

EXPLORING ADAPTIVE BEHAVIOR IN SALES
FORCE ALLOCATIONS USING AN
ENTRAPMENT METHODOLOGY

By

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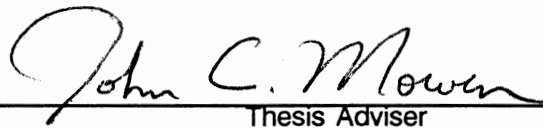
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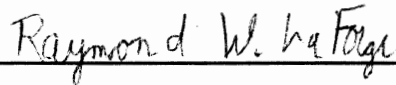
Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
DOCTOR OF PHILOSOPHY
December, 1989

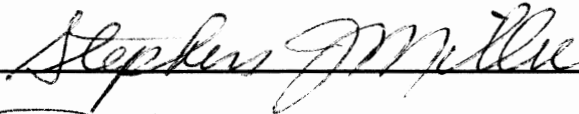
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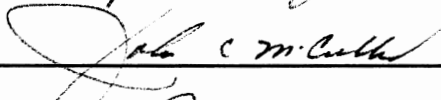
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ACKNOWLEDGEMENTS

I wish to express my sincere and heartfelt appreciation to my dissertation chairman, Dr. John Mowen, for his encouragement and advice throughout my graduate program. He stuck with me through thick and thin and never gave up on me. He holds a very special place in my life and in my career, and for that, I am truly grateful.

Many thanks also go to Dr. Raymond LaForge, Dr. Stephen Miller, and Dr. John McCullers for serving on my graduate committee. Their suggestions and support were very helpful throughout the study. Thanks also go out to Dr. Charles Greer whose suggestions and support were helpful in the early stages of the dissertation.

To Dr. David Cohen and Dr. Jerry Goolsby and their marketing classes who participated in the study I extend sincere thanks. Without their involvement the study would not have been possible.

To my mother, Terri Fabes, who encouraged and supported me all the way, thanks go to you for all that you did for me. Thanks also go to my grandmother, Mary Klein, who always keeps me going. Thanks also go to my father, Sherman Fabes, whose love, guidance, and devotion to me during his lifetime, served as a tremendous influence on what I have become. I dedicate this degree and dissertation to your memory.

Finally, thanks go out to Ms. Ruth Diamond, whose love, inspiration, and encouragement spurred me on in the final stages of the dissertation, and will continue to do so. I extend sincere thanks to all of you.

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CHAPTER I

INTRODUCTION

There is an old adage in personal selling that states, "If you knock on enough doors, somebody is going to say yes." This statement may be true in some selling situations. However, is this a cost effective way to make sales in all selling situations?

Simply knocking on doors can be expensive. Research conducted by Sales and Marketing Management (1987) shows the average cost of an industrial sales call to be \$178.96 per call, the average cost of a consumer sales call to be \$118.46, and the average cost of a service sales call to be \$161.76 in 1986. Although not mentioned in this particular study, it has been estimated in the past that it takes an average of 5.1 sales calls to close an industrial sale (Weitz, 1984). In addition, Sales and Marketing Management (1987) stated that the average cost of training a salesperson was \$19,320 in consumer sales during a median 19-week training period, \$27,525 in industrial sales during a median 17-week training period and \$20,460 in service sales during a median 14-week training period. Finally, Sales and Marketing Management (1987) showed that the average direct total sales costs per year for each salesperson, including compensation and field expenses, were \$53,916 for consumer goods salespeople, \$77,332 for industrial goods salespeople, and \$71,753 for service salespeople.

With these cost statements in mind, the goal of an organization should be to make a sale with the least amount of cost and with the greatest amount of benefit to the organization. Although this goal may seem to be a simple one, its accomplishment may be difficult to achieve due to the complexity of the salesperson's job. This was the conclusion

of Lamont and Lundstrom (1974) in an extensive study investigating the activities engaged in by salespeople on the job. In interviews with sales managers and sales representatives of a building materials manufacturer, Lamont and Lundstrom were able to identify sixty major salesperson job activities. These activities were then categorized into separate job dimensions using factor analysis. Four of these dimensions, direct selling, developing relationships with customers, meeting sales objectives, and maintaining complete customer records, are directly related to the selling process. Three other dimensions consist of assisting and working with district management, customer service, and keeping abreast of market conditions. Within these dimensions, each of the job activities, requires the salesperson to be able to possess certain abilities, to acquire or use knowledge and skills, and to channel efforts efficiently if the salesperson is to perform effectively.

Moncrief (1986) extended Lamont and Lundstrom's (1974) study by analyzing the jobs of salespeople from 51 industrial firms. He identified 121 sales activities, more than twice the number identified by Lamont and Lundstrom. Moncrief (1986) then created a taxonomy of six industrial sales jobs from a cluster analysis of the 121 sales activities. The six industrial sales jobs were defined as: (1) the institutional seller, who must perform creative selling and does very little work with retailer/ wholesalers, (2) the order taker, who basically takes orders and services the sales account, (3) the missionary salesperson, who emphasizes public relations work and "advance" selling over taking orders and making deliveries, (4) the trade servicer, who emphasizes servicing the industrial account, (5) the trade seller, who emphasizes front-end selling while deemphasizing service, and (6) the residual, who puts less energy into selling than any of the other groups.

Basic Approaches to the Study of Personal Selling Effectiveness

In addition to identifying job activities, however, a question arises concerning what characteristics should the effective salesperson possess. In an extensive literature review of

personal selling, Weitz (1979) categorized research on characteristics of personal selling effectiveness into four basic approaches.

The first approach involves identifying those characteristics of the salesperson that are related to successful performance. A second approach looks at the different aspects of the salesperson's behavior that affect his/her performance during the interaction with the buyer. These approaches are concerned with the characteristics and behavior of the salesperson without regard to the interaction between the salesperson and the customer. The third approach, the dyadic approach, investigates characteristics of the interaction between the salesperson and the customer that are associated with successful performance. Contingency theory is the fourth approach used to study personal selling effectiveness. This method investigates interactions between sales behaviors and aspects of the sales situation that are associated with successful performance.

In Weitz's (1979; 1981) reviews of the first three methods, he noted that the research findings concerning the relationships of personal characteristics and behaviors of salespeople to sales performance have been highly inconsistent. The first approach has focused on the relationships between the salesperson's resources and capabilities and performance. For example, age of the salesperson was found to be significantly related to performance in two studies (e.g., Weaver, 1969) and not significantly related in four studies (e.g., Lamont and Lundstrom, 1977). Intelligence of the salesperson was found to be significantly related to performance in four studies (e.g., Bagozzi, 1978) and not significantly related in three studies (e.g., Harrell, 1960). Other inconsistencies include the effects of age, education, sales related knowledge, sales experience, product knowledge, training, and empathy of the salesperson.

With regards to the second approach, looking at behavior affecting the salesperson's performance during the interaction with the buyer, there have been two basic types of studies conducted. One type of study examined the effectiveness of the different types of messages delivered by salespeople. Examples consist of looking at the effectiveness of

"canned" versus "extemporaneous" sales presentations (Jolson, 1975; Reed, 1976) and the effectiveness of a product-oriented versus a personal-oriented message presentation (Farley and Swinith, 1967). The other type of study has consisted of correlational studies that attempt to discover relationships between a salesperson's personality traits and behavioral predispositions and his/her performance. Examples have looked at such traits and predispositions as forcefulness (e.g., Ghiselli, 1973) and social orientation (e.g., Scheibelhut and Albaum, 1973). These results have been highly inconsistent and they have been unable to lead to the discovery of effective influence strategies.

The third approach, the dyadic, assumes that salesperson performance effectiveness is either moderated by or dependent on qualities of both the salesperson and the customer during a sales interaction. Similarity (e.g., Davis and Silk, 1972) and expertise (e.g., Busch and Wilson, 1976) are two examples of qualities which have been examined. However, weak relationships have been found. Also, there has been a lack of focus on relationships between sales behaviors and the characteristics of the selling dyad.

In addition to the inconsistency of the previous research in finding predictors of sales performance, one also finds that the type of job makes a difference. Churchill, Ford, Hartley, and Walker (1985) conducted a meta-analysis of the determinants of salesperson performance using 116 published and unpublished studies. Their findings suggested that the type of product sold influences the correlations between the various predictors and performance. This supports the idea that the determinants of sales performance are job-specific. However, it must be understood that these performance relationships were very weak.

In summary, past research indicates that efforts to uncover universal characteristics and behaviors belonging to or exhibited by salespeople and buyers have been unsuccessful. Such an outcome supports the idea that the relationship between various salesperson behaviors and salesperson characteristics depends upon the particular sales situation. The fourth, or contingency approach, to selling effectiveness was developed in

part to deal with these interactions. One contingency approach, called adaptive selling by Weitz (1984; Weitz, Sujan, and Sujan, 1986), states that the effectiveness of a salesperson's characteristics and behaviors are moderated by different aspects of the sales situation (Weitz, 1979). The area is relatively new with recent work having been conducted by Weitz (1984), Sujan (1986), and Weitz, Sujan, and Sujan (1986).

Adaptive Selling and Adaptive Behavior

The practice of adaptive selling is defined as "...the altering of sales behaviors during a customer interaction, or across customer interactions based on perceived information about the nature of the selling situation (Weitz, Sujan, and Sujan, 1986, p. 175)." The adaptive selling approach for increasing the effectiveness of the sales encounter emphasizes both the effort the salesperson puts into the task of selling and the ability of the salesperson to determine when and how to approach the customer in order to make a sale. According to this framework, no one sales approach is effective in all cases. The relationship between effective performance and the practice of adaptive selling is moderated by the selling environment and the salesperson's capabilities. Therefore, a salesperson must change his/her approach, strategy, or direction of effort based upon the particular selling situation and that salesperson's capabilities.

Direction of effort is of central importance to this thesis. It is the aspect of motivated behavior concerned with a choice among one or more options. In most sales encounters, a salesperson faces situations that can be approached using several different strategies. If one approach produces dismal results then a new direction of effort, or change in strategy, may be in order. It must be noted, however, that the change in approach or direction of effort does not ensure effective performance because the salesperson must work within the bounds of his/her capabilities and the selling environment. More on the direction of effort will be elaborated on in the next chapter.

In the final analysis, the practice of adaptive selling is only effective if the marginal benefits of practicing adaptive selling are greater than the marginal costs. Figure 1 presents the adaptive selling framework.

The adaptive selling framework is specifically concerned with salesperson-customer interactions. Yet, the salesperson-customer interaction is not the only area of sales where direction of effort is an important element leading to effective decision-making or effective performance. In fact, the adaptive selling idea can be expanded into a broader marketing concept that will be called "adaptive behavior." Adaptive behavior is defined as the altering of marketing behaviors based on perceived information about the nature of the marketing situation. However, at this time the discussion of adaptive behavior has been limited to a sales context. Duties performed by both sales managers and other sales personnel are unrelated to salesperson-customer interactions. Strategies concerning the size of a territory, the size of salesforce, the amount of manpower necessary to cover a territory, and how a salesperson decides to cover a territory are examples of strategy decisions that are not necessarily related to salesperson-customer interactions. As a starting point, the adaptive selling framework is useful when considering the broader adaptive behavior concept. The broader concept applies to sales contexts other than just those concerned with salesperson-customer interactions, including other marketing contexts discussed in the next chapter.

The author's development of the adaptive behavior concept has its origins in Weitz's (1978; 1984; Weitz, Sujan, and Sujan, 1986) works on contingency approaches to selling. Therefore, a discussion follows concerning the adaptive selling framework's origins and position in the sales literature.

The emphasis on change of approach or direction of effort sets the adaptive selling framework apart from previous models of salesperson performance. The model, however, does fit within the Churchill, Ford, and Walker (1985) sales performance framework.

Figure 2 presents the Churchill, Ford, and Walker (1985) framework. The model depicts four factors, motivation, skill level, aptitude, and role perceptions, as important

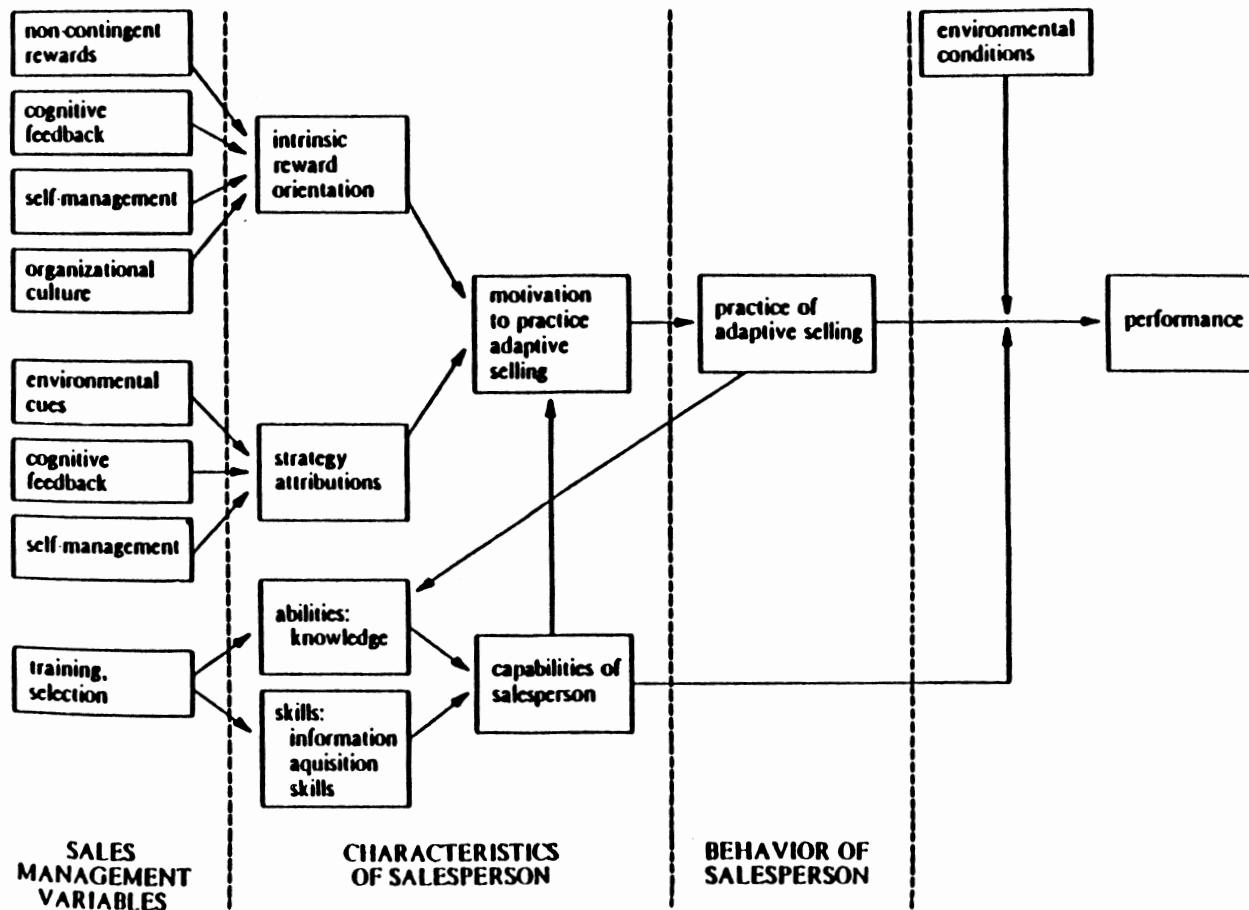


Figure 1. An Adaptive Selling Framework

Source: B. A. Weitz, H. Sujan, and M. Sujan (1986). Knowledge, Motivation, and Adaptive Behavior: A Framework for Improving Selling Effectiveness. *Journal of Marketing*, 50 (October), p. 175.

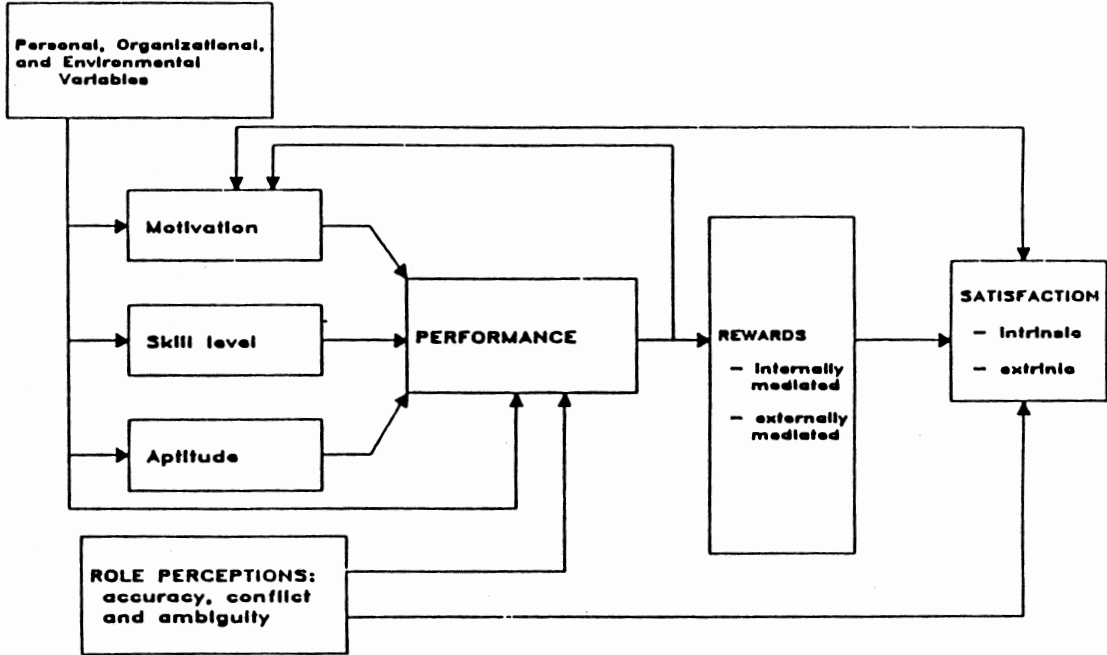


Figure 2. Model of the Determinants of Salesperson's Performance

Source: Gilbert A. Churchill, Jr., Nell M. Ford, and Orville C. Walker, Sales Force Management, Second Edition. (Homewood, Illinois: Richard D. Irwin, Inc., 1985), p. 298.

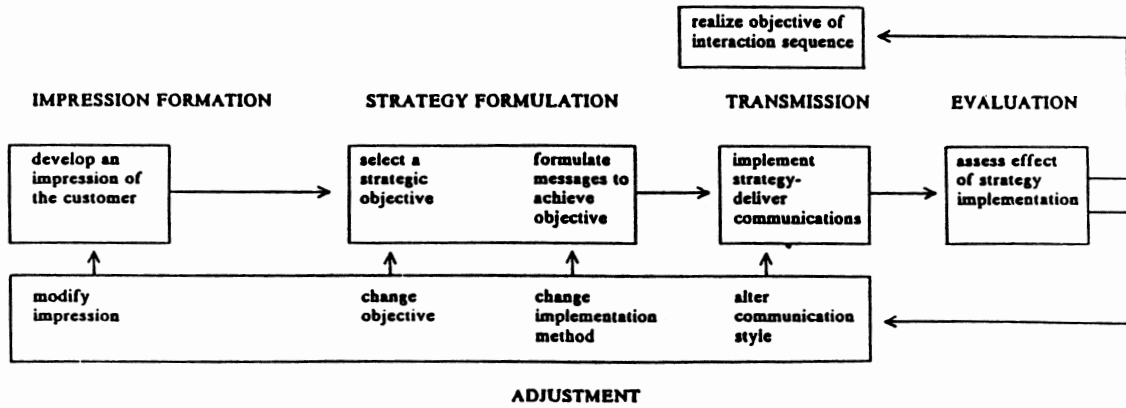


Figure 3. ISTEA Sales Process Model

determinants of performance with each being influenced by personal, organizational, and environmental characteristics. It also depicts reward and satisfaction relationships.

Weitz, Sujan, and Sujan (1986) have taken the ability component of the Churchill, Ford, and Walker (1985) framework and have expanded on it. In the Churchill, Ford, and Walker (1985) sales performance framework (see Figure 2), both aptitude and skill level are directly related to sales performance. The authors readily acknowledged the interaction between determinant factors, such as ability and motivation, but they didn't specify the interrelationships. Weitz, Sujan, and Sujan's (1986) adaptive selling framework concentrated on the relationship between sales ability and the salesperson's direction of effort, depicted as the motivation to practice adaptive selling.

Weitz (1978) began his work on the aptitude and skill level components of personal selling by developing the ISTEAs sales process model, presented in Figure 3. This model states that a salesperson must have five sales capabilities at his/her disposal to perform the sales function successfully. The salesperson must be able to (1) develop impressions of the buyer, (2) formulate selling approach strategies, (3) transmit messages to the buyer, (4) evaluate buyer reactions, and (5) make appropriate adjustments in his/her presentation in order to perform successfully.

Expanding further on the ability component, Weitz (1984) and his colleagues (Weitz, Sujan, and Sujan, 1986) developed the adaptive selling framework. This addition extended the Churchill, Ford, and Walker (1985) framework by mapping out the ability interrelationships (skill level and aptitude). According to the adaptive selling framework, salesperson capabilities affect the motivation to practice adaptive selling and moderate the relationship between adaptive selling and performance (see Figure 1). However, the adaptive selling/performance relationship is also moderated by environmental conditions which means that adaptive selling is only appropriate in certain selling situations and when appropriate performance depends upon the correct adaptations within or across customer encounters (Weitz, Sujan, and Sujan, 1986). Thus, the adaptive selling framework is based

on the idea that adapting sales approaches to specific situations may lead to effective selling performance. Table 1 identifies empirical studies supporting this idea.

Conceptual work also exists in the literature supporting the idea that adapting sales approaches to specific situations leads to effective selling performance. Gwinner (1968) stated that there was no one best approach to selling a customer. Each situation must be evaluated on its own merit. Therefore, planning is the key to successful selling. Robertson and Chase (1968) took an open systems approach to selling and argued that monitoring the environment and the customer will lead to successful selling. Webster (1968) stated that the salesperson who understands communications theory and buyer behavior will be able to develop more effective selling strategies. Finally, Spiro, Perreault, and Reynolds (1976) considered selling as a process that required adjustments between the buyer and seller to maintain successful selling relationships. From this base, adaptive selling had its roots.

The above conceptual and empirical pieces all tout the importance of matching the sales approach to the sales situation, but other than broadly stating that salespeople need to be trained to recognize various situations and strategies, there is no indication of what makes salespeople more likely to adapt their sales approaches to the situation.

What Makes Salespeople More Likely to Adapt

Weitz and his colleagues (1984; Weitz, Sujan, and Sujan, 1986) stated that to get salespeople to adapt their selling approaches to the situation they must be motivated to practice adaptive selling. Expanding the adaptive selling idea to the broader adaptive behavior concept allows investigation beyond salesperson-customer interactions, thus focusing on other types of decisions, such as allocating time across various job activities.

As was seen earlier in the Lamont and Lundstrom (1974) and Moncrief (1986) studies, 60 and 121 sales activities, respectively, were identified. Some of these activities will require great amounts of time and effort while other activities will require less time and effort in accomplishing sales goals. In any event, the salesperson must decide which activities

TABLE 1
EFFECTIVE SELLING PERFORMANCE STUDIES

Author(s)	Subjects	Study	Results	Suggestions
Tosi (1966)	102 Drug Retailers 35 Salesmen	Questionnaire concerning buyer-seller interaction	Significant relationship between expectation levels of the buyer and his number of suppliers	Customers have role expectations of salespeople that tend to vary as a function of different selling situations. The more a seller meets the buyer's expectations, the more effective the selling relationship. It is therefore important to adapt to the expectations of customers.
Willett & Pennington (1966)	210 Appliance Shoppers in 11 Appliance Stores	Observations of and exchange between customer and salesperson followed by follow-up with appliance customers (Sales Interaction Process Analysis)	There were significantly more bargaining acts in interactions concluding a sale. The salesman is the major contributor to interaction and also the source of influence in effecting total salesperson-customer interaction.	Salespeople controlled the customer-salesperson interaction. Problem-solving is a central part of selling. Therefore, salespeople need to adapt to customer needs.
Wise (1974)	19 New Car Salespeople	Prospect approached car salesman concerning a new car purchase. Then prospects filled out a checklist concerning their sales treatment.	Salespeople quote different prices to different prospects based on prospect's race, sex, and dress.	Salespeople adapt their behavior according to physical cues of the customer.
Johnson (1975)	180 undergraduate students	Students approached by salespeople to purchase Great Books of the Western World.	"Canned presentations" were more effective than customer-specific presentations.	Inexperienced salespeople should probably use the "canned presentation." However, adaptive selling may be more effective since all customers are not students.
Watts (1978)	44 Industrial Salespeople, 171 Matched pairs of salespeople and customers	Questionnaires filled out by salespeople and customers assessing the salesperson's perception of customers' choice spaces with the customers' self-reports about their choice spaces.	Significant relationships between performance and strategy formulation abilities across salespeople and across customers. Also between accuracy in perceiving performance beliefs and salesperson performance across salespeople.	Although just a correlational study, it intimates that adopting a sales strategy to the particular needs of the customer is associated with good performance.
Spico & Perreault (1979)	444 Industrial salespeople representing 220 different member firms of the Associated Equipment Distributors.	Subjects asked to think of a recent sales call and then respond to a questionnaire consisting of 5 influence-strategy measures and 15 situation variables.	The selling situation structures the salesperson's choice of an influence-strategy mix.	Different situations require the salesperson to adopt different influence strategies when trying to sell to customers.

he/she will channel his/her efforts and in what amounts in order to be effective. This decision is the salesperson's direction of effort or the choice of strategy used.

The salesperson's strategy chosen or direction of effort can be either effective or ineffective. If the salesperson is ineffective, he/she must either change his/her strategy or direction of effort, or work harder at the same strategy by becoming more persistent and/or intensifying his/her effort. When a strategy is effective, it is likely that the salesperson will continue his/her efforts in the previously effective direction. However, it is not so clear what a salesperson does after a strategy proves ineffective. Does he/she persist in the previous ineffective course of action or does he/she redirect his/her direction of effort? Therefore, there is an overall focus on whether or not one changes his/her strategy when that strategy is ineffective.

Specifically, as a beginning, this research looks at what characteristics, if any, might dispose one to change his/her strategy or direction of effort when that strategy is ineffective. Spiro and Weitz (1987) suggested that people who were high self-monitors, people who were more androgynous, and people who had a more internal locus of control tended to be more likely to practice adaptive selling or, in a broader sense, adaptive behavior. Each of these traits, or individual differences, has one thing in common. They are all traits that are conceptually related to flexibility in behaviors. Self-monitoring deals with the altering of one's self-presentation based on situational cues (Snyder, 1974). Androgyny deals with flexibility in interpersonal interactions where an androgynous person interacts with others based on the situational appropriateness of the behavior rather than on the basis of their perceived sex role (Bem, 1974). Locus of control, deals with the control one feels that he/she has over what happens to him/her. The more internal the locus of control, the more flexible the person's behavior (Lefcourt, 1966).

It is difficult to compare individual differences with the practice of adaptive behavior when the results of an initial decision or successive decisions meet with success. Continuing with the same decision or changing the decision is very difficult to ascertain.

However, when a failure is made obvious, changing the direction of effort, or the decision, should meet with the possibility of more success. Assuming that the marginal benefits exceed the marginal costs of changing the direction of effort, the key to the present research is to place subjects in a situation where a failure has occurred and see if the subject continues following the initial strategy chosen that resulted in a failure or he/she decides to follow a different course of action. In the psychological and management literature, a phenomenon exists that has been well-studied and may fit the adaptive selling or adaptive behavior problem, that of entrapment.

Entrapment

This phenomenon deals with whether one persists in an ineffective strategy, or one finds a new or different strategy to solve a problem. People are faced with problems to solve that may require either a new way of thinking about the problem or a change in strategy.

The present study uses the entrapment methodology. By using the entrapment methodology, a highly studied phenomenon in the psychological and management literatures is extended to the marketing literature. Entrapment also has several possible theoretical explanations that include prospect theory, attribution theory, and dissonance theory.

Entrapment is defined as escalating commitment to a previously chosen course of action that is failing (Brockner and Rubin, 1985). In an entrapping situation, an investment is made in the hope of achieving a specified goal, and the investment fails. When it comes time to decide whether or not to keep investing in the failing course of action, a conflict is experienced. A decision to re-invest in the same course of action is assumed to be justifying expenditures that have already been made, whereas a decision not to re-invest in the same course of action is assumed as seeing the goal as no longer attainable or worthy of additional expenditures. It must be understood that the precise nature of the investment

or expenditures does not have to be monetary. The investment could be in other terms, such as time or work effort. By this author's definition, adaptive behavior is practiced if the decision maker follows a new course of action. Thus, adaptive behavior is the mirror image of entrapment. In a sales context, a salesperson, who persists in using a selling strategy that is ineffective instead of changing that strategy, might be said to be entrapped. Therefore, a salesperson who is able to be motivated to practice adaptive behavior will not become entrapped.

Another contribution of using the entrapment methodology is to provide a theoretical context for the study of adaptive behavior. Currently, little work has been performed to explain theoretically the factors that influence adaptive behavior. Theoretical explanations of entrapment include dissonance theory, attribution theory, and prospect theory. Using dissonance theory (Staw, 1976), a decision maker becomes entrapped in order to protect his/her self-image. In attribution theory, Weiner (1974) suggested that attributions for the success or failure of an outcome may be dependent on how stable or unstable the cause of the outcome. Specifically, a task's difficulty and an individual's ability are considered stable causes because they are not likely subject to change. Therefore, if a decision maker attributes an outcome's failure to a stable cause, he/she is not likely to become entrapped. However, if a decision maker attributes an outcome's failure to an unstable cause (e.g., luck or effort), he/she is likely to become entrapped. Prospect theory involves the framing of a decision, either positively or negatively. An entrapped decision maker frames a failed previous decision negatively and thus tries to recoup all losses (Kahneman and Tversky, 1979). These will be elaborated on in detail in the next chapter.

To recap, the following research investigates the adaptive behavior concept, which is rooted in Weitz and his colleagues' (Weitz, 1984; Weitz, Sujan, and Sujan, 1986) adaptive selling concept. Particular attention is paid to gaining an understanding of adaptive behavior and its relationship to individual difference characteristics. Finally, the entrapment phenomenon is introduced to the sales marketing literature as a paradigm in which to study

the above relationship, complete with possible theoretical explanations. This leads to the basic questions this research seeks to explore.

The Research Questions

The basic research issues addressed by this dissertation concern investigating factors that may influence the tendency of salespersons to change their direction of effort in a sales task, extending the entrapment paradigm to the marketing literature, and lending theoretical explanation to the adaptive behavior concept.

The present research asks the following questions: Do the personality constructs of self-monitoring, androgyny, and locus of control moderate the tendency to become entrapped? Can the entrapment paradigm be extended to explain factors influencing adaptive behavior in a sales management setting? Does prospect theory, dissonance theory, or attribution theory appear to best explain adaptive behavior in a sales management setting?

Importance of the Research Questions

The research questions are important for a variety of reasons. First, little is known about what controls direction of effort. As previously discussed, there are no consistent salesperson characteristics and behaviors that predictably lead to selling effectiveness. However, certain characteristics possessed by salespeople or sales managers may make the individual more susceptible to change. Therefore, it becomes necessary to identify what characteristics salespeople or sales managers possess that allow them to be most effective. From a practical standpoint, knowing the characteristics that influence direction of effort may save firms a large amount of money in the selection and training of a sales force. Thus, the implications are that training and selection procedures may be changed and refined.

Also, past research in this area (e.g., Spiro and Weitz, 1987; Sujan, 1986) has consisted solely of self-reports from salespeople and sales managers on how they perceived

their overall selling situations and approaches to customers, with very little attempt at theoretical explanation for the practice of adaptive selling. The present research, using a role-playing adaptation of the entrapment paradigm, not only measures actual behavior but also attempts to provide a theoretical background for the practice of adaptive behavior.

Having introduced the concept of adaptive behavior, its relationship with individual differences, or traits, and a testing vehicle consisting of the introduction of the entrapment phenomenon to marketing, a general overview of the dissertation follows.

General Overview of the Dissertation

The literature review begins with a discussion of the choice aspect of motivation, known as direction of effort. The construct is defined, reviewed, and then connected to the sales marketing literature using Weitz's (1984; Weitz, Sujan, and Sujan, 1986) adaptive selling framework. Adaptive selling is then expanded into a broader concept, that of adaptive behavior. Specific focus is on the motivation to practice adaptive behavior, which encompasses the motivation to practice adaptive selling. Next, characteristics of the salesperson leading to the motivation to practice adaptive behavior are delineated and the following hypotheses are developed and tested:

Hypothesis 1: A salesperson or sales manager high in self-monitoring will be more likely to practice adaptive behavior than a salesperson or sales manager low in self-monitoring.

Hypothesis 2: A salesperson or sales manager that exhibits more androgenous traits will be more likely to practice adaptive behavior than a salesperson or sales manager with less androgenous traits.

Hypothesis 3: A salesperson or sales manager that exhibits more internal interpersonal control will be more likely to practice adaptive behavior than a salesperson or sales manager with less internal interpersonal control.

Hypothesis 4: A salesperson or sales manager that exhibits more personal efficacy will be more likely to practice adaptive behavior than a salesperson or sales manager exhibiting less personal efficacy.

The first four hypotheses are discussed as individual difference characteristics leading to the practice of adaptive behavior. Then, entrapment, is introduced as a vehicle for

analyzing the motivation to practice adaptive behavior. Because the entrapment paradigm is used to study the practice of adaptive behavior, its theoretical underpinnings of dissonance theory, attribution theory, and prospect theory are carefully examined. Then, the following hypotheses are examined:

Hypothesis 5: A salesperson or sales manager who frames a decision more positively will be more likely to practice adaptive behavior than a salesperson or sales manager who frames a decision less positively.

Hypothesis 6(A): A salesperson or sales manager attributing more of a failure for a previous course of action to a stable cause, specifically (A1) task difficulty and/or (A2) ability, should be more likely to practice adaptive behavior than a salesperson or sales manager who attributes less of a failure for a previous course of action to stable causes.

Hypothesis 6(B): A salesperson or sales manager attributing less of a failure for a previous course of action to an unstable cause, specifically (B1) effort and/or (B2) luck, should be more likely to practice adaptive behavior than a salesperson or sales manager who attributes more of a failure for a previous course of action to unstable causes.

Hypothesis 7: A salesperson or sales manager will be less likely to practice adaptive behavior the more personally responsible the salesperson or sales manager feels about the sales decision.

The study is conducted using undergraduate business students in an entrapment role-playing methodology. The students are be asked to answer some pretest questions taken from established self-monitoring, androgyny, and locus of control scales. They then receive the role-playing exercise for which they have to make a decision in an entrapment paradigm. The entrapment paradigm used follows that of Staw (1976). Independent variables used in the paradigm concern personal responsibility. The dependent variable is the number of resources, or personnel, allocated to the successful company division. This is followed by a post-exercise questionnaire asking subjects about various feelings and reasons concerning their decisions during the role-play. Further elaboration can be found in Chapter III. Results are then presented and discussed in Chapter IV, followed by theoretical and practical implications and suggestions for future research in Chapter V.

CHAPTER II

LITERATURE REVIEW

Introduction

Businesses have a tendency to use motivation as a synonym for productivity (Futrell, 1988). In other words, an individual is considered motivated as long as his/her job performance reaches or exceeds the level of performance expected by the business organization. Thus, it is in the interest of the firm to motivate its work force to reach and surpass specific performance levels. To do this, one must begin with what makes up the components of motivated behavior.

Motivational theorists, working in the area of worker and salesperson performance, have argued that motivated behavior consists of three aspects: (1) persistence, (2) intensity, and (3) choice (Atkinson, 1964; Campbell and Pritchard, 1976; Weiner, 1980). Persistence is the decision to continue expending effort on a task over time. Intensity is the decision to expend a certain amount or level of effort on a task. Both persistence and intensity relate to amounts or quantities of effort expended and have no directional component. Choice is the directional component referring to the particular approach or behavior used in the accomplishment of the task.

Past approaches to the study of motivated behavior concerning salesperson performance have dealt only with the quantity component of motivation, that is, the first two aspects of motivated behavior, persistence and intensity (e.g., Walker, Churchill, and Ford, 1977; 1979). No distinction has been made between persistence and intensity. Consequently, these two elements will be considered only as a quantity of effort expended

component. The choice aspect of effort has been relatively ignored except by Weitz and his colleagues (1981; 1984; Weitz, Sujan, and Sujan, 1986; Sujan, 1986).

It is the purpose of this chapter to review the relevant literature concerning the direction of effort concept to be used as a foundation for the current research. Five areas will be covered. First, a review of the literature will analyze how the direction of effort component of motivated behavior has been studied in relation to performance. Second, Weitz and his colleagues' (1984; Weitz, et. al., 1986) adaptive selling framework will be set forth with its link to direction of effort. Third, the idea of adaptive selling will be expanded into a much larger and broader marketing concept, that of adaptive behavior. Adaptive behavior may be used in various areas of marketing that require an individual to make decisions. However, other than the introduction of the concept, its discussion will be confined to the areas of personal selling and sales management. Fourth, characteristics of a salesperson or sales manager will be examined that may impact on the direction of effort or strategy chosen. Finally, theoretical justification will be given for the proposed link between the direction of effort component of motivated behavior and salesperson performance.

Direction of Effort – An Introduction

Direction of effort is that facet of motivated behavior concerned with a choice among one or more options. It is related to what Anderson and Jennings (1980) call "strategy' -- the particular approach, tactic, or method one uses in attempting to achieve a goal or solve a problem" (p. 394). Each of these terms, direction of effort, direction of behavior, selection, choice, and strategy have been used interchangeable in the literature.

Direction of effort has been seen in the psychological literature as an important concept within Lewin's formulation of field theory (Weiner, 1980). Field theory states that behavior is a function of both the person and his/her environment at a particular point in time. This implies that the goal one decides to undertake and/or the choice of the path to

the goal one decides to take will be determined by the person and his/her environment. For example, a salesperson's goal may be to open a new sales account. How that salesperson approaches this potential new account depends upon an interaction of the salesperson's personality, needs, values, attitudes, and motives and the new physical environment, such as the economic climate, the product being sold, and the strength of the competition.

Concern for direction of effort in Lewin's field theory manifested itself in level of aspiration research by Lewin, Dembo, Festinger, and Sears (1944, as cited in Weiner, 1980). Level of aspiration is defined as "the level of future performance in a familiar task which an individual, knowing his level of past performance in that task, explicitly undertakes to reach" (Frank, 1935, p. 119). Thus, level of aspiration refers to the setting of a performance goal. Lewin, et. al., (1944, as cited in Weiner, 1980) distinguished four main points in a sequence of events in a level of aspiration situation. The individual first looks at his/her last performance on a task as a frame of reference. Second, the individual specifies an aspiration level for his/her next performance. Third, the new task is undertaken and the new performance is assessed according to the level of aspiration previously set. Finally, according to the discrepancy between the new performance and the level of aspiration previously set, an affective reaction will follow that will start the cycle over again. For example, if the level of aspiration is not met, the individual should feel "bad".

On the surface, level of aspiration deals with intensity, or the level of effort one feels able to expend in accomplishing a particular task. When success is met, the level of aspiration is raised to a new level. However, when failure is encountered, the level of aspiration is either lowered or the individual withdraws from the task (Weiner, 1980). Remaining in or withdrawing from a particular task is a "directional" decision.

In the above early research, direction of effort manifested itself only in the decision of whether or not one should undertake a particular task (Frank, 1935; Lewin, et. al., 1944). There was no concern for finding different ways to accomplish a task in the face of a failure.

The only concern was at what level of difficulty would an individual set for himself/herself in order to accomplish a task. In this first area of research, it was not taken into account that an individual might have at his/her disposal more than one way to successfully complete a task. A second area of research on direction of effort puts its emphasis on choice as opposed to quantity of effort (e.g., Anderson and Jennings, 1980). Direction of effort in this second area of research deals with whether or not the individual looks for alternative ways to accomplish a task in the face of a failure or completion that is ineffective or inefficient. This paper is concerned with this line of research.

Direction of Effort – Empirical Literature Review

Direction of effort research has taken off in two different directions. In the management literature, direction of effort is synonymous with role perceptions or the type of activities and behaviors an individual deems necessary for the successful performance of his/her job (Terborg, 1977). A second stream of research focuses on direction of effort as a strategy choice (Anderson and Jennings, 1980). A major difference between these two approaches is that the former research equates a failing performance with one's perceived role not being the same as one's actual role, whereas the latter research equates poor performance with using the wrong strategy. In the first stream of research individuals have an opportunity to become successful because they understand their job or position and perform it accordingly. In the second stream of research, individuals have an opportunity to become successful because they have the ability to recognize that their approach to the problem or task may be faulty and therefore they must try a new strategy.

The author views the management literature definition of direction of effort as too confining and inadequate for the present research, and thus, is concerned with the broader definition of direction of effort as a strategy choice. Table 2 summarizes the direction of effort research. Also, some elaboration follows in the text.

TABLE 2
DIRECTION OF EFFORT STUDIES

Author(s)	Subjects	Type of Study (Analysis)	Operationalisation of Direction of Effort	Variables	Results
Anderson & Jennings (1980)	36 college students (14 male, 22 female)	t-tests	Attribution manipulation in which subjects are told that persuading people to pledge blood was a task in which either strategies (direction of effort condition) determined a volunteer's success or failure. Also a control group.	I.V.: Attribution manipulation (strategies vs. abilities) (strategies - direction of effort) Success-failure manipulation D.V.: Immediate success prediction; long-term success prediction; willingness to participate as an unpaid volunteer in an upcoming blood donor drive.	Strategy subjects expected their performance to improve with practice. Ability subjects did not.
Singer, Grove, Couraugh, & Budicill (1983)	30 college students (25 male, 25 female)	Analysis of Variance	Attribution manipulation where subjects were told that some strategies are better than others (strategy-oriented) and where subjects were told that both effort and the use of effective strategies were required for good performance (effort/strategy-oriented) and an ability-only condition and an effort-only condition. Also, a control group.	I.V.: Attribution manipulation (ability-only vs. effort-only vs. strategy-only vs. effort/strategy) D.V.: Ratings of expectancy; Affective reactions; free-time persistence; task performance	The strategy-oriented group and the effort/strategy-oriented group persisted on the task more than the control group.
Bojan (1984)	1283 salespeople	LISREL	A two-item scale indicating whether or not salespeople felt that their failures were caused by using poor selling strategies. And, a two-item scale indicating whether or not the salespeople will use multiple strategies to improve over last year's performance.	Intrinsic reward orientations; Extrinsic reward orientations; strategy attribution styles; Effort attribution styles; Motivation to "work harder" (use more effort); Motivation to "work smarter" (use more strategies).	Attributing failures to poor strategies motivates salespeople to change their direction of effort (work smarter). Salespeople's intrinsic reward orientations did not positively influence their tendency to attribute their failures to poor strategies.

Direction of Effort as a Strategy

These studies concentrate on a "strategy" definition of direction of effort. This definition was first espoused by Anderson and Jennings (1980). They asked subjects to persuade people to donate blood. After their attempt to recruit blood donors, they were told to reflect back and attribute their successes or failures to their persuasion strategies or to their abilities. Subjects in the strategy condition were told that they would do all right if they used different tactics until they found the one that worked. Also, in this condition the experimenter related a story about a salesman who was successful using this strategy. In the ability condition, subjects were told that you either have it or you don't have it. There was also a "no attribution" control group, where no information was given to subjects concerning the use of abilities or strategies. All subjects experienced failure in these manipulated conditions, except for the half of the "no attribution" group that was successful. Subjects were then asked about their expectancies for future success immediately and long-term.

Results indicate that strategy subjects made significantly higher predictions of subsequent success than did ability subjects. This seems to indicate that when individuals are led to perceive initial failure as resulting from the relative ineffectiveness of their strategies, rather than their lack of ability, experiences of failure promoted expectancies of success. Thus, an individual is inclined to tackle the task again using a different strategy. In contrast, subjects who are led to believe that their abilities are in question fail to attend to strategic features of their attempts or learn from their experiences. They therefore conclude that they cannot improve their performance, so direction of effort is not considered by these subjects.

Along the same lines, Sujan (1986), in a mail survey of salespeople, asked people various questions concerning their reward orientations (intrinsic and extrinsic), their attributional styles (strategy and effort), and their motivation to work (smarter and harder). Smarter refers to the direction of effort and harder refers to the amount of effort expended.

Sujan found that salespeople who attributed their failures to poor strategies were motivated to work smarter or change the direction of their efforts. It must be noted, however, that Sujan did not ask his subjects for ability attributions. Therefore, it is not possible to draw any conclusions concerning any assessment of ability from this study.

Finally, Singer, Grove, Cauraugh, and Rudisill (1985) assigned subjects to a motor task and found that direction of effort, or strategies, were also found to be significantly related to performance. In this study, subjects who attributed their failures to poor strategies persisted more in their quest for success to a greater extent than those who were given ability orientations or no orientation. This persistence came in the form of subjects trying different strategies to solve the motor task. Poor ability orientations seemed to cause subjects not to consider strategy changes as task solutions. Their ability was in question, therefore why bother.

In summary, these studies indicate that direction of behavior is an important determinant of performance. Individuals attributing poor performance to poor strategies looked for new strategies to improve their performance.

On the preceding pages, direction of effort was introduced as an important element of motivation that may lead to effective performance. In the sales literature, most frameworks of sales performance deal with motivation in a broad sense lumping both quantity of effort components and directional components together (e.g., Walker, Churchill, and Ford, 1979). The adaptive selling framework focuses on the direction of effort component of motivation as a crucial element in its explanation of sales performance (Weitz, et. al., 1986). It fits within the broader Walker, et. al. (1979) model.

The Adaptive Selling Framework

In the adaptive selling framework, the direction of effort component of motivation is represented as the motivation to practice adaptive selling. According to Weitz, et. al., "the practice of adaptive selling is defined as the altering of sales behaviors during a customer

interaction or across customer interactions based on perceived information about the nature of the selling situation (1986, p. 175).^a Before adaptive selling can be practiced, a salesperson must be able to recognize that there is more than one selling strategy that can be used in the pursuance of an effective sales performance. If the salesperson is not motivated to look for effective selling strategies for different sales encounters, then he/she is not likely to practice adaptive selling. In fact, when facing unsuccessful performance, the salesperson, who does not practice adaptive selling, is likely to repeat the same mistakes over and over by continuing to use the same strategy or to give up, feeling that he/she cannot make the sale. See the Weitz, et. al. (1986) model presented earlier in Figure 1.

An overview of the model shows that various characteristics of the salesperson may motivate him/her to practice adaptive selling. On the left-hand side of the model are sales management practices that are predicted to impact on these salesperson characteristics. Once adaptive selling is practiced, effective performance is moderated by the conditions of the environment and the capabilities of the salesperson.

There are three salesperson characteristics that are essential to the Weitz, et. al., (1986) model. The first is the degree to which a salesperson has an intrinsic reward orientation. The tendency of the salesperson to make strategy attributions when analyzing the causes of successful, as well as unsuccessful sales encounters, is the second characteristic. The capabilities of the salesperson form the third set of characteristics. These capabilities consist of the abilities and skills possessed by the salesperson.

These three salesperson characteristics are affected by several sales management variables. Affecting the intrinsic reward orientation is the nature of the reward system in which the salesperson functions, the feedback he/she is provided with concerning their previous performance, how much the organization allows the salesperson to self-manage his/her job, and the culture of the organization in which the salesperson functions. Strategy attributions are affected by cues from the environment, feedback received from superiors,

and the degree of self-management allowed. The capabilities of the salesperson are affected by the way in which the organization selects and trains their sales personnel.

In turn, these three characteristics that a salesperson possesses will determine whether or not a salesperson will be motivated to practice adaptive selling. The motivation to practice adaptive selling is crucial to the framework. If the salesperson is not disposed to altering sales behaviors with different customers and/or situations, the framework is rendered meaningless. For example, a salesperson who uses a "canned" presentation never varies from that presentation. The sale is either made or not made with no attempt to attend to the particular customer or situation. The motivation to practice adaptive selling is initiated and then translated into action, which leads to performance of the selling function.

It is important to understand that adaptive selling can be effective or ineffective depending upon the conditions within the selling environment and the capabilities of the salesperson. As long as the salesperson's abilities and the environmental conditions are conducive to practicing adaptive selling, the framework will be effective. For example, if the salesperson's skills are extremely limited or governmental regulations allow only one way for a salesperson to make a sale, adaptive selling may become a waste of effort. However, most selling situations do not have these limitations. Adaptive selling makes no guarantees of success. It only advises the salesperson that there is more than one way to approach a customer, and a failed encounter should alert the salesperson to try a new strategy.

Weitz, et. al. (1986) developed several propositions in their adaptive selling framework about factors that will lead to effective selling. These propositions deal with the categorizing and structuring of knowledge and the skills necessary for acquiring information. Selling effectiveness is beyond the scope of the present research; however, it is assumed that the practice of adaptive selling will lead to effective selling.

In conclusion, the key variable of concern that makes this framework function is the motivation to practice adaptive selling. This variable determines the direction that a

salesperson will channel his/her behavior in order to accomplish a particular selling activity or task.

Personal selling is not the only marketing area where direction of effort is an important element that may lead to effective decision making or effective performance. Thus, a broader marketing concept encompassing adaptive selling will be introduced. It is called adaptive behavior.

Adaptive Behavior

Adaptive behavior is defined as the altering of marketing behaviors based on perceived information about the nature of the marketing situation. Altering marketing behaviors will be effective only to the extent that the benefit of altering these behaviors exceeds the cost of altering these behaviors.

As long as there is a marketing decision to be made for which there are alternative strategies or options that can be used to solve the marketing problem, adaptive behavior may be practiced. One example where practicing adaptive behavior may lead to greater effectiveness might be the decision to replace old high priced durable goods with new goods or maintain and repair old durable goods. Specifically, it is possible that people keep automobiles or washing machines past their useful utility where repairs, when added up, exceed the cost of purchasing a new product or the resale value of that product becomes worthless. Following a strategy of maintaining and repairing the product until it no longer works may be ineffective, whereas opportunities in the marketplace may exist that are more effective. Opportunities conducive to buying new automobiles may consist of manufacturer rebates, large trade-in allowances, and so forth.

Another example where adaptive behavior may lead to effectiveness concerns marketing strategy. A firm that has been successful introducing and marketing products in a particular way may be reluctant to change even in the face of a changing environment. Remaining in the same strategy and ignoring or misperceiving information about the nature

of the marketing situation may be an ineffective strategy to follow having severe consequences for the firm in the future.

In a sales context, adaptive behavior does not have to occur only between the buyer and the seller. There are duties performed by both salespeople and sales managers alike that are unrelated to buyer-seller interactions. For example, assignments to and coverage of sales territories can be an area where altering manpower in the territory, changing the size of the territory, reapportioning the territory, and so forth, may lead to more effective behaviors than maintaining the status quo. The present research deals with adaptive behavior in a sales context unrelated to buyer-seller interactions.

If the practice of adaptive behavior has a good possibility of leading to effective decision making and performance, it is important to focus on what motivates a marketer to practice adaptive behavior. This is the crux of the present research. In the next section, previous empirical work on characteristics related to adaptive selling will be reviewed. It will be assumed that since adaptive selling occurs within the concept of adaptive behavior, the results pertain to adaptive behavior as well.

Previous Empirical Work on Adaptive Selling

There are two studies that relate salesperson characteristics and adaptive selling: Sujan (1986) and Spiro and Weitz (1987). Using a mail survey, Sujan (1986) asked salespeople with large manufacturing companies questions concerning their reward orientations, their attributional styles, and their work motivations. In this study, he conceptualized the practice of adaptive selling as the motivation to work smarter. He found that when a salesperson attributes failure to working with a poor strategy, the salesperson will practice adaptive selling, whereas when a salesperson attributes failure to insufficient effort, the salesperson will not practice adaptive selling. However, as Sujan admits, a limitation in his survey is that he used only two items on his scale to capture the meaning of adaptive selling. This is inadequate for such a rich and multifaceted construct.

Spiro and Weitz (1987), on the other hand, took on the task of developing a scale of adaptive selling. Salespeople in a large manufacturing firm were asked to fill out a questionnaire assessing whether or not they practice adaptive selling. The authors found three personality measures significantly related to adaptive selling: androgyny, internal locus of control, and the "ability to modify self-presentation" dimension of Lennox and Wolfe's (1984) self-monitor scale.

In both of these studies, no actual sales performance measures were taken. Responses to questions were of a general nature pertaining to a salesperson's overall assessment of the way he/she handled his/her job. This author's study differs from the above two studies in that subjects will be given a specific task to perform. They will then receive feedback on that task and they will be asked to perform that task again. Subjects will then be assessed as to whether they stayed with the same strategy or used a different strategy in performing the task a second time. In effect, actual performance will determine whether or not adaptive selling has been practiced. Therefore, it is necessary to devise a task that is considered solvable in an efficient manner where changing strategy is the proper thing to do. Also, the individual difference characteristics of androgyny, locus of control, and self-monitoring will be investigated against actual performance. Thus, attention is now turned to these individual difference characteristics that may motivate an individual to practice adaptive behavior.

Individual Difference Characteristics

Affecting Adaptive Behavior

Self-Monitoring

One characteristic possibly related to adaptive behavior is that of self-monitoring (Snyder, 1979). According to Snyder, self-monitoring deals with how concerned an individual is with his/her social behavior and his/her self-presentation in various situations and interpersonal contexts. People high in self-monitoring regard themselves as being quite

flexible and adaptive in the way they present themselves in different situations displaying chameleon-like behavior from situation-to-situation. In contrast, low self-monitoring individuals regard themselves as quite rigid in the way they present themselves and display consistency in behavior across situations (Snyder, 1979).

Snyder (1974) developed a scale to measure self-monitoring, consisting of five hypothetical components. These five components were (1) concern for the appropriateness of one's behavior in a social situation, (2) attention to information comparing oneself with other people in a social situation, (3) ability to control or modify self-presentation, (4) the actual usage of modification of self-presentation in particular situations, and (5) cross-situational variability of social behavior. The scale has been criticized for a lack of congruence between the scale and the construct (Briggs, Cheek, and Buss, 1980; Lennox and Wolfe, 1984). Lennox and Wolfe (1984) revised the scale using 13 items, which measure only sensitivity to the expressive behavior of others and ability to modify self-presentation.

Spiro and Weitz (1987) only found the ability to modify self-presentation to be significant to adaptive selling in their study. Assuming that selling takes place in different selling situations, that salespeople must be able to monitor buyer reactions and adapt to the different situations and reactions, it is predicted that individuals who are high in self-monitoring will be more apt to undertake the practice of adaptive behavior than individuals who are low in self-monitoring.

Hypothesis 1: A salesperson or sales manager high in self-monitoring will be more likely to practice adaptive behavior than a salesperson or sales manager low in self-monitoring.

Androgyny

Androgyny is another characteristic that may be related to adaptive behavior. Bem (1974) defines androgyny as the degree to which an individual endorses both masculine and feminine cultural traits. She developed a sex role inventory consisting of 20 masculine,

20 feminine, and 20 neutral items to measure androgyny. Testing her scale on two different samples of college students, she found reliabilities for the scale of .85 and .86. The impetus behind Bem's development of the scale was her belief that exclusively assigning dominant roles to men and nurturant roles to women was arbitrary, sexist, and counterproductive. She believed that strongly sex-typed individuals would be limited in the range of behaviors available to them as they moved through different situations. In other words, strongly sex-typed individuals would only engage in behaviors stereotypically associated with their perceived sex roles (Bem, 1974). On the other hand, androgenous people are not bound by stereotypical sex-role perceptions. Therefore, the more an individual exhibited both masculine and feminine behaviors, the more adaptive they would be from situation-to-situation. Support for this flexibility-androgyny relationship was found by Wiggins and Holzmuller (1981).

In a selling situation, a salesperson or sales manager must exhibit various types of behaviors depending upon the situation being faced. Spiro and Weitz (1987), in a study mentioned earlier, found androgyny to be related to the practice of adaptive selling while attempting to validate their own adaptive selling scales. It is predicted that an individual that displays more androgenous traits will be more apt to practice adaptive behavior.

Hypothesis 2: A salesperson or sales manager that exhibits more androgenous traits will be more likely to practice adaptive behavior than a salesperson with less androgenous traits.

Locus of Control

The last trait to be looked at is that of locus of control. If an individual perceives that an event's outcome is contingent upon his/her own behavior or permanent characteristics, this is a belief in an internal locus of control. If an individual perceives that an event's outcome is due to luck, chance, more powerful others, the particular task or situation, or any event not controlled by the individual, then this is a belief in an external locus of control

(Rotter, 1966). In other words, if an individual feels that his/her own actions influence the outcomes received, an internal locus of control is exhibited.

Paulhus (1983) has developed a locus of control scale consisting of three subscales, personal efficacy, interpersonal control, and sociopolitical control. Both the interpersonal control and personal efficacy subscales are of interest. Interpersonal control measures perceived control over others in dyad and group situations. In sales, a relationship is set up between the salesperson and the buyer. If the salesperson or sales manager controls the situation, he/she is more likely to make the sale. That control comes from being able to adapt to the different buyer types that a salesperson or sales manager encounters. Spiro and Weitz (1987) also found this subscale of Paulhus's (1983) locus of control scale to be related to the practice of adaptive selling. Thus, it is predicted that those who have more internal interpersonal control will be more apt to practice adaptive behavior.

Hypothesis 3: A salesperson or sales manager that exhibits more internal interpersonal control will be more likely to practice adaptive behavior than a salesperson or sales manager with less internal interpersonal control.

The second subscale is that of personal efficacy. This subscale measures control over the nonsocial environment in situations of personal achievement. In sales, the salesperson or sales manager must be able to solve nonsocial problems, such as deciding how to cover a territory and how to best budget his/her time solving administrative problems and paperwork between sales encounters. A salesperson high in personal efficacy will do what he/she can to master the environment. Therefore, it is predicted that those who are rated higher in personal efficacy will be more likely to practice adaptive behavior.

Hypothesis 4: A salesperson or sales manager that exhibits more personal efficacy will be more likely to practice adaptive behavior than a salesperson or sales manager exhibiting less personal efficacy.

Having made a list of characteristics predicted to be related to adaptive behavior, it is necessary to find a way of testing for whether or not one is inclined to practice adaptive behavior. The two previous studies on adaptive selling (Sujan, 1986; Spiro and Weitz, 1987), mentioned earlier, were accomplished by asking salespeople to recall whether or not

they practiced adaptive selling in their present jobs. Reliance on memory and hindsight may have distorted how these salespeople actually dealt with particular selling situations at the time. What is needed is a dynamic situation that is related to adaptive behavior where an individual can be observed to practice or not practice adaptive behavior.

There is a phenomenon that may be related to adaptive behavior and may allow for a dynamic testing of the practice of adaptive behavior: entrapment. The following is a discussion of entrapment.

Entrapment

Entrapment is defined as a decision-making process whereby individuals escalate their commitment to a previously chosen, though failing, course of action (Brockner and Rubin, 1985). Entrapment begins with making an investment in the hope of achieving a goal. This investment is on-going, and as a conflict is experienced about whether to continue adding resources to it when evidence indicates that it is failing. If the decision-maker decides to re-invest in a failing course of action, he/she may be justifying expenditures that have already been made. On the other hand, if the decision-maker decides not to invest, he/she may recognize that the goal is no longer attainable or worthy of additional expenditures. The precise nature of the investment can vary. It does not necessarily have to be a monetary investment. For example, the investment could be in terms of time, such as waiting for a bus at a bus stop. The longer one waits at a bus stop for a bus, one must decide whether to remain at the stop waiting for the bus to come (to invest) and to walk away or find another mode of transportation (to not invest). Also, the conflict that arises in an entrapping situation may be on many different levels. The conflict may be intrapersonal, interpersonal, organizational, international, or any combination of these levels (Brockner and Rubin, 1985).

Table 3 briefly summarizes the studies that have investigated the phenomenon of entrapment. Studies of entrapment have used four basic types of problems, and the table

presents these. The four types are: (1) a dollar auction game, (2) a puzzle solving game, (3) a counter game, and (4) a role-playing decision game.

When looking at the defining properties of entrapment, one must consider both its situational and psychological and behavioral characteristics (Brockner and Rubin, 1985). One situational characteristic is that the decision-maker's investments toward the goal can be interpreted both as a continued investment and as an irretrievable expense, depending upon the decision-maker's or the observer's perspective. Another situational characteristic is that the choice of whether to enter and remain or to leave the entrapping situation must be a free choice of the decision-maker. In the situation it is never entirely certain that the goal of the decision-maker will be realized. A final situational characteristic is that the decision-maker is required to make continual, rather than "one-shot" investment decisions.

The psychological and behavioral characteristics are responses to the entrapping situation. As the entrapped decision-maker's investments continue to mount, the conflict experienced by the decision-maker as to whether to continue or to quit investing becomes greater. Another characteristic deals with the involvement of the entrapped decision-maker. As he/she keeps investing, his/her involvement tends to become more and more emotional (Brockner and Rubin, 1985). Thus, continued investment may become almost an obsession making the decision-maker's motives shift from being rational to being rationalizing.

A final response characteristic is that entrapment is self-perpetuating up to a certain point. The more investments the entrapped decision-maker makes, the more committed he/she becomes to that chosen course of action. However, eventually the situation may become so uncomfortable and dissatisfying that he/she quits investing (Brockner and Rubin, 1985).

Adaptive behavior fits the entrapment phenomenon and its various characteristics quite well. Concerning the situational characteristics of entrapment, the time spent in the preparation of making a sales presentation to a customer, the time and money spent traveling, the time spent waiting for appointments, and the time and money spent on

TABLE 3
ENTRAPMENT STUDIES -- PUZZLE SOLVING

Study	Operationalization of Entrapment	Variables Examined	Theoretical Explanation	Results
Rubin & Brockner (1975)	Reward to be given for solving an unsolvable crossword puzzle.	I.V.1 Rate of decrement of the jackpot-high vs. low) balance-prosna or absence of a chart providing	Suggested commitment was escalated in the service of justifying previous investments.	Entrapment was heightened when (a) the size of the jackpot decreased slowly rather than rapidly, (b) when no payoff chart was made available, and (c) when subjects were told they were first rather than third in line for the dictionary.
Rubin, Brockner, Small-Well, & Nathanson (1980) Experiment 2	Reward given for solving an unsolvable crossword puzzle.	I.V.1 Social condition- competing with another person for the jackpot vs. nonsocial condition-working simultaneously with someone but not competitively; Active condition-experimentor asks subject every 3 minutes if he/she wishes to continue vs. passive condition- subject presses a button to quit; sex of subject. D.V.1 Possible reasons for remaining or quitting; entrapment (money spent)	Suggested self-justification. Those entrapped remained in order to look good.	Subjects in the passive condition became more entrapped than subjects in the active condition. Subjects became more entrapped under social than under nonsocial investment conditions. Also, men in the social condition became more entrapped than women in the social condition.
Matheson, Brockner, Brenner, Samuelson, Courtzman, Lloyd, & Rubin (1982) Experiment 2	Puzzle solving-subjects asked to solve puzzles and receive a prize for correctly solving all puzzles;	I.V.1 Information condition-subjects informed of the concept of entrapment vs. no information condition. Proximity condition-subjects told how close to the goal they were vs. control condition where no information was given on the number of puzzles that were necessary to solve to win the prize.	Self-awareness and cognitive awareness.	Subjects in the information condition were less likely to start competing in the puzzle solving context than subjects in the no information condition. There was no proximity main effect.

TABLE 3 (Continued)

ENTRAPMENT STUDIES -- PUZZLE SOLVING

Study	Operationalization of Entrapment	Variables Examined	Theoretical Explanation	Results
Brockner, Nathanson, Friend, Harbeck, Samuelsen, Houser, Bazerman & Rubin (1984) Experiment 1	Jigsaw Puzzle Solving- Reward for solving an unsolvable puzzle.	I.V.: Alone condition- subjects participated alone vs. competitive condition- subject and confederates compete against each other vs. model condition- the subject and confederates outcomes were independent. D.V.: Entrapment (money spent)	Relation to modeling effects	Subjects in the alone condition were less entrapped than subjects in either the competitive or model condition.
Brockner, Nathanson, Friend, Harbeck, Samuelsen, Houser, Bazerman, & Rubin (1984) Experiment 2	Jigsaw Puzzle Solving- Reward for solving an unsolvable puzzle.	I.V.: Increasing commitment condition- model escalated her degree of commitment vs. decreasing commitment condition- model decreased her degree of commitment and ultimately withdrew. D.V.: Entrapment (money spent)	Relation to modeling effects	Subjects became more entrapped in the presence of the increasing than decreasing commitment model.
Brockner, Houser, Birnbaum, Lloyd, Deitcher, Nathanson, & Rubin (1986) Experiment 1	Perception Test-Subjects are given an initial stake of money. They are shown white cards with black geometric shapes and asked to judge the percentage of the card blackened by the geometric pattern. Each card shown is a trial and must be paid for. A reward is paid to the subject if he/she earns a set amount of "accuracy" points.	I.V.: Diagnostic condition- subjects told that task performance was reflective of important self aspects vs. non-diagnostic condition- subjects told that task performance was not reflective of important self aspects. D.V.: Commitment (number of trials)	Ego-involvement (self-justification)	Entrapment was greater when subjects were told their ineffective performance reflected their self-identity than when they were told it did not.

TABLE 3 (Continued)
ENTRAPMENT STUDIES -- PUZZLE SOLVING

Study	Operationalization of Entrapment	Variables Examined	Theoretical Explanation	Results
Brocheur, Mousseur, Birnbaum, Lloyd, Deitcher, Mathanson, & Rubin (1986) Experiment 2	Perception Test-Subjects are given an initial stack of money. They are shown white cards with black geometric shapes and asked to judge the percentage of card blackened by the geometric pattern. Each card shown is a trial and must be paid for. A reward is paid to the subject if he/she earns a set amount of "accuracy" points.	I.V.: Performance due to luck vs. performance due to skill. Performance feedback increasingly more effective vs. increasingly ineffective. D.V.: Commitment (number of trials)	Ego-involvement (self-justification)	When receiving somewhat positive feedback entrapment was greater in the skill than in the luck condition. However, the skill-luck difference in entrapment was significantly reduced when negative feedback was received.

TABLE 3 (Continued)

ENTRAPMENT STUDIES -- COUNTER GAME

Study	Operationalization of Entrapment	Variables Examined	Theoretical Explanation	Results
Rubin, Brockner, Small-Weil, & Nathanson (1980) Experiment 1	Counter game-reward to be given if a computer-generated number was reached or a presumed adversary chose to quit first. Each click of the counter cost subjects 1¢.	I.V.: Non-social-computer-generated winning number vs. social-remain longer than adversary in the next cubicle; Active decision making process-press button to continue, nothing to quit vs. passive decision making process-press button to quit, nothing to continue; Sex of the subject. D.V.: Possible reasons for remaining or quitting; Entrapment (money spent)	Suggested self-justification. Those entrapped remained in order to look good.	Subjects became more entrapped under social than under nonsocial investment conditions. Also, men in the social condition became more entrapped than women in the social condition. There was no effect for the passive-active condition.
Brockner, Rubin, & Lang (1981) Experiment 1	Counter game-reward to be given if a computer-generated number was reached. Each time the counter increased by one unit, it cost the subject 1¢.	I.V.: Cautious condition-subjects advised to invest conservatively vs. Risky condition-subjects advised to invest a considerable amount. Large audience-subject is told and observed by confederates vs. Small audience-no confederates present. D.V.: Commitment (money spent) Questionnaire: Social anxiety scale administered	Face-Saving (self-justification)	Subjects invested more than twice as much in the risky condition. The instructions had a greater effect on subjects with high rather than low social anxiety. Subjects with high social anxiety who participated in front of a large audience were more influenced by the instructions than were subjects with low anxiety who participated in front of a small audience.
Brockner, Rubin & Lang (1981) Experiment 2	Counter game-reward to be given if a computer-generated number was reached. Each time the counter increased by one unit, it cost the subject 1¢.	I.V.: Low Cost Importance vs. High Cost Importance. Low Reward Importance vs. High Reward Importance. In both high conditions, charts indicating losses and/or rewards were affixed to the wall adjacent to the subject. In the low conditions, no charts existed. D.V.: Commitment (money spent)	Face-Saving (self-justification)	When cost importance was low, subjects invested significantly more than when cost importance was high. Reward importance had no effect.

TABLE 3 (Continued)

ENTRAPMENT STUDIES -- COUNTER GAME

Study	Operationalization of Entrapment	Variables Examined	Theoretical Explanation	Results
Brochner, Rubin, Fine, Hamilton, Thomas, & Tortohy (1982) Experiment 1	Counter game--Each tick of the counter cost subjects 1¢. Simulation of waiting for gas in a gas line.	I.V.: High cost salience--payoff chart provided to subjects vs. low cost salience--no payoff chart provided; Early condition--payoff chart introduced before subjects were asked to invest vs. late condition--payoff chart introduced after a considerable portion of investments were made. D.V.: Entrapment (money spent)	Self-awareness theory	Subjects became more entrapped in the low than the high salience condition. There was no difference between groups in the late condition.
Brochner, Rubin, Fine, Hamilton, Thomas, & Tortohy (1982) Experiment 2	Counter game--Each tick of the counter cost subjects 1¢. Simulation of waiting for gas in a gas line.	I.V.: Evaluative condition--subjects told that they were being observed and evaluated by experts in the field of decision making vs. non-evaluative condition--subjects told that they were being observed by people interested in seeing how the experiment was conducted. Early condition--observation began immediately vs. late condition--observation began when the counter reached 179. Social anxiety--high vs. low. D.V.: Entrapment (money spent) Possible reasons for remaining or quitting.	In the early phases of entrapment, economic factors are more influential determinants of behavior, whereas face-saving variables are more potent in the later phases. (self-awareness theory)	When the observers were described as experts in the evaluative condition, subjects high in public self-consciousness (or social anxiety) became less entrapped than those low in social anxiety. When the observers were described as only interested in the research, subjects high in public self-consciousness (or social anxiety) became more entrapped than those low in social anxiety.

TABLE 3 (Continued)
ENTRAPMENT STUDIES -- COUNTER GAME

Study	Operationalization of Entrapment	Variables Examined	Theoretical Explanation	Results
Matheson, Brockner, Brenner, Samuelson, Countryman, Lloyd, & Rubin (1987) Experiment 1	Waiting situation-- subjects informed that a second experimenter was on the way but had not arrived.	I.V.1 Self-awareness manipulation--mirror condition-- reflective side of mirror faces subject vs. no mirror condition. High vs. low self-esteem--based on Jenie-Field self-esteem inventory. D.V.1 Entrapment (time waited)	Self-awareness theory-- self-attention reduces entrapment	Subjects in the mirror condition were less entrapped than in the no mirror condition.
Brockner, Matheson, Friend, Barbeck, Samuelson, Houser, Baereman, & Rubin (1984) Experiment 3	Counter game--reward to be given if a computer-generated number was reached. Each time the counter increases by one unit, it costs the subjects 1¢.	I.V.1 Higher Entrapment Model condition--subjects witnessed a model become entrapped vs. Low-Entrapment Model condition does not become entrapped. Glad condition-- model expressed pleasure over chosen course of action vs. Regret condition--model expressed displeasure over chosen course of action. D.V.1 Entrapment (money spent)	Relation to Modeling effects	Interaction effects: Subjects in the glad condition became more entrapped in the high-entrapment than in the low-entrapment model condition. In the regret condition, subjects became more entrapped in the low-entrapment than in the high-entrapment model condition.
Brockner, Matheson, Friend, Barbeck, Samuelson, Houser, Baereman, & Rubin (1984) Experiment 4	Counter game--reward to be given if a computer-generated number was reached. Each time the counter increases by one unit, it cost the subject 1¢.	I.V.1 High Entrapment Model condition--subjects witnessed a model become entrapped vs. Low Entrapment Model condition; model does not become entrapped. All models were glad they chose their course of action. Personality conditions--No information vs. Unlikable. D.V.1 Entrapment (money spent) Interpersonal judgment scores.	Relation to Modeling effects	Level of entrapment was unaffected when model was unlikable, however when no information was given about the model's personality, the subject became more entrapped in the high-entrapment than low-entrapment model condition.

TABLE 3 (Continued)

ENTRAPMENT STUDIES -- ROLE-PLAYING

Study	Operationalization of Entrapment	Variables Examined	Theoretical Explanation	Results
Staw (1976)	Role-play-Financial Decision Case. Subjects asked to make an investment decision.	I.V.1 Success vs. Failure of initial decision. High responsibility-personally made initial investment decision vs. Low responsibility-did not make initial investment decision. D.V.1 Commitment (funds invested)	Self-justification	Subjects allocated more money to the declining rather than improving division. Subjects allocated more money to the initially chosen division when they originally made the initial decision. Subjects allocated more money under responsibility for negative consequences than would be expected by the two main effects acting alone.
Staw & Fox (1977)	Role-play-Financial Decision Case. Subjects asked to make an investment decision.	I.V.1 High responsibility condition-subjects responsible for initial investment decision vs. Low responsibility condition-not responsible for initial investment decision. Efficacy of resources High-prices given to company for handling successful projects vs. low-uncertainty expressed for handling successful projects. Three different time periods. D.V.1 Entrapment (commitment of resources to a course of action)	Suggested Self-justification	High responsibility subjects invested more in the failing course of action in time period 1 than did low responsibility subjects. There was a significant decline in commitment over time for high-responsibility subjects, while low-responsibility subjects maintained or slightly increased their commitment.
Staw & Ross (1978)	Role-play-Investment decision case. Subjects asked to make an allocation of funds decision.	I.V.1 Success of the project vs. Failure of the project. Exogenous cause of project setback vs. Endogenous cause of project setback. D.V.1 Commitment to a previously chosen course of action. Personality scales: Dogmatism, Ambiguity Tolerance, and Self-Defense	Psychological Reactance	The least amount of resources were committed by subjects who had experienced a previous failure and who faced an endogenous setback. The greatest amount of resources were committed by subjects who had experienced a prior failure and who faced an exogenous setback.

TABLE 3 (Continued)
ENTRAPMENT STUDIES -- ROLE-PLAYING

Study	Operationalization of Entrapment	Variables Examined	Theoretical Explanation	Results
Fox & Staw (1979)	Role-play-Financial Decision Case. Subjects asked to make an investment decision.	I.V.: High insecurity condition-temporary position of acting vice-president vs. low insecurity condition-permanent vice-president. Resistance manipulation low resistance condition-receiving positive feedback after initial and second reports vs. high resistance condition-receiving negative feedback after initial and second reports vs. no feedback condition vs. overcome resistance condition-receiving negative feedback after initial reports and positive feedback after second reports. D.V.: Entrapment (recommended allocation and minimum and maximum recommendations)	Suggested self-justification	As job insecurity and policy resistance increased, so did commitment to a previously chosen course of action.
Comton & Wolf (1980)	Role-play-Investment decision case. Subjects asked to make an allocation of funds decision.	I.V.: High involvement-involved in your position vs. low involvement-position is only a stepping stone. High visibility-decision is seen by all officers vs. low visibility-decision seen by one officer. Foreseeable vs. nonforeseeable. D.V.: Funds allocated to second decision (10: Calculators vs. Noncalculators)	Self-justification depending upon problem structure	The results suggest a powerful moderating effect of problem solving strategy on the foreseeability, visibility, and involvement effects. The strategy (calculator) variable was shown to reverse the Staw and Ross (1979) findings.

TABLE 3 (Continued)

ENTRAPMENT STUDIES -- ROLE-PLAYING

Study	Operationalization of Entrapment	Variables Examined	Theoretical Explanation	Results
Caldwell & O'Reilly (1982)	Role-play-Decision to choose one of three candidates to become a contract officer for a technical company.	I.V.1 Choice of a course of action vs. no choice. High responsibility-being held responsible by the board of directors for a decision vs. low responsibility-not being held responsible for the decision. D.V.1 Types of information selected for presentation to others. Questionnaires Snyder's (1974) self-monitoring scale.	Self-Justification	Subjects who are responsible for failure, either through choice or through assignment, are more likely to emphasize the positive aspects of their decision and to minimize the negative aspects. Subjects who are not responsible are likely to be more open and less defensive in their choice of information to be communicated to others. Subjects who are high self-monitors are likely to engage in information manipulation.
Bateman (1986) Experiment 1	Role-play-Financial Decision case. Subjects asked to make an investment decision.	I.V.1 Success vs. failure. Probability of future success for either success or failure conditions-30% vs. 70% success rate. Male vs. Female. D.V.1 Commitment (funds allotted)	Reactance	Recalculation did not occur. Subjects invested more money when the probability of success for the original division was 70%. Subjects also invested more money in the initially chosen division when the probability of successful investment in the other division was 30% than when it was 70%.
Bateman (1986) Experiment 2	Role-play-Financial Decision case. Subjects asked to make an investment decision.	I.V.1 Success vs. Failure. Attributions of internal causation vs. attributions of external causation for success or failure by board of directors. Probability of future success for either success of failure conditions-30% vs. 80% success rate. D.V.1 Commitment (funds allotted)	Reactance; Reinforcement theory; Learned helplessness.	Recalculation did not occur. Subjects whose decision outcomes were attributed by powerful others to external causes out of their control committed more additional funds to the original project than those subjects whose decision outcomes were attributed to internal causes.

TABLE 3 (Continued)

ENTRAPMENT STUDIES -- ROLE-PLAYING

Study	Operationalization of Entrapment	Variables Examined	Theoretical Explanation	Results
Davis & Bobko (1986)	Role-play-Public sector decision making. Subjects asked to make an investment decision.	I.V.: High responsibility-made initial decision vs. low responsibility-did not make initial decision. Decision alternative-Reserve fund vs. other sponsor. Decision framing-positive vs. negative. Mood-positive vs. neutral. D.V.: Commitment (funds allocated)	Prospect Theory	High responsibility subjects allocated more to the sponsor they previously designated than low responsibility subjects. When feedback was negatively framed, the effects of decision alternatives were negated resulting in allocation patterns consistent with other escalation research.

business meetings and entertainment all may be looked at as continued investments or irretrievable expenses, depending on the salesperson's or the company's point of view. Also, many salespeople, especially those working on commissions, are usually given sales territories and sales quotas to meet. A salesperson can usually feel free to open new accounts, discontinue servicing old accounts when they no longer are worth the effort, call on certain accounts more or less often than they have been called on in the past, and discontinue calling on accounts when it looks as if there is no opportunity for a sale to be made, in his/her territory. These are choices made freely by the salesperson. Finally, a salesperson must make continued visits to make a first sale to a customer and then to make continued sales to that customer. It is extremely rare to find either a "one-shot" sales call that results in a first sale or continued sales without servicing the customer. Relationships need to be cultivated to be successful.

Concerning the psychological and behavioral characteristics of entrapment, as a salesperson continues to call on a potential customer without getting a sale, he/she experiences a conflict between continuing to call on the potential customer, because an eventual sale and fruitful relationship looks possible, or discontinuing to call on the potential customer, because the continued effort is not worth the business to be had from the customer or the effort could be spent better trying to get or maintain other accounts. Also, involvement in sales has an emotional element. Salespeople tend to look at customers as "their own". Persistence at trying to make a sale becomes personal and shifts from a rational decision to a rationalizing decision where the salesperson almost becomes obsessed with making a sale to a particular customer. Finally, the more a salesperson visits a potential customer, especially if that customer has potential to give the salesperson a large volume of business, the more committed the salesperson becomes in trying to make the sale. However, this commitment does not last forever. Eventually, the salesperson realizes that persisting with the sale is useless and dissatisfying and therefore quits calling on that customer.

A salesperson that continues to approach customers in the same way unsuccessfully may be considered entrapped. Whether dealing with a sales encounter, setting up accounts, drawing up territories, etc., entrapment is staying with the same selling strategy, whereas changing the salesperson's strategy constitutes leaving the entrapment situation.

A number of decision problems have been shown to create entrapment including the dollar auction game (e.g., Shubik, 1971), games involving the solving of unsolvable jigsaw puzzles (e.g., Rubin and Brockner, 1975), counter games (e.g., Brockner, Shaw, and Rubin, 1979), and role-playing simulations (e.g., Staw, 1976). Each of these research paradigms have commonalities that are present in all entrapment situations. First, all subjects engage in some goal-directed behavior. Secondly, subjects are unsuccessful in their initial attempt to attain the goal and must have the choice to escalate their commitment in order to achieve the goal. The subject experiences conflict about the prudence of escalating commitment towards his/her goal. Finally, through the course of the experiment, the probability of attaining the goal is uncertain.

A description of the decision problems follows beginning with Shubik's (1971) dollar auction game. It concerns auctioning off a one dollar bill to an audience of two or more people. The person making the highest bid receives the dollar, paying the auctioneer the amount bid in return. In this case, the auction differs in that the person who finishes as the second highest bidder must also pay the auctioneer the amount bid while receiving nothing in return. The second highest bidder is always entrapped and bidding tends to go well past one dollar.

The puzzle procedure has been used by Rubin and Brockner (1975) and their colleagues (Rubin, Brockner, Small-Weil, and Nathanson, 1980; Nathanson, Brockner, Brenner, Samuelson, Countryman, Lloyd, and Rubin, 1982; Brockner, Nathanson, Friend, Harbeck, Samuelson, Houser, Bazerman, and Rubin, 1984). In each of these studies subjects were given an initial stake of money (e.g., \$4) for participating in the study. They were then asked if they would like to win an additional amount of money (e.g., \$10) for

solving the puzzle within a certain period of time. If the subjects wished not to participate in the puzzle solving task, they could leave the study at this point taking their initial stake of money with them. However, if they participated in the task, they could purchase puzzle pieces (e.g., Brockner, et. al., 1984) or extra solving time (e.g., Rubin and Brockner, 1975) using money from their initial stakes to win the additional amounts of money. After making investments in puzzle pieces and time, subjects would experience the conflict inherent in entrapment. Although they wanted to quit, they were compelled to continue in order to justify the time and money already spent on the finding of a solution to the puzzle.

The counter game is another procedure used by Rubin, Brockner, and their colleagues (Rubin, et. al., 1980; Brockner, Rubin, and Lang, 1981; Brockner, Rubin, Fine, Hamilton, Thomas, and Turetsky, 1982; Nathanson, et. al., 1982; Brockner, et. al., 1984). In this procedure, subjects are given an initial stake of money, usually \$5, and are told that they may keep their initial stake for just reading through the counter game instructions, or they could participate in the counter game and have a chance to earn more money. The game is set up in such a way that subjects are told that they have an opportunity to win a jackpot, usually \$3. Subjects are placed in front of an electronically controlled counter that marks off numbers one at a time, consecutively. When the number picked appears on the counter, the subject has won the jackpot. Subjects are told that the winning number is randomly generated by a computer and that they must pay an amount of money, usually one cent for each number ticked off by the counter before the winning number comes up. In effect, if the counter runs past 300, the subject stands only to lose money and no gain can completely cover the loss. At this point, the subject has become entrapped.

Research paradigms that seem best suited for studying entrapment in selling situations are role-playing simulations. Role-playing simulations have been used frequently by organizational behavior researchers to study entrapment (e.g., Staw, 1976; Staw and Fox, 1977; Staw and Ross, 1978; Fox and Staw, 1979; Conlon and Wolf, 1980; Caldwell and O'Reilly, 1982; Bateman, 1986; Davis and Bobko, 1986). These role-playing simulations

usually follow Staw's (1976) procedure. Subjects are typically presented with an investment scenario in which they have to allocate funds for a particular project. Subjects are then told that their initial allocation of funds failed to achieve the goals of the company. However, they are given another opportunity to invest more money in the same course of action or an alternative course of action. Subjects are usually given financial data, such as sales and earnings, as a base for their allocation decisions. There is usually a deepening decline in the profitability of the chosen course of action but an improvement in the unchosen course of action. Those subjects allocating a majority of funds to the failing course of action during the second investment decision are considered to be entrapped.

In the entrapment studies using role-playing simulations, seven achieved the entrapment effect, two did not. Four of these studies used the Adams and Smith financial decision case developed by Staw (1976; Staw and Fox, 1977; Fox and Staw, 1979; Bateman, 1986). The other five studies were composed of different scenarios. Since the author's study is a role-playing entrapment scenario, a more in-depth literature review follows.

There were some interesting findings among the seven studies reporting an entrapment effect. In the first empirical test of an entrapment effect using a role-playing simulation, Staw (1976) created a situation where losses could be recovered by committing resources to a particular plan of action. Subjects playing the role of a corporate financial officer were asked to allocate research and development (R&D) funds to one of two operating divisions of a medium-sized company. Both positive and negative feedback were given to subjects concerning their first allocation. Subsequently, subjects were asked to make a second allocation of R&D funds. There were also some subjects in this study who did not make an initial allocation decision but acted on the results of an initial decision made by another financial officer in the firm. The three major findings of the study were that: (1) more money was allocated to the declining division than the improving division in the second allocation; (2) more money was allocated to the initially chosen division in the

second decision when the initial decision was made by the subject rather than the other financial officer; and (3) more money was allocated for negative consequences when the subject made the initial allocation decision than in any of the other experimental cells.

Making an initial decision is an indication of personal responsibility for that decision.

Therefore, these findings suggest that by escalating a commitment of resources to a failing course of action, subjects seek to justify their initial allocation decisions.

As a follow-up to the Staw (1976) study, Staw and Fox (1977) assigned subjects to high and low responsibility conditions using the same type of role-playing simulation. However, all subjects received negative feedback on their initial allocation decisions, and they were asked to make investment decisions for three consecutive periods after the initial investment decision. The extra time periods were added to see if commitment under high responsibility would continue or if commitment could be built up over time, even when the subject was not responsible for the initial allocation decision. The effect of personal responsibility found in Staw's (1976) first study was replicated when only Time 1 data were considered. However, by the end of the last period, there was a significant decline in commitment over time for the high-responsibility subjects, while low-responsibility subjects maintained or slightly increased their commitments to their original courses of action.

Thus, looking at the results of these two studies, evidence of a completely self-justifying subject was lacking. In fact, it appears that a learning process is taking place in the Staw and Fox (1977) study and that when faced with continued negative feedback, subjects did not remain steadfast in their initial courses of action. This questions the persistence of entrapment over time.

Staw and Ross (1978) followed the above two studies with a third study where previous success and failure was manipulated along with causal information (endogenous versus exogenous causes) concerning investment failure. The endogenous cause of a failure given to subjects was that of a problem central to the completion of a particular project and one that was likely to persist. Results of this experiment indicated that when

failure pointed to an exogenous cause rather than an endogenous cause, more resources were allocated regardless of whether or not success or failure was manipulated. However, when subjects had been given a previous failure rather than a success, the results were more pronounced. These results seem to indicate that entrapment does not take place when prospects for future gain appear to be futile, and there seems to be little hope of recovering previous losses.

A fourth study by Fox and Staw (1979) placed all subjects in the high responsibility and negative feedback conditions described in the earlier Staw (1976) study. There were two manipulations: one for job security, being promoted to a temporary, trial, high insecurity position versus being promoted to a permanent position where performance evaluation for the task-at-hand is not critical to job security, and the other manipulation, where the subject's superiors were either highly supportive or highly critical of the subject's initial recommended course of action. The subjects became more committed to their original course of action in the high insecurity condition and in the condition where superiors were highly critical of the subject's initial decision. There was no interaction effect. Results of this study are highly suggestive of a mediating role of face-saving in an entrapment situation. It seems the more individuals are either insecure about their job or the more their superiors are critical of their individual performances, the more people feel the need to justify their previous decisions.

Other studies were conducted to build on the stream of research started by Staw and his colleagues. Conlon and Wolf (1980) used Staw and Ross's (1978) exogenous cause versus endogenous cause manipulation plus two other manipulations. The first manipulation dealt with ego-involvement where the subject was either highly involved with and devoted to the job position and content to remain in that position until retirement or the subject was less involved with the job position and saw the position only as a stepping stone to other positions in the firm. Another manipulation concerned the visibility of the subject's decisions to superiors. Under high visibility conditions, subjects were told that all of their decisions

would be highly scrutinized by superiors while in the low-visibility condition there was little or no scrutiny by superiors over decisions made by the subject. Results indicated an exogenous/endogenous X visibility interaction, where subjects placed in both an exogenous condition and a high visibility condition committed the most amount of resources to their initial course of action. Subjects placed in both the endogenous condition and the high visibility condition committed the least amount of resources to their initial courses of action. The above result was coupled with an involvement X exogenous/endogenous interaction where the exogenous, high-involvement condition produced the largest amount of commitment to an initial course of action and the endogenous, high-involvement condition produced the least amount of commitment to an initial course of action. These two interactions seem to suggest that something like ego-involvement could be a moderator of entrapment even though ego-involvement was not directly manipulated.

Finally, Conlon and Wolf (1980) classified subjects into two groups, calculators and non-calculators. Basically, calculators used mathematical rules to make their decisions while non-calculators did not use such mathematical rules to make their decisions. Subjects were more susceptible to entrapment if they were non-calculators than if they were calculators. An interaction between calculators/non-calculators and exogenous/endogenous variables was found. It was difficult to explain, however, the results suggested that individual difference variables may have an effect on entrapping behavior.

Caldwell and O'Reilly (1982) pursued Conlon and Wolf's (1980) idea that individual difference variables would have an effect on entrapping behavior. There were two interesting findings from this study. Using the typical choice and responsibility independent variables discussed in Staw (1976), Caldwell and O'Reilly (1982) found an entrapment effect using a dependent variable other than resource allocation. Secondly, an individual difference variable, self-monitoring, was used as a moderating variable. It was found that high self-monitors are more likely than low self-monitors to engage in information manipulation.

A final role-playing study giving support to the entrapment effect was conducted by Davis and Bobko (1986). Responsibility and choice were manipulated as in other entrapment studies. However, two other variables were manipulated. One variable consisted of positive versus negative decision framing while the second variable consisted of positive versus neutral mood states. Results indicated an interaction between responsibility and choice which seemed to be moderated by how the decision feedback was framed. The more the feedback was negatively framed, the more consistent the results were with previously successful entrapment research.

On the other hand, two role-playing studies did not get the entrapment effects as did the other seven studies. They deserve mention here. The first is a study by Bateman (1986) using the financial case simulation devised by Staw (1976). Explanations for why the entrapment effect was not realized may lie in the fact that probabilities of success and failure were manipulated, which resulted in taking away some of the uncertainties in the possible outcomes and the addition of a consulting team to evaluate the decision maker's past and future performance. Making this information obviously salient could affect the entrapping situation. The second study was also a role-playing simulation (Wagner and Wolf, 1987). Possible reasons that Wagner and Wolf did not realize the entrapment effect in their study are first, there was no clear cut loss in their scenario. By leaving the entrapping situation immediately the subjects could realize a \$20,000 profit. Second, staying with the same strategy in an entrapping situation assumes no changes. Revising the third act of a play is hardly the same decision as staying with the play as it has originally been written. Following the advice of critics and changing the third act is hardly remaining with the same strategy. And, third, there is a diffusion of responsibility since the decision maker is only responsible for a personal investment of 25 percent making him/her subject to the losses and gains of his/her partners and able to justify losses as happening to him/her as well as them.

Having explained entrapment and having reviewed the relevant literature, it is necessary to look at the possible theoretical underpinnings to the entrapment phenomenon.

Theoretical Explanations for Entrapment

There are several possible theoretical explanations for entrapment, including prospect theory, attribution theory, and self-justification or dissonance theory.

Prospect Theory

Both prospect theory and entrapment involve decision making under uncertainty. They both concern choices with either explicitly stated or implicitly implied probabilities of success or failure that yield some monetary outcome. In an analysis of decision making, prospect theory distinguishes between risky and riskless choices. Prospect theory has its foundations in expected utility theory. One major difference from expected utility theory is that choice alternatives are evaluated as either gains or losses relative to a subjective reference point determined by the decision maker rather than a final wealth state (Kahneman and Tversky, 1979).

The choice alternative process comes about in two phases: an editing phase followed by an evaluation phase. The editing phase is the initial phase in which the decision maker reconstructs, or frames, the decision problem into a simplified manageable form. This phase consists of three substantive and three stylistic operations. The three substantive operations are (1) coding, describing an outcome by its change in position from a neutral reference point, (2) segregation, isolating the risk involved in the decision, and (3) cancellation, eliminating components of the alternatives shared by each alternative (Kahneman and Tversky, 1979). It is in these three substantive operations where the decision maker either frames the problem positively or negatively. A positive frame means that the decision maker looks at the decision as one of evaluating gains and a negative frame means that the decision maker looks at the decision as one of evaluating losses. The

other three operations, combination, simplification, and detection of dominance, are tidying up operations that make the alternatives more manageable. The final phase, evaluation, is where the decision maker assigns a value to each of the alternatives under consideration in the editing process and then chooses the highest valued alternative. From this choice alternative process, prospect theory predicts that decision makers will tend to be risk averse when the decision environment is framed positively and risk seeking when the decision environment is framed negatively (Kahneman and Tversky, 1979; 1984).

Crucial to entrapment is the framing process. In an entrapment situation decisions are made from a negative frame. That is, an entrapment situation is automatically set up where a loss is experienced and the decision maker wants to regain or exceed a previous outcome's negative reference or starting point. In role-playing entrapment exercises (e.g., Staw, 1976), the exercise is stated in a way such that the decision maker loses money on his/her initial investment. A mental account is set up such that a transaction has taken place resulting in a loss (Kahneman and Tversky, 1984). Thus, a loss is framed by the decision maker.

When the decision is framed negatively, decision makers will be risk-seeking (Kahneman and Tversky, 1979; 1984). The question for the decision maker then becomes, how is continuing with the same course of action a risk-seeking decision. Under prospect theory, a decision maker has two basic decisions to make. The decision maker can either (1) lessen commitment to or withdraw from the previous course of action, or (2) maintain or escalate commitment to the previous course of action. Assuming that the initial strategy decision chosen has a success-failure record of no successes and one failure and that the alternative strategy not chosen has a success-failure record of no successes and no failures, all else being equal, following the course of the initial strategy decision is the riskier decision. The thought here is that a zero and one success-failure record has a greater probability of coming up a failure on a second try using the same strategy decision than a zero and zero success-failure record using an alternative strategy decision. With an initial

failure, the decision maker frames the strategy decision negatively when choosing to maintain or escalate commitment to the previous course of action. The decision maker's loss is below the original starting-point of the initial strategy decision. The decision maker wishes to recoup the losses all at once by continuing with the same course of action where the possibility for even greater losses exist. This is entrapment. On the other hand, with an initial failure, the decision maker frames the strategy decision maker frames the strategy decision positively when choosing to lessen commitment to or withdraw from a previous course of action. The decision maker's loss becomes the new reference point from which a decision is made. The decision maker has accepted the initial strategy decision as a sure loss with no greater loss possible from the initial decision. Thus, the new strategy decision starts from a neutral reference point. Then, looking at success-failure records when evaluating the initial and alternative strategies, the decision maker follows the less risky course of action, that is, lessening commitment to or withdrawing from the initial course of action. This is adaptive behavior.

Along the same lines of thought, decision makers may set up mental accounts of their decisions leading them to evaluate gains and losses in relative rather than in absolute terms (Kahneman and Tversky, 1984). When an individual has more than one option to evaluate, he/she sets up a mental account of the advantages and disadvantages of each option relative to some reference state. The option whose value of its advantages exceeds the value of its disadvantages will be the option chosen. Advantages and disadvantages can be assumed to be psychological. Therefore, if two options, relative to a reference point, can be looked at as one being previously successful and the other as being previously unsuccessful, the option chosen will depend on the setting up of the decision maker's mental account of the situation. If the unsuccessful option is chosen, it is probably due to the decision maker's high perceived loss of closing that mental account. This option lies below the reference point set up, placing the decision maker in a position of attempting to recoup losses. In other words, entrapment takes place. However, if the successful option is

chosen, it is probably due to the decision maker's low perceived loss of closing the unsuccessful option's mental account. This option lies above the reference point set up, placing the decision maker in a position of protecting gains. Thus, adaptive behavior takes place.

Since adaptive behavior is the opposite of entrapment, it is predicted that a possible explanation for adaptive behavior may have a foundation in prospect theory (Kahneman and Tversky, 1984). It is therefore predicted that an individual who practices adaptive behavior frames a decision or choice above a particular reference point, whereas an individual who does not practice adaptive behavior frames a decision below a particular reference point. If the frame of a decision or choice is above a particular reference point, it is said to be framed positively, and if the frame of a decision or choice is below a particular reference point, it is said to be framed negatively. Thus,:

Hypothesis 5: A salesperson or sales manager who frames a decision more positively will be more likely to practice adaptive behavior than a salesperson or sales manager who frames a decision less positively.

Attribution Theory

Attribution processes may also underlie the entrapment phenomenon. When people are engaged in achievement-related tasks, they look for explanations of their success or failure at the task (Heider, 1958). Heider stated that people have expectations of the outcomes of the task. When an outcome disconfirms an expectancy, the basis for the expectancy is called into question. According to Miller and Ross (1975), when a person expects to succeed at a task and success is confirmed, it is usually because that person believes that he/she possesses the prerequisite abilities necessary to achieve a successful outcome. Therefore, an explanation of that person's success is attributed to internal attributions of ability. On the other hand, failure would disconfirm the expectancy, leading to an external attribution, such as luck or task difficulty. This could be interpreted as a protection of self-esteem. That is, a person would be motivated to take credit for success

and deny blame for failure (Bradley, 1978). Bradley also found that there are times when a person might want to accept some blame for a failure when he/she is told that performance is the major object of study. For example, it may be more self-serving to be modest about a successful performance, especially if success is so obvious it cannot be denied (Fiske and Taylor, 1984). On the other hand, an individual may fear that taking too much credit for a successful performance will be seen by others as self-serving, he/she may take less credit for the success. Also, if future performances are to be scrutinized by others, an individual may temper his/her successes. In the above cases, ego or self-esteem is protected such that the person does not present himself/herself unrealistically positive.

In entrapment situations, the initial decision results in a negative outcome. This will influence expectancies of future performance. Weiner (1980) states that expectancy shifts after success and failure depend upon the perceived stability of the cause of the prior outcome. In other words, success ascribed to ability should lead to an even greater expectancy of failure. To avoid the failure, the person should withdraw from the entrapping situation. This might entail making a decision to change the previous course of action. On the other hand, failure attributed to unstable causes, such as effort or luck, should cause little expectancy shift for effort and almost no expectancy shift for luck (Weiner, 1980). Thus, a person ascribing bad luck to an entrapping situation should not alter his/her course of action in a subsequent decision.

In summary, a person ascribing failure to stable causes should withdraw from the entrapping situation by withdrawing from the situation. This might entail coming up with a new strategy. This is adaptive behavior. A person ascribing failure to unstable causes should remain in the new entrapping situation, especially if the attribution is made to bad luck. This is entrapment.

Hypothesis 6(A): A salesperson or sales manager attributing more of a failure for a previous course of action to a stable cause, specifically (A1) task difficulty and/or (A2) ability, should be more likely to practice adaptive behavior than a salesperson or sales manager who attributes less of a failure for a previous course of action to stable causes.

Hypothesis 6(B): A salesperson or sales manager attributing more of a failure for a previous course of action to an unstable cause, specifically (B1) effort and/or (B2) luck, should be less likely to practice adaptive behavior than a salesperson or sales manager who attributes less of a failure for a previous course of action to unstable causes.

Dissonance Theory

Dissonance theory may also explain entrapment. "Dissonance is a negative drive state which occurs whenever an individual simultaneously holds two cognitions (ideas, beliefs, opinions) which are psychologically inconsistent (Aronson, 1976, pp. 5-6)". Because dissonance is considered to be unpleasant, people try to reduce it by adding more consonant cognitions or by changing one or both of the dissonant cognitions.

Dissonance theory predicts that an individual's attitude toward a task or a decision made will be biased in a positive direction in order to justify his/her previous behavior (Staw, 1976; 1981). This biasing of attitudes occurs because the decision maker feels personally responsible for the negative consequences of the decision made and the consequences of the decision are difficult or impossible to undo. Decision makers who are scrutinized or evaluated by important others may attend to events or acts in ways to protect their own self-images. In other words, they engage in face-saving activities. Therefore, the decision makers commit more resources toward a failing course of action in the hope of recouping their losses and proving to important others that their initial decision was ultimately the correct decision.

In conclusion, it seems that a viable way to study whether one will or will not practice adaptive behavior is through either the attribution or dissonance explanations of the entrapment phenomenon. Previous research has not been able to separate the two explanations from each other as they make the same predictions (Greenwald, 1975). Personal responsibility should have an effect on entrapment in two ways. First, when a person feels personally responsible for a previous decision, he/she should continue in the same course of action. Also, if a person follows a self-serving bias, he/she should continue

investing in the same course of action if a superior order him to do so in order to protect his/her job or position in the company. From this conclusion, the hypothesis follows:

Hypothesis 7: A salesperson or sales manager will be less likely to practice adaptive behavior the more personally responsible the salesperson or sales manager feels about the sales decision.

The study that follows will utilize the role-playing methodology of entrapment and, at the same time, test the attribution and dissonance theory explanations for entrapment.

CHAPTER III

METHODOLOGY

Design Overview

The goal of the study was to investigate various factors that may influence the tendency of sales personnel or sales management to engage in adaptive behavior. Table 4 presents the hypotheses derived in Chapter II that the study seeks to test.

In the study subjects role-played that they were sales personnel who had to make decisions concerning how they would allocate sales personnel to different divisions within a company. All subjects made two decisions in the role-playing exercise. After making the first personnel allocation decision, all subjects received failure feedback. They then received additional information from which they had to make a second allocation decision. The dependent variable in the study was the number of personnel allocated to each of the two business divisions within the company in the second decision. Adaptive behavior would be indicated by the amount of manpower allocated to the unchosen division of the company after receiving failure feedback.

In the study, a total of seven independent variables were investigated. Four of the variables were measures of individual difference constructs. The four individual difference variables were: self-monitoring, androgyny, and two locus of control constructs; interpersonal control and personal efficacy. Each of these variables was assessed six weeks prior to the actual conduct of the role-playing exercise.

In addition to assessing the four correlational variables, three independent variables were manipulated with one becoming a self-selection variable. Each independent variable

TABLE 4
HYPOTHESES OF THE STUDY

Hypothesis 1: A salesperson or sales manager high in self-monitoring will be more likely to practice adaptive behavior than a salesperson or sales manager low in self-monitoring.

Hypothesis 2: A salesperson or sales manager that exhibits more androgynous traits will be more likely to practice adaptive behavior than a salesperson or sales manager with less androgynous traits.

Hypothesis 3: A salesperson or sales manager that exhibits more internal interpersonal control will be more likely to practice adaptive behavior than a salesperson or sales manager with less internal interpersonal control.

Hypothesis 4: A salesperson or sales manager that exhibits more personal efficacy will be more likely to practice adaptive behavior than a salesperson or sales manager exhibiting less personal efficacy.

Hypothesis 5: A salesperson or sales manager who frames a decision more positively will be more likely to practice adaptive behavior than a salesperson or sales manager who frames a decision less positively.

Hypothesis 6(A): A salesperson or sales manager attributing more of a failure for a previous course of action to a stable cause, specifically (A1) task difficulty and/or (A2) ability, should be more likely to practice adaptive behavior than a salesperson or sales manager who attributes less of a failure for a previous course of action to stable causes.

Hypothesis 6(B): A salesperson or sales manager attributing less of a failure for a previous course of action to an unstable cause, specifically (B1) effort and/or (B2) luck, should be more likely to practice adaptive behavior than a salesperson or sales manager who attributes more of a failure for a previous course of action to unstable causes.

Hypothesis 7: A salesperson or sales manager will be less likely to practice adaptive behavior the more personally responsible the salesperson or sales manager feels about the sales decision.

examined a component of the personal responsibility explanation for entrapment. Because of the difficulty of examining seven variables simultaneously, a decision was made to perform a series of analyses. A median split was conducted on each individual difference variable. Respondents were divided into groups composed of the lowest and the highest scoring on each of the four scales. A series of four analysis of variance procedures were run, one 3 X 2 X 2 design for androgyny and three 2 X 2 X 2 designs for the other individual difference variables. In this way, the relationship between each individual difference variable and the dependent variable could be ascertained. In addition, any potential interaction effects between the blocking and the manipulated variables could be examined. A potential problem with this approach was that of alpha inflation. With the number of analyses performed the probability of Type I errors is increased. Because of this potential problem, it was decided to focus on identifying general patterns of results. Isolated significant effects were treated highly cautiously.

All four individual difference variables were additionally assessed simultaneously with the other independent variables treating the four individual difference variables as covariates. The four individual difference variable scores could not be controlled during the role-playing exercise, however it was suspected that these variables affected the dependent variable, the allocation of personnel to the successful division. Using this covariance analysis, the sensitivity of the F-test is increased and the covariates were no longer buried in the error variance.

The two manipulated variables dealt with a personal responsibility explanation of entrapment or adaptive behavior. The first independent variable dealt with whether the sales manager remained in the same company for two decision periods or went to another company after one decision period. The switch to another company was manipulated by telling subjects that they had been hired by a competitor facing similar problems. It was expected that personal responsibility would be lower when the person was hired into the second company. The second independent variable dealt with the subject, as National

Sales Manager of F&M Company, making the first sales force allocation decision as opposed to a previous National Sales Manager making the first allocation decision. It was expected that personal responsibility would be lower when the first sales force allocation decision was made by a previous national sales manager. A more detailed discussion of the independent variables follows in the treatment variable section.

These manipulations were used to test hypothesis 7, concerning personal responsibility and a dissonance explanation for entrapment or adaptive behavior. Figure 4 illustrates the adaptive behavior or entrapment predictions in the four cells by magnitude. The more plusses, the higher the magnitude of entrapment or the least likely that adaptive behavior would be practiced. Two main effects were predicted, coinciding with previous findings using the role-play methodology (e.g., Staw, 1976). That is, the two independent variables discussed earlier should show more adaptive behavior when personal responsibility was the lowest and more entrapment when personal responsibility was the greatest. Therefore, cell 4, having the least amount of personal responsibility attached to it, should show the most amount of adaptive behavior, while cell 1, having the most amount of personal responsibility attached to it, should show the least amount of adaptive behavior.

Another important variable was the self-selection variable. The self-selection variable was created by the subjects' choice between the forced options in the first decision. Subjects were given failure feedback no matter which option they chose. This was done in order to allow the subject to feel that he/she had some element of choice in the initial decision. Feedback had to be couched in terms of the chosen alternative in order to get the decision maker to focus on his/her decision as Staw (1976) did. In an initial analysis, subject choice was treated as a third independent variable. It was expected that the self-selection variable would not interact with the two independent variables. If the analysis supported this expectation, the variable would be collapsed as has been done in previous entrapment studies (e.g., Staw, 1976). A more detailed description of the study and its independent and dependent variables follows.

	STAY IN ORIGINAL COMPANY	GO TO NEW COMPANY
SUBJECT MAKES INITIAL DECISION	+++ (1)	++ (2)
OTHER MAKES INITIAL DECISION	++ (3)	+ (4)

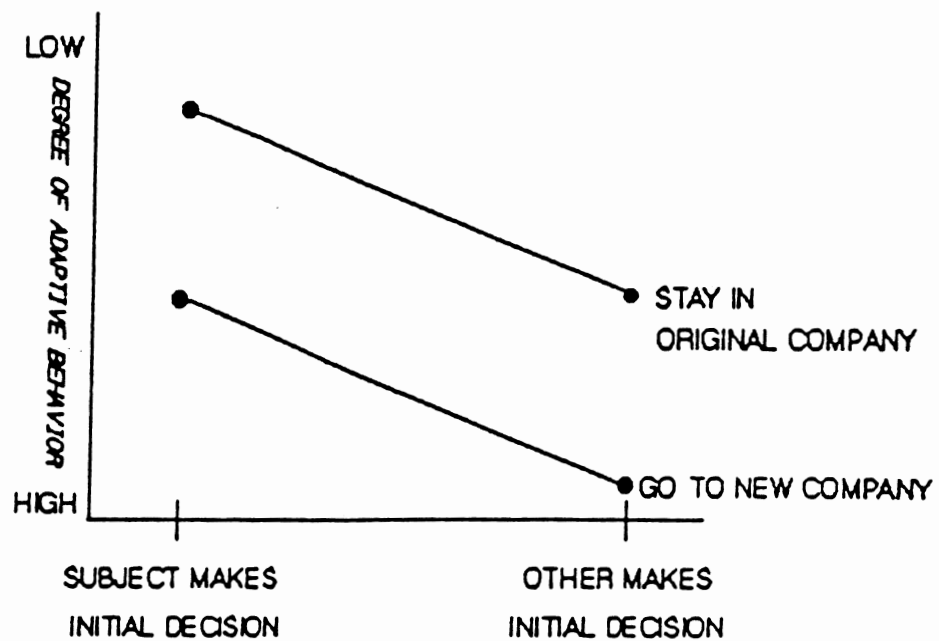


Figure 4. Adaptive Behavior Predictions by Magnitude

Subjects

Subjects were undergraduate students at the College of Business Administration at Oklahoma State University. Subjects were randomly assigned to the experimental conditions. For their participation in the study, subjects received extra credit grade points in their respective introduction to marketing and consumer behavior courses. Subjects who agreed to participate in the study answered a pre-test questionnaire in their respective classes. Then, they were asked to meet in smaller groups at a later date to participate in the role-playing simulation. Care was taken not to allow students who were taking more than one marketing course to participate more than once.

Study Design

The design of the study was a treatment by blocks design (Keppel, 1982). This design was chosen because it allowed individual difference variables to be identified as important sources of variance.

The present study consisted of seven independent variables (made up of two treatment and four blocking variables, and a self-selection variable) and one dependent variable. In the following sections each of these variables will be discussed along with their influential hypotheses.

Self-Selection Variable. The self-selection variable was the choice of the initial forced strategy alternative. "Strategy alternative one" concerned choosing the industrial products division of the company for the placement of sales personnel, and "strategy alternative two" concerned choosing the consumer products division of the company for the placement of sales personnel. Each of the two strategy alternatives, when initially chosen, affected the information given to the subject when making the second strategy decision. No matter which alternative was selected, the type of information given to the subject was of a failing nature. It was hoped that the two strategy alternatives would be sufficiently similar so that subjects would perceive little difference between the two strategy alternatives. A preliminary

analysis was conducted to test for differences between the two alternatives. If no main effects occurred, then it would be possible to collapse this variable (Staw, 1976).

Treatment Variables – Personal Responsibility. The personal responsibility variables were used to get at a dissonance explanation of entrapment. An explanation for these variables state that a person would stay in a particular course of action in order to protect his/her own self-image or to engage in face-saving activities.

The first manipulation placed subjects in the same company for two decision periods or subjects spent one decision period in one company and a second decision period in another similar company. Personal responsibility should be greatest when the subject makes two decisions for a single company. In this condition, the subject should feel the most personal responsibility because the subject's initial decision should have ramifications for future decisions. In the second condition, having just entered the second company, the subject would see that all previous decisions had been made and executed prior to his/her employment. The subject would perceive no control in the decision-making process because he/she never played a part in the decision-making process or the execution of the decision. Having no relationship with the second company prior to employment, the subject should feel very little or no personal responsibility for previous decisions. This coincides with Cooper's (1971) work on dissonance and personal responsibility. Cooper stated that a person would feel dissonance for an action only to the extent that he/she felt personally responsible for that action.

The second manipulated variable placed subjects in a position where either the initial personnel allocation decision was made by someone other than the subject or the subject made two personnel allocation decisions. Where someone other than the subject made the initial allocation decision, that individual was no longer holding that same position during the second allocation decision in the subject's current company. It was expected that personal responsibility would be lower when the first personnel allocation decision was made by a former National Sales Manager other than the subject. Again, the subject would perceive no

control over past actions in the decision-making process having not been a part of that decision. With no input into the initial personnel allocation decision, the subject should feel very little or no personal responsibility for any previous decisions made by the previous National Sales Manager. Any decision that was made for the subject allowed the subject to avoid personal responsibility, thus allowing the subject to keep himself/herself free from entrapment. It was therefore predicted that the least amount of entrapment to a course of action would come when the subject felt the least amount of personal responsibility.

Other Variables – Individual Difference Variables. Four individual difference variables were used in the present study. The four variables were assessed using previously validated personality scales.

The first of the four individual difference variables assessed in a pretest was that of self-monitoring. Hypothesis 1 predicted that a salesperson assessed as high in self-monitoring would be more likely to practice adaptive behavior than a salesperson assessed as low in self-monitoring. Self-monitoring was assessed using a revised version of Snyder's (1979) Self-Monitoring Scale (Lennox and Wolfe, 1984). This scale consisted of thirteen statements of which seven statements measured the ability to modify self-presentation and six statements measured sensitivity to expressive behavior of others.

A second individual difference variable to be assessed in a pretest was that of androgyny. Hypothesis 2 stated that a salesperson exhibiting more androgynous traits would be more likely to practice adaptive behavior than a salesperson with less androgynous traits. The instrument used to assess androgyny was Bem's (1974) Sex-Role Inventory.

The third and fourth individual difference variable to be assessed in a pretest concerned locus of control. Two hypotheses were developed (hypotheses 3 and 4) based upon two dimensions of locus of control. Hypothesis 3 stated that a salesperson exhibiting more internal interpersonal control would be more likely to practice adaptive behavior than a salesperson with less internal interpersonal control. A second hypothesis 4 stated that a

salesperson exhibiting high personal efficacy would be more likely to practice adaptive behavior than a salesperson exhibiting low personal efficacy. Paulhus (1983) has developed an internal locus of control scale of which ten statements assess internal interpersonal control and ten statements assess personal efficacy.

Dependent Variable. The dependent variable employed in the present study was the subject's choice of how to allocate new personnel between the industrial products division and the consumer products division in the second choice decision of the entrapment simulation (e.g., Staw, 1976). Interval scaled data were used as a measure of the personnel allocation in the territory. The initial decision for all subjects consisted of whether to allocate an additional 25 new sales personnel to either the industrial products or consumer products division. The second decision consisted of an additional 50 new sales personnel allocation to be divided up between the two divisions in any way that the subject liked as long as all sales personnel were allocated.

Concerning all hypotheses, if a subject became entrapped or nonadaptive during the second decision sequence, the subject was viewed as not adapting well and would most likely not practice adaptive behavior. On the other hand, if the subject did not become entrapped, the subject was considered to adapt well and most likely be one who would practice adaptive behavior. Specifically, main effects were predicted for the two personal responsibility variables and the four individual difference variables. The less personal responsibility, the higher in self-monitoring, the more androgynous, and the greater internal locus of control, the more one should allocate sales personnel to the successful division; in other words, the more one should be motivated to practice adaptive behavior.

Procedure

General Instructions to Subjects. Subjects were told that they would be participating in a sales allocation role-playing exercise that was developed and used by a large sales organization in its sales training program. They were told that the exercise had been found

to be a successful learning device. Subjects were also told that the purpose of the study was to see whether this exercise could be successfully developed as part of a selection device for hiring new graduates. Hopefully, this description would help secure high involvement of the subjects participating in the study.

Before beginning the role-playing exercise, subjects were asked to fill out a questionnaire consisting of three previously established, reliable personality scales. Two weeks later, subjects were asked to sign up for part two of the study, which took place six weeks after part one. This entailed a meeting outside of the classroom in groups of 6 to 16 students. At the classroom meeting subjects were told that they could bring calculators or any other kinds of aids that they thought could help them solve the role-playing exercise. This meeting took place approximately six weeks later. At this meeting, subjects were given the F&M Sales Force Allocation Case.

The F&M Sales Force Allocation Case

Overview

The F&M Sales Force Allocation Case initially described a hypothetical corporate firm in 1981. Some subjects were told that they were the National Sales Manager for the F&M Company and that the purpose of this case was to examine the effectiveness of business decision making under various amounts of information. Materials given to the subjects for making their sales force allocation decision consisted of a brief description of the F&M Company, a scenario describing the case, and a financial history of sales and earnings of the F&M Corporation over the past ten years. After reviewing these materials, subjects in the two decision conditions were asked to make a 25 person allocation to only one of two corporate divisions, a consumer products division or an industrial products division. After making that decision, subjects were asked to write a short paragraph defending their allocation decision. This was done in order to enhance the personal responsibility felt by subjects for their allocation decisions. Following this decision, the subjects were told that

their initial decisions were being evaluated and that they would be making an additional sales force allocation decision based on their previous decision or new circumstance in which they had found themselves. For this second decision all subjects were given failure information for the corporate division they had previously chosen and were then asked to make another sales force allocation decision using a 50 person allocation that now could be divided up between the two corporate divisions in any way the subject saw fit to do it. To satisfy the second independent variable, for this decision, subjects not making an initial manpower allocation were brought into the study. Also, at this point, subjects were told that they either remained in the same company or had taken a similar position with a similar company. This satisfied the first independent variable. Information used to make this second decision consisted of financial data over a five year period from 1981 to 1986. Following this decision, subjects were asked to again write a short paragraph defending their allocation decision. Finally, subjects were asked to fill out a post-experimental questionnaire, which included questions about the case and questions used to get at possible dissonance, attribution, and prospect theory explanations of the entrapment phenomenon and some insights into the broad concept of adaptive behavior.

Post-Test Questionnaire

The post-test questionnaire consisted of manipulation checks for personal responsibility (the treatment variables) and questions that addressed the issue of dissonance theory, attribution theory, and prospect theory. All of these variables were assessed from 7-point Likert-type or semantic differential scales. Each scale was anchored by agree and disagree.

When the subject completed the post-test questionnaire, all materials were taken up. At this point, the subjects were thanked for their cooperation and participation and the study ended. The appendix contains the post-test questionnaire items used in the study.

CHAPTER IV

RESULTS

The purpose of this chapter is to present the results of the analyses. First, the manipulation check for personal responsibility and the median splits for the four individual difference variables are discussed. Then, findings pertaining to each of the study's hypotheses are presented.

As a help to the reader, Table 5 defines all symbols used in the upcoming tables and figures.

Manipulation Check

The data were first analyzed to determine if the subjects perceived the manipulation of personal responsibility in the expected manner. Three measures were taken of the personal responsibility construct, which was used as a manipulation check of the variations in the level of personal responsibility. Subjects were asked to rate their felt personal responsibility for the allocation decision, their accountability for the allocation decision, and how their superiors will perceive their personal responsibility for the allocation decision. Responses to the questions assessing the personal responsibility construct were summed to form an index of subjects' perceptions of the construct. Coefficient alpha was computed for the personal responsibility construct to obtain an assessment of internal consistency. The internal reliability was good with alpha equaling .8094.

Table 6 presents the results of the manipulation check. The results revealed that whether or not the subject made the initial allocation decision strongly influenced subject

TABLE 5
SYMBOLS USED IN THE STUDY

<u>SYMBOL</u>	<u>TYPE OF VARIABLE</u>	<u>EXPLANATION</u>
CONIND	SELF-SELECTION	1-CONSUMER DIVISION AS INITIAL CHOICE 2-INDUSTRIAL DIVISION AS INITIAL CHOICE
DECONE	INDEPENDENT	1-INITIAL DECISION MADE BY SOMEONE OTHER THAN THE SUBJECT 2-INITIAL DECISION MADE BY THE SUBJECT
EMPLOY	INDEPENDENT	1-SECOND DECISION MADE FOR ORIGINAL FIRM, F&M 2-SECOND DECISION MADE FOR NEW FIRM, ABC
ADAPT	DEPENDENT	(0-50) ALLOCATION OF SALES PERSONNEL TO THE SUCCESSFUL DIVISION
SELF	COVARIATE & INDEPENDENT	1-LOW SELF-MONITOR 2-HIGH SELF-MONITOR
ANDRO	COVARIATE & INDEPENDENT	1-ANDROGYNOUS CHARACTERISTICS 2-MALE-DOMINANT CHARACTERISTICS 3-FEMALE-DOMINANT CHARACTERISTICS
INTER	COVARIATE & INDEPENDENT	1-LOW INTERNAL INTERPERSONAL CONTROL 2-HIGH INTERNAL INTERPERSONAL CONTROL
EFF	COVARIATE & INDEPENDENT	1-LOW PERSONAL EFFICACY 2-HIGH PERSONAL EFFICACY
ALLO	INDEPENDENT	1-LESS THAN 25 PEOPLE ALLOCATED TO THE PREVIOUSLY SUCCESSFUL CONDITION. 2-25 OR MORE PEOPLE ALLOCATED TO THE PREVIOUSLY SUCCESSFUL CONDITION.
Q1	DEPENDENT	(1-7) PERSONAL RESPONSIBILITY VARIABLE
Q2	DEPENDENT	(1-7) LUCK--ATTRIBUTION THEORY
Q3	DEPENDENT	(1-7) DISSONANCE THEORY
Q4	DEPENDENT	(1-7) PROSPECT THEORY
Q5	DEPENDENT	(1-7) ABILITY -- ATTRIBUTION THEORY
Q6	DEPENDENT	(1-7) EFFORT -- ATTRIBUTION THEORY

TABLE 5 (Continued)
 SYMBOLS USED IN THE STUDY

<u>SYMBOL</u>	<u>TYPE OF VARIABLE</u>	<u>EXPLANATION</u>
Q7	DEPENDENT	(1-7) DISSONANCE THEORY
Q8	DEPENDENT	(1-7) ABILITY -- ATTRIBUTION THEORY
Q9	DEPENDENT	(1-7) PERSONAL RESPONSIBILITY VARIABLE
Q10	DEPENDENT	(1-7) LUCK -- ATTRIBUTION THEORY
Q11	DEPENDENT	(1-7) TASK DIFFICULTY -- ATTRIBUTION THEORY
Q12	DEPENDENT	(1-7) DISSONANCE THEORY
Q13	DEPENDENT	(1-7) EFFORT -- ATTRIBUTION THEORY
Q14	DEPENDENT	(1-7) TASK DIFFICULTY -- ATTRIBUTION THEORY
Q15	DEPENDENT	(1-7) DISSONANCE THEORY
Q16	DEPENDENT	(1-7) TASK DIFFICULTY -- ATTRIBUTION THEORY
Q17	DEPENDENT	(1-7) EFFORT -- ATTRIBUTION THEORY
Q18	DEPENDENT	(1-7) PERSONAL RESPONSIBILITY VARIABLE
Q19	DEPENDENT	(1-7) ABILITY -- ATTRIBUTION THEORY
Q20	DEPENDENT	(1-7) PROSPECT THEORY
PROS	DEPENDENT	(1-9) PROSPECT THEORY
RESP	MANIPULATION CHECK	COMPOSITE -- SUMMED INDEX OF Q1+Q9+Q18
ABIL	DEPENDENT	COMPOSITE -- SUMMED INDEX OF Q5+Q8+Q19
EFFT	DEPENDENT	COMPOSITE -- SUMMED INDEX OF Q6+Q13+Q17

TABLE 6

ANALYSIS OF VARIANCE: THE MANIPULATION CHECK FOR
PERSONAL RESPONSIBILITY -- ITS SIGNIFICANT MEANS

<u>SOURCE</u>	<u>DF</u>	<u>SS</u>	<u>F</u>	<u>PR<F</u>
DECONE	1	637.1158	41.64	0.0001
CONIND	1	9.1213	0.60	0.4418
EMPLOY	1	52.8861	3.46	0.0658
DECONE*CONIND	1	6.9630	0.46	0.5014
CONIND*EMPLOY	1	66.5990	4.35	0.0394
DECONE*EMPLOY	1	0.8050	0.05	0.8190
DECONE*CONIND*EMPLOY	1	8.0588	0.53	0.4696

MEANS FOR THE DECONE MAIN EFFECT

<u>CONDITION</u>	<u>N</u>	<u>MEAN</u>
DID NOT MAKE INITIAL DECISION	53	9.887
MADE INITIAL DECISION	59	14.610

MEANS FOR THE CONIND X EMPLOY INTERACTION EFFECT

<u>CONIND CONDITION</u>	<u>EMPLOY CONDITION</u>	<u>N</u>	<u>MEAN</u>
CONSUMER DIVISION	SAME FIRM	25	13.320
CONSUMER DIVISION	NEW FIRM	21	11.048
INDUSTRIAL DIVISION	SAME FIRM	38	12.395
INDUSTRIAL DIVISION	NEW FIRM	28	12.500

perceptions of personal responsibility ($p < .0001$). However, whether or not the subject remained in the initial company for the second allocation decision only marginally influenced subject perceptions of personal responsibility ($p < .0658$). Interestingly enough, there was a significant interaction effect between the company in which the second allocation was made and the division chosen for the first allocation ($p < .0394$). This was the first indication that the two company divisions may have been perceived differently. Separate analyses were then run on the two divisions. In the consumer division, the company the second allocation was made in influenced subject perceptions of personal responsibility ($p < .0147$), while there was no influence in the industrial division ($p < .8589$).

Next, the four individual difference variables, androgyny, self-monitoring, interpersonal control, and personal efficacy, were classified using median splits. The last two variables are two aspects of locus of control.

Median Splits

Androgyny

The instrument used to assess androgyny was Bem's (1974) Sex-Role Inventory. The inventory consisted of 20 traits classified as masculine, 20 traits classified as feminine, and 20 traits classified as neutral. As in previous uses of the Sex-Role Inventory, the neutral traits were not used to make classifications (e.g., Wiggins and Holzmueller, 1981). Each of the traits measured used a seven-point scale in which one represented showing very little or none of the trait considered to seven, having a great amount of the trait considered. A median split was conducted on the 20 masculine traits and the 20 feminine traits, separately. The median score for the feminine traits was 4.95 and the median score for the masculine traits was 5.10. Any individual score over 4.95 for the feminine traits and any individual score over 5.10 for the masculine traits was classified as high in feminine traits and masculine traits, respectively. Those individual mean scores below and equal to the median scores were considered low in feminine traits and masculine traits, respectively.

Taking the results of the two scales, subjects were classified into four groups. An individual scoring high in masculine traits and low in feminine traits was classified as male-dominated. An individual scoring high in feminine traits and low in masculine traits was classified as female-dominated. Finally, an individual scoring high in both masculine and feminine traits was considered androgynous. There were a few subjects who scored low in both masculine and feminine traits who could have been classified as undifferentiated. However, noticing that these subjects had mean scores above 4.00 in both masculine and feminine traits, a decision was made to classify the undifferentiated subjects as androgynous. In the end, 53 subjects were classified as androgynous, 30 subjects were classified as male-dominated, and 29 subjects were classified as female-dominated.

Self-Monitoring

The instrument used to assess self-monitoring was Lennox and Wolfe's (1984) revised self-monitoring scale. A seven-point scale ranging from highly disagree to highly agree was used by subjects in response to the thirteen items that made up the instrument. Total scores on the items ranged from 35 to 86. Three subjects did not complete the self-monitoring scale and were dropped from the self-monitoring part of the analysis. A median split was then conducted on the remaining subjects' scores. The median score was 65. Those subjects scoring 65 or less were classified as low self-monitors and those subjects scoring 65 or more were classified as high self-monitors. There were 61 low self-monitors and 48 high self-monitors.

Internal Interpersonal Control and Personal Efficacy

Internal interpersonal control and personal efficacy were measured using two dimensions of Paulhus's (1983) locus of control scale. Both scales consisted of ten items each. A seven-point scale ranging from highly disagree to highly agree was used by subjects in response to the ten items that made up each instrument. Total scores on the

items of the interpersonal control scale ranged from 26 to 68. The median score was 50. Those subjects scoring 50 or less were classified as low on the interpersonal control scale while those scoring 51 or more were classified as high on the interpersonal control scale. Fifty-four subjects were classified as low on the interpersonal control scale while 58 were classified as high on the interpersonal control scale. On the personal efficacy scale, total scores on the ten-item instrument ranged from 31 to 69. The median score was 52. Subjects scoring 52 or less were classified as low on the personal efficacy scale while subjects scoring 53 or more were classified as high on the personal efficacy scale. Fifty-two subjects were classified as low on the personal efficacy scale while 60 were classified as high on the personal efficacy scale.

Having presented the manipulation check and the median splits for the individual difference variables, findings for the study's hypotheses are presented.

Findings for the Hypotheses

Findings for the hypotheses are presented in three parts. The first part looks at the independent variables and their effects on the dependent variable -- the allocation of sales personnel to the previously successful division. The second part looks at the first four hypotheses dealing with the relationship between the practice of adaptive behavior and each of the four individual difference variables. Initially, all four individual difference variables were assessed simultaneously as covariates with the other independent variables in the study. Then each individual difference variable was assessed separately as blocking variables. Finally, the third part consists of the assessment of the final three hypotheses, looking for a theoretical explanation for the practice of adaptive behavior.

The Independent Variables

In the beginning, there were two independent variables, a self-selection variable, and four covariates used to assess the dependent variable -- the allocation of sales personnel to

the previously successful division. The first independent variable dealt with whether or not the subject made the first allocation decision. A second independent variable dealt with whether the subject remained in the same company for two decision periods or went to another company after one decision period. The self-selection variable was created by the subject's choice between the forced options in the first decision (where to allocate all 25 additional personnel). Finally, the four individual difference variables, androgyny, self-monitoring, interpersonal control, and personal efficacy, were used as covariates.

In the initial analysis, the analysis of variance procedure was used. A 2 X 2 X 2 design with four covariates was employed. Table 7 presents a summary of the results. There was a main effect for the self-selection variable ($F(1,111)=12.35$, $p<.0007$) on the dependent variable. The means show that when the consumer products division was the recipient of all additional personnel in the first allocation decision ($M=24.500$), subjects tended to adapt more in their allocation of additional personnel in the second allocation decision than when the industrial products division was chosen as the recipient of all additional personnel in the first allocation decision ($M=15.742$). Thus, when the consumer products division was initially chosen, the allocation of personnel in the second allocation decision tended to go more towards allocating the majority of personnel to the industrial products division, which was more successful between decision periods one and two. On the other hand, when the industrial products division was initially chosen, the allocation of personnel in the second allocation decision tended to stay more with the industrial products division than when the consumer products division was chosen first.

There was also an interaction effect between who made the first allocation decision and the division chosen for the first allocation of personnel ($F(1,111)=5.37$, $p<.0225$) on the dependent variable. An examination of the means, as presented in Figure 5, shows that when the subject did not make the first allocation decision, if the division chosen for the initial allocation of personnel was the consumer division, the most adaptation took place in the second allocation decision among the four groups ($M=26.000$). In other words, more

TABLE 7

ANALYSIS OF VARIANCE: ALL INDIVIDUAL DIFFERENCE COVARIATES
AND THEIR SIGNIFICANT MEANS

<u>SOURCE</u>	<u>DF</u>	<u>SS</u>	<u>F</u>	<u>PR<F</u>
DECONE	1	60.3434	0.30	0.5867
CONIND	1	2506.0481	12.35	0.0007
EMPLOY	1	70.0540	0.35	0.5582
ANDRO	1	249.5985	1.23	0.2701
SELF	1	810.2786	3.99	0.0484
INTER	1	3.3220	0.02	0.8984
EFF	1	84.3816	0.42	0.5205
DECONE*CONIND	1	1090.6296	5.37	0.0225
CONIND*EMPLOY	1	13.1028	0.06	0.7999
DECONE*EMPLOY	1	493.5190	2.43	0.1220
DECONE*CONIND*EMPLOY	1	110.4983	0.54	0.4623

MEANS FOR THE CONIND MAIN EFFECT

<u>CONDITION</u>	<u>N</u>	<u>MEAN</u>
CONSUMER DIVISION	46	24.500
INDUSTRIAL DIVISION	66	15.742

MEANS FOR THE DECONE X CONIND INTERACTION EFFECT

<u>DECONE CONDITION</u>	<u>CONIND CONDITION</u>	<u>N</u>	<u>MEAN</u>
NOT MAKE INITIAL DECISION	CONSUMER DIVISION	27	26.000
NOT MAKE INITIAL DECISION	INDUSTRIAL DIVISION	26	11.077
MAKE INITIAL DECISION	CONSUMER DIVISION	19	22.368
MAKE INITIAL DECISION	INDUSTRIAL DIVISION	40	18.775

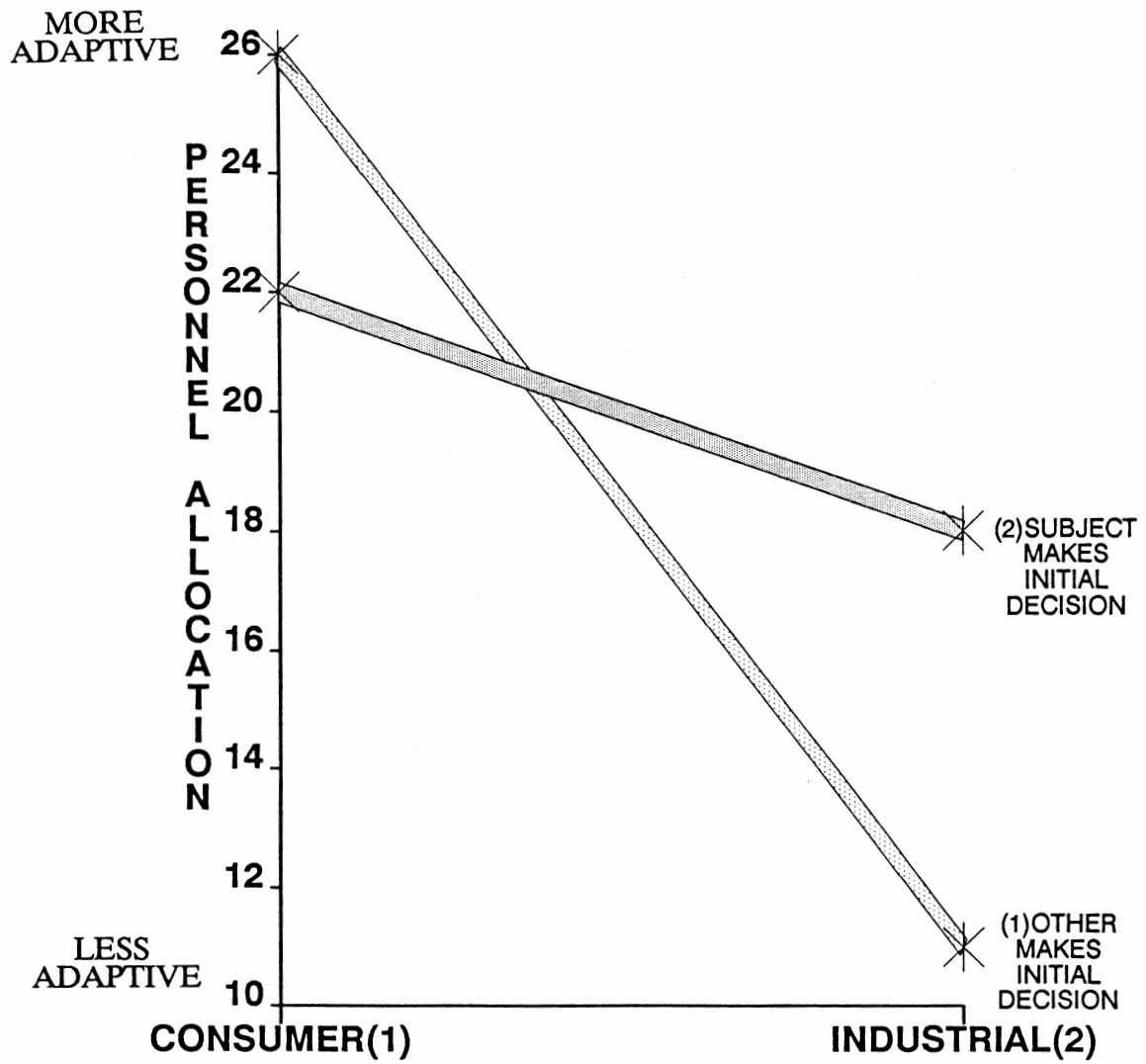


Figure 5. DECONE X CONIND Interaction

personnel were allocated to the alternative division in the second allocation decision than in any of the other three conditions. Also, if the division chosen for the initial allocation of personnel was the industrial division and the subject did not make that initial allocation decision, the least amount of adaptation took place in the second allocation decision among the four groups ($M=11.076$). When the initial allocation of personnel decision was made by the subject, if the consumer division was chosen first ($M=22.368$), there was more adaptation than if the industrial division was chosen first ($M=18.775$). However, the difference in means was less, depending on whether or not the subject made the initial allocation decision. In other words, the degree of adaptation or nonadaptation was more moderate when the subject made the initial allocation decision.

The analysis now turns to an assessment of the four individual difference variables and their accompanying hypotheses.

Individual Difference Variables: Hypotheses 1-4

Self-Monitoring Variables

Hypothesis 1 stated that a salesperson or sales manager high in self-monitoring would be more likely to practice adaptive behavior than a salesperson or sales manager low in self-monitoring. Table 7 indicated that the self-monitor covariate (SELF) appeared to have a significant effect ($F(1,111)=3.99, p<.0484$) on the dependent variable. Having found a significant effect for the covariate, it was necessary to redo the analysis by treating the covariate as an independent variable in order to determine the direction of the effect. Using the previously mentioned median split of the self-monitoring variable as an independent variable, the mean for high self-monitors, $M=21.917$, shows a greater tendency for the motivation to practice adaptive behavior than the mean for low self-monitors, $M=17.406$.

Due to the significant effect of the self-selection variable on the dependent variable, the second analysis, removing all the other covariates from the analysis and treating the self-monitoring covariate as an independent variable, becomes a $2 \times 2 \times 2$ analysis of

variance design. Table 8 presents the results of this analysis. The self-selection variable remains significant in the same direction as previously discussed ($F(1,110)=15.07$, $p<.0002$). Note that in all of the second analyses, the self-selection variable remained in the analyses due to its significant effects.

Two other interactions were found to be significant at the .05 level. First, was an interaction between the self-selection variable and the self-monitoring variable on the dependent variable ($F(1,110)=4.50$, $p<.0364$). The second significant interaction involving the self-monitoring variable was a three-way interaction between the initial division chosen, whether the subject remained in the original company for two decision periods or moved to a second company after the first decision period, and the self-monitoring variable ($F(1,110)=6.39$, $p<.0131$).

With the large main effect displayed by the self-selection variable, it was determined that subjects perceived the consumer and industrial divisions quite differently. Thus, any significant interactions involving the self-selection variable were explained separately, that is, by the initial division chosen for the personnel allocation.

Table 9 presents the results of the analysis from the industrial division as the initial choice condition. There was one significant main effect concerning whether or not the subject made the initial allocation decision ($F(1,65)=4.49$, $p<.0385$). Subjects were more likely to adapt when they made their own initial allocation decision ($M=18.775$) than when someone else made the initial allocation decision ($M=11.077$).

In the consumer division, there were two significant effects, as shown in Table 10. There was a main effect for the self-monitoring variable ($F(1,45)=7.95$, $p<.0076$). High self-monitors were more likely to adapt ($M=31.048$) than low self-monitors ($M=19.000$). The second effect was an interaction between the self-monitoring variable and whether or not the subject remained in the initial company for the second allocation decision ($F(1,45)=6.83$, $p<.0128$). This interaction is diagrammed in Figure 6. When subjects remained in the initial company, F&M, for the second allocation decision, high self-monitors ($M=25.167$) tended to

TABLE 8

ANALYSIS OF VARIANCE: ISOLATING THE SELF-MONITORING VARIABLE
AND ITS SIGNIFICANT MAIN EFFECT MEANS

<u>SOURCE</u>	<u>DF</u>	<u>SS</u>	<u>F</u>	<u>PR<F</u>
DECONE	1	156.4918	0.42	0.5140
CONIND	1	2885.2452	15.07	0.0002
EMPLOY	1	23.3540	0.12	0.7276
SELF	1	675.2122	3.53	0.0634
DECONE*CONIND	1	723.7860	3.78	0.0548
CONIND*EMPLOY	1	86.4721	0.45	0.5031
DECONE*SELF	1	0.0596	0.00	0.9860
CONIND*SELF	1	862.1767	4.50	0.0364
EMPLOY*SELF	1	265.8274	1.39	0.2415
DECONE*EMPLOY	1	431.4842	2.25	0.1365
DECONE*CONIND*EMPLOY	1	82.9289	0.43	0.5120
DECONE*CONIND*SELF	1	178.4119	0.93	0.3368
DECONE*EMPLOY*SELF	1	43.4551	0.23	0.6348
CONIND*EMPLOY*SELF	1	1222.7919	6.39	0.0131
DECONE*CONIND*EMPLOY*SELF	1	30.9167	0.16	0.6887

MEANS FOR THE CONIND MAIN EFFECT

<u>CONDITION</u>	<u>N</u>	<u>MEAN</u>
CONSUMER DIVISION	46	24.500
INDUSTRIAL DIVISION	66	15.742

TABLE 9

ANALYSIS OF VARIANCE: ISOLATING THE SELF-MONITORING VARIABLE
IN THE INDUSTRIAL DIVISION AND ITS MEANS

<u>SOURCE</u>	<u>DF</u>	<u>SS</u>	<u>F</u>	<u>PR<F</u>
DECONE	1	938.5926	4.49	0.0385
EMPLOY	1	12.0538	0.06	0.8112
SELF	1	6.8948	0.03	0.8566
DECONE*SELF	1	111.7791	0.53	0.4678
EMPLOY*SELF	1	210.4842	1.01	0.3200
DECONE*EMPLOY	1	82.2278	0.39	0.5332
DECONE*EMPLOY*SELF	1	0.6432	0.00	0.9560

MEANS FOR THE DECONE MAIN EFFECT

<u>CONDITION</u>	<u>N</u>	<u>MEAN</u>
NOT MAKE INITIAL DECISION	26	11.077
MAKE INITIAL DECISION	40	18.775

TABLE 10

ANALYSIS OF VARIANCE: ISOLATING THE SELF-MONITORING VARIABLE
IN THE CONSUMER DIVISION AND ITS MEANS

<u>SOURCE</u>	<u>DF</u>	<u>SS</u>	<u>F</u>	<u>PR<F</u>
DECONE	1	88.3482	0.54	0.4678
EMPLOY	1	85.1616	0.52	0.4759
SELF	1	1306.3452	7.95	0.0076
DECONE*SELF	1	73.3255	0.45	0.5080
EMPLOY*SELF	1	1121.0645	6.83	0.0128
DECONE*EMPLOY	1	380.7003	2.32	0.1361
DECONE*EMPLOY*SELF	1	62.9765	0.38	0.5394

MEANS FOR THE SELF MAIN EFFECT

<u>CONDITION</u>	<u>N</u>	<u>MEAN</u>
LOW SELF-MONITOR	25	19.000
HIGH SELF-MONITOR	21	31.048

MEANS FOR THE EMPLOY X SELF INTERACTION EFFECT

<u>EMPLOY CONDITION</u>	<u>SELF CONDITION</u>	<u>N</u>	<u>MEAN</u>
SAME FIRM	LOW SELF-MONITOR	13	21.923
SAME FIRM	HIGH SELF-MONITOR	12	25.167
NEW FIRM	LOW SELF-MONITOR	12	15.833
NEW FIRM	HIGH SELF-MONITOR	9	38.889

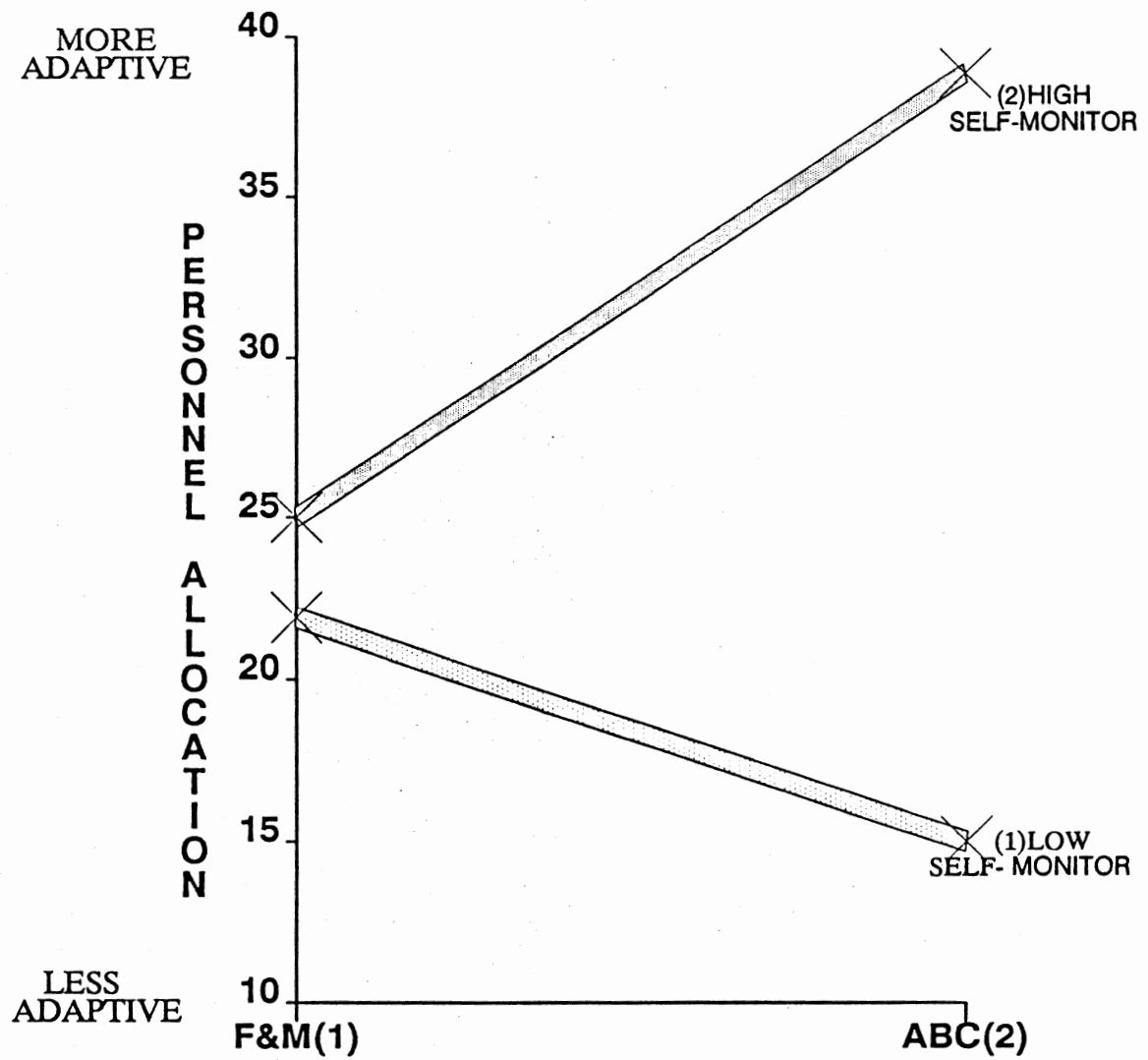


Figure 6. SELF X EMPLOY Interaction Within the Consumer Division

adapt only slightly more than low self-monitors ($M=21.923$). When subjects made a second allocation decision for a different company, ABC, a greater gap was present. High self-monitors ($M=38.889$) displayed more adaptive behavior than low self-monitors ($M=15.833$).

Androgyny Variables

Hypothesis 2 stated that a salesperson or sales manager having more androgynous traits, as opposed to less androgynous traits, would be more likely to practice adaptive behavior. Table 7 indicates no significant effect for the androgyny (ANDRO) covariate on the dependent variable ($F(1,111)=1.23$, $p<.2701$). Thus, in the initial analysis, there is no support for the second hypothesis.

A second analysis was conducted removing all of the covariates except for androgyny. Androgyny was treated as an independent variable. It was divided into three different classifications, as specified earlier in the chapter. The three classifications were male-dominated traits, female-dominated traits, and androgynous traits. Table 11 presents the results of this $3 \times 2 \times 2 \times 2$ analysis of variance design.

In this analysis, the androgyny variable had a significant effect on the dependent variable, the practice of adaptive behavior ($F(1,111)=3.48$, $p<.0350$). As previously mentioned, the androgyny variable consisted of the following classifications: androgynous, female-dominant, and male-dominant. Their means were $M=22.340$, $M=18.793$, and $M=14.567$, respectively. Using the Duncan comparison test between means, the significant difference between means was between those classified as androgynous and those classified as male-dominant with the latter being less likely to practice adaptive behavior than the former.

Two other interactions were found to be significant. They involved the self-selection variable. One interaction was between the initial division chosen and whether or not the subject made the initial allocation decision ($F(1,111)=5.04$, $p<.0272$). The other was a three-way interaction between the initial division chosen, whether the subject remained in the

TABLE 11

ANALYSIS OF VARIANCE: ISOLATING THE ANDROGyny VARIABLE
AND ITS SIGNIFICANT MAIN EFFECT MEANS

<u>SOURCE</u>	<u>DF</u>	<u>SS</u>	<u>F</u>	<u>PR<F</u>
DECONE	1	58.1568	0.29	0.5886
CONIND	1	1638.9435	8.31	0.0050
EMPLOY	1	0.6943	0.00	0.9528
ANDRO	2	1373.6034	3.48	0.0350
DECONE*CONIND	1	995.4593	5.04	0.0272
CONIND*EMPLOY	1	8.2240	0.04	0.8387
DECONE*ANDRO	2	181.8141	0.46	0.6324
CONIND*ANDRO	2	687.1338	1.74	0.1813
EMPLOY*ANDRO	2	204.0597	0.52	0.5981
DECONE*EMPLOY	1	73.7847	0.37	0.5424
DECONE*CONIND*EMPLOY	1	5.3133	0.03	0.8700
DECONE*CONIND*ANDRO	2	480.8057	1.22	0.3006
DECONE*EMPLOY*ANDRO	2	189.5696	0.48	0.6202
CONIND*EMPLOY*ANDRO	2	1576.72287	4.00	0.0218
DECONE*CONIND*EMPLOY*ANDRO	1	41.4935	0.21	0.6477

MEANS FOR THE CONIND MAIN EFFECT

<u>CONDITION</u>	<u>N</u>	<u>MEAN</u>
CONSUMER DIVISION	46	24.500
INDUSTRIAL DIVISION	66	15.742

TABLE 11 (Continued)

ANALYSIS OF VARIANCE: ISOLATING THE ANDROGyny VARIABLE
AND ITS SIGNIFICANT MAIN EFFECT MEANS

MEANS FOR THE ANDRO MAIN EFFECT		
<u>CONDIT ON</u>	<u>N</u>	<u>MEAN</u>
ANDROGY OUS	53	22.340
MALE-DOM NANT	30	14.567
FEMALE-DC INANT	29	18.793

original company for two decision periods or moved to a second company after the first decision period, and the androgyny variable ($F(1,111)=4.00$, $p<.0218$).

Again, the large main effect displayed by the self-selection variable ($F(1,111)=8.31$, $p<.0050$) meant that differences were perceived based on the initial division chosen for personnel allocation. Thus, the two divisions were analyzed separately and the above interactions were explained separately by division.

The industrial division analysis, as presented in Table 12, contained one significant main effect for whether or not the subject made the initial allocation decision ($F(1,65)=5.21$, $p<.0264$). Subjects were more likely to adapt when they made their initial allocation decision ($M=18.775$) than when someone else made the initial allocation decision ($M=11.077$).

Two effects, one significant and one approaching significance, came out of the consumer division analysis presented in Table 13. There was a main effect for the androgyny variable ($F(1,45)=4.37$, $p<.0203$) with the androgynous, female-dominant, and male-dominant means equalling 28.864, 24.615, and 15.636, respectively. Using the Duncan comparison test between means, significant differences were found between the androgynous and male-dominant conditions with those classified as androgynous adapting more than those classified as male-dominant.

The effect approaching significance was an interaction between the androgyny variable and whether or not the subject remained in the initial company for the second allocation decision ($F(1,45)=3.12$, $p<.0567$). Figure 7 presents a diagram of the effect. The greatest and the least tendency to practice adaptive behavior occurred when subjects in the second decision period made their decisions for a second firm, ABC. The androgynous classification of subjects ($M=32.500$) and the male-dominant classification of subjects ($M=5.000$) showed the greatest and the least tendency to practice adaptive behavior. Also, the female-dominant classification of subjects ($M=27.857$), in the ABC Company, showed a tendency to practice adaptive behavior. Little differences were observed between the

TABLE 12

ANALYSIS OF VARIANCE: ISOLATING THE ANDROGyny VARIABLE IN THE
INDUSTRIAL DIVISION AND ITS SIGNIFICANT MEANS

<u>SOURCE</u>	<u>DF</u>	<u>SS</u>	<u>F</u>	<u>PR<F</u>
DECONE	1	1081.6992	5.21	0.0264
EMPLOY	1	5.5382	0.03	0.8708
ANDRO	2	164.1089	0.40	0.6753
DECONE*ANDRO	2	622.5734	1.50	0.2322
EMPLOY*ANDRO	2	431.8557	1.04	0.3602
DECONE*EMPLOY	1	15.6854	0.08	0.7844
DECONE*EMPLOY*ANDRO	2	108.5777	0.26	0.7708

MEANS FOR THE DECONE MAIN EFFECT

<u>CONDITION</u>	<u>N</u>	<u>MEAN</u>
NOT MAKE INITIAL DECISION	26	11.077
MAKE INITIAL DECISION	40	18.775

TABLE 13

ANALYSIS OF VARIANCE: ISOLATING THE ANDROGYNY VARIABLE IN THE
CONSUMER DIVISION AND ITS SIGNIFICANT MEANS

<u>SOURCE</u>	<u>DF</u>	<u>SS</u>	<u>F</u>	<u>PR<F</u>
DECONE	1	262.4180	1.44	0.2375
EMPLOY	1	0.2230	0.00	0.9722
ANDRO	2	1586.5410	4.37	0.0203
DECONE*ANDRO	2	143.5942	0.40	0.6765
EMPLOY*ANDRO	2	1133.2358	3.12	0.0567
DECONE*EMPLOY	1	122.8663	0.68	0.4164
DECONE*EMPLOY*ANDRO	1	93.6827	0.52	0.4774

MEANS FOR THE ANDRO MAIN EFFECT

<u>CONDITION</u>	<u>N</u>	<u>MEAN</u>
ANDROGYNOUS	22	28.864
MALE-DOMINANT	11	15.636
FEMALE-DOMINANT	13	24.615

MEANS FOR THE EMPLOY X ANDRO INTERACTION EFFECT

<u>EMPLOY CONDITION</u>	<u>ANDRO CONDITION</u>	<u>N</u>	<u>MEAN</u>
SAME FIRM	ANDROGYNOUS	12	25.833
SAME FIRM	MALE-DOMINANT	7	21.714
SAME FIRM	FEMALE-DOMINANT	6	20.833
NEW FIRM	ANDROGYNOUS	10	32.500
NEW FIRM	MALE-DOMINANT	4	5.000
NEW FIRM	FEMALE-DOMINANT	7	27.857

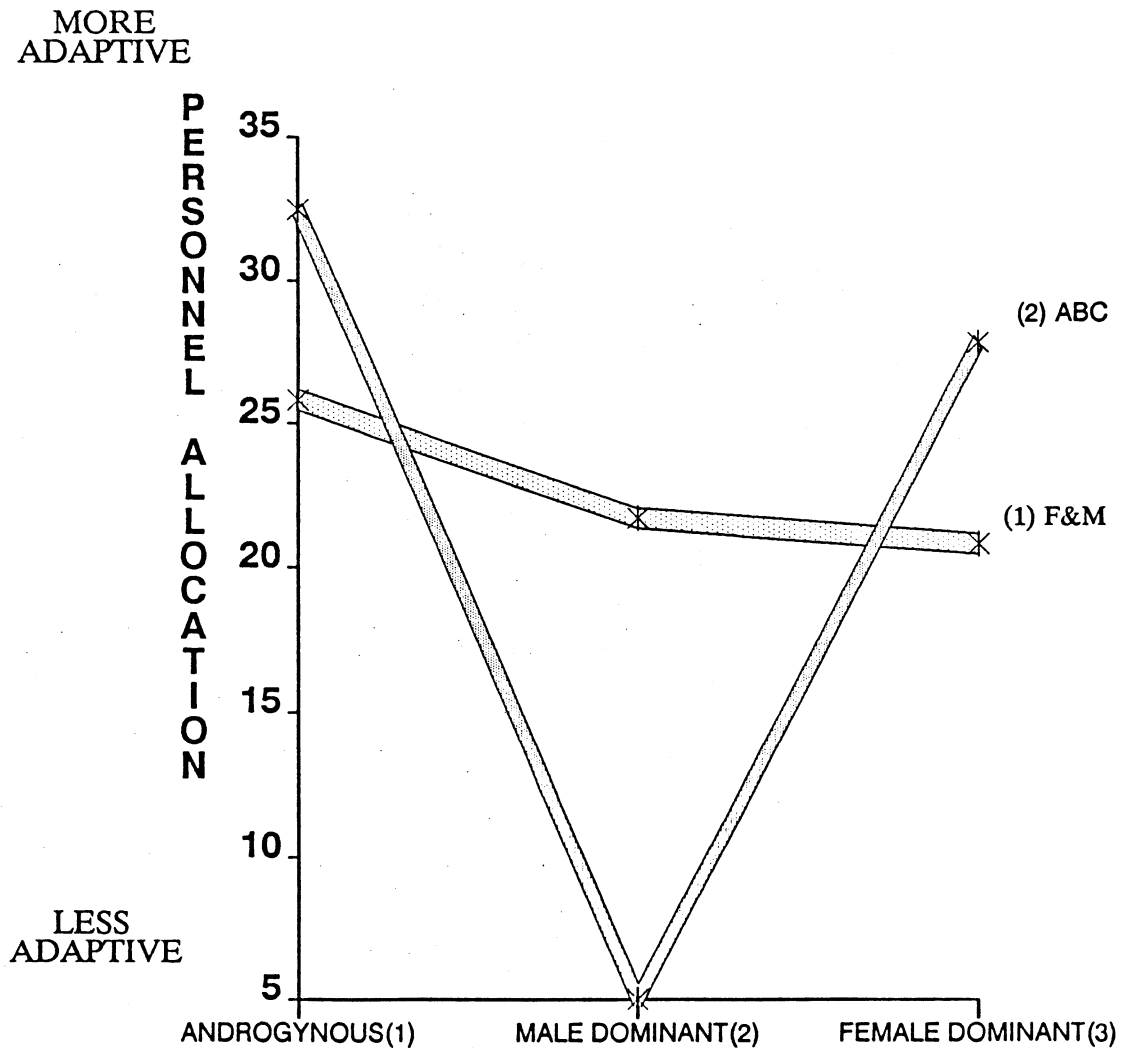


Figure 7. ANDRO X EMPLOY Interaction Within the Consumer Division

androgyny conditions when subjects made their second allocation decisions for the original firm, the F&M Company.

Locus of Control Variables

Hypotheses 3 and 4 both deal with an individual's locus of control. An individual having an internal locus of control would be more likely to practice adaptive behavior than an individual dominated by an external locus of control. Specifically, Hypothesis 3 stated that a salesperson or sales manager exhibiting more internal interpersonal control would be more likely to practice adaptive behavior than if he/she had less internal interpersonal control. Table 7 indicated no significant effect for the internal interpersonal control (INTER) covariate on the dependent variable ($F(1,111)=0.02$, $p<.8984$). Therefore, there was no support for the third hypothesis in the initial analysis.

In the second analysis, treating the internal interpersonal control covariate as an independent variable, there was still no significant effect for internal interpersonal control, as shown in Table 14. Internal interpersonal control was divided into two different classifications, those classified as high and those classified as low in internal interpersonal control, as specified by the median splits discussed earlier in the chapter. The self-selection variable remained significant. With no significant interactions involving the self-selection variable, no separate analysis was reported.

Hypothesis 4 stated that a salesperson or sales manager exhibiting more personal efficacy would be more likely to practice adaptive behavior than if he/she had less personal efficacy. As indicated in Table 7, there was no significant effect for the personal efficacy (EFF) covariate ($F(1,111)=0.42$, $p<0.5205$) on the dependent variable. Thus, there is no support for the fourth hypothesis in the initial analysis.

In the second analysis, treating the personal efficacy covariate as an independent variable, there was still no support for the fourth hypothesis, as shown in Table 15. However, the self-selection variable remained significant and there was one significant

TABLE 14

ANALYSIS OF VARIANCE: ISOLATING THE INTERNAL INTERPERSONAL
CONTROL VARIABLE AND ITS SIGNIFICANT EFFECTS

<u>SOURCE</u>	<u>DF</u>	<u>SS</u>	<u>F</u>	<u>PR<F</u>
DECONE	1	108.9126	0.51	0.4762
CONIND	1	2216.6788	10.41	0.0017
EMPLOY	1	9.4573	0.04	0.8335
INTER	1	37.2792	0.18	0.6766
DECONE*CONIND	1	805.3794	3.78	0.0547
CONIND*EMPLOY	1	4.5842	0.02	0.8837
DECONE*INTER	1	201.7859	0.95	0.3328
CONIND*INTER	1	6.3889	0.03	0.8628
EMPLOY*INTER	1	328.3022	1.54	0.2174
DECONE*EMPLOY	1	481.2077	2.26	0.1360
DECONE*CONIND*EMPLOY	1	310.5384	1.46	0.2302
DECONE*CONIND*INTER	1	50.2424	0.24	0.6283
DECONE*EMPLOY*INTER	1	2.7029	0.01	0.9105
CONIND*EMPLOY*INTER	1	264.1604	1.24	0.2681
DECONE*CONIND*EMPLOY*INTER	1	139.7979	0.66	0.4198

MEANS FOR THE CONIND MAIN EFFECT

<u>CONDITION</u>	<u>N</u>	<u>MEAN</u>
CONSUMER DIVISION	46	24.500
INDUSTRIAL DIVISION	66	15.742

interaction between the personal efficacy variable and whether or not the subject made the initial allocation decision ($F(1,111)=5.63, p<0.0197$).

For this analysis, personal efficacy was divided into two different classifications, those classified as high and those classified as low in personal efficacy, as specified earlier in this chapter. As shown in Figure 8, subjects high in personal efficacy were more adaptive when they did not make the initial allocation decision ($M=21.3571$) than when they did make the initial allocation decision ($M=15.4545$). Exactly the opposite pattern emerged for those subjects classified as low in personal efficacy. Subjects exhibiting low personal efficacy were more adaptive when they made the initial allocation decision ($M=22.5946$) than when they hadn't made the initial allocation decision ($M=15.6800$).

Having looked at the first four hypotheses, individual difference variables leading to the practice of adaptive behavior, the focus turns to the last three hypotheses in which an attempt was made to identify an underlying theoretical explanation for practice of adaptive behavior. As explained earlier, the entrapment paradigm was used in the study as a vehicle in which the motivation to practice adaptive behavior could be analyzed. The following is an analysis of the last three hypotheses.

Theoretical Explanations for the Practice of Adaptive Behavior: Hypotheses 5-7

Hypotheses 5-7 looked at possible theoretical explanations for the practice of adaptive behavior. In the entrapment literature, three theoretical explanations have been offered for entrapping behavior; prospect theory, attribution theory, and dissonance theory (Brockner and Rubin, 1985). These three theories were investigated in hypotheses 5-7, respectively. Attribution theory and dissonance theory were investigated through the manipulation of the independent variables within the study. As was shown in Table 7, entrapment was not found overall. Of the 112 subjects participating in the study, 72 became entrapped by escalating their commitment to the failing course of action. In order to identify differences in

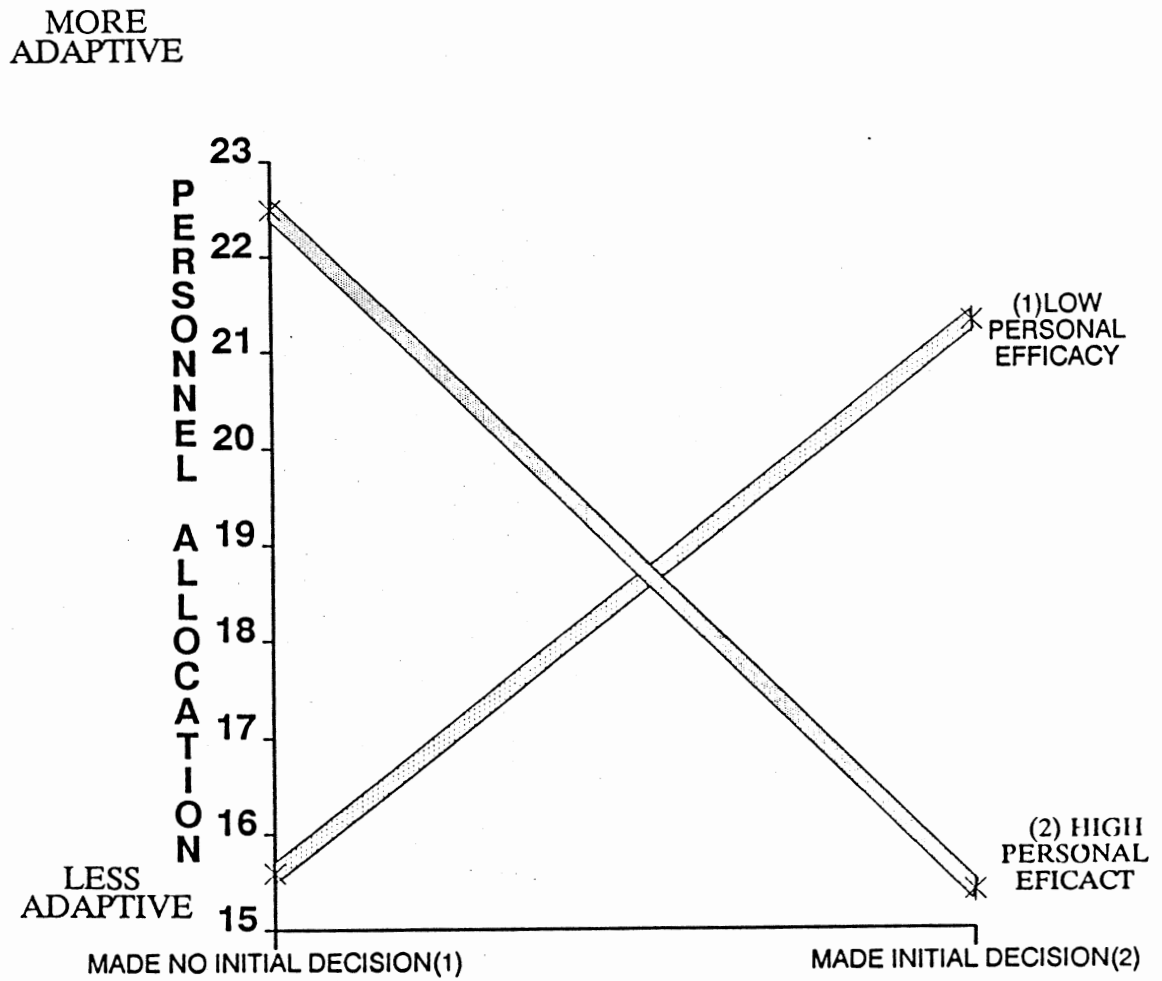


Figure 8: EFF X DECONE Interaction

those who were and were not entrapped, t-tests were run using personnel allocation as an independent variable, and the individual theoretical statements (Q1-Q20, excluding the personal responsibility statements) as dependent variables. By definition (e.g., Staw, 1976), entrapment is escalating commitment to a course of action that is failing. Therefore, any allocation of personnel to the failing division for the second decision that was less than or equal to the original allocation was considered to be adaptive behavior, while any allocation greater than the original allocation to the failing division was considered entrapping. Since the personnel allocation variable was set up as an adaptation variable, the two categorical conditions for the independent variable were as follows: Condition 1, allocating less than 25 salespeople to the previously successful division, was the entrapping condition and condition 2, allocating 25 or more salespeople to the previously successful division, was the adapting condition. Table 16 presents the results of all t-tests used for testing the theoretical explanations. The following examines these relationships.

Prospect Theory Hypothesis

Hypothesis 5 stated that a salesperson or sales manager who framed a decision more positively would be more likely to practice adaptive behavior than one who framed a decision less positively. This hypothesis looked at a prospect theory explanation for the practice of adaptive behavior. Two questions in the posttest questionnaire were used to get at the notion of framing or prospect theory. The first question dealt with recouping losses from the initial allocation decision while the second question dealt with the subject's concern over previous losses. Initially, the two questions were combined and a coefficient alpha was computed to obtain an assessment of internal consistency. With alpha equaling 0.0590, there was no internal reliability. Thus, an analysis was conducted on each question separately.

The T-test results of the first question (Q4) concerning the recouping of losses from the initial allocation decision revealed significant effects for the study ($|T|=5.2955$, $p<.0001$).

TABLE 16

T-TESTS USED FOR TESTING THEORETICAL EXPLANATIONS

<u>DEPENDENT VARIABLE</u>	<u>INDEPENDENT VARIABLE</u>	<u> T </u>	<u>P> T </u>
Q2	ALLO	2.0391	0.0438*
Q3	ALLO	0.8749	0.3836
Q4	ALLO	5.2955	0.0001**
Q5	ALLO	0.7519	0.4537
Q6	ALLO	0.7314	0.4661
Q7	ALLO	1.1743	0.2428
Q8	ALLO	0.4758	0.4758
Q10	ALLO	1.4312	0.1604
Q11	ALLO	0.8500	0.3971
Q12	ALLO	0.7987	0.4262
Q13	ALLO	0.4844	0.6291
Q14	ALLO	0.5563	0.5791
Q15	ALLO	0.9856	0.3265
Q16	ALLO	0.1472	0.8832
Q17	ALLO	0.9994	0.3198
Q19	ALLO	0.2550	0.7992
Q20	ALLO	1.0227	0.3087
ABIL	ALLO	0.6184	0.5376
EFFT	ALLO	0.0533	0.9576

* MEANS: <=25 PERSONNEL ALLOCATED TO SUCCESSFUL DIVISION - 3.875
 >25 PERSONNEL ALLOCATED TO SUCCESSFUL DIVISION - 3.292

** MEANS: <=25 PERSONNEL ALLOCATED TO SUCCESSFUL DIVISION - 3.766
 >25 PERSONNEL ALLOCATED TO SUCCESSFUL DIVISION - 2.188

Those subjects in the entrapping condition agreed significantly more with placing sales personnel in the unsuccessful division in order to recoup the losses from the initial allocation decision ($M=3.7656$) than subjects in the adapting condition ($M=2.1875$). There were no significant effects for Q20. Thus partial support was given to Hypothesis 5.

Attribution Theory Hypotheses

Attribution theory as a possible explanation for the practice of adaptive behavior was the subject of Hypothesis 6. Hypothesis 6 contained four parts. The first two parts of hypothesis 6 stated that a salesperson or sales manager who attributed more failure than less failure for a previous course of action to a stable cause would be more likely to practice adaptive behavior. Task difficulty and ability were the two stable causes investigated. On the other hand, the last two parts of Hypothesis 6 stated that a salesperson or sales manager who attributed more failure than less failure for a previous course of action to an unstable cause would be less likely to practice adaptive behavior. Effort and luck were the two unstable causes investigated.

First, three questions were presented in the posttest questionnaire (Q11, Q14, and Q16) to deal with task difficulty. Q11 dealt with the initial allocation task itself being too hard for a successful decision to be made. Q14 dealt with the initial allocation decision being a simple task. And, Q16 dealt with the initial allocation decision task being too overwhelming for the sales manager to be successful. There were no significant effects for any of the task difficulty questions.

Ability was the second stable cause investigated from the attribution theory perspective. Three questions, Q5, Q8, and Q19, were used to get at the ability construct. Q5 dealt with blaming failure for the initial allocation decision on the sales manager not possessing the skills necessary to make a successful decision. Q8 dealt with blaming failure for the initial allocation decision on the sales manager's lack of aptitude necessary to make a successful decision. Finally, Q19 dealt with the sales manager's lack of ability to

make a successful first allocation decision. No support was given for an ability attribution explanation.

Effort was the first unstable cause investigated from the attribution theory perspective. The effort construct was dealt with by looking at Q6, Q13, and Q17. Failure for the initial allocation decision in Q6 was due to not trying hard enough. Q13 dealt with the possibility that the initial allocation decision would have been successful if more effort had been put into the decision. In Q17 failure for the initial allocation decision was attributed to not taking enough time to make the initial allocation decision. No support was given for an effort attribution explanation for the practice of adaptive behavior.

Luck was the second unstable cause investigated and the last variable studied from an attribution theory perspective. The luck construct was made up using statements Q2 and Q10. Q2 concerned the failure of the initial allocation decision being due to chance factors beyond the sales manager's control while the initial allocation decision failure in Q10 was attributed to being unlucky. Q2 revealed a significant effect for chance factors beyond the sales manager's control ($|T|=2.0391$, $p<.0438$). Those subjects in the entrapping condition agreed significantly more with the failure of the initial allocation decision being due to factors beyond the sales manager's control ($M=3.8750$) than subjects in the adapting condition ($M=3.2917$). Thus, partial support was given to the luck attribution explanation for the practice of adaptive behavior.

Dissonance Theory Hypothesis

Dissonance theory was the last proposed possible explanation for the practice of adaptive behavior and is the subject of hypothesis 7. Hypothesis 7 stated that a salesperson or sales manager who felt more personally responsible about the sales decision would be more likely motivated to practice adaptive behavior than those who felt less personally responsible. Again, just as in hypotheses 5 and 6, hypothesis 7 was dependent on a positive finding for the practice of adaptive behavior. The scenario used in the study

did not produce that effect. However, an analysis of dissonance theory as it pertains to the scenario was investigated.

There were four statements, Q3, Q7, Q12, and Q15, used to get at a dissonance theory explanation. Q3 dealt with blaming the failure of the initial allocation decision on not having more than one year to evaluate that decision. Q7 maintained that the initial allocation decision was excellent considering all the information possessed by the subject. Q12 concerned making the same decision if the subject had to do it all over again. Finally, Q15 dealt with the subject's evaluation by his/her superiors being based in part on the initial allocation decision. No significant effects were found, lending no support for Hypothesis 7.

CHAPTER V

DISCUSSION

The discussion of the study includes four parts. The first part deals with the practice of adaptive behavior and the adaptation of the entrapment paradigm to its study. The second part analyzes the first four hypotheses concentrating on the relationship between the practice of adaptive behavior and the individual difference variables tested. The third part discusses the last three hypotheses concentrating on theoretical explanations of using an entrapment methodology to explain the concept of the practice of adaptive behavior. Finally suggestions for future research were proposed.

Adaptation and Entrapment

The purpose of the present study was three-fold. First, the concept of the practice of adaptive behavior was introduced as an overall marketing concept. Using the psychological phenomenon of entrapment, an attempt was made to find out more about the practice of adaptive behavior. Second, relationships between the practice of adaptive behavior and four individual difference variables were proposed and tested in a sales management context. And third, using the psychological phenomenon of entrapment as a paradigm for the practice of adaptive behavior, an attempt was made to find theoretical support for the practice of adaptive behavior.

Concept of the Practice of Adaptive Behavior

The author argued that the psychological phenomenon of entrapment had a number of similarities with the practice of adaptive behavior. Adaptive behavior was defined as the altering of marketing behaviors based on perceived information about the nature of the marketing situation. The practice of adaptive behavior deals with the directional component of motivation. If people alter the direction of their behavior and proceed on a different course of action, one is said to practice adaptive behavior. Through the use of the entrapment paradigm, subjects were always facing a failing course of action. This should have been a signal to subjects to change their courses of action. But, in the entrapment paradigm studies, subjects escalate their commitment to the previously chosen, failing course of action (e.g., Staw, 1976). When subjects do not escalate commitment to a previously chosen, failing course of action, they practice adaptive behavior.

As with any decision, changing a course of action may not bring about success. However, all things being equal, a decline in profitability following the chosen course of action and an improvement in the profitability of the unchosen course of action should signal the decision maker that investing in the original course of action may be nonoptional. Thus, following a new or different course of action may be more successful than the original course of action.

In the initial analysis, there was a significant main effect, a significant interaction effect, and an interaction effect approaching significance that deserves some discussion. The significant main effect occurred for the self-selection variable. Subjects practiced adaptive behavior more when the consumer products division was initially chosen than when the industrial products division was initially chosen. Although great pains were taken to try to make the strategy choice of placing additional salespeople in the consumer products division or the industrial products division, for the second allocation decision, sufficiently similar, it would seem that subjects perceived the choice as dissimilar. A likely explanation for this main effect could be that some subjects paid more attention in the second decision

to sales in dollar figures than to percentages in either division or industry growth. The successful division, regardless of whether it was the consumer products division or the industrial products division, had a division growth rate of 5.35%, while the failing division had a growth rate of 0.52% for 1986. The industry growth rate for the same period was 5.18% for both divisions. However, when translated into dollars, there was a \$60 million gap when the industrial products division was successful and a \$15 million gap when the consumer products division was successful.

There are several things notable about the interaction between who made the initial allocation decision and the division chosen for that allocation of sales personnel. First, as shown in Figure 5, regardless of whether or not the subject made the first allocation decision, if the consumer division was initially chosen, more adaptive behavior took place than if the industrial division was initially chosen. Second, if the industrial division was initially chosen, more adaptive behavior took place when the subject made the initial allocation decision than when the initial allocation decision was made by someone other than the subject. Finally, while there was little change in the practice of adaptive behavior between the consumer and the industrial divisions when the subject made the initial allocation decision, there was a considerable difference in the practice of adaptive behavior between the consumer and industrial divisions when someone other than the subject made the initial allocation decision.

The greatest practice of adaptive behavior took place when the consumer division was initially chosen, while the least amount of adaptive behavior took place when the industrial division was initially chosen. It is possible that there are a couple of forces at work here. Possibly the difference in the dollar amounts between the divisions may have had more impact on the last allocation decisions than industry and company division percentages. In all cases, percentages were held constant while dollar amounts fluctuated according to those stable percentages. There was a \$60 million gap shown to the subjects initially allocating personnel to the consumer division and a \$15 million gap shown to the subjects

initially allocating personnel to the industrial division. As shown in the results section, significantly more adaptation took place in the consumer division. Therefore, the larger gap may have had an impact on the subject's decisions. This would account for more practice of adaptive behavior in the consumer division than in the industrial division.

Secondly, there may be some sense of personal responsibility interacting with the way subjects interpret the dollar amount differences between the consumer and industrial divisions, as seen by the DECONE X CONIND interaction ($F(1,111)=5.37, p<.0225$). With a \$60 million gap, it appears evident that subjects perceived a fairly clear-cut failing course of action that must be changed when they made their own initial personnel allocation. With the perception of the failure being obvious to the subject, failure must also be obvious to the subject's superiors. Due to the perception of the obvious nature of the decision, the subject and his/her superiors should see a rather clear cut path of personal responsibility if the subject followed the initial failing course of action. In this case, the practice of adaptive behavior would be a necessity. However, if the subject begins a new course of action and a failure occurs, consequences from that failure might not be perceived as stemming completely from the subject's decision. The previous decision would be seen as having an effect on the second allocation decision. It must be remembered that the subjects in the consumer division adapted more than the subjects in the industrial division regardless of who made the initial allocation decision. On the other hand, with only a \$15 million gap, the failure of the previous course of action may not seem as clear-cut. Being unsure of what to do, subjects might protect themselves by following the previous decision makers' course of action. However, if subjects make their own initial allocation decisions, they have no one else to blame for the failure of their decisions. Therefore, they might adapt more than they would had they not made the initial allocation decisions.

Individual Difference Variables and the

Practice of Adaptive Behavior

Self-monitoring, androgyny, internal interpersonal control, and personal efficacy make up the four individual difference variables and their relationships with the practice of adaptive behavior correspond with the first four hypotheses, respectively. Both internal interpersonal control and personal efficacy deal with an individual's internal locus of control.

In the initial covariance analysis of the four individual difference variables, only the self-monitoring variable was significantly related to the practice of adaptive behavior. High self-monitors showed a greater tendency to practice adaptive behavior than low self-monitors. This result corresponds with the prediction in Hypothesis 1. As shown in table 7, no other individual difference variable, as a covariate, approached significance. However, since the study was exploratory in nature, each individual difference variable was reanalyzed as an independent variable, removing all of the other individual difference variables from the analysis. The following are analyses of each of the four individual difference variables. There will be no discussion of the main effects of the self-selection variable for all four individual difference variables as it has been discussed earlier.

When looking at the self-monitoring variable, two significant interactions are necessary to discuss. The first interaction was between the self-monitoring variable and the initial industry chosen. There was little difference in the practice of adaptive behavior, regardless of which initial industry was chosen, when the subject was classified as a low self-monitor. However, when the subjects were classified as high self-monitors, they showed the greatest tendency toward practicing adaptive behavior when the consumer division was initially chosen and the least tendency toward practicing adaptive behavior when the industrial division was initially chosen. While those subjects classified as high self-monitors reacted as predicted when the consumer division was initially chosen, they reacted quite the opposite when the industrial division was initially chosen. It is hard to determine why this happened. However, it seems that if, as stated in an earlier section of this chapter, the calibration of the

sales dollars of the industrial and consumer divisions were such that when subjects chose the industrial division initially, that division was not a clear cut failing proposition, then adaptation would not be a clear cut solution. In fact, a careful reading of the scenario by a high self-monitor may have him/her perceiving that he/she is being sent mixed signal messages. This can be illustrated by the following two consecutive lines:

After analyzing these results, the board is disappointed with the company's overall sales performance. But they do see some positive aspects in the selling performance and are willing to let you further increase the size of your sales force.

Again, there is no clear cut position taken even by the subject's superiors. It seems possible that a preoccupation with the mixed signal message might cause the subject to escalate commitment to the previous course of action, thus somewhat protecting his/her ego or to prevent looking indecisive to his/her superiors. The above is also borne out when taking all interactions with the self-monitoring variable and analyzing them by each division selected. In the consumer division, a significant main effect is revealed, whereas there is no significant main effect for the self-monitoring variable.

The second significant interaction was a three-way interaction between the division chosen, whether the subject made the second allocation decision for the same company or a different, but similar company, and the self-monitoring variable. Conducting separate analyses on the three-way interaction by the division chosen showed no effects in the industrial division. No significant effects due to the subjects' perception that there may not have been a clear cut, unredeemable failure in the industrial division. However, as shown in Figure 6, a significant interaction between self-monitoring and in what firm the subject made the second allocation decision, revealed that personal responsibility may have played a role in allocating personnel. High self-monitors making a second allocation for a second firm, ABC Company, seemed to practice adaptive behavior substantially more than subjects in any other consumer division condition. Removing personal responsibility for previous actions seems to motivate high self-monitors to practice adaptive behavior the most. When the subject was a high self-monitor and personal responsibility was removed, the subject

seemed to be able to take a more objective view of the situation. After all, the subject could key in on his/her superiors' behaviors without having the added responsibility of having made the previous decision for that second firm.

On the other hand, low self-monitors making a second allocation for ABC Company allocated the smallest number of personnel to the previously successful division. Having no previous responsibility for the initial allocation decision to the ABC Company coupled with the fact that the subject was a low self-monitor, allowed the subject to be rigid in his/her decision-making due to little or no repercussions for past actions. Without the added pressure of responsibility for past actions, the low self-monitor was able to be rigid and consistent with past actions. It may have been that a low self-monitor, by following the previous course of action, would avoid personal responsibility for future actions by not upsetting the status quo. Thus, personal blame might be avoided.

Moving on the second individual difference variable, androgyny, there were three significant effects necessary to discuss. First, as predicted, androgynous people practiced adaptive behavior significantly more than male dominant personalities. As indicated earlier, one who is androgynous is more flexible and less rigid than one who is not androgynous. This tends to partially support hypothesis 2. Female dominant personalities practiced less adaptive behavior than androgynous personalities. Even though they were not significant, the results for female dominant personalities were in the intended direction. It is possible that when using business students as subjects and putting them into classifications according to median splits, the female dominant category may really lean toward being more androgynous. Following typical female dominant traits should not lead an individual to major in business and pursue a career in a professional or managerial capacity.

For the three-way and two-way interactions, separate analyses were again conducted using the initial division chosen. In the consumer division, a main effect occurred for the androgyny variable with results paralleling the above results. The effect approaching significance behaved similarly to that of the self-monitoring variable, as shown in Figure 7. It

seemed that removing an element of personal responsibility for previous actions allowed androgynous subjects to practice adaptive behavior the most, while the rigidity of the male-dominant trait subjects did not allow them to practice adaptive behavior.

In the industrial division analysis, there was one main effect. It had nothing to do with the effects already discussed, however it deserves mention here. The main effect was for whether or not the subject made the initial allocation decision. Those who made the initial allocation decision adapted more than those who did not make the initial allocation decision. Although this result occurred partially in the way it was predicted, it is difficult to understand why this did not also happen in the consumer division. For one thing, means were higher for the allocation of personnel to the successful division, regardless of who made the initial allocation, when the initial allocation was made to the consumer division. Again, it may have been perceived that the failure in the consumer division was so great, or so obvious, that personal responsibility made almost no difference. That is, adaptation was seen as a necessity.

Theoretical Explanations for the Practice of Adaptive Behavior

Three possible theoretical explanations for the practice of adaptive behavior were investigated. They were prospect theory, attribution theory, and dissonance theory. These theories were embodied in hypotheses 5, 6, and 7, respectively. The results did not reveal either clear cut entrapment or, its opposite, the practice of adaptive behavior. This was probably due to the fact that there was a major flaw in the presentation of the consumer and industrial divisions to subjects in the scenario. Despite the attempt to present the two divisions so that they looked equally favorable to the subjects, a distinct preference for the industrial division existed.

For exploratory purposes, however, the last three hypotheses were set up as t-tests using the individual statements from the post-test questionnaires, when feasible, as

dependent variables and the allocation of personnel as the independent variable. Since Staw (1976) and his colleagues (e.g., Staw and Fox, 1977) considered an allocation of resources equal to or greater than the original or previous allocation of resources escalating commitment to a course of action, it was determined that a categorical variable could be made out of the allocation of personnel variable in order to look at the last three hypotheses. By changing the dependent variable, allocation of sales personnel, to an independent variable it was felt that something could be learned by comparing those subjects who became entrapped and those who did not become entrapped in the role-play. Condition 1 was the entrapping condition that encompassed all subjects allocating less than 25 sales personnel to the successful division. Condition 2 was the adapting condition allocating 25 or more subjects to the successful division.

The prospect theory approach dealt with the positive or negative framing of a decision. Partial support for prospect theory was found in the subjects' agreement or disagreement with the statement: "It is necessary to risk putting most of the salespeople in the 1987 allocation decision into the unsuccessful division in order to recoup the losses from the 1986 allocation decision". Those subjects who became entrapped were significantly more concerned with recouping losses than those subjects who adapted. This was in accordance with prospect theory, which states that people pick reference points and frame gains and losses from that reference point as a loss or a gain (Kahneman and Tversky, 1984). In other words, prospect theory would say that subjects who became entrapped would concern themselves with recouping losses while those subjects who adapted would not concern themselves with recouping losses. This was supported by Q4.

An attribution theory approach looks at the explanations people give for the success or failure of their actions, in this case, the outcomes of their decision-making behavior. The luck variable was the only attribution variable receiving any support through the T-test. Entrapped sales managers saw the initial allocation's failure due to chance factors beyond their control significantly more than did adapting sales managers. Reasoning here could be

that entrapped sales managers ascribing their failures to chance factors beyond their control may have been able to avoid attributions of failure to stable causes, such as ability and task difficulty (Weiner, 1980). Adapting sales managers, on the other hand, would seem not to be as concerned about protecting themselves from the same attributions.

The final approach deals with dissonance theory which looks at the role of personal responsibility. No significant effects were found for a dissonance theory explanation. In retrospect it is unclear whether the questions used tap into the dissonance construct.

The above discussion concerning theoretical explanations for the adaptation of the entrapment paradigm to the practice of adaptive behavior attempted to shed some light on the thoughts and perceptions of subjects as they participated in the current study even though the paradigm itself did not find the significance intended for the practice of adaptive behavior. In summary, the theoretical approach that seemed to fit the data the best was prospect theory.

Study Limitations

No study undertaken is ever void of limitations and this one was no exception. First, a role playing methodology was used. As pointed out by Suprenant and Churchill (1984), role-playing may be more vulnerable to demand characteristics, such as trying to be a "good" subject. Subjects may also be unwilling or unable to complete the role play properly, as the tasks may be too long or difficult to understand. Also, role playing may not elicit as much subject involvement as other methodologies. However, role playing does have its advantages (Suprenant and Churchill, 1984). It is ethically superior to deception. It is more flexible than other methodologies. Role playing allows the researcher to come up with manipulations that would otherwise be too costly in terms of expense, time, or availability. Finally, it may be the only way to control variables that may turn out to be causes of behavior.

Another limitation is the use of student subjects to role play the sales manager. This is not a great limitation as long as the present researcher's interest is in "theory application" rather than "effects application" (Calder, Phillips, and Tybout, 1981). The present research is "theory application" oriented and the students were considered a homogeneous subject population.

External validity was another limitation of the present study. The results of students are not generalizable to sales managers nor are students representative of sales managers. However, since the present research is "theory application" driven, some external validity can be sacrificed. The study can be strengthened by having "real world" subjects participate in the same study. This may not be possible in the "real world" where companies may not want their businesses to be used in field studies, thus, possibly forcing the researcher into making modifications to suit different businesses.

Suggestions for Future Research

The current study provided an exploratory examination of the practice of adaptive behavior in a sales management context. An attempt was made here to look at the decision-making behavior of individuals under varying degrees of felt personal responsibility and in conjunction with several personality characteristics suggested by Weitz and his colleagues (e.g., Spiro and Weitz, 1987). The findings from this study suggested that both felt personal responsibility and one's personality may influence decision-making behavior.

There is one major concern in the current study that should be examined further. In order to use a true adaptation of the entrapment paradigm (e.g., Staw, 1976), the self-selection variable, in this case the initial division selected for personnel allocation, should not have affected a subsequent investment decision. However, there was an effect, and subjects perceived the industrial division to be superior to the consumer division. Great pains were taken to make the two divisions look equally attractive. A decision was made to keep percentages constant and to change dollar amounts in accordance with the

corresponding percentages. Little doubt exists that dollar amounts and dollar gaps had an effect on the subjects' allocations of personnel. Another option might be to create a situation in which everyone chooses the same division for personnel allocation. Therefore, it is suggested that the study be rerun after recalibrating the consumer and industrial divisions to look equally attractive for investment.

Other questions arise concerning the preference of one division over another division. People seemed to pay more attention to dollars than percentages. It would be interesting to investigate the differences in attention people pay to dollars versus percentages. This could be done by looking at dollar gaps between successful and unsuccessful divisions. Also, with attention paid to dollars, is personal responsibility seen as a more crucial aspect of the subject's decision-making behavior the larger the dollar gap, or is there some kind of middle of the road strategy to be played? It is possible that the dollar amount gaps between successful and unsuccessful choices change the way subjects approach an allocation problem, especially when they are being held accountable for their decisions.

Another point to be made is that personal responsibility may play a major role in an individual's decision-making behavior. It seems that subjects were practicing adaptive behavior most when they were in situations where having or not having personal responsibility for previous actions was clear cut. When personal responsibility was not a clear cut issue, subjects tended not to be motivated to practice adaptive behavior. Whether or not personal responsibility is considered a clear cut issue may have implications for prospect theory and the subject's setting up of mental accounts. In other words, the clearer cut the issue, the more likely the subject should have a mental account set up that places the decision to be made in a positive frame. This issue deserves further study.

Further research should also take the direction of looking into other variables, such as intrinsic reward orientations, abilities, knowledge, and skills, suggested by Weitz, Sujan, and Sujan (1986) to affect the practice of adaptive behavior. Then, research should be followed up by sampling actual sales managers in order to give some external validity to current and

future findings.

Also, an attempt has been made to give a theoretical explanation for the practice adaptive behavior. Success, in this endeavor, was not achieved. However, the marginal support received for a prospect theory explanation of adaptive behavior should require greater investigation.

Finally, sales management is only one application of the practice of adaptive behavior. As stated earlier in the literature review, marketing applications of the practice of adaptive behavior range from marketing strategy decisions involving the introduction of new products and the deletion of old products from a company's offerings to consumer decisions, such as when to replace an automobile or a washing machine. Each of these issues and issues in between should be investigated in the future.

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APPENDIX

THE F&M SALES FORCE ALLOCATION CASE

INTRODUCTION

In this case, you will play the role of a corporate executive, the National Sales Manager, for the F&M Company. F&M is a large technologically-oriented firm with total sales of about 1.56 billion dollars. It is currently 1986. Your sales force is divided into two major divisions: a consumer products division and an industrial products division. Both divisions contain approximately the same number of sales personnel.

The purpose of the case is to examine the effectiveness of business decision-making given various amounts of information.

On the following pages you will find a brief description of the F&M Company, a scenario describing the case, and a financial history of sales for the F&M Company over the past six years. After reviewing the company description, the scenario, and the sales history of the F&M Company, you will be asked to make a sales force allocation decision.

THE F&M SALES FORCE ALLOCATION CASE

INTRODUCTION

In this case, you will play the role of a corporate executive, the National Sales Manager, for the F&M Company. F&M is a large technologically-oriented firm with total sales of about 1.60 billion dollars. It is currently 1987. Your sales force is divided into two major divisions: a consumer products division and an industrial products division. Both divisions contain approximately the same number of sales personnel.

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THE F&M COMPANY DESCRIPTION

In 1917, two young scientists, Kevin Farmer and Joseph Martin formed the F&M Company. Farmer had developed an electronic instrument which detected gold and silver metal deposits. Up until 1939, the company scored a string of exploration successes and could list all of the major precious metal mining companies as clients. This exploration emphasis led to a number of defense contracts for electronic equipment, such as mine detectors. After the war, F&M sold its exploration activities and set on a course of electronic innovation.

With the introduction of the transistor in the early 1950's, F&M developed the transistor radio. The development and refinement of high-frequency transistors made F&M a leader in electronic equipment production for both consumer and industrial application. In 1971, with the development of the microchip, F&M entered the microcomputer market.

Today, in the consumer products market, F&M is a leader in producing a large assortment of hand-held calculators, home microcomputers, and television and radio components. Sales personnel in the consumer products division sell hand-held calculators, home microcomputers, and television and radio components to electronics and computer wholesalers and retailers, as well as to department stores and mass merchandisers. All products sold by this division are sold for resale purposes. As of 1985, there were over 200 firms competing in F&M's consumer products market of which 15 pose serious competitive threats.

Technological change in the industry has slowed considerably over the past 5 years resulting in a fairly stable consumer market. The consumer products division currently serves over 60,000 customers with each sale averaging \$3,175. Each customer makes purchases an average of 4 times per year. A salesperson calls on each customer an average of 6 times per year.

In the industrial products market, F&M is a leader in producing microcomputers, minicomputers, and computer components for mainframe computers. Sales personnel in the industrial products division sell microcomputers, minicomputers, and computer components for mainframe computers to businesses that wish to computerize their offices and operations and to businesses that wish to maintain and improve on their present computer systems. These businesses range in size from small insurance agencies and law firms to multi-million dollar manufacturers. It is the responsibility of sales personnel to configure computer systems for each individual business. As of 1985, there was an estimated 175 firms competing in F&M's industrial market of which 9 pose serious competitive threats. There has been rapid technological change in the industry over the past 5 years resulting in a number of firms constantly entering and leaving the industry. The industrial products division currently serves over 60,000 customers with each sale averaging \$6,350. Each customer makes purchases an average of 2 times per year. A salesperson calls on each customer an average of 6 times per year.

The following is a chart making comparisons of the competitive situation in both the consumer products and industrial

products divisions of the F&M Company.

COMPARISON OF CONSUMER PRODUCTS AND INDUSTRIAL PRODUCTS DIVISIONS
OF F&M COMPANY

DESCRIPTION	INDUSTRIAL PRODUCTS	CONSUMER PRODUCTS
INDUSTRY LEADER	YES	YES
PRODUCT ASSORTMENT	SMALL	LARGE
CUSTOM PRODUCTS	YES	NO
RATE OF TECHNOLOGICAL CHANGE	FAST	SLOW
NUMBER OF SERIOUS COMPETITORS	9	15
AVERAGE SALE TO CUSTOMER	\$6,350	\$3,175
NUMBER OF CUSTOMERS	OVER 60,000	OVER 60,000
AVERAGE NUMBER OF PURCHASES PER CUSTOMER PER YEAR	2	4
AVERAGE NUMBER OF SALES CALLS PER CUSTOMER	6	6

YEARLY COMPARISON OF F&M INDUSTRIAL PRODUCTS DIVISION SALES GROWTH VS. INDUSTRY SALES GROWTH (IN %)

FISCAL YEAR	SALES (IN MILLIONS)	INDUSTRIAL PRODUCTS DIVISION GROWTH	INDUSTRY GROWTH
1980	\$689	4.31%	4.12%
1981	718	4.21	4.37
1982	747	4.04	4.59
1983	769	2.94	4.77
1984	783	1.82	4.94
1985	789	0.76	5.14

QUARTERLY CONTRIBUTION TO SALES OF F&M INDUSTRIAL PRODUCTS DIVISION FOR 1984 AND 1985

YEAR	QUARTER	SALES (IN MILLIONS)
1984	1	\$185
	2	214
	3	201
	4	193
1985	1	193
	2	212
	3	207
	4	181

YEARLY COMPARISON OF F&M CONSUMER PRODUCTS DIVISION SALES GROWTH VS. INDUSTRY
SALES GROWTH (IN %) :

FISCAL YEAR	SALES (IN MILLIONS)	CONSUMER PRODUCTS DIVISION GROWTH	INDUSTRY GROWTH
1980	\$668	4.63%	4.17%
1981	701	4.94	4.34
1982	726	3.57	4.57
1983	748	3.03	4.76
1984	760	1.60	4.87
1985	767	0.92	5.01

QUARTERLY CONTRIBUTION TO SALES OF F&M CONSUMER PRODUCTS DIVISION FOR 1984
AND 1985

YEAR	QUARTER	SALES (IN MILLIONS)
1984	1	\$178
	2	212
	3	207
	4	160
1985	1	175
	2	215
	3	193
	4	177

THE F&M SALES FORCE ALLOCATION CASE SCENARIO

You are the National Sales Manager of the F&M Company. You have held this position since January of 1980. As National Sales Manager you have full responsibility for the management of F&M's sales operations. Most of your time is spent in the corporate office traveling only as necessary to keep in touch with field selling operations and customer problems. It is also your responsibility to secure, train, and supervise sales personnel and place them in sales territories.

The percentage sales growth of the F&M Company for both consumer products and industrial products divisions has been lagging behind the industry percentage sales growth for competing products over several preceding years. This lag in the growth rate has resulted in a deterioration of F&M's overall competitive position. On January 5, 1986, the directors of the company met and agreed that one of the major reasons for the decline in corporate sales was due to the size of the sales force. It is grossly understaffed.

The directors have concluded that the sales force should be expanded by 25 additional new sales people. For the time being, the directors have determined that the extra salespeople should be invested in only one of the two major corporate divisions. The logic behind putting all salespeople into one division rests in the fact that it is cheaper to train salespeople in one division than it is in two divisions.

On the following pages, you will find a comparison of F&M sales growth vs. industry sales growth for competing products in

both consumer products and industrial products divisions since you took over the National Sales Manager job in January of 1980. You are also given quarterly sales figures for each division over the last two years, 1984 and 1985. To remain an industry leader in either division, F&M sales growth must equal or exceed sales growth in the industry. For the year ending December 31, 1985, consumer products division sales grew 0.92 percent lagging behind an industry growth rate of 5.04 percent. For the same time period, industrial products division sales grew 0.76 percent lagging behind an industry growth rate of 5.01 percent. It is estimated that industry growth for both the consumer products and industrial products division will be again over 5 percent. Since the board of directors is letting you add another 25 salespeople to the division of your choice, they expect the chosen division to increase its sales in that division by at least 5 percent. Therefore, if you choose the CONSUMER PRODUCTS division, your goal is to exceed \$806 million in sales in that division. If you choose the INDUSTRIAL PRODUCTS division, your goal is to exceed \$829 million in sales in that division.

Your task is to determine which division, consumer products or industrial products, should receive the total allocation of 25 additional salespeople. The board of directors will be evaluating the results of your allocation decision at next year's annual meeting of the board of directors.

THE F&M SALES FORCE ALLOCATION DECISION

Circle the division that will receive ALL of the 25 additional salespeople. Remember, you are to make this allocation decision on the basis of future sales for the company.

CONSUMER PRODUCTS DIVISION

INDUSTRIAL PRODUCTS DIVISION

THE F&M SALES FORCE ALLOCATION CASE SCENARIO

You are the National Sales Promotions Manager of the F&M Company. It is your responsibility to motivate buyers to make special efforts to purchase and/or market F&M products in both the consumer and industrial products divisions. You also help to motivate salespeople to sell more of F&M's products. Your responsibilities include setting up trade shows and booths in national and regional trade shows, contests, point-of-purchase displays, and cooperative advertising and other promotional programs. You have held this position since January of 1980.

The percentage sales growth of the F&M Company for both consumer products and industrial products divisions has been lagging behind the industry percentage sales growth for competing products over several preceding years. This lag in the growth rate has resulted in a deterioration of F&M's overall competitive position. On January 5, 1986, the directors of the company met and agreed that one of the major reasons for the decline in corporate sales was due to the size of the sales force. It was grossly understaffed.

The directors concluded that the sales force should be expanded by 25 additional new salespeople. The directors determined that the extra salespeople should be invested in only one of the two major corporate divisions. The logic behind putting all salespeople into one division rested in the fact that it was cheaper to train salespeople in one division than it was in two divisions. The then national sales manager decided that all

25 additional salespeople should be allocated to the CONSUMER PRODUCTS division.

On March 5, 1986, the national sales manager suddenly died of a heart attack and you were chosen as the logical successor to take the vacant position due to your familiarity and experience with F&M Company sales. As national sales manager, you have full responsibility for the management of F&M's sales operations. Most of your time is spent in the corporate office traveling only as necessary to keep in touch with field selling operations and customer problems. It is also your responsibility to secure, train, and supervise sales personnel and place them in sales territories.

It is now January 5, 1987. One year has passed since the initial allocation of 25 additional salespeople to the CONSUMER PRODUCTS division. You and the company sales force are being evaluated by the directors of the company. For the year 1986, the CONSUMER PRODUCTS division had sales of \$771 million, an increase of 0.52%, or \$4 million, over last year's sales. However, the CONSUMER PRODUCTS division lagged behind an industry growth rate of 5.18%. For the same period, the INDUSTRIAL PRODUCTS division had sales of \$831 million, an increase of 5.35%, or \$42 million over last year's sales. Sales for the INDUSTRIAL PRODUCTS division surpassed the industry growth rate of 5.18% for the same period. After analyzing these results, the board is disappointed with the company's overall sales performance. But they do see some positive aspects to the performance and are willing to give you a chance to let you increase the size of your sales force. In

fact, the directors have allowed you to increase the sales force by an additional 50 salespeople. As National Sales Manager, you may allocate the additional 50 salespeople among the two major corporate divisions any way you wish. That is, all 50 additional salespeople may be allocated to just one division or divided among the two divisions using any possible combination of salespeople.

On the following pages, you will find a comparison between F&M sales growth vs. industry sales growth for competing products in both consumer products and industrial products divisions since January of 1980. You are also given quarterly sales figures for each division over the last three years; 1984, 1985, and 1986.

An important consideration in your decision of where to place the additional 50 salespeople is to remember that your training department is geared up for training in the CONSUMER PRODUCTS division having trained 25 additional salespeople for that division a year ago. The training department can easily handle a handful of people to be trained in the INDUSTRIAL PRODUCTS division. However, if the decision is made to increase the INDUSTRIAL PRODUCTS division by more than 5 additional salespeople, then more personnel will have to be added to the INDUSTRIAL PRODUCTS training team. This would entail not only the costs of additional personnel, but also the costs of enlarging present training facilities. The costs of training would amount to approximately \$50,000 extra dollars in 1987.

Your task is to make another sales force allocation decision. Remember, the board of directors is disappointed with the company's overall sales performance. But, they do see some

positive aspects to your performance and are willing to give you another chance by again letting you increase the size of your sales force.

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company's overall sales performance. But, they do see some positive aspects to your performance and are willing to give you another chance by again letting you increase the size of your sales force.

QUARTERLY CONTRIBUTION TO SALES OF F&M CONSUMER PRODUCTS DIVISION
FOR 1986

YEAR	QUARTER	SALES (IN MILLIONS)
1986	1	\$159
	2	217
	3	203
	4	192
	TOTAL	\$771

F&M GROWTH FOR 1986 = 0.52%

OVERALL CONSUMER INDUSTRY GROWTH FOR 1986 = 5.18%

QUARTERLY CONTRIBUTION TO SALES OF F&M INDUSTRIAL
DIVISION FOR 1986

YEAR	QUARTER	SALES
1986	1	\$201
	2	227
	3	208
	4	195
	TOTAL	\$831

F&M GROWTH FOR 1986 = 5.35%

OVERALL INDUSTRIAL INDUSTRY GROWTH FOR 1986 = 5.18%

QUARTERLY CONTRIBUTION TO SALES OF F&M CONSUMER PRODUCTS DIVISION
FOR 1986

YEAR	QUARTER	SALES (IN MILLIONS)
1986	1	\$190
	2	221
	3	203
	4	194
	TOTAL	\$808

F&M GROWTH FOR 1986 = 5.35%

OVERALL CONSUMER INDUSTRY GROWTH FOR 1986 = 5.18%

QUARTERLY CONTRIBUTION TO SALES OF F&M INDUSTRIAL
DIVISION FOR 1986

YEAR	QUARTER	SALES
1986	1	\$165
	2	221
	3	203
	4	204
	TOTAL	\$793

F&M GROWTH FOR 1986 = 0.52%

OVERALL INDUSTRIAL INDUSTRY GROWTH FOR 1986 = 5.18%

THE F&M SALES FORCE ALLOCATION CASE SCENARIO -- PART 2

It is now January 5, 1987. One year has passed since your initial allocation of 25 additional salespeople to the INDUSTRIAL PRODUCTS division. You and the company sales force are again being evaluated by the directors of the company. For the year 1986, the INDUSTRIAL PRODUCTS division had sales of \$793 million, an increase of 0.52%, or \$4 million, over last year's sales. However, the INDUSTRIAL PRODUCTS division lagged behind an industry growth rate of 5.18%. For the same period, the CONSUMER PRODUCTS division had sales of \$808 million, an increase of 5.35%, or \$41 million over last year's sales. Sales for the CONSUMER PRODUCTS division surpassed the industry growth rate of 5.18% for the same period. After analyzing these results, the board is disappointed with the company's overall sales performance. But they do see some positive aspects to your performance and are willing to give you another chance by again letting you increase the size of your sales force. In fact, the directors have allowed you to increase the sales force by an additional 50 salespeople. As National Sales Manager, you may allocate the additional 50 salespeople among the two major corporate divisions any way you wish. That is, all 50 additional salespeople may be allocated to just one division or divided among the two divisions using any possible combination of salespeople.

On the next page, you will find quarterly sales figures for 1986. You will also find sales growth figures for the company's two divisions, consumer products and industrial products, along

with industry sales growth figures for 1986.

An important consideration in your decision of where to place the additional 50 salespeople is to remember that your training department is geared up for training in the INDUSTRIAL PRODUCTS division having trained 25 additional salespeople for that division a year ago. The training department can easily handle a handful of people to be trained in the CONSUMER PRODUCTS division. However, if the decision is made to increase the CONSUMER PRODUCTS division by more than 5 additional salespeople, then more personnel will have to be added to the CONSUMER PRODUCTS training team. This would entail not only the costs of additional personnel, but also the costs of enlarging present training facilities. The costs of training would amount to approximately \$50,000 extra dollars in 1987.

Your task is to make another sales force allocation decision. Remember, the board of directors is disappointed with the company's overall sales performance. But, they do see some positive aspects to your performance and are willing to give you another chance by again letting you increase the size of your sales force.

THE F&M SALES FORCE ALLOCATION CASE SCENARIO -- PART 2

It is now January 5, 1987. One year has passed since your initial allocation of 25 additional salespeople to the CONSUMER PRODUCTS division. You and the company sales force are again being evaluated by the directors of the company. For the year 1986, the CONSUMER PRODUCTS division had sales of \$771 million, an increase of 0.52%, or \$4 million, over last year's sales. However, the CONSUMER PRODUCTS division lagged behind an industry growth rate of 5.18%. For the same period, the INDUSTRIAL PRODUCTS division had sales of \$831 million, an increase of 5.35%, or \$42 million over last year's sales. Sales for the INDUSTRIAL PRODUCTS division surpassed the industry growth rate of 5.18% for the same period. After analyzing these results, the board is disappointed with the company's overall sales performance. But they do see some positive aspects to your performance and are willing to give you another chance by again letting you increase the size of your sales force. In fact, the directors have allowed you to increase the sales force by an additional 50 salespeople. As National Sales Manager, you may allocate the additional 50 salespeople among the two major corporate divisions any way you wish. That is, all 50 additional salespeople may be allocated to just one division or divided among the two divisions using any possible combination of salespeople.

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Your task is to make another sales force allocation decision. Remember, the board of directors is disappointed with the company's overall sales performance. But, they do see some positive aspects to your performance and are willing to give you another chance by again letting you increase the size of your sales force.

DESCISION DESCRIPTION

The case you have just completed asked you to make two sales force allocation decisions and to defend your decisions. Describe the process you went through in making each of your decisions. What did you think of? Trace your decision-making process from the time you received the case introduction until defending the second allocation decision. Reflect back upon the feelings and thoughts that you had while making your allocation decisions.

QUESTIONNAIRE

INSTRUCTIONS: Please respond to the 7-point scales by circling the appropriate response. Also note that any time that the phrase "1986 (sales force) allocation decision" is used, it refers to the first allocation of 25 salespeople to either the consumer products division or the industrial products division, whether made by you or by a previous sales manager.

1. My superiors will hold me personally responsible for the outcome of the 1986 allocation decision.

Disagree							Agree
1	2	3	4	5	6	7	

2. The failure of the 1986 sales force allocation decision was due to chance factors beyond the sales manager's control.

Disagree							Agree
1	2	3	4	5	6	7	

3. If I had more than one year to use as an evaluation of the 1986 allocation decision, my decision would have been successful.

Disagree							Agree
1	2	3	4	5	6	7	

4. It is necessary to risk putting most of the salespeople in the 1987 allocation decision into the unsuccessful division in order to recoup the losses from the 1986 allocation decision.

Disagree							Agree
1	2	3	4	5	6	7	

5. The 1986 sales force allocation decision failed because the sales manager did not possess the skills necessary to make a successful decision.

Disagree							Agree
1	2	3	4	5	6	7	

6. The sales manager failed at the 1986 allocation decision due to not trying hard enough.

Disagree							Agree
1	2	3	4	5	6	7	

7. The 1986 allocation decision was an excellent decision considering all the information that I possessed.

Disagree Agree

1 2 3 4 5 6 7

8. The sales manager did not possess the aptitude necessary to make a successful allocation decision in 1986.

Disagree Agree

1 2 3 4 5 6 7

9. I should be held accountable for the outcomes of the 1986 allocation decision.

Disagree Agree

1 2 3 4 5 6 7

10. The 1986 sales force allocation decision would have been successful had the company not been unlucky.

Disagree Agree

1 2 3 4 5 6 7

11. The 1986 sales force allocation decision task itself was too hard for the sales manager to be successful.

Disagree Agree

1 2 3 4 5 6 7

12. If I had it to do all over again, I would still make the same 1986 allocation decision.

Disagree Agree

1 2 3 4 5 6 7

13. The sales manager's 1986 allocation decision would have been successful if more effort had been put into the decision.

Disagree Agree

1 2 3 4 5 6 7

14. The 1986 sales force allocation decision was a simple task.

Disagree

Agree

1 2 3 4 5 6 7

15. My superiors will evaluate my performance based in part on the 1986 allocation decision.

Disagree

Agree

1 2 3 4 5 6 7

16. The difficulty of the task of making the 1986 allocation decision was too overwhelming for the sales manager to be successful.

Disagree

Agree

1 2 3 4 5 6 7

17. The sales manager was not successful with the 1986 allocation decision because not enough time was taken to make the decision.

Disagree

Agree

1 2 3 4 5 6 7

18. I feel personally responsible for the outcome of the 1986 allocation decision.

Disagree

Agree

1 2 3 4 5 6 7

19. The sales manager lacked the ability to make a successful allocation decision in 1986.

Disagree

Agree

1 2 3 4 5 6 7

20. Concern over previous losses had no impact on my previous decision.

Disagree

Agree

1 2 3 4 5 6 7

CIRCLE THE NUMBER OF THE ONE EXPLANATION THAT BEST MATCHES
YOURS

1. I used the dollar amounts as a basis of comparison. I saw that the successful division had a large sales increase while the unsuccessful division had a small sales increase. It was therefore more important to allocate all or most of the 50 additional salespeople to the successful division in order to maintain and increase those sales gains. The following were my thoughts:
2. I used the dollar amounts as a basis of comparison. I saw that the successful division had a large sales increase while the unsuccessful division had a small sales increase. It was therefore more important to allocate all or most of the 50 additional salespeople to the unsuccessful division in order to recover those sales losses. The following were my thoughts:
3. I used the dollar amounts as a basis of comparison. I saw that the successful division had a large sales increase while the unsuccessful division had a small sales increase. I did not think in terms of gains or losses. The following were my thoughts:

4. I used the percentages as a basis of comparison. I saw that the successful division exceeded its quota while the unsuccessful division did not meet its quota. It was therefore more important to allocate all or most of the 50 additional salespeople to the successful division in order to maintain or increase sales over future quotas. The following were my thoughts:

5. I used the percentages as a basis of comparison. I saw that the successful division exceeded its quota while the unsuccessful division did not meet its quota. It was therefore more important to allocate all or most of the 50 additional salespeople to the unsuccessful division in order to recover those sales losses. The following were my thoughts:

6. I used the percentages as a basis of comparison. I saw that the successful division exceeded its quota while the unsuccessful division did not meet its quota. I did not think in terms of gains or losses. The following were my thoughts:

7. I used the first 25 additional salespeople as a basis of comparison. The first allocation went to the unsuccessful division. It was therefore more important to allocate all or most of the 50 additional salespeople to the successful division in order to maintain and increase those sales gains. The following were my thoughts:

8. I used the first 25 additional salespeople as a basis of comparison. The first allocation went to the unsuccessful division. That division needs even more salespeople to overcome its losses so I allocated most or all of the 50 additional salespeople to that division. The following were my thoughts:

9. I used the first 25 additional salespeople as a basis of comparison. The first allocation went to the unsuccessful division. I did not think in terms of gains or losses. The following were my thoughts:

DEFENDING YOUR ALLOCATION DECISION

Please write a brief paragraph defending your sales force allocation decision.

VITA

Keith Jan Fabes

Candidate for the Degree of

Doctor of Philosophy

Thesis: EXPLORING ADAPTIVE BEHAVIOR IN SALES FORCE ALLOCATION
USING AN ENTRAPMENT METHODOLOGY

Major Field: Business Administration

Biographical:

Personal Data: Born in Tulsa, Oklahoma, April 23, 1954, the son of Sherman D.
and Teresa S. Fabes

Education: Graduated from Thomas A. Edison High School, Tulsa, Oklahoma, in May
1972; received Bachelor of Arts degree in International Affairs from George
Washington University in May 1976; completed requirements for the Doctor of
Philosophy degree at Oklahoma State University in December, 1989.

Professional Experience: Research Assistant, U.S. News and World Report, January
1975 to May 1976; Manufacturer's Representative, FAPCO Associates, May 1976
to December 1976; Regional Manager, Fantastic Sam's, January 1977 to August
1978; General Manager/Owner, Family Tree Hair Centers, August 1978 to August
1983; Teaching Assistant, Department of Management, Oklahoma State
University, August 1984 to May 1985; Research Assistant, Department of
Marketing, Oklahoma State University, May 1985 to August 1986; Teaching
Assistant, Department of Marketing, Oklahoma State University, August 1986 to
December 1987; Instructor, Department of Marketing, Baruch College, January
1988 to present.