technical competence of familiarity than is normal for purchasing personnel.

Engineering Preferences for Salesman Behavior. The higher importance placed by engineering on product matters confirms the expected relations (Table 6-2). The order of the four product items indicates that technical considerations of the product come first and that operating and, particularly, economic considerations are of relatively less importance.

The expectation that engineering would place greater importance on personal matters was not confirmed. Respondents in engineering place the same low level of importance on this item as do the other functions.

The low level placed on the importance of discussing evaluation is surprising. Much of the engineer's work is evaluation, either of a product being considered for use or of an approved product being compared to others as part of a specific purchasing transaction. This low level of interest may suggest that distribution equipment salesmen are not

particularly knowledgeable in this area and so are not seen as qualified to discuss it. Alternatively, it may be that evaluation is inherently a difficult or uncomfortable area to discuss. That is, discussion of evaluation may involve personal values, such as an engineer's preference for sophisticated, as opposed to simple, designs. Or, it may involve company policy, such as the decision to weigh copper loss more heavily than core loss (measures of transformer efficiency).

If personal values are involved, the engineer may feel that the area is not appropriate for discussion. If company policy is involved, the engineer may feel discussions are academic. From the salesman's standpoint, however, influencing a customer's evaluation criteria can be of critical importance. The low level of interest on the part of engineering respondents indicates a need for skillful approaches if the salesman hopes to modify evaluation criteria in the engineering function.

Operating Preferences for Salesman Behavior. The expectation that operating would place more importance on product discussion than respondents in aggregate was confirmed and the order of the first four items in Table 6-2 is consistent with the operating task. That is, most importance is placed on discussion of product operating characteristics.

The expectation that operating would place more importance, than the aggregate, on general matters was not confirmed. However, respondents in operating did place higher importance on discussing such items as order status, terms and conditions and purchasing philosophies than did those in engineering so that there is an effect. As in the case of engineering, the expectation that operating would place higher importance than the aggregate on discussion of personal matters was not confirmed. The difference noted in the table is not statistically significant and the conclusion is that all three functions place equally low importance on this item.

Overall, respondents in operating place the same high importance on product matters as do respondents in engineering. On a number of more general items, however, they place higher importance than engineering, indicating a somewhat broader range of interests, although not quite as broad as that of respondents in purchasing.

Effect of Buyer Factors on Purchasing Preferences for Salesman Behavior

Three aspects of the purchasing process most influence the preferences of purchasing respondents: formality, the degree of sophistication of evaluation procedures and the inclusion, or not, of a specific items of salesman evaluation. In addition, the size of the utility, the edu-

cation of the respondent and whether his organization is part of a holding company also influence his preferences. In total, the importance of eight items of salesman behavior is influenced by these six buyer factors, as shown in Table 6-3 and as discussed in the following paragraphs.

Size of Utility. This buyer factor influences the largest number of behavior items; namely, the importance of discussing product details, the importance of discussing product economics and the importance of discussing technical services. As shown in Table 6-3, and as mentioned previously, the relation is curvilinear. That is, purchasing respondents in both small and large utilities tend to place more importance on these items than do respondents in medium size utilities. The prediction of increased interest in product matters for small utilities is confirmed but the increase in large utilities is unexpected. To some degree this may be an artifact of the small number of respondents in the medium and large categories and the difference in importance between medium and large utilities for two of the items in Table 6-3 is not statistically significant. The general effect on a number of items is so pervasive, however, that a tentative explanation is offered.

Historically, one of the characteristics of the relationship between small utilities and manufacturers has been the relatively heavy reliance on the manufacturer for technical service, the right product, local stock and so forth.

TABLE 6-3

MEAN IMPORTANCE RATINGS -- SALESMAN BEHAVIOR ITEMS BY PURCHASING FUNCTION AND SELECTED BUYER FACTORS

Item	Buyer Factor			Eta Squared [a]
	Purchasing Practice			
	Formal		Informal	
Informal Presentations	N=81		N=12	
	4.70		5.67	.04[c]
	Area of Education			
	Engineering		Other	
Product Application	N=34		N=57	
	5.35		4.25	.06[c]
	Are Salesmen Evaluated			
	Yes		No	
Product Trends	N=39		N=54	
	7.00		6.30	.04[c]
	Part of Holding Company			
	Yes		No	
Technical Services	N=20		N=73	
	4.60		5.63	.05[c]
	Sophistication of Evaluation			
	Low	Medium	High	
Technical Services	N=18	N=48	N=26	
	5.12	5.83	4.81	.05[c](LM,LH)
	Size of Utility			
	Saml1	Medium	Large	
	N=59	N=19	N=14	
Product Details	6.07	4.42	5.07	.11[b](SL,ML)
Product Economics	6.36	5.16	6.79	.08[c](SL)
Technical Services	5.86	4.10	5.00	.14[b](SL,ML)

Scale used: 9 = Most important to discuss or emphasize

[a] t test of column means difference for designated pair(s) indicates difference not significant at $p < .05$
(L = Low, M = Medium, H = High, etc.)

[b] F-ratio significant at $p < .01$

[c] F-ratio significant at $p < .05$

In some instances this dependency has led to a climate where individuals in the utility feel that manufacturers' personnel presume on the relation and try to "tell them what to do." The general decrease in importance of a number of these items for medium sized utilities may indicate an almost conscious effort on the part of these customers to reduce this dependency -- which their size now permits. The increased importance attached to these items by the very large utilities may indicate that the dependency feelings have been eliminated and that manufacturers are again relied on for information.

The increased importance placed on discussion of technical services by purchasing respondents in small utilities is consistent with their greater need for such services. In addition, two other buyer factors influence the importance placed on discussing technical services.

Holding Company Organization and Sophistication of Evaluation. The importance for the salesman to discuss technical services decreased for respondents in holding companies and for those with sophisticated evaluation systems. As with large utilities, holding company organizations have more in-house competence to do their own application engineering and perform other elements of technical service. This reduces their need for such service from the manufacturer.

Sophistication of evaluation, regardless of utility

size, may parallel technical sophistication. If so, this would also explain why increased sophistication of evaluation is related to lower importance of discussing technical service.

It is interesting to note, however, that buyer factors affect interest in technical service only for respondents in the purchasing function. This may reflect a different context for technical service for purchasing personnel when compared to engineering or operating personnel.

In general, individuals in purchasing are not direct beneficiaries of technical services. Rather, they are involved in evaluating such services as part of the manufacturer's total offering. Hence, salesmen are generally talking to them about services provided to others in the organization -- or about their capabilities to provide such services. Salesmen can overwork this aspect of their total offering as indicated by the comment of one purchasing agent to the effect that he "had never met a salesman who didn't lose an order because of price or who didn't get an order because of technical service." The data here indicates either that the use of technical service may be overworked as a potential sales mover or that salesmen need to better understand how the value of technical service may vary to buyers in different situations and adjust their presentations accordingly.

Education. It was previously noted that one characteristic of the purchasing function is relatively low interest in information about product application. The effect of an engineering education is to heighten this interest, although not to the level of other aspects of the product and certainly not to the level of interest of those respondents in the engineering function. This may imply a relatively academic interest in the subject; essentially a carry over of the respondents earlier training. It may, however, indicate that with an engineering background the individual in purchasing is more likely to take account of application aspects of the product in arriving at a purchasing decision.

Purchasing Formality and Salesman Evaluation. The last two items affected by buyer factors are the importance of informal presentations and the importance of talking about industry trends. Not surprisingly, buyers with informal purchasing practices place increased importance on informal presentations. Purchasing respondents in organizations that specifically evaluate salesmen place increased importance on discussions of product trends. Individually, neither of these items has strong implications for behavior. Collectively, however, the observed relation adds insight to the total effect all aspects of the purchasing process have on preferences of purchasing personnel for salesman behavior.

Effect of Buyer Factors on Engineering Preferences for Salesman Behavior

The only buyer factor affecting engineering preference for salesman behavior is the nature of the buying task as shown in Table 6-4. Engineering respondents engaged predominantly in newbuy activities place increased importance on discussions of product detail. Conversely, those in predominantly straight rebuy activities show a marked decrease in interest in product detail. These two types of buying activities seem to be directly reciprocal and this is confirmed for two of the salesman behavior items in the table.

The surprising relationship is that of the buy-phase and the level of interest in information relevant to new business or forthcoming requirements. A logical expectation is that engineers in predominantly newbuy activities will have a heightened interest in all facets of new or future oriented information. The evidence here indicates that engineers so engaged already have a good feel for forthcoming requirements as part of their daily work and are not interested in speculating about forthcoming requirements beyond those with which they are currently involved. On the other hand, for individuals in straight rebuy work, the daily activities may be seen as relatively dull and the opportunity to talk about new things may provide a welcome

TABLE 6-4

MEAN IMPORTANCE RATINGS -- SALESMAN BEHAVIOR ITEMS BY ENGINEERING FUNCTION AND SELECTED BUYER FACTORS

Item	Buyer Factor		Eta Squared
	Buying Task		
	Predominantly Newbuy	Other	
	N=29	N=52	
Product Details	7.72	7.00	.05[a]
Forthcoming Requirements	4.27	5.17	.05[a]
	Buying Task		
	Predominantly Straight Rebuy	Other	
	N=16	N=65	
Product Details	6.56	7.43	.07[a]
Personal Matters	3.06	2.17	.03[a]
Forthcoming Requirements	5.56	4.68	.08[a]

Scale used: 9 = Most important to discuss or emphasize

[a]F-ratio significant at $p < .05$

change of pace. This view also seems consistent with the substantial increase in importance placed on interest in personal matters by those in predominantly straight rebuy.

Buyer Preferences for Salesman Knowledge

Buyers in aggregate place prime importance on the salesman's knowledge of product application and details and of his company's capabilities (Table 6-5). Customer requirements, engineering economics, terms and conditions and competition which are also strongly task related are next in

importance. General utility knowledge, knowledge of purchasing practices and financial practices are of least importance.

While the order of importance is consistent with overall task interests of the respondents, the range of importance placed on the various items is surprising. Considering the preferences of the three functions separately the range decreases somewhat for purchasing and operating respondents but increases for engineering respondents. Still further, for all items other than product matters engineering places consistently lower importance on the salesman's knowledge than do purchasing and operating. While this may be consistent with the strong product orientation in the engineering function it may also indicate a lack of appreciation as to the background knowledge needed by salesmen to effectively discuss product matters.

Effect of Function on Buyer Preferences for Salesman Knowledge

Function has a powerful influence on the importance buyers place on different aspects of the salesman's knowledge. As shown in Table 6-5, six of the ten knowledge items are seen differently and four of the items have an associated eta squared greater than .10; an indication, again, of considerable explanatory power. The sharp differentiation in point of view between purchasing and

TABLE 6-5

MEAN IMPORTANCE RATINGS -- SALESMAN KNOWLEDGE ITEMS
GRAND MEAN AND MEANS BY BUYER FUNCTION

Rank and Item	Grand Mean N=242	Means by buyer function: Purchasing N=93	Engineering N=89	Operating N=60	Eta squared ([a])
1. Product Application	6.06	6.01	6.04	6.15	N.S.
2. Product Details	6.05	6.10	6.03	6.02	N.S
3. His Company's Capabilities	5.93	6.17	5.67	5.95	.03[c](PO,EO)
4. Your Requirements	5.0	5.61	4.63	4.62	.11[b](EO)
5. Engineering Economics	4.44	4.53	4.38	4.38	N.S.
6. Terms & Conditions	4.39	5.45	3.46	4.15	.25[b]
7. Competition	4.39	4.44	4.26	4.50	N.S.
8. Industry -- General	4.02	4.30	3.75	3.97	.03[c](PO,EO)
9. Purchasing Practices	3.98	4.74	3.25	3.89	.18[b]
10. Financial Practices	3.20	3.63	2.61	3.44	.11[b](PO,EO)

Scale used: 7 = Most important

Dashed lines indicate difference of adjacent means is signficiant at $p < .05$

N.S. = not significant

[a] t test of column means difference for designated pair(s) not significant at $p < .05$ (P = purchasing, E = engineering, O = operating)

[b] F - ratio significant at $p < .01$.

[c] F-ratio significant at $p < .05$

operating is again evident. These two functions see all six affected items differently. The delineation between operating respondents and those in either engineering or purchasing is not as sharp. Operating respondents place different importance than purchasing on three knowledge items. Similarly, they place different importance than engineering on only two knowledge items.

Preferences for Product Knowledge. It was expected that individuals in engineering and operating would place more importance on product knowledge than would those in purchasing (see Table 4-1). This expectation, however, was not confirmed. As shown in Table 6-5, respondents in all three functions place equal, and highest, importance on this dimension of the salesman's knowledge.

It is interesting to note that purchasing places essentially the same importance on product application knowledge as on knowledge of product details. This is inconsistent with the relatively low interest placed by purchasing on the importance for salesmen to discuss product application (as shown in Table 6-1). This suggests that the importance the buyer places on certain aspects of the salesman's knowledge does not necessarily indicate a direct interest in the area but, rather, is seen as a required degree of expertise which may enhance the salesman's overall credibility.

Preferences for General Knowledge. The expectation was that purchasing would place more importance on general knowledge and this expectation is confirmed. Respondents in purchasing place higher importance (Table 6-5) on the salesman's knowledge of his company's capabilities, of his customer's requirements, general industry matters, utility financial practices, purchasing practices and terms and conditions.

The relatively low importance placed on knowledge of customer requirements by both engineering and operating may well be a matter of concern for utilities and manufacturers alike. From the industrial manufacturer's standpoint, the salesman is the key element in providing information to management on customer needs for product development, level of business activity, delivery requirements and customer reaction of competitive offerings. Within the bounds of business propriety the utility has much to gain in terms of improved manufacturer performance by providing as much of this kind of information to suppliers as is possible. In essence, the utility has a vested interest in helping the salesman do a good job of market research for his firm. The low level of importance placed on this kind of knowledge by personnel in engineering indicates a less than desirable level of understanding that (1) salesmen represent their customers' interest back to the factory and (2) that manu-

facturers' knowledge of customer requirements is vital if the manufacturer is to be responsive to these requirements.

Rank Order of Knowledge Items by Function. The data from Table 6-5 are reformatted and presented in Table 6-6 to show the rank ordering of knowledge items by function. Again, the dashed lines indicate breaks that are significant at $p < .05$ and may be helpful to see how respondents group various items. The pattern of five groups for engineering, four for purchasing and three for operating is consistent with the pattern found for behavior items and confirms that engineers tend to use discrete categories as they think about their relations with salesmen whereas purchasing and operating tend to think of them along a continuum.

Effect of Buyer Factors on Preferences for Salesman Knowledge

Within the three functions only three knowledge items were affected by other (non function) buyer factors (as shown in Tables 6-7 and 6-8). The importance to engineering of the salesman's knowledge of his company's capability is influenced by the formality of the purchasing practices. Importance of his knowledge of terms and conditions, to purchasing, is affected by utility growth rate. Importance of knowledge of product detail is affected by the locus of the buying influence in holding company organizations for both purchasing and engineering.

TABLE 6-6

MEAN IMPORTANCE RATINGS -- SALESMAN KNOWLEDGE
ITEMS RANKED BY FUNCTION

	Function					
Rank	Purchasing		Engineering		Operating	
1.	His Company's Capabilities	6.17	Product Application	6.04	Product Application	6.15
2.	Product Details	6.10	Product Details	6.03	Product Details	6.02
3.	Product Application	6.01	His Company's Capabilities	5.67	His Company's Capabilities	5.67
4.	Your Requirements	5.61	Your Requirements	4.63	Your Requirements	4.62
5.	Terms & Conditions	5.95	Engineering Economics	4.53	Competition	4.50
6.	Purchasing Practices	4.74	Competition	4.26	Engineering Economics	4.38
7.	Engineering Economics	4.53	Industry -- General	3.75	Terms & Conditions	4.15
8.	Competition	4.44	Terms & Conditions	3.46	Industry -- General	3.97
9.	Industry -- General	4.30	Purchasing Practices	3.25	Purchasing Practices	3.89
10.	Financial Practices	3.63	Financial Practices	2.61	Financial Practices	3.44

Scale used: 7 = Most important

Dashed lines indicate difference of adjacent means is significant at $p < .05$

Effect of Purchasing Practice. Purchasing practice, as indicated in Table 6-7, affects how engineering perceives the importance of the salesman's knowledge regarding his company's capabilities. This may indicate that utilities with more formal purchasing practices specifically require engineers to study the manufacturer's approaches to design, manufacture and quality control and that salesmen, in turn, are called on to provide much of this information.

Effect of Rate of Growth. For purchasing respondents, the importance of knowledge of terms and conditions is affected by the growth rate of the utility (Table 6-7). This is a subject which has been receiving increased attention by all utilities in recent years but why rate of growth should affect it is somewhat puzzling. Particularly puzzling is the increased interest for both above and below average growth rates, although as noted the difference between average and below is not significant at $p < .05$. Of interest to the salesman is that growth appears to influence the importance purchasing places on his knowledge of the subject, not on the importance of discussing it.

Effect of Holding Company Influence. Knowledge of product details was influenced by the apparent locus of purchasing influence in holding company organizations (Tables 6-7 and 6-8). In both the engineering and purchasing functions there is a marked reduction in the importance placed on the salesman being knowledgeable regarding product

TABLE 6-7

MEAN IMPORTANCE RATINGS -- SALESMAN KNOWLEDGE ITEMS BY ENGINEERING FUNCTION AND SELECTED BUYER FACTORS

Item	Buyer Factor		Eta squared
	Purchasing Practice		
His Company's Capabilities	Formal N=60	Informal N=29	
	6.00	4.97	.11[a]
	Holding Company Influence		
Product Details	Operating N=12	Parent N=7	
	6.17	5.14	.27[b]

Scale used: 7 = Most important

[a] F-ratio significant at $p < .01$

[b] F-ratio significant at $p < .05$

TABLE 6-8

MEAN IMPORTANCE RATINGS -- SALESMAN KNOWLEDGE ITEMS BY PURCHASING FUNCTION AND SELECTED BUYER FACTORS

Item	Buyer Factor			Eta squared
	Growth			
Terms and Conditions	Average N=45	Above Average N=36	Below Average N=11	
	5.09	5.83	5.64[a]	.08[b]
	Holding Company Influence			
Product Details	Operating N=12		Parent N=7	
	6.5		5.29	.21[b]

Scale used: 7 = Most important

[a] t test on mean difference between Below Average and Average and between Below Average and Above Average not significant at $p < .05$

[b] F-ratio significant at $p < .05$

details when purchasing influence is predominantly in the parent and/or holding company. The small number of respondents in these categories suggests caution in drawing conclusions from this evidence. It does indicate, however, that there are instances where product knowledge is not as all important as some would contend.

Buyer Preferences for Salesman Competence

The mean importance ratings of competence items are presented in Table 6-9. The rank order of items for engineering duplicates that for the aggregate sample. Only one item is out of order for operating and two items are out of sequence for purchasing. Hence, a separate table of items rank ordered by function has not been included.

Effect of Function on Buyer Preferences for Salesman Competence

Of all the items included in this study, reliability and credibility received the highest relative scores. This underscores the critical nature of these characteristics to all buyers, regardless of function or other factors. Next in level of importance are ability to get answers and responsiveness to requests; both closely associated with reliability and credibility. Considerable importance is placed on communication skills and on empathy items of sensitivity to the buyers time situation and to his level of understanding which are closely associated with communica-

TABLE 6-9

MEAN IMPORTANCE RATINGS -- SALESMAN COMPETENCE ITEMS
GRAND MEAN AND MEANS (WITH RANK) BY BUYER FUNCTION

Rank and Item	Grand Mean N=249	Function: Purchasing N=93	Engineering N=89	Operating N=60	Eta Squared ([a])
1. Reliability	6.59	6.71 (1)	6.63 (1)	6.36 (1)	.04[b] (PE
2. Credibility	6.52	6.57 (2)	6.57 (2)	6.36 (2)	N.S.
3. Ability to Get Answers	6.28	6.31 (4)	6.33 (3)	6.15 (3)	N.S.
4. Responsiveness	6.21	6.42 (3)	6.14 (4)	6.00 (4)	.05[b] (EO)
5. Communication Skill (Oral)	5.85	6.09 (6)	5.77 (5)	5.62 (6)	.04[b] (EO)
6. Sensitivity to Time	5.77	5.84 (7)	5.69 (6)	5.80 (5)	N.S.
7. Communication Skill (Written)	5.67	6.09 (5)	5.42 (7)	5.41 (7)	.08[b] (EO)
8. Sensitivity to Understanding	5.27	5.38 (8)	5.16 (8)	5.28 (8)	N.S.
9. Persuasiveness	4.02	4.32 (9)	3.70 (9)	4.02 (9)	.03[c] (PO,EO)
10. Aggressiveness	3.69	3.99 (10)	3.41 (10)	3.63 (10)	.04[b] (PO,EO)

Scale used: 7 = Most important

Dashed lines indicate difference of adjacent means is significant at $p < .05$

N.S. = not significant

[a] t test of column means difference for designated pair(s) not significant at $p < .05$ (P = purchasing, E = engineering, O = operating)

[b] F-ratio significant at $p < .01$.

[c] F-ratio significant at $p < .05$.

tion. The higher importance placed on sensitivity to time than on sensitivity to level of understanding indicates salesmen are more likely to impose on the buyer's time than to talk up or down to him.

Both persuasiveness and aggressiveness score low but not as low, for instance, as talking about personal matters or knowledge of financial practices. In other words, although these aspects of sales work may generally have negative connotations this is apparently not the case for buyers in this industry. The higher importance placed on persuasiveness than aggressiveness may indicate a willingness to be "sold" but without "push."

Preferences for Reliability. Despite its high absolute rating, respondents in operating place slightly less importance on reliability than do the other two functions. This slightly lower rating may reflect a slightly lower dependence on salesmen because of the nature of the operating job but the item still ranks first. Put another way, this may indicate that the salesman is a more critical element in engineering and purchasing work than in operating but the importance placed on reliability is still there. The slightly higher importance placed on responsiveness by purchasing is consistent with the fact that purchasing is normally working in a shorter time frame than engineering or operating.

Preferences for Communication Skill. Both oral and written communication are more important to purchasing than to the other two functions. This may stem from the contractual nature of the relationship with purchasing and the fact that misunderstandings concerning some aspects of an order or contract can have serious and immediate economic consequences. Alternatively, it may indicate that the act of interfacing with more salesmen, and more frequently, has heightened the sensitivity of purchasing to this aspect of the salesman's competence. The difference in importance to purchasing versus the other functions is particularly pronounced regarding written communication. This suggests that salesmen should stress clarity in written communication to purchasing.

Preferences for Aggressiveness. The implication of aggressiveness and persuasion will be explored more fully in Chapters VII and VIII. Briefly it is suggested here that there are two possible explanations for the increased importance placed on these factors by purchasing. It may simply be a further instance of acceptance of the idea that a salesman is "supposed to be aggressive." Given the almost symbiotic relation of salesmen and purchasing agents, this may be an easier concept for purchasing to accept than the other functions.

Alternatively, it may suggest that purchasing has a

different view of the salesman's role, one that is more cognizant of the impact the salesman can have on the marketing mix of his own company if he is aggressive or persuasive with his factory contacts as well as with his customers. This view tends to be consistent with the higher importance placed by purchasing on the salesman's knowledge of his customer's requirements. That is, it recognizes that manufacturers frequently have to be "sold" on meeting a particular customer requirement and that a persuasive, aggressive salesman can be highly influential in such "selling."

Effect of Buyer Factors on Preferences for Salesman Competence

Effect of Purchasing Practice. The competence item most affected by buyer factors is the importance placed on written communication skill (Table 6-10). Engineering and purchasing in utilities with more formal purchasing practices both emphasize this item as does engineering in utilities with more sophisticated evaluation systems. Of particular interest is the decrease in difference in importance placed on this skill between purchasing and engineering as the purchasing process becomes more formal or the evaluation becomes more sophisticated (Table 6-11).

Effect of Size of Utility. The size of the utility affects the importance, to engineering, of the salesman's ability to get the "right answer" (Table 6-11). For the

TABLE 6-10

MEAN IMPORTANCE RATINGS -- SALESMAN COMPETENCE ITEMS BY PURCHASING FUNCTION AND SELECTED BUYER FACTORS

Item	Buyer Factor		Eta Squared
	Purchasing Practice		
Communication Skill Written	Formal N=81	Informal N=12	
	6.16	5.58	.05[b]
	Area of Education		
Reliability	Engineering N=34	Other N=57	
	6.5	6.82	.07[b]
	Are Salesmen Evaluated?		
	Yes N=39	No N=54	
Aggressiveness	4.28	3.78	.04[b]
Persuasiveness	4.79	3.98	.08[a]

Scale used: 7 = Most important

[a]F-ratio significant at $p < .01$

[b]F-ratio significant at $p < .05$

aggregate sample this characteristic is considered more important than product knowledge (6.28 versus 6.08) and the effect for large utilities confirm that in many instances the ability to get answers is more important than having the knowledge personally.

Effect of Evaluation of Salesmen. Including an evaluation of salesmen as part of the purchasing process increases the importance purchasing places on aggressiveness and persuasiveness in salesmen. The higher importance placed on these items by purchasing versus the other func-

TABLE 6-11

MEAN IMPORTANCE RATINGS -- SALESMAN COMPETENCE ITEMS BY ENGINEERING FUNCTION AND SELECTED BUYER FACTORS

Item	Buyer Factor			Eta Squared ([a])
	Purchasing Practice			
Communication Skill Written	Formal N=60		Informal N=29	
	5.63		5.00	.06[c]
	Sophistication of Evaluation			
Communication Skill Written	Low N=31	Medium N=39	High N=20	
	4.94	5.77	5.5	.09[c](LH,MH)
	Time Salesmen Known			
Sensitivity to Time	Short N=17	Medium N=50	Long N=21	
	5.18	5.68	6.24	.08[c]
	Size of Headquarter City			
Persuasiveness	Small N=41	Medium N=35	Large N=14	
	3.76	3.23	4.71	.11[b](SM)
	Size of Utility			
Ability to Get Answers	Small N=59	Medium N=16	Large N=15	
	6.29	6.13	6.73	.07[c](SM)
	Buying Task			
Responsiveness	Predominantly Straight Rebuy N=16		Other N=65	
	5.81		6.28	.08[c]

Scale used: 7 = Most important

[a] t test of column means difference for designated pair(s) indicates difference not significant at $p < .05$

[b] F-ratio significant at $p < .01$

[c] F-ratio significant at $p < .05$

tions is further evidence that some buyers see these characteristics in the salesman as valuable in making him more effective in representing his customer's needs to his own company.

Effect of Time Salesmen Known. The length of time the engineer has known the salesmen who call on him has a substantial effect on the importance placed on the salesman's sensitivity to the buyer's time situation. Why this should have an effect or why the effect is limited to engineering, is not clear. The nature of salesmen's calls on engineering in this industry tends to have more of a "drop-in" characteristic than calls on purchasing. It may be that over time there is a growing discontent with the imposition on the engineer's time that can result from this calling pattern. In any event, the concern is strong enough that salesmen should be aware of it.

Effect of the Nature of the Buying Task. Individuals in predominantly straight rebuy show a marked decrease in the importance placed on salesman's responsiveness. While this has little practical significance for salesmen, it does help to confirm the belief that the buy phase concept can improve insight into industrial buyer behavior.

Effect of Size of Headquarter City. The size of headquarter city was included in the study as another possible indicator of sociocultural effects. Although primarily exploratory in nature, some empirical observations

indicated that the size of the headquarter city might be a surrogate for sophistication. As indicated in Table 6-11, respondents in large cities place more importance on salesman persuasiveness so this factor seems to have some effect. To the degree that recognition of the importance of persuasiveness in salesmen can be equated to sophistication the expectation is confirmed but the evidence is very tenuous.

Buyer Preferences for Personal Relations

Mean ratings for the four items included in Personal Relations are presented in Table 6-12. In aggregate, this group of buyers tends to know salesmen primarily as business acquaintances with only slight familiarity with salesmen's personal ambitions or outside interests. On an initiator-responder dimension they indicate a slight preference for initiative. Salesmen are seen to have just slightly lower status than buyers. A somewhat open relation is preferred with salesmen as opposed to a formal, or arms-length, relation.

The profile developed has to be interpreted in the context of the questionnaire wording. That is, respondents were asked to indicate their relations and perceptions of status, etc., with salesmen in general. Hence, these findings should not be taken to mean, for instance, that no buyers have close personal friendships with sales-

TABLE 6-12

MEAN RATINGS -- SALESMAN PERSONAL RELATION ITEMS
GRAND MEAN AND MEANS BY BUYER FUNCTION

Item	Grand Mean N=242	Function			Eta squared
		Purchasing N=91	Engineering N=89	Operating N=61	
Extent of Friendship	2.24	2.27[a]	2.36[a]	2.05	.04[b]
Desired Initiative	4.68	4.66	4.75	4.62	N.S.
Relative Status	2.71	2.76	2.69	2.65	N.S.
Openness of Relation	2.82	2.81	2.85	2.79	N.S.

Scales used:
Extent of Friendship 4 = maximum
Desired Initiative 7 = maximum
Relative Status 1 = buyer > salesman
3 = equal status
Openness of Relation 1 = Arms length

[a] t test of column means difference between Purchasing and Engineering not significant at $p < .05$

[b] F-ratio significant at $p < .05$

men. Rather, the findings confirm the predominant task orientation of buyers in their relations with salesmen. The degree to which personal friendship exists or that open and easy going relations are preferred seems consistent with the kind of relationship necessary to facilitate the primary task, i.e., purchase of distribution equipment.

Essentially none of the expected effects of function or other buyer factors were confirmed and the data indicate that the nature of friendship and other aspects of relations

are very stable across function and other buyer factors. The two exceptions are the impact of function on the degree friendship for operating and the impact of education on perceptions of status and preference for an initiating role for the salesman as shown in Table 6-13.

TABLE 6-13

MEAN RATINGS -- SALESMAN PERSONAL RELATION ITEMS BY PURCHASING FUNCTION AND SELECTED BUYER FACTORS

Item	Buyer Factor		Eta Squared
	College Degree		
	Yes N=53	No N=31	
Relative Status	2.63	2.94	.05[b]
Desired Initiative	5.07	4.03	.08[a]
	Area of Education		
Relative Status	Engineering N=32	Other N=53	
	2.59	2.85	.04[b]

Scale used: Relative Status 1 = buyer > salesman, 3 = equal status
Desired Initiative 7 = maximum

[a]F-ratio significant at $p < .01$

[b]F-ratio significant at $p < .05$

Effect of Function on Personal Relations

Function has a slight effect on the degree or extent of friendship between respondents and salesmen. Individuals in operating indicate the extent of their personal friendship with salesmen is slightly less than for the other two

functions. (Note: respondents were asked about their actual relations, not preferences.) Although controlling for function eliminated the effect of time spent with salesmen on friendship there was an effect for operating, significant at $p = .06$. Hence the fact that operating personnel spend less time with salesmen than do engineering or purchasing may offer a partial explanation of the observed relation. However, given the general awareness that the purchasing and engineering functions are more influential in the buying process than operating, this may indicate that conscious efforts by salesmen to establish personal friendship with key buying influences have succeeded to some degree.

Effect of Education on Personal Relations

The educational background of individuals in engineering and operating is almost totally homogeneous (i.e., a bachelors degree in engineering) and the effects of education could be considered only for purchasing. As shown in Table 6-13, either an engineering background or a college degree result in slightly higher perceptions of status relative to salesmen. Not shown in Table 6-13 is the effect of time in function on perceptions of relative status as the ANOVA criterion of $p < .05$ was not met. However, for both engineering and operating, more time in function does lead to according higher status to salesmen and while the ANOVA result is not significant, t-tests between short and long time in function are significant at $p = .02$ for

both functions. It appears, therefore, that college education in general and an engineering degree in particular result in some bias about the nature of saleswork and that this bias diminishes over time, possibly as a result of an improved understanding of the role the salesman plays in the capital equipment purchasing process.

A further effect of a college degree is an increase in the amount of initiative desired, or perceived, in successful salesmen. This may suggest that a "responder" orientation may be more suitable for the salesman interfacing with an individual in purchasing who does not have a college degree.

Summary

This chapter analyzed the relation of 25 buyer factors, or aspects of the buyer's personal or organizational situation, to his preferences for 43 items of salesman behavior, knowledge, competence and personal relations. In total, 14 of these 25 buyer factors, affected preferences for 34 of the 43 items.

The buyer's function was overwhelmingly the most important predictor, or factor, influencing buyer preferences. Function affected preferences for 26 of the 43 items. Still further, the explanatory power (eta squared) for affected preferences was consistently greater for function than for any other buyer factor. Clearly this is the

dimension on which the salesman most needs to differentiate his approach to buyers to attempt to meet their varying role expectations.

Of the remaining 24 buyer factors, 13 were found to affect buyer preferences for a total of 19 items. Explanatory power was generally low, compared to function, but the shifts in preferences give further insight into how buyer role expectations change as a function of aspects of their personal and organizational situations.

The approach of the analysis was to consider the effect of the other, or non-function, factors separately for each function. Preferences of respondents in the operating function were found to be unaffected by any other buyer factors. This strongly suggests that the salesman is not a salient factor in the operating task and may suggest that there is only a modest opportunity for the salesman to influence the purchasing process through contact with buyers in operating; even though buyers in operating may themselves have considerable influence on the purchasing decision.

Preferences of buyers in the purchasing and engineering functions, however, are affected by a number of buyer factors. For purchasing respondents, 7 organizational and 2 personal factors influences preferences for 13 items. For engineering respondents, 6 organizational and 1 personal factor influences 10 items. These buyer factors, and the

TABLE 6-14

SUMMARY OF BUYER FACTORS AFFECTING BUYER PREFERENCES FOR SALESMAN FACTORS/ITEMS -- PURCHASING FUNCTION

Buyer Factor	Salesman Factor/Item
Size of Utility	Behavior/Product Detail Behavior/Product Economics Behavior/Technical Service
Growth Rate	Knowledge/Terms and Conditions
Holding Company Affiliation	Behavior/Technical Service
Locus of Holding Company Purchasing Influence	Knowledge/Product Detail
Formality of Purchasing Practice	Behavior/Informal Presentations Competence/Communication Skill -- Written
Sophistication of Evaluation	Behavior/Technical Service
Are Salesmen Evaluated	Behavior/Trends Competence/Aggressiveness Competence/Persuasiveness
Years of School Completed	Personal Relations/Initiative Personal Relations/Status
Area of Education	Behavior/Product Application Personal Relations/Status

items they affected, are summarized in Table 6-14 and 6-15, for purchasing and engineering respondents respectively.

The net effect of these findings confirms the need for salesmen to differentiate their sales approaches, not only on the basis of the buyer's function, but on the basis of a variety of organizational characteristics. Good salesmen do this; either on a rational or an intuitive basis. The evidence developed in this study will help build a frame-

TABLE 6-15

SUMMARY OF BUYER FACTORS AFFECTING BUYER PREFERENCES FOR SALESMAN FACTORS/ITEMS -- ENGINEERING FUNCTION

Buyer Factor	Salesman Factor/Item
Size of Utility	Competence/Ability to Get Answers
Locus of Holding Company Purchasing Influence	Knowledge/Product Details
Size of Headquarter City	Competence/Persuasiveness
Nature of the Buying Task	Behavior/Product Detail Behavior/Forthcoming Requirements Behavior/Personal Matters Competence/Responsiveness
Formality of Purchasing Practice	Knowledge/His Company's Capabilities Competence/Communication Skills -- Written
Sophistication of Evaluation	Competence/Communication Skills -- Written
Time Salesmen Known	Competence/Sensitivity to Time

work for a better rational understanding of the factors which affect this need for differentiation.

Conclusion

Hypothesis 1 stated, essentially, that a buyer's preference for certain aspects of a salesman's behavior, knowledge, competence and personal relations will vary as a function of certain aspects of the buyer's personal and organizational situation. The evidence presented in this chapter indicates the hypothesis should be accepted.

The relations that exist (and knowledge of those that do not exist) add to the body of knowledge of industrial buyer behavior and have a number of implications for marketing and purchasing management. These implications will be presented in Chapter VIII and will be related to the findings on perceptions of selling effectiveness which will be covered in Chapter VII.

Footnotes

[1]Nunnally, Jum C., Psychometric Theory, New York: McGraw-Hill, Inc., pp. 24-25.

[2]Andrews, Frank M. and Stephen B. Withey, Social Indicators of Well-Being, New York: Plenum Press, 1976, p. 36.

[3]Labovitz, Sanford, "The Assignment of Numbers to Rank Order Categories," American Sociological Review, 35 (June 1970): 575-524.

[4]Fox, Daniel J. and Kenneth E. Guire, Documentation for MIDAS, Ann Arbor, Michigan: Statistical Research Laboratory, University of Michigan, September 1976.

CHAPTER VII

THE RELATION OF SALESMAN FACTORS TO PERCEPTIONS OF SELLING EFFECTIVENESS

The previous chapter developed insights into buyer preferences for salesman behavior, knowledge, competence and personal relations. This chapter will examine the relationship that these preferences have to buyer perceptions of selling effectiveness. The first section will review the concepts underlying Model 2 (from Chapter II). The second section will outline the methodology used to analyze the relationships and will present the results of the analysis. The last section will summarize the results of the analysis.

A Review of Model 2

As discussed in Chapter II, salesmen have a certain degree of skepticism regarding statements by buyers as to what constitutes effective behavior, knowledge and so forth. There is always the nagging question, at least in the salesman's mind, as to whether or not conformity to buyer preferences will result in securing the order or, at a minimum, increase the chances of securing it. For instance, as shown in Chapter VI, purchasing respondents rank the importance of discussing terms and conditions of sale second only to discussion of price (Table 6-2) but most salesmen will be

highly skeptical that putting such a high priority on terms and conditions will enhance the probability of securing an order. Similarly, all respondents placed very low importance on discussion of personal matters but this is totally counter to dearly held beliefs about selling and certainly is counter to the experience or intuition of many salesmen.

In a sense then, given all the stated preferences of buyers for various aspects of saleswork, the question remains, "what <u>really</u> makes salesmen effective in the mind of the buyer?" Model 2 considers this question without explicitly asking buyers to describe effective behavior. Instead, it proposes that examining the relation between (1) the importance placed on various salesman factors and (2) buyer's perception of effectiveness of salesmen will identify those factors which, if not causal to effectiveness, are at least associated with it. In other words, this approach will identify those salesman factors that are salient to buyers with respect to selling effectiveness; salient in the sense that the importance placed on the factor increases for buyers who increasingly view salesmen as effective. This approach will also identify those factors which are essentially invariant, or non-salient, with respect to buyer perceptions of selling effectiveness.

The hypothesis associated with Model 2 stated that:

Given a buyer's stated preference for certain aspects of a salesman's behavior, knowledge, competence and

personal relations-

(1) these preferences will correlate with perceived selling effectiveness and

(2) the nature and degree of the correlation will vary as a function of various aspects of the buyer's personal and organizational situation.

This hypothesis assumes that several buyer factors will influence the salesman factors relating to PSE. The overwhelming effect of function is such that the effect of other buyer factors (non-function) should be considered for each function separately. The size of the sample precludes definitive analysis, however, and in the remainder of this chapter only the effect of function will be considered in the relationship of salesman factors to PSE.

Four salesman factors are explicitly identified in Model 2; behavior, knowledge, competence and personal relations. To a large degree this identification is conceptual rather than operational. For instance, a finding that salesman behavior correlates more with PSE than does salesman knowledge would not be particularly useful, per se, in providing guidance to the salesman on possible ways to increase his effectiveness. On the other hand, simultaneous consideration of all 43 questionnaire items included in the four factors is difficult, analytically, and poses serious problems of interpretation. Therefore, the four salesman factors of Model 2 were subdivided into eleven factors, as

shown in Figure 7-1, and the relations of these factors to PSE was investigated for each category of function; that is, for purchasing, engineering and operating.

1. Product Discussion	(PRODT)
2. Price Discussion	(PRICET)
3. General Discussion	(GENLT)
4. Structure	(STRUCTURE)
(as regards the nature of the salesman's calls)	
5. Product Knowledge	(PRODK)
6. General Knowledge	GENLK)
7. Aggressiveness	(AGGR)
8. Reliability	(RELI)
9. Empathy	(EMPATHY)
10. Communication Skill	(COMM)
11. Personal Relations	(RELA)

Figure 7-1. Salesman Factors used to examine the relations in Model 2.

Methodology

Analysis of the relations shown in Model 2 consists of three steps. First, specific salesman factors, whose relation to PSE would subsequently be analyzed, were defined. Second, indexes for these factors and for PSE were constructed. Third, simple and multiple correlation procedures were used to examine the relationships. These steps will be discussed in the following subsections.

Salesman Factors

Designation of salesman factors and construction of

indexes are necessarily associated. Essentially, the task was to develop a "reasonable" number of factors that would provide enough detail to be useful, in an operational sense, but not complicate analysis and interpretation. There were three problems in developing the salesman factors. Because questionnaire items are used to define the salesman factors, the first problem was whether respondents did indeed group items consistently with the four broad factors of Model 2. That is, did respondents group behavior items with behavior items, knowledge items with knowledge items and so forth. The second problem was to determine how many factors are "reasonable" in terms of how respondents viewed the questionnaire items. Finally, there was the question as to which of the items associated with a given factor should be used to form an index for that factor.

Several analytical procedures were used to validate the conceptualization of the factors, and to decide how many factors should be used in the analysis. First, the correlation matrix for the 43 questionnaire items was analyzed following the hand linkage clustering procedure described by McQuitty.[1] This analysis indicated that items grouped well conceptually in 14 clusters. This is considered high from an interpretive standpoint. Second, the pool of items was factor analyzed utilizing a principal axis factor solution followed by a varimax rotation to an orthogonal

solution. Eight factors were rotated, based on Kaiser's criterion of rotating factors with an given value greater than one. An examination of the items that loaded on each factor confirmed the original conceptualization and the grouping of items that loaded heavily on each factor was generally consistent with the results of the hand clustering procedure. Last, a hierarchical cluster analysis of the 43 items was made using an average distance approach for forming clusters from a correlation matrix of the items. The approach in this procedure is to initially consider each item as an individual cluster and then build clusters, successively, until all items are in one large cluster.[2] Although this procedure does not in any way define the "right" number of clusters, it gives good insight as to how small clusters are formed and then as to how these small clusters group with others to form large clusters.

Cluster and factor analysis confirmed that respondents grouped items consistently with the original conceptualization. Eight factors developed by factor analysis were considered as a minimum number to be used. Item loadings on each factor were then considered in the context of the clusters developed by the hand linkage method and by the way in which small clusters formed larger clusters in the hierarchical method. For instance, in the factor analysis items relating to aggressiveness and to empathy loaded

most heavily on a general discussion factor. However, in the hand cluster approach these items formed separate clusters and in the hierarchical clustering analysis the empathy items were associated with communication skills. Both of these concepts are of interest in their own right, and the interpretation of the factor loading is ambiguous. Hence, these were identified as separate factors. With this approach, a total of eleven factors were identified for analysis.

The next step was construction of indexes to represent each factor. Conceptually, indexes can be constructed using all items associated with a concept, arguing that each item contributes "something" to the representation of the concept. However, one objective for an index is to achieve a high degree of reliability; reliability used here to mean the degree to which the index correlates with the "true score" which would be developed from an infinite pool of items associated with the concept. Nunnally outlines a procedure for calculating a reliability coefficient for indexes (i.e., the correlation of index score to "true score") and this procedure was followed to calculate reliability coefficients for indexes for all salesman factors.[3] In some instances, items "nominated" for inclusion in a factor were weakly correlated with other items and their inclusion in the index reduced its reliability coefficient. If in addi-

tion, the item appeared weakly related conceptually to the others it was not included in the final indexes.

The indexes for each salesman factor were constructed by arithmetically summing, on a non-weighted basis, the responses for items finally selected to define each factor. Reliability coefficients calculated for these indexes range from .54 to .87 and are generally well above the minimum for this kind of research. The factors are tabulated, together with the items included and the calculated reliability coefficients, in Appendix D and are briefly described in the following paragraphs.

Product Discussion (PRODT). Talking product is fundamental to sales work. Of the four questionnaire items used to define this concept three are unambiguously related to product, per se; the importance of discussing product details, the importance of discussing product application and the importance of discussing product operation. These are included in the index. The fourth product item, importance of discussing product economics is not included for two reasons. First it has connotations of price and so is not unambiguous with respect to product. Second, it is weakly correlated with the other items and so its inclusion would reduce the reliability coefficient of the index.

Price Discussion (PRICET). The most straightforward representation of this factor is defined by the questionnaire items of the importance of discussing price,

per se, and the importance of discussing terms and conditions of sale. Certain other items such as importance of discussing product economics or importance of knowledge of terms and conditions are also associated with price. However these were of more general purchasing interest and they were not included in the price index.

General Discussion (GENLT). A number of the questionnaire items which are general in nature, correlate fairly well with each other. They are included in this factor to designate an activity on the part of the salesman that is not specifically related to price or product but that is related to the business generally. Discussion of these items by the salesmen might not only inform the buyer but could convey an overall breadth of knowledge and interest that could enhance the salesman's credibility in price and product discussion.

Structure (STRUCTURE). Formal and informal presentation items and the importance of routine calls are included in the index for this factor to define the concept of a structured call pattern, in contrast to a random calling pattern with little or no indication of a planned presentation. The index for this item correlates strongly with the indexes for Product Discussion (PRODT) and General Knowledge (GENLK). However this factor represents a dimension of the selling task that should be investigated separately as it

considers the way in which information is presented as well as the information itself.

Product Knowledge (PRODK). Only two items concerning product knowledge, importance of knowledge of product detail and importance of knowledge of product application, were included in the questionnaire. The items relate to each other strongly and are conceptually straightforward. Both are included in this factor.

General Knowledge (GENLK). The nature of this factor generally parallels the nature of importance of general discussion (GENLT). Seven of the general knowledge items in the questionnaire are used to form the index for this factor. These include the importance of knowledge of purchasing philosophy, the importance of knowledge of utility financial practices and so forth. General knowledge, although not of direct benefit to the buyer, may well enhance the salesman's credibility in more task related areas.

Aggressiveness (AGGR). The two questionnaire items of importance of aggressiveness and importance of persuasiveness are strongly associated and are included in the aggressiveness factor. Together they define salesman aggressiveness reasonably well, particularly in this kind of market and industry.

Reliability (RELI). Two items are included in this factor; the importance of being reliable and the importance of credibility. Together these two items provide a good

definition of overall reliability. The importance of responsiveness and the importance of getting the right answer also have strong connotations as measurements of reliability and were considered for this factor. However, these two items also have strong connotations of communication skill. Since they reduced the reliability coefficient they are not included.

Empathy (EMPATHY). Both empathy items from the questionnaire are included in this index. They are the importance of sensitivity to the respondent's time and sensitivity to his understanding.

Communication Skills (COMM). The index for this factor includes the oral and the written communication items of the questionnaire. Both clearly relate to the importance of clear communication.

Personal Relations (RELA). This factor includes three items; the importance of discussion of personal matters, the degree of personal friendship respondents have with salesmen, and the desired openness of the relationship. The reliability coefficient for the index using these items is relatively low (.54). Nevertheless, the three items, taken together, do give a reasonable indication of respondents' overall views of the importance of personal relations in the buying situation.

(As will be shown in the summary section, the personal relations factor is not salient with respect to sel-

ling effectiveness. However, interesting relations were found between certain personal relation items and a few behavior and competence items. Specifically, for respondents in purchasing the extent of personal friendship and the desired openness of the relation correlate positively, significant at $p < .01$, with the importance of talking about personal matters and negatively with the importance of the salesman's sensitivity to the buyer's time situation. Still further, for purchasing respondents the extent of personal friendship and the importance of salesman's sensitivity to the buyer's level of understanding also correlate negatively. For engineering respondents the extent of personal friendship and the desired openness of the relation both correlate positively, significant at $p < .01$ with the importance placed on the salesman talking about his company. The implications of these findings will be included in Chapter VIII.)

Perceived Selling Effectiveness (PSE)

Six items were included in the questionnaire to develop an index for PSE (as discussed in Chapter IV).

(1) a global rating of effectiveness,

(2) a global rating of influence,

(3) a composite rating of influence on the marketing mix,

(4) a global rating of salesmen as problem solvers,

(5) a categorical statement as to the nature of sales-work, and

(6) a categorical statement as to reliance on salesmen as a source of information.

The last item, the degree to which buyers rely on salesmen for information, correlates very weakly with the other items. This is surprising, given the commonly held view that the primary function of the salesman is to provide the customer with information about the product. It has the interesting implication that this commonly held view is not necessarily correct or, at least, that the salesman does not have to be the source of all knowledge to be effective.

Because of the weak correlation of reliance on salesmen for information with the other items the PSE index includes the first five items only. As with indexes for salesman factors, the PSE index was constructed by arithmetically summing responses to the five items on an unweighted basis. (Note: because of scale values, responses were standardized before summing.) The reliability coefficient calculated for the index is .60.

Correlation of Salesman Factors and PSE

For all three functions the simple correlation matrixes (Tables 7-1, 7-2, and 7-3) identify certain salesman factors which have a high correlation with PSE. However, there is also substantial amount of intercorrelation between

TABLE 7-1

SIMPLE CORRELATIONS — PURCHASING FUNCTION-IMPORTANCE OF SALESMAN FACTORS AND PSE

N = 93 DF = 91 R@ .0500 = .2039 R@ .0100 = .2659

Variable												
PSE	1.000											
PRICT	.0690	1.0000										
PRODT	.0667	-.0799	1.0000									
GENLT	.2647	.3349	.1219	1.0000								
STRUCTUR	.2015	.1482	.4499	.4714	1.0000							
PRODK	.0827	-.0381	.5968	.1341	.3010	1.0000						
GENLK	.3451	.3432	.0873	.6027	.1968	.1987	1.0000					
AGGR	.3500	.0979	.2269	.5138	.4095	.3246	.4179	1.0000				
RELI	.1794	.1211	-.0035	.1444	.0763	.0317	.1406	.0936	1.0000			
EMPATH	.2078	.2867	.1561	.3652	.2312	.2623	.4281	.3083	.1827	1.0000		
COMM	.0838	.3474	.0387	.2457	.1473	.1471	.3034	.3260	.1799	.4348	1.0000	
RELA	.2135	-.0162	.1442	.3515	.3860	-.0099	.2549	.2926	-.0328	-.1288	-.1131	1.0000
	PSE	PRICT	PRODT	GENLT	STRUCTUR	PRODK	GENLK	AGGR	RELI	EMPATH	COMM	RELA

TABLE 7-2

SIMPLE CORRELATIONS — ENGINEERING FUNCTION-IMPORTANCE OF SALESMAN FACTORS AND PSE

N = 89 DF = 87 R @ .0500 = .2084 R @ .0100 = .2717

Variable												
PSE	1.0000											
PRICT	.0708	1.0000										
PRODT	.3782	-.0316	1.0000									
GENLT	.4060	.3692	.3255	1.0000								
STRUCTUR	.4103	.1837	.3062	.6537	1.0000							
PRODK	.2553	.0449	.3968	.1509	.1333	1.0000						
GENLK	.3085	.3993	.2657	.6176	.3111	.2940	1.0000					
AGGR	.3451	.0696	.3577	.4791	.4206	.1224	.3049	1.0000				
RELI	.0537	.0362	.1918	.1502	.2075	.1574	.1595	-.0167	1.0000			
EMPATH	.1200	.1737	.2558	.3304	.1432	.0610	.2981	.1776	.2025	1.0000		
COMM	.1058	.2695	.0750	.2135	.1060	.2292	.3764	.0759	-.0021	.2924	1.0000	
RELA	.1550	.1075	.0699	.4455	.3960	.0779	.3209	.3001	.0802	.0347	.0523	1.0000
	PSE	PRICT	PRODT	GENLT	STRUCTUR	PRODK	GENLK	AGGR	RELI	EMPATH	COMM	RELA

TABLE 7-3

SIMPLE CORRELATIONS — OPERATING FUNCTION-IMPORTANCE OF SALESMAN FACTORS AND PSE

N = 61 DF = 59 R @ .0500 = .2521 R @ .0100 = .3274

Variable												
PSE	1.0000											
PRICT	.0412	1.0000										
PRODT	.1949	.1580	1.0000									
GENLT	.2191	.1448	.1752	1.0000								
STRUCTUR	.3050	.0502	.3001	.5263	1.0000							
PRODK	.1301	-.0934	.5280	-.0098	.0476	1.0000						
GENLK	-.0718	.3655	.2014	.3788	.1563	.1925	1.0000					
AGGR	.0969	.1058	-.0903	.1458	.2366	-.1709	.3096	1.0000				
RELI	.1498	-.0478	.3929	.0357	-.0598	.4234	-.0461	-.2350	1.0000			
EMPATH	-.0906	-.1257	.3012	.1407	-.0499	.1973	.0338	-.1468	.3754	1.0000		
COMM	-.0118	-.2269	.4341	.1480	.2953	.3371	.1349	.0926	.2685	.5076	1.0000	
RELA	.1847	.1212	.0850	.2250	.2814	-.0680	.1443	.2380	.1477	-.1713	-.0598	1.0000
	PSE	PRICT	PRODT	GENLT	STRUCTUR	PRODK	GENLK	AGGR	RELI	EMPATH	COMM	RELA

salesman factors suggesting that many of the factors are not unambiguous in their relation to PSE. In the matrix for purchasing, for instance, (Table 7-1) importance of general knowledge (GENLK) and importance of aggressiveness (AGGR) correlate most strongly with PSE. However, importance of general discussion (GENLT) is also correlated with PSE and is strongly correlated with importance of general knowledge (GENLK). It may be that the two factors are explaining essentially the same thing, in which case the question is whether one can be designated as more salient than the other.

The use of partial correlations provides a way to untangle, to a degree, the multiple relations that exist in these data and multiple regression techniques provide a method for calculation of such partial correlations. However, with as much intercorrelation as exists here simultaneous regression of all variables against a dependent variable still does not untangle the relations. With certain precautions stepwise regression can be useful to analyze highly intercorrelated variables and this technique was used to analyze these data in two ways.

First, for each function, the stepwise procedure was used to develop a regression equation which included those variables (salesman factors) which had the highest partial correlation with PSE, significant at $p < .10$. Variables entering these equations are tentatively designated as salient. This process is highly mechanical, however, and the

first variable selected for inclusion is simply the one with the highest simple correlation with the dependent variable. Hence, another variable that equally explains the same thing might not be admitted into the equation (because the significance of its partial correlation is low). Conclusion that the second variable has no relation to the dependent variable could be erroneous.

As a check against the possibility of such an erroneous conclusion, a second regression equation was developed using the stepwise procedure but "forcing" variables into the equation that were highly correlated with variables included in the first set of equations. If presence of these "forced" variables precluded entry of a variable included in the first equation then it was concluded that the two variables were surrogates to a degree that designation of one as salient would be erroneous. On the other hand, if the originally selected variable(s) still came into the equation, despite the forced presence of the others, and had a high partial correlation with PSE then it was concluded that variables are not complete surrogates and that some unique aspect of the original variable indeed made it salient. The "behavior" of variables applying this procedure will be described in the following sections which interpret the results for each function.

Correlation for Salesman Factors and PSE for Purchasing

The correlation matrix (Table 7-1) reveals that for purchasing, general knowledge (GENLK) and aggressiveness (AGGR), are most strongly correlated with PSE, followed by general discussion (GENLT). GENLT, in turn, is highly correlated with GENLK and AGGR. This can be broadly interpreted to mean that purchasing respondents associate general knowledge and general discussion with selling effectiveness, both of which are closely associated with the concept of aggressiveness. Given this observed pattern, however, there is still the question as to whether one of the factors is truly salient.

To develop further insight into the relation of the three factors to PSE, a stepwise regression was run allowing all salesman factors the opportunity to come into the regression equation. The results are as follows:

$R^2 = .17$ F-statistic = 9.24, significant at p = .00

Variable	Partial Correlation	Significant at p =
GENLK	.23	.03
AGGR	.24	.02

This tends to confirm the conclusion that could be drawn from the simple correlation matrix; that is, that the importance of general knowledge, associated in some way with a concept of aggressiveness, is salient in regard to PSE. However, the close relation of GENLT to GENLK suggests that

GENLT could be explaining much the same thing as GENLK. From the salesman's standpoint, it is important to know if it is general knowledge, per se, that is associated with effectiveness with just enough general discussion to establish possession of general knowledge or, is it important to discuss general subjects per se.

To attempt to answer this question the next step in the analysis was to run the stepwise procedure forcing in GENLT. In addition, STRUCTURE was also forced in as it is closely related to both GENLK and GENLT. The results of this procedure are:

R^2 = .17 F-statistic = 4.66, significant at p = .00

Variable	Partial Correlation	Significant at p =
GENLK	.22	.04
AGGR	.21	.05
GENLT	-.04	.72
STRUCTURE	.02	.50

Not shown is the intermediate equation with just GENLT and STRUCTURE but the R^2 is .08, indicating much less explanatory power for these variables. Because their presence in the above equation adds nothing to the explanatory power of the previous equation and because their partial correlation coefficients are essentially zero it is concluded that it is indeed the importance of general knowledge that is salient in the respondents' minds as relating to effectiveness and that this is closely associated with the concept of aggressiveness.

Correlation of Salesman Factors and PSE for Engineering

From the correlation matrix for salesman factors and the PSE for the engineering function (Table 7-2) it can be seen that a number of factors correlate strongly with PSE, particularly importance of general discussion (GENLT), importance of structure (STRUCTURE), importance of product discussion (PRODT), importance of aggressiveness (AGGR), and importance of general knowledge (GENLK); factors primarily relating to discussion in a structured form or to general knowledge and the concept of aggressiveness. Again, because these factors are highly intercorrelated and because importance of product knowledge (PRODK) is also intercorrelated, there is considerable question as to which, if any, factors are truly salient.

The results of a stepwise regression on all eleven salesman factors with PSE as the dependent variable were:

$R^2 = .24$ F-statistic = 13.49, significant at p = .00

Variable	Partial Correlation	Significant at p =
PRODT	.29	.01
STRUCTURE	.33	.00

The stepwise procedure was then run forcing GENLT, GENLK, PRODK and AGGR in with the following results:

$R^2 = .26$ F-statistic = 5.77, significant at p = .00

Variable	Partial Correlation	Significant at p =
PRODT	.19	.08
GENLT	.19	.07
GENLK	.03	.79
AGGR	.13	.23
PRODK	.12	.28

The fact that PRODT came into the second equation so strongly, despite the presence of the other factors, indicates that this factor is, indeed, salient to engineers in relation to selling effectiveness. STRUCTURE, however, which was strongly correlated to PSE in the first equation did not come into the second, indicating that it is closely associated with some of the other concepts, particularly general discussion.

Correlation of Salesman Factors and PSE for Operating

The operating function shows the weakest relation between salesman factors and PSE. As indicated in Table 7-3, only one factor, STRUCTURE, correlates significantly with PSE. The regression equation developed using the stepwise procedure is tabulated as follows:

$R^2 = .09$ F-statistic = 6.05, significant at p = .02

Variable	Partial Correlation	Significant at p =
STRUCTURE	.31	.02

Because the STRUCTURE factor is so closely correlated with GENLT, the stepwise procedure was run forcing this variable into the equation with the following result:

R^2 = .10 F-statistic = 3.14, significant at p = .05

Variable	Partial Correlation	Significant at p =
STRUCTURE	.23	.08
GENLT	.07	.58

It appears that STRUCTURE is salient to respondents in operating as an indicator of selling effectiveness. However, the weakness of the relation suggests that perceptions regarding selling effectiveness for personnel in the operating function are mainly explained by factors other than salesman factors.

Summary

The first part of Hypothesis 2 stated that buyer preferences for salesman behavior, knowledge, competence and personal relations would explain their perceptions of selling effectiveness (again with the caveat against inferring causality). The results of the research presented in this chapter confirm this part of the hypothesis. For each of the three functions, regression equations were developed in which salesman factors explained PSE at statistically significant levels.

The second part of Hypothesis 2 stated that the nature and degree of explanatory power of salesman factors would vary according to certain aspects of the buyer's situation. The research confirms this part of the hypothesis as well. Different salesman factors explain PSE for

each function and the amount of explanatory power (R^2) varies considerably. The remainder of this section will consider some of the implications of these two findings.

Variation in R^2

Salesman factors explained some of the variation in PSI in all three functions. However, the amount of explanatory power was quite different for each function. For operating the R^2 for PSE in the "best" equation is a relatively low .10. This increases to .17 for purchasing and is .26 for engineering. (Note: inclusion of all salesman factors in the regression equations did increase the R^2 but in each instance the increase was slight.) There are at least two explanations for this variation. First, it is possible that not all salesman factors have been identified and that inclusion of other factors would increase explanatory power. Alternatively, it may be that factors outside the domain of salesman factors substantially determine perceptions of selling effectiveness. For instance, variations in PSE could well be related to respondents' personal experiences in sales work or cultural influences, such as family background, and so forth.

Respondents in operating have the least contact with salesmen and it is tempting to conclude that such other, or non-salesman, factors are major determinants of PSE. This would suggest that the low R^2 is a result of lessened opportunity in operating to develop strong perceptions of selling

effectiveness from direct work contact. However, this argument is not consistent with the fact that R^2 for purchasing is less than for engineering, yet purchasing has the highest amount of contact with salesmen. It is more likely that difference in R^2 between engineering and purchasing is due to the unidimensional nature of the engineering task, with its heavy orientation to just product, versus the multidimensional nature of the purchasing task involving not only price, product and shipment but a host of other factors including expediting, invoice approvals, inventory concerns, etc. No one of these may be important individually, in terms of relating to the salesman's role but collectively, omission of some salesman factors not specifically identified in this research could account for some loss in potential R^2 for purchasing.

It seems reasonable to conclude that some non-salesman factors are involved in explaining variation in PSE. Additional salesman factors could increase the R^2, particularly for the purchasing and operating functions. The results of this research reflect the multidimensional aspect of the purchasing and operating tasks. It is also consistent with the unidimensional nature of the engineering task.

Salient and Non-Salient Salesman Factors

In Chapter IV certain salesman factors were predicted to explain variation in PSE (Table 4-2). Because of limitations of the sample only the effect of buyer function on the expected relations could be analyzed.

The expectation that general knowledge and aggressiveness would explain variation in PSE for purchasing was confirmed. However, the expectation that communications skills, discussion of price and general discussion would also explain, or be salient respect to PSE, was not confirmed.

Similarly, the expectation that product discussion would be salient with respect to PSE for engineering was confirmed, but the expectation that product knowledge would be salient for engineering was not. It will be noted that an additional factor, structure, is identified in this chapter, based on the previously discussed factor and cluster analyses. This factor is identified as salient for engineering with the caution that general discussion may be a surrogate.

The precise interpretation of the salient factors depends to a large degree on what assumption is made as to respondents perceptions of selling effectiveness. The assumption is made here that buyers who believe salesmen are effective hold this belief based on actual observation of

salesmen, and that the salient factors are those which these buyers have identified as dimensions on which they can discriminate between effective and ineffective salesmen. No inference of causality is warranted but this interpretation does assume more than just casual preference by these buyers.

This chapter has been concerned primarily with factors that are salient with respect to PSE. Those factors which are not salient are also of interest. There are a number of factors that are invariant with respect to PSE. For instance, purchasing preference for product discussion (PRODT), price discussion (PRICET) and communication skill (COMM), as shown in Table 7-1, have essentially zero correlation with PSE. For these factors there is some fixed level of importance held by buyers, regardless of their feelings about selling effectiveness. These fixed levels may well constitute a "norm" or minimum expected level of performance. If importance ratings are equated with expected performance levels (and evidence gathered in the pilot study indicates buyers do make this equation) this may mean that for these factors there is a level of performance that is satisfactory and that improved performance would not increase buyer's perceptions of effectiveness. However, and more significantly, the implication is that for the salient factors higher levels of performance will be associated with increased effectiveness.

Taking the salient and non-salient, or invariant, factors in combination, certain patterns between salesman factors and PSE emerge. For each function there are certain factors which make up a core that represents a minimum level of salesman behavior, knowledge, competence and personal relations. Performance at this minimum level is important but performance at higher levels is not associated with increased perceptions of selling effectiveness. For each function there are additional factors which do discriminate between effective and ineffective salesmen. For these salient factors increased performance is associated with increased effectiveness.

For each function there are other factors which cannot be clearly categorized as salient or non-salient. For instance, for the engineering function simple correlations of importance of general knowledge (GENLK) and importance of aggressiveness (AGGR) with PSE are relatively high, and significant at $p < .01$, but the partial correlations are much lower and not statistically significant. For other factors the partial correlations would undoubtedly have been low, if calculated, but the simple correlations indicate some kind of relation to PSE. Rather than arbitrarily designate these factors as non-salient they are identified as factors which cannot presently be classified.

The salesman factors are tabulated for each function in Table 7-4, using the three categories of salient, non-

TABLE 7-4

THE RELATION OF SALESMAN FACTORS TO PSE -- BY FUNCTION

Relation	Function		
	Purchasing	Engineering	Operating
Non-Salient or Invariant	PRICET PRODT PRODK COMM	PRICET RELI EMPATHY COMM RELA	PRICET GENLK AGGR COMM EMPATHY
Salient	GENLK AGRR	PRODT STRUCTURE (GENLT)[a]	STRUCTURE
Unclassified	GENLT RELA RELI STRUCTURE EMPATHY	PRODK GENLK AGRR	PRODK RELA RELI PRODT GENLT

PRICET = price discussion, PRODT = product discussion, PRODK = product knowledge, COMM = communication skill, GENLK = general knowledge, GENLT = general discussion, RELA = personal relations.

[a]GENLT may be a surrogate for structure

salient and unclassified. For the purchasing function, the table is read that the non-salient factors are price discussion, product discussion, product knowledge and communication skill. For these factors, performance at some minimum level is expected and performance at a higher level is not necessary, at least in terms of increasing perceived effectiveness. The salient factors for purchasing are general knowledge and aggressiveness. For these factors,

"more" is better and is associated with increased effectiveness. Similar interpretations can be made for the factors tabulated for engineering and operating.

The effect of function is readily apparent. Contrasting purchasing and engineering, price discussions are norms for both functions. Product discussion is a norm for purchasing but is a key dimension on which engineering differentiates effectiveness. General knowledge and aggressiveness which cannot be classified for engineering are the key dimensions on which purchasing differentiates salesman effectiveness.

Some caution must be observed in interpreting Table 7-4. This research is exploratory in nature and there are no established benchmarks from the literature as to reasonable values of R^2. The levels for engineering and purchasing seem reasonable, on an intuitive basis. The level for operating would seem to caution against overly substantive interpretation. Despite this caution the findings have interesting implications for salesmen and sales managers. These implications, combined with those developed from the findings of Chapter VI will be presented in the following chapter.

[1]McQuitty, Louis L., "Elementary Linear Analysis for Isolating Orthogonal and Oblique Types and Typal Relevancies," Educational and Psychological Measurement, 17 (Summer 1957): 207-29.

[2]Sneath, Peter H.A. and Robert R. Sokal, Numerical Taxonomy, San Francisco: W.H. Freeman and Company, 1973, p. 218.

[3]Nunnally, Jum C., Psychometric Theory, New York: McGraw-Hill Book Company, 1967.

CHAPTER VIII

IMPLICATIONS OF THIS RESEARCH FOR MARKETING AND PURCHASING MANAGEMENT

The results of this study have confirmed the expectation that (1) buyers' role expectations for salesmen can be researched by means of a mail questionnaire (2) that these role expectations vary as a function of the buyer's organizational and personal situation and (3) that there is a relation between these role expectations and the buyer's perceptions of selling effectiveness. In this chapter, implications of the specific finding will be developed for marketing and for purchasing management. The findings also will be related to the general field of marketing and purchasing knowledge with suggestions for further research of potential benefit to management.

Implications for Marketing Management

This study provides many insights into a number of specific aspects of buyer preferences for salesman behavior, knowledge, competence and personal relations. Implications for marketing are presented in the context of the market studied and will cover the areas of sales effectiveness, sales force organization, sales force assignments, and salesman role prescriptions.

There are many similarities, however, between the exchange process in the market studied and others in the broad area of industrial marketing. For instance, the original equipment market (OEM) in many industries is similar to the utility market in many respects. Products are generally sold in high volume. In some cases the manufacturer's standard product is purchased. In others, the design may be tailored to the purchaser's specifications. In either case, formal approval that the product meets buyer specifications is necessary before bids or quotations can be considered. This is essentially the same purchasing process as followed by the utility industry which also requires product approval before allowing the manufacturer to bid or quote. To the degree that these and other similarities exist this study may be generalizable beyond just the specific market studied.

Salesman Effectiveness

This research strongly confirms the need for a salesman to have a large role repertoire, and to be able to enact different roles by adjusting his behavior as a function of the buyer's personal or organizational situation. The complexity of the organizational buying situation with its multiple buying influences adds further emphasis to this need. This study investigated buyer's role expectations in terms of indicated preferences for 43 items relating to

salesman behavior, knowledge, competence and personal relations. Of these 43 items only two, discussion of personal matters and knowledge of financial practices were of low absolute importance to buyers. From the buyer's standpoint, it is important for the salesman to do much more than just talk price or product.

The research confirms expectations that knowledge of the buyer's individual situation can provide substantial guidance in determining appropriate behavior, knowledge, skill and personal relations for salesmen. The major determinant of variations in buyer role expectations is the buyer's function. The nature of the purchasing process is also a significant determinant. For the salesman it is important to consider the purchasing process, not only in terms of who the decision makers are, but in terms of how it may require him to differentiate his role as he calls on these decision makers.

Previous studies have indicated that meeting buyer's role expectations can increase the probability of sales success. Taking buyer's expectations at face value, however, does not develop a definitive role prescription for salesman effectiveness. For purchasing respondents, two aspects of role, general knowledge and aggressiveness, rank considerably below others in terms of absolute importance but are the factors on which effectiveness is differentiated. For engineering respondents product discussion is

the most important aspect of behavior in absolute terms and is salient with respect to perceived selling effectiveness. On the other hand, the concept of structure, also salient with respect to effectiveness, is relatively low in terms of absolute importance. In other words, buyers do not necessarily place the highest absolute importance on those aspects of the salesman's role that differentiate salesman effectiveness.

The evidence concerning the desirability of a large role repertoire for salesmen needs to be considered in the context of what is known about actual salesman behavior. Formal evidence of salesman behavior is limited, but Thompson contends that the salesmen he observed in a wide variety of selling situations play very limited roles.[1] Informal evidence based on discussion with many buyers indicates that many salesmen use what might be called a "single strategy" approach. In this approach the salesman relies on superior product knowledge or on after-sales service, etc. as his only method of attempting to influence the purchasing process. The salesman using this approach does not attempt to recognize the buyer's function or his organizational circumstances.

The empirical evidence developed in this study regarding buyer's role expectations should provide a challenge to the "single strategy" salesman to broaden his

approach. The research should also assist marketing management in developing sales training programs designed to expand the salesman's role repertoire.

Organization of the Field Sales Force

Typically, the salesman for distribution products calling on the electric utility industry is responsible for all contact necessary with buyers in all three functions. An alternative form of sales organization was used at one time in this industry and is frequently used, or considered for use, in other industries. This alternative approach involves an account manager assisted by specialists who call on some or all of the buying influences.

The amount of role adjustment necessary as salesmen or specialists interact with a wide variety of buyers is one of the criteria in determining which sales approach is most appropriate. In the account manager approach the specialists generally are involved with only one function but call on a number of different firms or accounts. In the total responsibility approach the salesman is generally involved with fewer accounts (frequently only one) but must deal with all three functions. This research gives insights as to how the role adjustment required by these two forms of sales organizations can be evaluated.

Visual inspection of the items in Table 6-2 shows considerable variation in the rank ordering of buyer pref-

erences for behavior items depending on buyer function. This variation can be quantified and rank order correlation coefficients were calculated for the behavior items in Table 6-1 for all three pairs of function (Spearman's r_s). The calculated correlations are: .34 for purchasing-engineering, .51 for purchasing-operating and .92 for engineering-operating.

Essentially these correlation coefficients confirm what is readily discernible from visual inspection of Table 6-2. The greatest change in behavior is required as the salesman makes the transition from calling on buyers in purchasing to calling on engineering. On the other hand, only a slight behavioral change is necessary in the transition from calling on engineering buyers to calling on operating buyers.

It should be noted that conflict in role expectations between functions exists essentially only in the behavior area. The lowest rank order correlation for knowledge items is .82 between purchasing and engineering and the correlation for all pairs of the three functions for competence items is almost 1.00.

Obviously, it cannot be stated that the required role adjustment indicated by a correlation coefficient of .34 is acceptable, per se; even if the assumption is made that the typical sales approach in this industry is cor-

rect. Role adjustment is just one of many factors that needs to be considered in establishing a specific sales approach. It can be said that in this industry the pros of undivided and sharply focused individual salesman responsibility apparently more than offset the problems that may arise because of the required amount of role adjustment by the salesman.

An account manager/specialist team form of sales organization can reduce the required role adjustment. Specialists calling on only one function would have to make only the role adjustment necessitated by other (i.e., non-function) buyer factors. In some industries the benefit from the reduction in required role adjustment may more than offset other considerations, such as divided responsibility. If so, a form of account manager/specialist team approach would be favored.

The right selling organization can be determined only in the context of a variety of factors. The specific values of correlation coefficients developed in this study should assist in evaluating these factors as different forms of sales organizations are considered.

Sales Force Assignments

Many of the problems associated with sales force assignments are closely related to problems of sales force organization. For instance, if sales force assignments are

made strictly on a geographic basis the mix of accounts may vary widely on organizational characteristics such as size or sophistication of evaluation; thus increasing the salesman's required role adjustment. However, the evidence in this research indicates that in this industry the amount of role adjustment required by such organizational considerations is small compared to that required by functional considerations.

The finding that geography has no influence on any of the buyers' preferences for salesman items is of particular interest from a sales force assignment standpoint. As far as role expectations are concerned, at least in this industry, salesmen should have no problems in adjusting to buyers when transferred from one area to another.

Role Expectations

A definitive prescription for a specific role, or roles, for a salesman would not be consistent with the complexity of the interactions between buyers and sellers in this industry. Some broad generalizations can be made which may help to establish a framework within which appropriate salesman roles may be more easily identified. These are developed in terms of the four salesman factors; behavior, knowledge, competence and personal relations.

Role Expectations and Behavior

Behavioral adjustments to meet buyer role expecta-

tions take place in actual calls on the customer. This is in contrast to the adjustments required in knowledge, competence and friendship, all of which are more long term in nature. These behavioral adjustments require perceptions not only as to the nature of the buyer's task, and his organizational situation, but to a host of other factors relating to the buyer's personal interests, psychological makeup or style, and to the buyer's mood or attitude at the time of the salesman's call.

Ability to adjust behavior appropriately and instantaneously to these factors is associated with the salesman's empathy and intuition. Knowledge of how preferences for behavior vary, according to the buyer's situation, can enhance this natural empathy and intuition. The evidence developed in this research provides some of this kind of knowledge, especially regarding variation in preferences of buyers in the purchasing, engineering and operating functions.

Purchasing Preference for Salesman Behavior. The preference of buyers in purchasing is consistent with the nature of the purchasing task. It is most important for salesmen to discuss price, price related topics and status of orders. It is least important, emphatically, to talk about personal matters.

Purchasing buyers consider it important for the salesman to discuss a wide range of subjects in addition to

price. Product discussion is important, with emphasis on economic aspects. It is important to keep buyers in purchasing current on both the salesman's own activities and his company's activities.

Respondents in purchasing equate selling effectiveness with possession of general knowledge and aggressiveness. Discussion of general topics is not related to selling effectiveness, indicating that general knowledge may need to be demonstrated in the context of discussion of other topics.

Purchasing expectations for salesman behavior are affected by a number of buyer factors. The salesman particularly needs to be aware of the buyer's purchasing practices, the size of the utility and the buyer's area of education in order to appropriately modify his behavior to meet buyer expectations.

Calls on purchasing will involve the most role conflict or ambiguity. Price, the primary interest of purchasing, is traditionally the subject salesmen are taught to deemphasize.[2] Purchasing's other interests appear to form a continuum and it may be difficult for the salesman to sense exactly what behavior is appropriate.[3] The adjustment required as the salesman makes the transition from calling on engineering and operating to calling on purchasing is great. General knowledge is important but may be hard to demonstrate. Aggressiveness is important but it is not an

unambiguous concept and the salesman may wonder "aggressive with respect to what?"

Because of this role conflict, some salesmen will tend to avoid calls on purchasing. The conflict with regard to price may seem to establish an adversary relation. Buyers in purchasing, however, rate salesmen higher on PSE than do the other functions. They are more interested in evaluation techniques and purchasing philosophies and also in the general activities of the salesman and his company than are engineering respondents. What appears to be an adversary attitude should be recognized more realistically as a healthy manifestation of the objective of maximizing value to the buyer's firm.

A special aspect of calling on purchasing involves technical services. Most suppliers of distribution equipment consider technical services as an important element in the marketing mix. Engineering buyers uniformly (i.e., regardless of other buyer factors) place high importance on discussion of technical services, confirming their apparent value. Purchasing buyers, however, place lower importance on discussion of technical services than do engineering buyers. Purchasing buyers in large utilities, in utilities with sophisticated evaluation procedures and in holding company organizations place still lower importance on discussion of technical services. For the salesman this suggests the need to clearly identify the value of technical

services, in terms relevant to purchasing in order to secure favorable evaluation.

Engineering Preferences for Salesman Behavior. It is most important for salesmen calling on buyers in engineering to talk about all aspects of the product and about technical services, which are closely related to the concept of product. Again, discussion of personal matters is of least importance by a considerable margin.

As with purchasing, it is important for the salesman calling on engineering to talk about a wide variety of other topics. The absolute importance placed on discussing non-product topics is somewhat less than for engineering than for purchasing, however. The only buyer factor that affects engineering preferences for salesman behavior is the nature of the buying task (i.e., Newbuy or Straight Rebuy). For buyers in engineering a product orientation predominates.

Role adjustment or role ambiguity problems should be minimum for salesman calling on engineering. The emphasis on product discussion is consistent with the salesman's orientation and training. The importance placed on product discussion is also consistent with its identification as a dimension used to differentiate salesman effectiveness. Structure is the other dimension engineering buyers equate with effectiveness. This implies that organized product

discussion will further enhance perceptions of salesman effectiveness. In the non-product areas the discrete grouping of preferences for behavior items should make it easier for salesmen to sense the need to adjust behavior during actual calls.[4]

The criteria used by engineering buyers in evaluating the product may be a problem for salesmen. The low level of importance placed on discussion of evaluation techniques by engineering respondents indicates that changing their "nature of demand" may be difficult. For the salesman whose factory emphasizes elements of the marketing mix that the engineering buyer believes are relatively unimportant this represents a particular challenge. Nothing found in this research gives clues as to how this challenge may be met but it is important to recognize that it exists.

Operating Preferences for Salesman Behavior. In calling on operating buyers it is most important for the salesman to talk about all aspects of the product. Discussion of personal matters is relatively unimportant by much the same wide margin as for the other functions.

In the non-product areas much of the interest of operating respondents parallels the interests of purchasing respondents. It is important for the salesman to discuss price and order status with these buyers. They place greater importance on discussing non-product topics, on an overall basis, than do engineering respondents. Their

preferences for salesman behavior are unaffected by any of the buyer factors identified in this study. Only the concept of structure, or organized presentations, is related to perceptions of selling effectiveness for buyers in operating.

The preferences of operating respondents for salesman behavior in the non-product areas are arranged on a continuum. It may, therefore, be difficult for the salesman to sense appropriate behavior. On the other hand, the lack of effect of buyer factors on these preferences and the low explanatory power of salesman factors for PSE^5 suggest the salesman is not significantly involved in the operating task; at least as compared to engineering and purchasing. If this is the case, role ambiguity with respect to behavior may not be a serious problem. It may be appropriate for the salesman to discuss any of a wide range of topics but he should recognize that his organization of the discussion is what will be equated with his effectiveness by operating personnel.

Role Expectations and Knowledge

Buyers in all functions place prime importance on the salesman's knowledge of his product(s) and its application. Respondents in purchasing place equally high importance on the salesman's knowledge of his company's capabilities.

A wide range of other aspects of knowledge is important in addition to product knowledge. Of the eight general items of knowledge investigated only the salesman's knowledge of utility financial practices is relatively unimportant to buyers in this industry. Differences in the preference patterns for knowledge items are slight for the three functions. Only three other buyer factors affect preferences; formality of the purchasing practice, utility growth rate and locus of purchasing influence in holding company organizations.

Purchasing respondents place the highest importance on salesman knowledge in aggregate. For buyers in purchasing, general knowledge is one of the two salesman factors that is salient with respect to PSE. In essence, buyers in purchasing have higher expectations regarding salesman knowledge than do buyers in engineering and operating and general knowledge is a dimension used to differentiate effectiveness.

For the salesman it is clear that the advice to be knowledgeable as possible in all aspects of the product is confirmed by buyers in this industry. Product knowledge, per se, is not enough, however. A wide variety of knowledge in other areas is also important.

Role Expectation and Competence

Reliability is the aspect of competence that is most

important to all functions and is most important of all the items in this study. Aggressiveness is least important to all functions but its absolute level indicates it is not unimportant.

The rank order of competence items is essentially the same for all three functions. Considering absolute importance values, however, purchasing has higher overall expectations regarding salesman competence than do the other functions, particularly with regard to communication skills and aggressiveness.

A large number of other buyer factors (non-function) influence preference for competence. The importance of written communication skills increases in utilities with formal purchasing practices or sophisticated evaluation systems. In utilities that specifically evaluate salesmen, buyers in purchasing place greater importance on aggressiveness. The importance engineering respondents place on the salesman's sensitivity to their time situation increases as they know salesmen longer.

Reliability, in terms of doing what he says he will do, and credibility, in terms of the reliability of his information, are the critical aspects of the salesman's role. Still further, these two aspects are not salient in relation to PSE indicating this importance is constant, regardless of beliefs about the effectiveness of salesmen. On the

other hand, aggressiveness is not unacceptable. All buyers place considerable importance on aggressiveness and it is salient with respect to PSE for purchasing. The higher importance placed on persuasiveness, however, suggests aggressiveness should be applied with a soft touch.

High importance is placed on the abilility to get answers by all buyers. The equally high importance placed on product knowledge, per se, indicates that ability to get answers is not a substitute for product knowledge. The two items are complementary, not mutually exclusive.

The importance of oral communication skills is probably accepted by most salesmen without question. The equal importance placed on written communication skills may not be as well accepted. The increase in importance placed on this skill by buyers in utilities with formal purchasing practices and sophisticated evaluation systems reinforces the overall importance placed on these skills.

The length of time engineering respondents have known salesmen increases the importance placed on salesman sensitivity to the buyer's time situation. For salesmen this may emphasize the need to be aware of this factor on a continuing basis.

Role Expectations and Personal Relations

The low importance buyers place on discussion of personal matters may meet with considerable skepticism on the part of most salesmen. It is interesting to consider

the relation of the extent of friendship buyers have with salesmen, and their desired level of openness of relations, to a number of other items.

For buyers in purchasing, extent of friendship and desired openness of relations correlate with each other. They correlate negatively with the importance placed on the salesman's sensitivity to time situation and level of understanding. For engineering respondents, the extent of friendship and desired openness of relations were found to correlate positively with each other and with the importance placed on the salesman talking about his company.

In discussing the question of friendship with one buyer, interviewed in the pilot study, his view was stated as follows:

> I like to know the salesmen who call on me and I like to play golf with them or otherwise get to know them outside the office. I think, though, that this may make some aspects of their job tougher. If we have a problem with a manufacturer I have less hesitancy to "give the salesman a little hell" if I know him well.

Essentially what this buyer was describing is what this research has defined as openness of relations or that aspect of personal relations in which candor is seen as a way to improve understanding between buyer and seller to their mutual benefit. Although personal friendship is associated with open relations this has a very different connotation than does the implication that friendship in some way biases the buyer to make prejudicial decisions. Why friend-

ship should increase the willingness of engineering respondents to have the salesman talk about his company is not clear but it certainly does not have any pejorative implication.

The low importance buyers placed on discussion of personal matters needs to be put in a proper context by the salesman. The importance buyers place on discussing personal matters does correlate positively with the extent of personal friendship. Value of friendship or the desirability of open relations is not necessarily denied. Rather, given the nature of the buyer's task, and the time pressures associated with it, the interpretation is that with all buyers much discussion of personal matters is simply inappropriate.

Implications for Purchasing

The contention that "Buying is Marketing, Too!"[6] has interesting implications for purchasing and is supported by this research. The marketing concept requires a firm to adopt an external orientation, focusing on the needs of customers as the primary way of achieving organizational objectives. Extended to purchasing, this concept suggest an active role for purchasing in developing strong relations with suppliers. In this role purchasing management maintains a continual awareness of suppliers' attitudes and needs as well as of their capabilities. Purchasing strategies are developed, based on this knowledge, to increase suppliers' overall interest in the buyer's business. A

buyer may use various strategies to become a "preferred account."[7] If this goal is achieved suppliers are more competitive and are more responsive to buyers' needs for special features or special services.

The active role suggested by the marketing concept, if used by purchasing, is a way to increase the value obtained from expenditure of the purchasing dollar. This research has identified two areas that are promising for development of specific strategies designed to influence suppliers to be more responsive to the buyer's needs: (1) relations with salesmen and (2) evaluation practices.

Relations with Salesmen

The wide range of variation in respondents perceptions of selling effectiveness is subject to many interpretations. It is possible that buyers who judge salesmen as effective do so because the salesmen who call on them are, indeed, effective and, alternatively, that buyers who judge salesmen as ineffective do so because the salesmen who call on them are, indeed, ineffective. In view of the number of salesmen who call on individual buyers, the length of time most buyers have been in their assignments and the relatively frequent turnover of salesmen it seems highly unlikely that this is the case. It is possible that a buyer's perception of selling effectiveness represents a judgment, or frame of reference, brought to the job from

previous experience or background. It is also possible that perceptions of selling effectiveness reflect points of view based on early, and presumably limited, experiences on the job, unchanged by subsequent events. None of these possibilities suggest ways to improve purchasing effectiveness.

An intuitively appealing explanation of the variation in PSE is that buyers who perceive salesmen as effective, capable of exerting influence on the purchasing process or the marketing mix, are themselves responsible (at least in part) for making the salesman effective. Some buyers, recognizing the role the salesman can play in influencing the marketing mix may take specific action to help the salesman represent their needs to his factory. There is at least some evidence to support this point of view.

For example, respondents in purchasing whose companies specifically evaluate salesmen rate them higher on the global influence measure than do those in companies without specific evaluation (4.47 vs. 3.90, significant at $p = .03$). The ratings on PSE and influence on the marketing mix also increase for these respondents, although the increases are not statistically significant. Still further, purchasing respondents in companies that specifically evaluate salesmen also place higher importance on salesmen persuasiveness and aggressiveness than do those in other companies. Indeed, one of the companies interviewed during the pilot study stated it specifically evaluates the

influence the salesman has with his factory in such areas as shipment and product design.

While this evidence is not conclusive, it seems unlikely that this much recognition can be placed on the salesman's influence with his factory without also recognizing that the utility buyer has a vested interest in his successful efforts. This vested interest can be served by providing the salesman with the guidance, information and encouragement necessary for him to adequately represent the customer to his factory.

Evaluation

Most of the differences in importance placed on various items of salesman behavior, knowledge, competence and personal relations can logically be explained by the difference in the nature of the task for buyers in the three functions. Purchasing management may be concerned, however, regarding the low importance engineering respondents place on the importance for the salesman to discuss evaluation techniques.

A basic objective of all purchasing departments is the maximization of overall value obtained by expenditure of the purchasing dollar. If all else is equal price can determine the contract award. All else is seldom equal and evaluation is used to establish the value of those attributes or aspects of a supplier's proposal which represent benefits to the buyer. These attributes can be related

strictly to the product. Typical examples might include size or weight, efficiency, life expectancy or ease of maintenance. An economic premium might be justified for superior performance on any or all such attributes. Shipment, availability or past performance on shipping promises can be evaluated. Attributes relating to the supplier broadly, rather than the specific product, may be evaluated. These could include his R&D activities, financial stability in factory personnel. In some instances the salesman is specifically evaluated.

Some attributes can be evaluated in economic terms. Others cannot. Value can be established precisely for some attributes but can only be estimated for others. For the salesman it is clear that how and what his customer(s) evaluates is of critical importance to his selling strategy and to his overall probability of success. For purchasing management the evaluation process can be equally critical to its purchasing strategy and to the probability of maximizing value received for the purchasing dollar.

As an element of purchasing strategy, evaluation can be used in two ways. On the one hand it can be a relatively passive tool which is used to apply judgments to products (used here to mean all aspects of the proposal) that are designed without the specific evaluation process in mind. For example, in the extreme case the manufacturers may not be told what evaluation parameters a customer uses. Hence

the product offering is either the manufacturer's standard or represents his "best guess" as to what may be most favorably evaluated. Little opportunity exists in this case for optimization by the manufacturer to improve either his competitive position or the value of his offering to the customer.

Alternatively, evaluation can be used as an active tool that influences manufacturers to continually improve all aspects of the product to meet customer requirements. Manufacturers are provided with maximum information as to what improvements are desired, what features are needed, what services are important, etc., and how these attributes will be evaluated economically.

The engineering function is very much involved in the evaluation process, whatever its nature. The low interest expressed in the subject of evaluation techniques may indicate a failure to recognize the role of evaluation in purchasing strategy. To the degree that purchasing management views evaluation as an active element of strategy it may be important to define this view to others in the organization and, particularly, to buying influences in the engineering function.

Suggestions for Further Research

This study confirms the researchability of buyer's role expectations through use of a mail survey. It has developed some insight as to how these expectations vary as a

function of certain aspects of the buyer's organizational or personal situation. A number of factors have been identified which do not affect buyer's role expectations, i.e., geography, amount of managerial responsibility, extent of contact with salesmen, experience of the respondent and the purchasing mix in terms of day to day expenditures vs. annual contracts.

The variation in role expectations as a function of buyer factors has been used to quantify the degree of role adjustment necessary for salesmen in various situations. Insight has been gained into perceptions of selling effectiveness. Through this investigation of buyer role expectations for salesmen, it has been possible to identify conflicting expectations for buyers in purchasing, engineering and operating and to either explain these differences or identify them as problem areas.

This study suggests five areas for future research which should be of value to both marketing and purchasing management. These are:

(1) Perceived Selling Effectiveness

(2) The Role of Buyers in Increasing Effectiveness

(3) Evaluation as an Element of Purchasing Strategy

(4) Multiple Selling Strategies

(5) Role Adjustment for Salesmen

These areas will be described briefly in the following sections.

Perceived Selling Effectiveness

The concept of selling effectiveness remains a challenging one for research. Development of the measure of PSE used in this study is a tentative step in what could be a promising area of investigation.

In this study, no attempt was made to correlate PSE with "hard" measures of sales success. This could be done by asking buyers to rate individual salesmen on the items used to construct the PSE index.[8] Correlation of PSE with measures of the salesman's performance relative to budget, market share or some similar measure would give further indication of the validity of the index. The measure might then be directly usable in salesman performance evaluation.

Further development of the index itself is necessary before such an investigation is undertaken. The calculated reliability coefficient of .60 needs to be increased for the index to be widely useful.[9] This can be best achieved by increasing the number of items included in the index. A study of appropriate items would, of itself, improve understanding of the concept of sales effectiveness. For example, in this study it was discovered that use of salesmen as a source of information, traditionally thought to be the primary role of the salesman, does not appear to be related to perceptions of effectiveness.[10]

The Role of Buyers in Increasing Selling Effectiveness

It is common for capital goods salesmen to state that over 50% of their job consists of "selling the factory." Just as the salesman needs help from his factory in selling the customer, so he needs help from his customer in selling his factory to respond to customer requirements. This study suggests that specific buyer actions can increase the salesman's effectiveness in this area.

No studies investigating this aspect of buyer activities were found in the literature review. Identifying the help that salesmen need from buyers, related to what they actually get, would provide further insight into development of purchasing strategies which influence the supplier.

Evaluation as an Element of Purchasing Strategy

Two approaches to evaluation have been described and some evidence has been presented indicating that differences exist in the understanding of the concept. Little is known, however, regarding specific details of evaluation practices. Still less is known as to the impact they have on manufacturers. An investigation of evaluation practices, both per se and related to the influence they exert on manufacturers, would add considerably to the understanding of the exchange process in industrial markets.

Multiple Selling Strategies

Large role repertoires, or multiple selling strategies, are widely accepted as the mark of a successful salesman. The advice to salesmen on multiple strategies, simply stated, is "more is better," based on theories from the behavioral sciences and on the observations of most practitioners.

No research has been found that specifically relates to this advice or that confirms the contention. Research that specifically relates the number and mix of various selling strategies used to hard measures of selling effectiveness would provide valuable information for salesman training and performance evaluation.

Role Adjustment

The concept of role adjustment is fundamental to personal selling effectiveness. Individual adjustment to buyer expectations by the salesman is an aspect of the promotional mix which can be provided in no other way by marketing management. Because of the complexity of human interaction there is no question that role adjustments in "one on one" relationships are unique to each relationship. However, the circumstances confronting the salesman can greatly increase or decrease the required amount of role adjustment to meet buyer expectations. Managerial decisions affect many of these circumstances.

This research has identified certain items of salesman behavior, knowledge, competence and personal relations that, together, can be used to measure required role adjustment in this industry. Usefulness to marketing management would increase if studies could identify items that would measure required role adjustment for a range of markets and/or product lines. Values need to be established for the amount of role adjustment that appears to be achievable. To be most useful these values need to be established in the context of trade-offs of other criteria used to determine the appropriate selling organization.

Summary

This section will summarize the main findings of this study presented in this and previous chapters.

(1) Role Repertoire

From the perspective of buyers in the electric utility industry this research confirms the need for salesmen of electric distribution equipment to have large role repertoires in order to meet buyer's role expectations. Forty three items of salesman behavior, knowledge, competence and personal relations were investigated for buyer preferences. Only two of the items are relatively unimportant to respondents in this study.

It is important to buyers in this industry that salesmen talk about price and product. It is also impor-

tant to talk about a wide variety of other topics. Product knowledge is important but knowledge in a number of other areas is also important. Reliability is the most important aspect of competence and aggressiveness is not unimportant.

To the degree that role conflict for salesmen stems from failure to meet buyer expectations, salesmen with small role repertoires can expect to experience high role conflict. Single or limited strategy salesmen cannot hope to meet the role expectations of more than a few buyers.

(2) Role Adjustment

A large role repertoire is useful only if the salesman can sense which role should be enacted in a particular circumstance. This research developed buyer preference hierarchies for the 43 items of behavior, knowledge, competence and personal relations and identified a number of buyer factors which affect these preference hierarchies. Of these buyer factors the effect of function (i.e., is the buyer in purchasing, engineering or operating) is predominant. For buyers in each function several other factors affect preferences, particularly those associated with some aspect of the selling process. Some factors were found to have no effect on preferences, including the buyer's geographic location and the extent of his managerial responsibility. Knowledge of these relative preferences and how they change should assist salesmen to enact appropriate roles.

The amount of role adjustment the salesman is required to make is determined by the amount of variation in buyer role expectations. This research has quantified the amount of role adjustment required for 19 items of behavior as salesmen make the transition from calling on buyers in one function to buyers in another function in the electric utility industry. The greatest adjustment in behavior is required as salesmen make the transition from calling on buyers in engineering to calling on buyers in purchasing. The values established may be useful benchmarks for comparison with required role adjustment in other industries and may assist consideration of alternative forms of sales force organization or alternative sales force assignments.

(3) Selling Effectiveness

This research identified 11 salesman factors within the broad areas of behavior, knowledge, competence and personal relations. The relation of these factors to perceptions of selling effectiveness was examined. Some of the factors were found to be invariant with respect to PSE. Other factors were found to be salient with respect to PSE.

The relative importance buyers place on various aspects of the salesman's role can be equated with an expected level of performance. The salient factors should be recognized as areas in which an increase in level

of performance will be equated with increased sales effectiveness.

Which factors are salient and which are invariant varies depending on the buyer's function. For instance, salient factors for purchasing are general knowledge and aggressiveness. For engineering buyers the salient factors are product discussion and structure, or organized presentations.

(4) The Relation of Salesmen to Buyers in Purchasing

Buyers in purchasing rate salesmen higher on PSE than do buyers in other functions.[11] They have higher expectations, in aggregate, for the various aspects of the salesman's role. Although the salesman may sense high role conflict on calls on purchasing, the evidence does not support the view of an adversary relationship between salesmen and buyers in purchasing.

(5) Personal Relations Between Buyers and Salesmen

Friendship between buyers and salesmen in this industry is primarily of a business nature. Closer friendship appears to facilitate open relations which can enhance communication between buyers and seller, certainly a desirable objective. Buyers in all functions place low levels of importance on discussion of personal matters. Some salesmen may discount this but the evidence seems clear

that much discussion of personal matters in the buyer's office is inappropriate.

(6) Technical Services

The area of technical services is identified as one requiring special attention by salesmen. Buyers in large utilities, for instance, may feel that their own in-house competence reduces the need for technical services from suppliers. Engineering buyers, however, indicate technical services are important regardless of utility size. To effectively discuss technical services with buyers in purchasing, salesmen need to be particularly aware of the context in which buyers will judge the value of technical services.

(7) The Buyer's Role in Increasing Selling Effectiveness

Evidence developed in this study indicates that buyers can play an active role in increasing salesman effectiveness, particularly in regard to the influence the salesman can exert on his factory. Salesmen need help from the customer in "selling the factory" on meeting customer requirements. Buyer action aimed at increasing salesman effectiveness can be a significant part of a purchasing strategy designed to establish a "preferred account" status with suppliers.

(8) Evaluation as Part of Purchasing Strategy

The evaluation process can play a powerful role in influencing suppliers to meet customer requirements. To be truly effective this role needs to be understood by all functions that are involved in the process. Evidence in this research indicates a need for purchasing management to more clearly define the role of evaluation to buyers in engineering.

Conclusion

The dynamic nature of marketing insures that the role of the industrial salesman cannot be defined in static terms. Hence, the question "what makes a salesman effective?" is not answered by this study. Rather, data have been developed to establish a broad framework of buyer perceptions and preferences regarding the salesman's role. To the degree that views of buyers are valued by marketers, this study will provide insights into specific ways to improve effectiveness.

The concept of an active role for purchasing, vis a vis its suppliers, is not new. Specific and conscious use of the salesman to implement such an active role is not widespread, however, nor is there wide recognition as to the amount of influence the salesman can exert on his factory. Indication of the degree of influence some buyers perceive salesmen capable of exerting on their factories may

encourage more emphasis on the use of the salesman as part of an active purchasing strategy.

Footnotes

[1]Thompson, Joseph W., Selling: A Behavioral Science Approach, New York: McGraw-Hill Book Company, 1966.

[2]Kirkpatrick, Charles A. and Frederick A. Russ, Salesmanship Cincinnati: Southwestern Publishing Company, 1976, p. 467.

[3]Chapter VI, p. 124.

[4]Ibid.

[5]Chapter VII, p. 183.

[6]Kotler, Philip and Sidney J. Levy, "Buying is Marketing Too!", Journal of Marketing, 37 (January 1973): 54-59.

[7]Brokaw, Alan, J., An Explanation of the Preferences of Suppliers for Buyers in a Selected Segment of the Chemical Industry, Unpublished Ph.D. Dissertation, University of Michigan, 1976.

[8]Chapter VII, p. 173.

[9]Chapter VII, p. 174.

[10]Ibid.

[11]One way analysis of variance; F statistic significant at $p = .0077$

APPENDIX A

Questionnaire

ELECTRIC UTILITY INDUSTRY SURVEY

The purpose of this study is to develop a comprehensive picture of how purchasing, engineering and operating personnel view the role and work of the distribution equipment salesmen (or saleswomen) who call on them. The results of the study will be of interest to both manufacturers and utilities in improving the efficiency and understanding of the purchasing process as it applies to distribution products.

As an individual who has considerable contact with salesmen your response is most important and I hope you will take the time to fill out the questionnaire. In pilot studies it has taken no more than half an hour to complete.

I think you will find the questions interesting. Should you want a copy of a summary of the results, please send your name and address on the enclosed post card. Responses to the survey are anonymous and no single individual or company data will be revealed. The numbers in the margins and in parentheses by the questions are for purposes of keypunching and computer coding. Please ignore them.

The study is concerned with your view of the salesmen who call on you on some regular basis and whom you consider your primary contacts with their firms for such products as distribution transformers, light arresters, insulators, cable, etc. Generally the salesmen for such products will be either direct employees of the manufacturer or will be manufacturers' agents or representatives.

Thank you very much for your time and your cooperation.

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* * *

SECTION I

First, a few general questions.

1. WHAT IS YOUR FUNCTIONAL AREA?

l: 5 Purchasing ____ (1) Engineering ____ (2) Operating ____ (3)

2. ARE YOU INVOLVED IN MANAGERIAL (I.E., SUPERVISION) AS WELL AS FUNCTIONAL WORK?

l: 6-8 No ____ (100) Yes ____

↓

IF YES, WOULD YOU ESTIMATE THE PERCENT OF YOUR TIME SPENT ON FUNCTIONAL WORK? ____

3. WOULD YOU INDICATE THOSE DISTRIBUTION PRODUCTS WITH WHICH YOU ARE GENERALLY INVOLVED?

l: 9-18

Distribution transformers	_____	Capacitors	_____
Street light luminaries	_____	Insulators	_____
Lightning arresters	_____	Voltage regulators	_____
Reclosers	_____	Fuse cutouts	_____
Cable	_____	Switching equipment	_____

4. CONSIDERING ALL THE PRODUCTS YOU CHECKED ABOVE, APPROXIMATELY HOW MANY SALESMEN FOR THEM IN TOTAL CALL ON YOU WITH SOME DEGREE OF REGULARITY?

l: 19-20 _____

5. ON AVERAGE, WHAT IS THE FREQUENCY OF YOUR CONTACT WITH THEM?

l: 21

Weekly or oftener	_____ (1)	One to three times a month	_____ (2)
Less than monthly	_____ (3)		

6. WHAT WOULD BE THE TYPICAL LENGTH OF TIME YOU HAVE KNOWN THE SALESMEN WHO CALL ON YOU?

l: 22

Less than one year	_____ (1)	One to two years	_____ (2)
Three to five years	_____ (3)	Over five years	_____ (4)

7. WOULD YOU ESTIMATE THE AMOUNT OF TIME YOU SPEND WITH SALESMEN <u>OF ALL KINDS</u> IN A TYPICAL WEEK, EITHER IN YOUR OFFICE OR IN PHONE CONTACT.

l: 23-24

0-2 hrs.	_____ (01)	10-12 hrs.	_____ (06)
2-4 hrs.	_____ (02)	12-14 hrs.	_____ (07)
4-6 hrs.	_____ (03)	14-16 hrs.	_____ (08)
6-8 hrs.	_____ (04)	16-18 hrs.	_____ (09)
8-10 hrs.	_____ (05)	18-20 hrs.	_____ (10)

8. IN GENERAL, HOW WOULD YOU RATE THE EFFECTIVENESS OF THE SALESMEN WHO CALL ON YOU FOR DISTRIBUTION PRODUCTS? (Please circle the appropriate number with 7 indicating very effective and 1 indicating very ineffective.)

l: 25 1 2 3 4 5 6 7

SECTION II

Most utilities, in making a purchasing decision, evaluate a number of factors such as price, shipment, quality of product, service and so forth and place different weights on these factors. I'm interested in two aspects of this. First, what relative weights do you put on certain factors. Second, how much influence you feel salesmen exert on their companies to improve these factors. That is, given a gap between your requirement on a given factor and a company's offering, how much influence can a salesman exert on his company to meet your requirement.

For the following factors, then, would you indicate the relative weight you feel each factor should have in making the purchasing decision and the amount of influence you perceive salesmen to be able to exert on that factor with their companies to modify them to meet your requirements.

Please circle the appropriate numbers, using 1 for Lightly Weighted or Little Influence and 7 for Heavily Weighted or a Great Deal of Influence.

			Relative Weight in the Buying Decision	Amount of Influence the Salesman Can Exert on his Company to Modify
l: 26-27	1.	OVERALL REPUTATION OF THE MANUFACTURER.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
l: 28-29	2.	MANUFACTURER'S FLEXIBILITY IN ADJUSTING TO YOUR COMPANY'S NEEDS.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
l: 30-31	3.	TERMS AND CONDITIONS	1 2 3 4 5 6 7	1 2 3 4 5 6 7
l: 32-33	4.	PRICE AND PRICE POLICIES.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
l: 34-35	5.	TECHNICAL SERVICES OFFERED.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
l: 36-37	6.	PRODUCT CHARACTERISTICS OR FEATURES.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
l: 38-39	7.	PRODUCT QUALITY	1 2 3 4 5 6 7	1 2 3 4 5 6 7

			Relative Weight in the Buying Decision	Amount of Influence the Salesman Can Exert on his Company to Modify
1: 40-41	8.	AVAILABILITY OR DELIVERY.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
1: 42-43	9.	QUALITY AND TIMELINESS OF INFORMATION BEFORE PURCHASE.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
1: 44-45	10.	QUALITY AND TIMELINESS OF INFORMATION AFTER PURCHASE.	1 2 3 4 5 6 7	1 2 3 4 5 6 7

I'm also interested in the influence you feel salesmen can exert on your company's overall buying decision, defined to include all steps from product approval to final purchase decision.

1: 46 11. WOULD YOU INDICATE THE AMOUNT OF PERSONAL INFLUENCE YOU FEEL SALESMEN FOR DISTRIBUTION EQUIPMENT EXERT ON YOUR COMPANY'S OVERALL BUYING DECISIONS. (Again, 7 would indicate a great deal of influence.)

1 2 3 4 5 6 7

SECTION III

This section focuses on those things you like a salesman to do or emphasize when he calls on you in your office. That is, a salesman can take a wide variety of approaches in his calls on customers. He can take a broad approach and cover a wide range of topics or areas of interest and adjust his emphasis to a particular situation. Alternatively, he can take a narrower approach and consistently emphasize only one or a few topics. Still further, not all topics are of equal interest to all customers.

Would you look over the following items and then indicate the relative importance you would place on each item in terms of what you like salesmen to discuss or emphasize when they call on you.

(Please circle the appropriate number.)

			Relatively Unimportant		Medium Importance		Very Important		Most Important
1: 47	1.	DETAILS OF THE PRODUCT SUCH AS FEATURES OR ACCESSORIES, CONSTRUCTION, PHYSICAL OR ELECTRICAL CHARACTERISTICS	1	2	3	4	5	6	7 8 9

	(Important for salesman to discuss or emphasize)	Relatively Unimportant		Medium Importance		Very Important		Most Important	
l: 48	2. APPLICATION CONSIDERATIONS SUCH AS SHORT CIRCUIT RATINGS, SWITCHING SPEEDS, VOLTAGE TOLERANCE, CO-ORDINATION WITH OTHER DEVICES OR EFFECT ON OTHER PARTS OF THE SYSTEM.	1	2	3	4	5	6	7	8	9
l: 49	3. ECONOMICS OF THE PRODUCT SUCH AS LOSS EVALUATION, COST OF OPERATION, REVENUE REQUIREMENTS OR EFFECT ON REVENUE OR INVESTMENT.	1	2	3	4	5	6	7	8	9
l: 50	4. OPERATING CONSIDERATIONS SUCH AS EASE OF MAINTENANCE, SAFETY AND SO FORTH.	1	2	3	4	5	6	7	8	9
l: 51	5. PRICE AND PRICE POLICIES	1	2	3	4	5	6	7	8	9
l: 60	6. TERMS AND CONDITIONS OF SALE AND PURCHASE.	1	2	3	4	5	6	7	8	9
l: 61	7. PERSONAL MATTERS SUCH AS YOUR NON-BUSINESS INTERESTS, HOBBIES, FAMILY AND SO FORTH.	1	2	3	4	5	6	7	8	9
l: 62	8. GENERAL INDUSTRY MATTERS NOT RELATED TO PRODUCT SUCH AS EEI ACTIVITIES, REGULATORY MATTERS, ENVIRONMENTAL TRENDS, ETC.	1	2	3	4	5	6	7	8	9
l: 63	9. WHAT'S GOING ON IN THE INDUSTRY RELATIVE TO HIS PRODUCT SUCH AS PRICE TRENDS, PRODUCT DESIGN OR DEMAND TRENDS.	1	2	3	4	5	6	7	8	9
l: 64	10. STATUS OF ORDERS SUCH AS SHIPMENT, DRAWINGS, ETC.	1	2	3	4	5	6	7	8	9
l: 65	11. INFORMATION RELEVANT TO NEW BUSINESS OR FORTHCOMING REQUIREMENTS.	1	2	3	4	5	6	7	8	9
l: 66	12. GENERAL ACTIVITIES OF HIS COMPANY SUCH AS R&D, INDUSTRY PROGRAMS OR SIMILAR.	1	2	3	4	5	6	7	8	9

	(Important for salesman to discuss or emphasize)	Relatively Unimportant		Medium Importance		Very Important		Most Important
l: 67	13. WHAT'S GOING ON RELATIVE TO HIS PRODUCTS IN OTHER PARTS OF YOUR COMPANY.	1	2	3	4	5	6	7 8 9
l: 68	14. ROUTINE CALLS TO FIND OUT IF YOU HAVE ANY PROBLEMS OR QUESTIONS FOR HIM.	1	2	3	4	5	6	7 8 9
l: 69	15. TECHNICAL SERVICES OFFERED BY HIS FIRM SUCH AS APPLICATION ENGINEERING.	1	2	3	4	5	6	7 8 9
l: 70	16. FORMAL PRESENTATIONS (BY THE SALESMAN).	1	2	3	4	5	6	7 8 9
l: 71	17. INFORMAL PRESENTATIONS.	1	2	3	4	5	6	7 8 9
l: 72	18. PURCHASING PHILOSOPHIES AND APPROACHES.	1	2	3	4	5	6	7 8 9
l: 73	19. EVALUATION TECHNIQUES.	1	2	3	4	5	6	7 8 9

SECTION IV

The previous section dealt with what the salesman does. This section deals with your preferences for <u>how</u> he does it. Would you indicate the <u>relative importance to you</u> of the following salesman traits or characteristics?

	(Please circle the appropriate number.)	Relatively Unimportant		Medium Importance		Very Important
l: 74	1. CREDIBILITY OR HOW MUCH YOU CAN RELY ON INFORMATION HE GIVES YOU.	1	2	3	4	5 6 7
l: 75	2. RELIABILITY OR HOW MUCH YOU CAN RELY ON HIM DOING WHAT HE SAYS HE'LL DO.	1	2	3	4	5 6 7
l: 76	3. AGGRESSIVENESS OR THE DEGREE TO WHICH HE PUSHES FOR A PARTICULAR POINT OF VIEW.	1	2	3	4	5 6 7

	(Importance of salesman's traits or characteristics)	Relatively Unimportant / Medium Importance / Very Important
1: 77	4. HIS ABILITY TO GET ANSWERS ABOUT HIS PRODUCTS OR THEIR APPLICATION.	1 2 3 4 5 6 7
1: 78	5. HIS SENSITIVITY TO YOUR TIME SITUATION.	1 2 3 4 5 6 7
1: 79	6. HIS SENSITIVITY TO YOUR LEVEL OF UNDERSTANDING.	1 2 3 4 5 6 7
1: 80	7. PERSUASIVENESS OR THE ABILITY TO MAKE GOOD ARGUMENTS FOR, OR BRING PEOPLE TO, HIS POINT OF VIEW.	1 2 3 4 5 6 7
2: 1-4		
2: 5	8. RESPONSIVENESS IN TERMS OF REACTING TO YOUR REQUESTS AND NEEDS.	1 2 3 4 5 6 7
2: 6	9. HIS ABILITY TO COMMUNICATE CLEARLY ORALLY.	1 2 3 4 5 6 7
2: 7	10. HIS ABILITY TO COMMUNICATE CLEARLY IN WRITING.	1 2 3 4 5 6 7

SECTION V

A frequent question concerns the importance that a salesman be personally knowledgeable about various aspects of his product, company, customers and industry. Would you indicate the relative importance to you that distribution equipment salesmen be knowledgeable in the following areas.

		Relatively Unimportant / Medium Importance / Very Important
2: 8	1. DETAILS OF HIS PRODUCT.	1 2 3 4 5 6 7
2: 9	2. APPLICATION OF HIS PRODUCT.	1 2 3 4 5 6 7
2: 10	3. INDUSTRY PURCHASING PRACTICES.	1 2 3 4 5 6 7

		(Importance of salesman's knowledge)	Relatively Unimportant		Medium Importance		Very Important	
2: 11	4.	ENGINEERING ECONOMICS.	1	2	3	4	5	6 7
2: 12	5.	UTILITY ACCOUNTING AND FINANCIAL PRACTICES.	1	2	3	4	5	6 7
2: 13	6.	GENERAL UTILITY INDUSTRY MATTERS.	1	2	3	4	5	6 7
2: 14	7.	CONTRACTUAL MATTERS (TERMS AND CONDITIONS).	1	2	3	4	5	6 7
2: 15	8.	YOUR COMPANY'S POLICIES AND REQUIREMENTS.	1	2	3	4	5	6 7
2: 16	9.	HIS COMPANY'S POLICIES AND CAPABILITIES.	1	2	3	4	5	6 7
2: 17	10.	HIS COMPETITION.	1	2	3	4	5	6 7

SECTION VI

This section will deal with the interpersonal aspect of the buyer-seller relationship.

1. WHICH OF THE FOLLOWING BEST DESCRIBES THE RELATIONSHIP YOU HAVE WITH THE SALESMEN WHO CALL ON YOU?

2: 18

[ ] (1) I know the salesmen who call on me as personal friends as well as business acquaintances. Their personal ambitions and outside interests (such as family and hobbies) are well known to me.

[ ] (2) I know the salesmen who call on me as business acquaintances and friends. I have some familiarity with their personal ambitions and outside interests.

[ ] (3) I know the salesmen who call on me primarily as business acquaintances. Some of their obvious personal ambitions and outside interests are known to me.

[ ] (4) I know the salesmen who call on me strictly as business acquaintances. Their personal ambitions and outside interests are almost unknown to me.

Salesmen vary considerably in the way they approach customers. In the following questions, would you check the space that you feel comes closest to representing the approach used by the more successful or more effective salesmen who call on you.

2:19 2. INITIATOR / / / / / / / RESPONDER
(1) (2) (3) (4) (5) (6) (7)

2:20 3. ANTAGONISTIC / / / / / / / COOPERATIVE

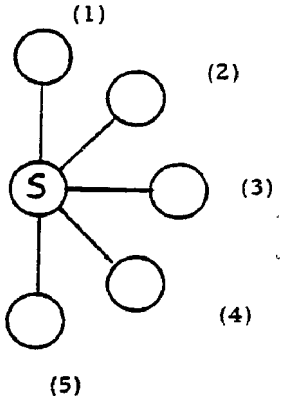
2:21 4. STRAIGHTFORWARD / / / / / / / MANIPULATING

2:22 5. INGRATIATING / / / / / / / SINCERE

2:23 6. SUBSERVIENT / / / / / / / DOMINANT

2:24 7. BUSINESS ORIENTATION / / / / / / / PERSONAL ORIENTATION

2:25 8. THE CIRCLE BELOW MARKED "S" STANDS FOR A SALESMAN. WOULD YOU CHOOSE ONE OF THE CIRCLES TO STAND FOR YOURSELF AND PUT A "C" IN IT?



2:26 9. IN THE CIRCLES BELOW, THE JUST TOUCHING CIRCLES MIGHT INDICATE AN ARMS LENGTH RELATIONSHIP AND THE TOTALLY CONVERGENT CIRCLES MIGHT INDICATE THE CLOSEST POSSIBLE RELATIONSHIP BETWEEN TWO PEOPLE. WOULD YOU INDICATE THE CONFIGURATION THAT MOST CLOSELY REPRESENTS THE RELATIONSHIP YOU LIKE TO HAVE WITH SALESMEN?



(1) (2) (3) (4) (5) (6) (7)

SECTION VII

This section is concerned with how you see the general role of the distribution equipment salesman and his effectiveness.

1. THE SALESMAN IS ONLY ONE OF A NUMBER OF POSSIBLE SOURCES OF INFORMATION ABOUT HIS FIRM'S PRODUCTS. OTHER POSSIBLE SOURCES INCLUDE CATALOGS, DIRECT MAIL, OTHERS IN YOUR COMPANY, EMPLOYEES OF OTHER COMPANIES, DIRECT CONTACT WITH FACTORIES, TRADE ASSOCIATION MEETINGS AND SO FORTH. WHICH OF THE FOLLOWING MOST CLOSELY DESCRIBES YOUR USE OF SALESMEN AS INFORMATION SOURCES?

2: 27

[ ] (1) I rely on salesmen almost exclusively for information about their products.

[ ] (2) I rely heavily on salesmen for information about their products.

[ ] (3) I get considerable information from salesmen about their products but also rely on a number of other sources.

[ ] (4) I get some information from salesmen about their products but rely primarily on other sources.

[ ] (5) I rely little if at all on salesmen for information about their products.

2. WOULD YOU INDICATE WHICH OF THE FOLLOWING DESCRIPTIONS COMES CLOSEST TO REFLECTING YOUR VIEW OF THE SALESMEN WHO CALL ON YOU?

2: 28

[ ] (1) A specialized source of information about his product(s), more efficient and convenient than catalogs or direct mail.

[ ] (2) A communicator who not only provides information about his product(s) but who can serve as a communication link between you and his factory.

[ ] (3) A communicator who not only serves as a communication link between you and his factory but who through his personal knowledge and expertise presents information in such a way as to increase its value and usefulness by making it relevant to your situation.

[ ] (4) A communicator with knowledge and expertise who also exerts influence on my company to modify our requirements and on his company to modify its offering and so is actively involved in bringing us together.

3. SOME SALESMEN FOR DISTRIBUTION PRODUCTS HAVE A PRIMARILY TECHNICAL ORIENTATION. OTHERS HAVE A PRIMARILY BUSINESS ORIENTATION. WOULD YOU INDICATE YOUR PREFERENCE FOR A MIX OF THESE TWO ORIENTATIONS.

2: 29

Primarily Business / / / / / / / / Primarily Technical
(1) (2) (3) (4) (5) (6) (7)

4. GIVEN YOUR PREVIOUS RATING OF EFFECTIVENESS OF DISTRIBUTION EQUIPMENT SALESMEN IN GENERAL, WHAT PERCENTAGE OF THE SALESMEN WHO CALL ON YOU ARE SIGNIFICANTLY MORE EFFECTIVE THAN THE GROUP AS A WHOLE?

2:30-31 _____%

5. WHAT PERCENTAGE ARE SIGNIFICANTLY LESS EFFECTIVE?

2:32-33 _____%

6. SALESMEN OF TECHNICAL PRODUCTS ARE SOMETIMES DESCRIBED AS "PROBLEM-SOLVERS"--THAT IS, THEIR PRIMARY FUNCTION IS SEEN AS APPLICATION OF THEIR TECHNICAL SKILLS TO THE SOLUTION OF CUSTOMER PROBLEMS. WOULD YOU INDICATE THE DEGREE TO WHICH YOU FEEL SALESMEN OF DISTRIBUTION EQUIPMENT ARE "PROBLEM-SOLVERS." (Please circle the appropriate number with 7 indicating a high degree of "problem-solving.")

2:34 1 2 3 4 5 6 7

7. MANY SALESMEN OF DISTRIBUTION EQUIPMENT ARE GRADUATE ENGINEERS. WOULD YOU INDICATE HOW IMPORTANT IT IS TO YOU THAT DISTRIBUTION EQUIPMENT SALESMEN WHO CALL ON YOU HAVE ENGINEERING DEGREES. (Please circle the appropriate number with 7 indicating a high degree of importance.)

2:35 1 2 3 4 5 6 7

SECTION VIII

In this section I would like to ask you a few questions about your company. Some may be a little more pertinent to purchasing than to engineering or operating, and vice versa, but I hope you can answer them all.

1. WOULD YOU INDICATE THE APPROXIMATE SIZE OF YOUR COMPANY IN TERMS OF TOTAL CONNECTED METERS?

2:36

100,000 or less	_____ (1)	500,001 to 1,000,000	_____ (4)
100,001 to 250,000	_____ (2)	1,000,001 to 2,000,000	_____ (5)
250,001 to 500,000	_____ (3)	2,000,001 or more	_____ (6)

2. REFERRING TO THE MAP ON P. 15, PLEASE INDICATE YOUR GEOGRAPHICAL AREA.

2:37

Pacific	_____ (1)	West South Central	_____ (4)	New England	_____ (7)
Mountain	_____ (2)	East North Central	_____ (5)	Middle Atlantic	_____ (8)
West North Central	_____ (3)	East South Central	_____ (6)	South Atlantic	_____ (9)

3. PLEASE CHECK THE SPACE THAT MOST APPROPRIATELY REPRESENTS THE MIX OF YOUR COMPANY'S EXPENDITURES FOR DISTRIBUTION PRODUCTS.

2:38

Day to day purchases / / / / / / / / Annual or Blanket Contract
(1) (2) (3) (4) (5) (6) (7)

4. FOR DISTRIBUTION PRODUCTS, WOULD YOU ESTIMATE THE INFLUENCE ON THE OVERALL BUYING DECISION ACTUALLY EXERTED BY INDIVIDUALS IN THE FOLLOWING CATEGORIES? (Please divide 100 points between the three categories.)

2:39-40 Upper management (above department level) _____

2:41-42 Middle management _____

2:43-45 Primarily functional work _____

5. FOR DISTRIBUTION PRODUCTS, WOULD YOU ESTIMATE HOW OVERALL BUYING INFLUENCE IS DISTRIBUTED BETWEEN ENGINEERING, OPERATING AND PURCHASING? (Please divide 100 points between the three categories.)

2:46-48 Engineering _____

2:49-51 Operating _____

2:52-54 Purchasing _____

6. IN SOME COMPANIES EVALUATION OF BIDS OR QUOTATIONS CAN BE VERY INFORMAL. IN OTHERS THERE ARE VERY FORMAL AND SOPHISTICATED EVALUATION SYSTEMS. HOW WOULD YOU CLASSIFY YOUR COMPANY'S EVALUATION PROCEDURE? (Please circle the appropriate number with 7 indicating a very formal system.)

2:55 1 2 3 4 5 6 7

7. WHICH OF THE FOLLOWING STATEMENTS WOULD COME CLOSEST TO DESCRIBING YOUR COMPANY'S PRACTICE FOR MAJOR PURCHASES OF DISTRIBUTION PRODUCTS. (Please check the appropriate statement.)

2:56

[ ] (1) Formal sealed bid. Essentially no discussion of bids with suppliers.

[ ] (2) Formal sealed bids or quotations. Limited discussion with suppliers of their proposals, primarily for clarification purposes.

[ ] (3) Informal quotations. Limited opportunity for suppliers to revise or supplement their proposals.

[ ] (4) Informal quotations. Considerable opportunity for suppliers to revise or supplement their proposals.

[ ] (5) Active negotiation with considerable give and take with the supplier.

8. DOES YOUR COMPANY'S EVALUATION OF BIDS OR QUOTATIONS FOR DISTRIBUTION PRODUCTS INCLUDE THE SALESMAN AS A FACTOR TO BE SPECIFICALLY EVALUATED?

2:57

Yes, for all products _____ (1)
Yes, for some products _____ (2)
No _____ (3)
Not sure _____ (4)

9. WOULD YOU INDICATE THE APPROXIMATE POPULATION OF YOUR COMPANY'S HEADQUARTER CITY (OR METROPOLITAN AREA)?

2:58

Less than 250,000 _____ (1)
Between 250,000 and 1,000,000 _____ (2)
1,000,000 or more _____ (3)

10. WOULD YOU CHARACTERIZE YOUR COMPANY'S GROWTH IN RECENT YEARS AS:

2:59

About the industry average _____ (1)
Above the industry average _____ (2)
Below the industry average _____ (3)

SECTION IX

This last section asks a few personal background questions.

1. HOW LONG HAVE YOU BEEN WITH YOUR COMPANY?

2:60

Five years or less _____ (1)
Six to ten years _____ (2)
Eleven to twenty years _____ (3)
More than twenty years _____ (4)

2. HOW LONG HAVE YOU BEEN IN YOUR PRESENT FUNCTIONAL AREA?

2:61

Less than two years _____ (1)
Two to five years _____ (2)
Six to ten years _____ (3)
More than ten years _____ (4)

3. WOULD YOU INDICATE THE HIGHEST GRADE OF FORMAL SCHOOLING YOU HAVE COMPLETED? (Please circle the appropriate number.)

2:62

10 11 12 13 14 15 16 17 18
(1) (2) (3) (4)

4. WOULD YOU INDICATE THE PRIMARY AREA OF YOUR EDUCATION?

2:63

Engineering _____ (1)

Business _____ (2)

Liberal arts _____ (3)

5. DO YOU HAVE A MASTER'S DEGREE?

2:64

No _____ (1) Yes _____

If yes, is it in: Business _____ (2)
Engineering _____ (3)
Other _____ (4)

2:65 6. PLEASE INDICATE YOUR SEX.

Male _____ (1)
Female _____ (2)

7. THE PURCHASE OF INDUSTRIAL PRODUCTS IS SOMETIMES DIVIDED INTO CATEGORIES OF:

NEWBUY (I.E., A PRODUCT COMPLETELY NEW TO THE PURCHASER)
STRAIGHT REBUY (I.E., THE PRODUCT ESSENTIALLY DUPLICATES WHAT HAS BEEN PURCHASED MANY TIMES IN THE PAST)
MODIFIED REBUY (I.E., ALTHOUGH PURCHASED FREQUENTLY IN THE PAST, THE PRESENT PURCHASE INVOLVES MODIFICATIONS, HENCE SOME RECONSIDERATION OF SPECS AND REQUIREMENTS IS NECESSARY)

WOULD YOU ESTIMATE YOUR INVOLVEMENT IN THESE THREE CATEGORIES BY SPREADING 100 POINTS ACROSS THEM?

2:66-68

Newbuy _____

Straight rebuy _____

Modified rebuy _____

SECTION X

Supplement for Holding Company Organization

1. IS YOUR COMPANY OR ORGANIZATION

2:69

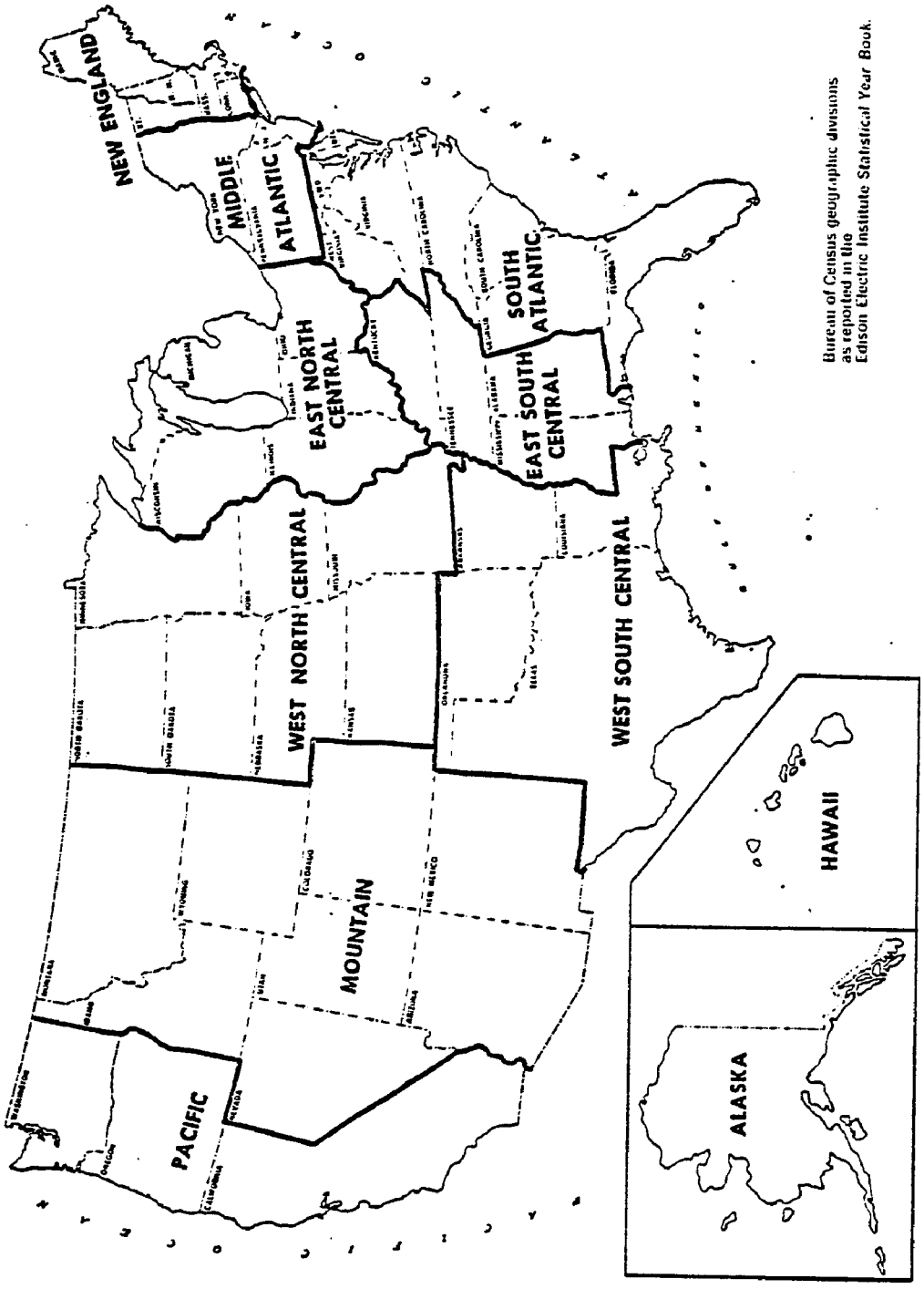
The parent or service company? _____ (1)

An operating company? _____ (2)

2. FOR DISTRIBUTION EQUIPMENT WOULD YOU ESTIMATE THE SPLIT IN OVERALL BUYING INFLUENCE BETWEEN THE PARENT/SERVICE COMPANY AND THE OPERATING COMPANIES?

2:70

All influence with the operating companies. / / / / / / / / All influence with the parent and/or service company.
(1) (2) (3) (4) (5) (6) (7)



Bureau of Census geographic divisions
as reported in the
Edison Electric Institute Statistical Year Book.

APPENDIX B

Privately Owned Electric Utilities Included in the Sample

Independent Utilities

Atlantic City Electric Co.
Atlantic City, N.J. 08404

Arizona Public Service Co.
Phoenix, Arizona 85004

Baltimore Gas & Electric Co.
Baltimore, Md. 21203

Bangor Hydro-Electric Co.
Bangor, Me. 04401

Black Hills Power & Light Co.
Rapid City, S.D. 57701

Boston Edison Co.
Boston, Mass. 02199

California Pacific Utilities Co.
San Francisco, Calif. 94108

Carolina Power & Light Co.
Raleigh, N.C. 27602

Central Hudson Gas & Electric Corp.
Poughkeepsie, N.Y. 12602

Central Illinois Light Co.
Peoria, Ill. 61602

Central Illinois Public Service Co.
Springfield, Ill. 62701

Central Louisiana Electric Co.
Pineville, La. 71360

Central Main Power Co.
Augusta, Me. 04336

Central Vermont Public Service Corp.
Rutland, Vt. 05701

Cincinnati Gas & Electric Co.
Cincinnati, Ohio 45201

The Cleveland Electric Illuminating Co.
Cleveland, Ohio 44113

Columbus & Southern Ohio Electric Co.
Columbus, Ohio 43215

Commonwealth Edison Co.
Chicago, Ill. 60690

Community Public Service Co.
Ft. Worth, Texas 76102

Consolidated Edison Co. of New York, Inc.
New York, N.Y. 10002

Consumers Power Co.
Jackson, Mi. 49201

The Dayton Power & Light Co.
Dayton, Ohio 45401

Delaware Power & Light Co.
Wilmington, Del. 19899

Duke Power Co.
Charlotte, N.C. 28242

Duquesne Light Co.
Pittsburgh, Pa. 15219

El Paso Electric Co.
El Paso, Texas 79999

Empire District Electric Co.
Joplin, Mo. 64801

Florida Power Corp.
St. Petersburg, Fla. 33733

Florida Power & Light Co.
Miami, Fla. 33174

Green Mountain Power Co.
Burlington, Vt. 05401

Gulf States Utilities Co.
Beaumont, Texas 77704

Home Light & Power Co.
Greeley, Colo. 80631

Houston Lighting & Power Co.
Houston, Texas 77001

Idaho Power Co.
Boise, Idaho 83721

Illinois Power Co.
Decatur, Ill. 62525

Indianapolis Power & Light
Indianapolis, Ind. 46206

Interstate Power Co.
Dubuque, Ia. 52001

Iowa Electric Light &
Power Co.
Cedar Rapids, Ia. 52406

Iowa-Illinois Gas &
Electric Co.
Davenport, Ia. 52808

Iowa Power & Light Co.
Des Moines, Ia. 50303

Iowa Public Service Co.
Sioux City, Ia. 51102

Iowa Southern Utilities Co.
Centerville, Ia. 52544

Kansas City Power & Light Co.
Kansas City, Mo. 64141

Kansas Gas & Electric Co.
Wichita, Kan. 67201

The Kansas Power & Light Co.
Topeka, Kan. 66612

Kentucky Utilities Co.
Lexington, Ky. 40507

Lake Superior District
Power Co.
Ashland, Wi. 54806

Long Island Lighting Co.
Mineola, N.Y. 11501

Louisville Gas & Electric Co.
Louisville, Ky. 40201

Madison Gas & Electric Co.
Madison, Wi. 53701

Maine Public Service Co.
Presque Isle, Me. 04769

Minnesota Power & Light Co.
Duluth, Minn. 55802

Mississippi Power Co.
Gulfport, Miss. 39501

Missouri Power & Light Co.
Jefferson City, Mo. 65101

Missouri Public Service Co.
Kansas City, Mo. 64138

Montana Dakota Utilities Co.
Bismarck, N.D. 58501

Montana Power Co.
Butte, Mon. 59701

Nevada Power Co.
Las Vegas, Nev. 89101

New Mexico Electric Service
Co.
Hobbs, N.M. 88240

Newport Electric Corp.
Newport, R.I. 02840

New York State Electric and
Gas Corp.
Binghampton, N.Y. 13902

Niagara Mohawk Power Corp.
Syracuse, N.Y. 13202

Northern Indiana Public Service Co.
Hammond, Ind. 46320

Northern States Power Co.
Minneapolis, Minn. 55401

Northwestern Public Service Co.
Huron, S.D. 57350

Ohio Edison Co.
Akron, Ohio 44308

Oklahoma Gas & Electric Co.
Oklahoma City, Okla. 73101

Orange & Rockland Utilities Inc.
Spring Valley, N.Y. 10977

Ottertail Power Co.
Fergus Falls, Minn. 56537

Pacific Gas & Electric Co.
San Francisco, Calif. 94106

Pacific Power & Light Co.
Portland, Ore. 97204

Pennsylvania Power Co.
Newcastle, Pa. 16103

Pennsylvania Power & Light Co.
Allentown, Pa. 18101

Philadelphia Electric Co.
Philadelphia, Pa. 19101

Portland General Electric Co.
Portland, Ore. 97205

Potomac Electric Power Co.
Washington, D.C.

Public Service of Colorado
Denver, Colo. 80201

Public Service Electric & Gas Co.
Newark, N.J. 07101

Public Service Indiana
Plainfield, Ind. 46168

Public Service of New Hampshire
Manchester, N.H. 03105

Public Service Co. of New Mexico
Albuquerque, N.M. 87103

Puget Sound Power & Light Co.
Bellevue, Wash. 98009

Rochester Gas & Electric Corp.
Rochester, N.Y. 14649

San Diego Gas & Electric Co.
San Diego, Cal. 92101

Savannah Electric & Power Co.
Savannah, Ga. 31401

Sierra Pacific Power Co.
Reno, Nev. 89510

South Carolina Electric & Gas Co.
Columbia, S.C. 29201

Southern California Edison Co.
Rosemead, Cal. 91770

Southern Indiana Gas & Electric Co.
Evansville, Ind. 47741

Southwestern Electric Service Co.
Dallas, Tex. 75201

Southwestern Public Service Co.
Amarillo, Tex. 79170

St. Joseph Light & Power Co.
St. Joseph, Mo. 64502

Tampa Electric Co.
Tampa, Fla. 33601

Toledo Edison Co.
Toledo, Ohio 43652

Tucson Gas & Electric Co.
Tucson, Ariz. 85702

U.G.I. Corp.
Valley Forge, Pa. 19482

Union Electric Co.
St. Louis, Mo. 63103

The United Illuminating Co.
New Haven, Conn. 06506

Upper Peninsula Power Co.
Houghton, Mi. 49931

Utah Power & Light Co.
Salt Lake City, Utah 84110

Virginia Electric & Power Co.
Richmond, Va. 23261

Washington Water Power Co.
Spokane, Wash. 99220

Wisconsin Electric Power Co.
Milwaukee, Wisc. 53201

Wisconsin-Michigan Power Co.
Appleton, Wisc. 54911

Wisconsin Power & Light Co.
Madison, Wisc. 53703

Wisconsin Public Service Co.
Green Bay, Wisc. 54305

Holding Company Organizations

Alabama Power Co.
Birmingham, Ala. 35291

Allegheny Power Service Corp.*
Greensburg, Pa. 15601

American Electric Power Service Corp.*
New York, N.Y. 10004

Appalachian Power Co.
Roanoke, Va. 24001

Arkansas & Missouri Power Co.
Blythville, Ark. 72315

Arkansas Power & Light Co.
Little Rock, Ark. 72203

Central Power & Light Co.
Corpus Christi, Texas 78403

Central Telephone & Utilities Corp.*
Great Bend, Kan. 67530

Dallas Power & Light Co.
Dallas, Texas 75201

EUA Service Corp.*
Boston, Mass. 02107

Georgia Power Co.
Atlanta, Ga. 30302

GPU Services Corp.*
Parsippany, N.J. 07054

Gulf Power Co.
Pensacola, Fla. 32505

Indiana & Michigan Electric Co.
Ft. Wayne, Ind. 46801

Jersey Central Power & Light Co.
Morristown, N.J. 07960

Louisiana Power & Light Co.
New Orleans, La. 70174

Metropolitan Edison Co.
Reading, Pa. 19603

Mississippi Power & Light Co.
Jackson, Miss. 39205

Missouri Utilities Co.
Cape Girardeau, Mo. 63701

NEGEA Service Corp.*
Cambridge, Mass. 02139

New England Power Service Co.*
Westborough, Mass. 01581

New Orleans Public Service Co.
New Orleans, La. 70160

Northeast Utilities Service Corp.*
Hartford, Conn. 06101

Ohio Power Co.
Canton, Ohio 49702

Pennsylvania Electric Co.
Johnstown, Pa. 15907

Public Service Co. of Oklahoma
Tulsa, Okla. 74103

Texas Electric Service Co.
Ft. Worth, Texas 76102

Texas Power & Light Co.
Dallas, Texas 75201

*Parent or service company

Southwestern Electric Power Co.
Shreveport, La. 71156

West Texas Utilities Co.
Abilene, Texas 79604

APPENDIX C

Transmittal Letter to Purchasing Managers

1240 Astor Drive
Apartment A-2022
Ann Arbor, Michigan 48104

February 9, 1977

Name
Company
Address
City, State, ZIp

Dear Name:

I need your help in connection with a study which I hope will be of considerable interest, both to you and to your associates who are involved in the purchase of electric distribution equipment. Briefly, the study--and the help I need--are as follows:

1. The study is in connection with a Ph.D. dissertation at the University of Michigan. Its purpose is to investigate how purchasing, engineering and operating people in the utility industry see the role of a distribution equipment salesman; and, what they think he should do to be more effective.

   The study is funded by a grant from the NAPM (see the National Purchasing Review--November 1976). In addition, I have talked to Dave Mayson (outgoing chairman of the PUBG) and he has indicated the results might be appropriate for the 1978 PUBG program. Hence, there is some indication of interest beyond my own personal enthusiasm for the subject.

2. The help I need is to get three respondents from your company who meet the following broad criteria:

   a. One each from purchasing, engineering and operating (either managers or individual contributors).

   b. A reasonable amount of influence on some aspect of the overall buying decision, e.g., product approval, vendor selection, etc.

   c. Contact on a fairly regular basis with at least five salesmen for distribution products.

A complete packet consisting of a questionnaire and return envelope for each respondent is enclosed. Also, I have included postcards for respondents to indicate their desire for a copy of the summary results. (Most of the respondents in my pilot studies asked for a summary.) Please note, however, that aggregate data only will be published and no data will be released on individuals or single companies.

I hope this is a study which you will support and will appreciate your help very much. Many thanks.

Sincerely,

H. Michael Hayes
HMH:jmm
Encl.

APPENDIX D

Salesman Factors Used in Regression

Salesman Factor	Index Reliability Coefficient	Abbreviated Description of Items Included in the Index	Questionnaire Reference, Section and Number
Product Discussion	.87	Product Detail	III-1
		Product Application	III-2
		Product Operation	
Price Discussion	.87	Price	III-5
		Terms and Conditions	III-6
General Discussion	.85	General Industry Matters	III-8
		Trends	III-9
		Order Status	III-10
		Forthcoming Requirements	III-11
		His Company's Activities	III-12
		Your Company's Activities	III-13
		Purchasing Philosophies	III-18
		Evaluation Techniques	III-19
Structure	.62	Routine Calls	III-14
		Formal Presentations	III-16
		Informal Presentations	III-17
Product Knowledge	.79	Product Detail	V-3
		Product Application	V-2
General Knowledge	.81	Purchasing Practices	V-3
		Engineering Economics	V-4
		Financial Practices	V-5
		General Industry Matters	V-6
		Terms and Conditions	V-7
		Your Requirements	V-8
		His Capabilities	V-9
Reliability	.87	Credibility	IV-1
		Reliability	IV-2
Aggressiveness	.69	Aggressiveness	IV-3
		Persuasiveness	IV-7
Empathy	.63	Sensitivity to Time	IV-5
		Sensitivity to Level of Understanding	IV-6
Communication Skill	.87	Oral Communication	IV-9
		Written Communication	IV-10
Relations	.54	Personal Matters	III-7
		Extent of Friendship	VI-1
		Openness of Relations	VI-9

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