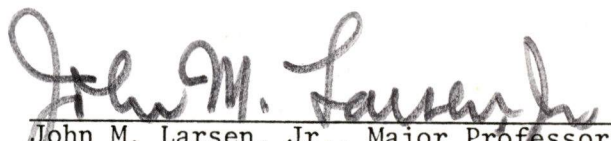
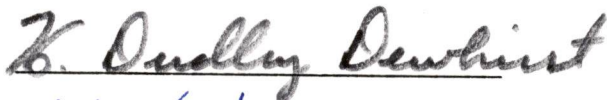


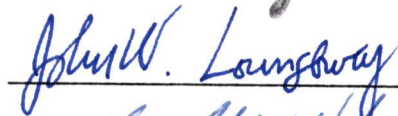
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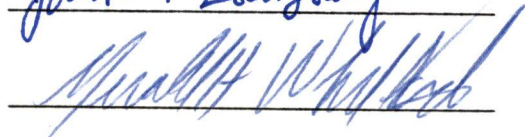
I am submitting herewith a dissertation written by Terrence Leonard Eugene Guth entitled "The Development and Evaluation of a Model of Employee Turnover." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Industrial and Organizational Psychology.


John M. Larsen, Jr., Major Professor

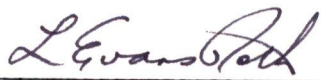
We have read this dissertation
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Accepted for the Council:


Vice Chancellor
Graduate Studies and Research

THE DEVELOPMENT AND EVALUATION OF A MODEL OF
EMPLOYEE TURNOVER

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Terrence Leonard Eugene Guth

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The development of an individual is an ongoing process beginning at birth and continuing all one's life. During early years it is one's parents who establish the foundation upon which all else rests. Thus I would like to thank my parents for demanding of me what I thought to be unattainable, for believing in me when I had self doubts, and for encouraging me to develop to my fullest.

The bond established between a professor and student is much like that between a parent and child. A professor counsels, guides and directs his student's effort so as to allow the student to discover for himself the scholarly principles upon which knowledge is attained. However, a professor's responsibilities do not stop here. He must reassure his student when his student has doubts, correct his student when his student is in error, and be a friend when one is needed. Such was the relationship between myself and Dr. John M. Larson, Jr., to whom I am sincerely grateful.

Finally, and most importantly, I would like to thank my loving wife, Pat, for her strength and support when I was weak, for her faith when all seemed hopeless, and for her continual understanding. This degree would mean little if I did not have her with whom to share it.

I would also like to express my appreciation to the many professors, colleagues, fellow students, and friends who played a significant role in my professional development.

ABSTRACT

The study of employee turnover has for many years been an area much discussed and researched by applied psychologists. Early investigations were able to demonstrate relationships between biographical data attitudinal variables and turnover. This early work which was characteristically bivariate in both design and analyses, has led reviewers to assemble long lists of turnover correlates which take on varying degrees of importance across different studies. Contradictory findings have often occurred. The result has been some confusion on the part of researchers about what characteristics of individuals are predictive of turnover. Reviewers of the turnover literature have in recent years begun to call for theoretical models and multivariate approaches to the study of turnover. Just such a model was proposed by Mobley in 1977.

The purposes of this study were fourfold. First, there was an attempt to evaluate the predictability of a moderated regression model within a retail sales organization. Second, the utility of adding an organizational commitment component to the Mobley model was assessed. Third, the moderating effect of employee's employability-mobility was assessed. Finally, an attempt was made to explain the lack of relationship between turnover behavior and other forms of organizational withdrawal.

The results of this investigation suggest it is appropriate to use the moderated model to predict retail sales employee turnover.

Statistical significance was demonstrated below the .001 level. In addition, it was demonstrated that organizational commitment should be included in a model of employee turnover. Positioning of the organizational commitment component was suggested to follow job satisfaction, but precede an individual's thoughts of quitting. Other results presented indicate that an individual's employability-mobility significantly moderated the relationship between intention to remain and actual turnover behavior. The moderating effect was demonstrated for a continuous moderating variable as well as when it was dichotomized.

Hypothesized explanations of the lack of relationship between turnover behavior and other forms of withdrawal failed to be supported by the data presented. Further explanation of these results and recommendations for future research were presented.

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INTRODUCTION

The study of turnover by industrial psychologists, organizational behaviorists, and a number of related disciplines has, for many years, been a principle area of applied research. While a few beneficial results of turnover have been discussed, typically an employee's decision to terminate has been considered to have a negative net consequence for the organization. As a result of this, there has been a great deal of research activity directed toward finding potential predictors of turnover. The usefulness of such predictors is twofold. First, these predictors could be administered to individuals prior to their entry into the organization so as to identify and eliminate individuals who are likely to be short tenured. Secondly, this information could be used by organizations to identify individuals within their current work force who have a high probability of terminating in the near future. With this type of information, organizations could move to reduce or eliminate problems which would result in employee termination as well as improve organization planning processes with respect to manpower planning. With increasing technological advancement of American industry, the costs of replacing a terminated employee in terms of recruiting, selecting, and training are likely to increase for the foreseeable future. This being the case, the need to better understand and to improve the prediction of turnover takes on even greater importance.

Definition of Turnover

For the purposes of this analysis, turnover is defined as severance of formal organizational ties. This definition acknowledges that subsequent to the termination event, informal and social relationships may be maintained with members of or with the organization as a whole. In addition, the definition excludes intraorganizational transfers and/or promotions as incidents of turnover. This definition is consistent with that of Smith (1976) and Steel (1980).

While this definition is consistent with the objectives of this study, it should be noted that other authors have offered dissimilar definitions in their empirical studies. Specifically, Price (1977) has defined turnover as ". . . the degree of individual movement across the membership boundary of a social system." Problems with this definition result from the fact that movement can be either toward or away from any particular organization. Thus, this definition would incorporate both the acquisition of employees as well as the termination of employees. Seldom, if ever, have operational definitions of turnover included the acquisition of employees. As a result, the major weaknesses of Price's definition is the failure to distinguish between acquisitions and terminations. Van Der Merwe and Miller (1976) suggest that a definition of turnover should include only controllable separations. As a result their definition is deficient in that it excludes uncontrollable (from the organizational perspective) events. Smith's (1976) definition differs from the one presented above in that it describes turnover as a rate as opposed to an event. Specifically, she suggests

that the average number of terminations and accessions divided by the average number of the working force or "the number of terminations divided by the average number in the working force" is a more appropriate definition of turnover.

Thus, in the definition stated here turnover is considered to be an event rather than a rate, and these events are limited to incidents of total severance of formal ties with the organization in question.

While this definition is adequate for determining when an employee has terminated, it is deficient in that it gives no indication of the expected tenure of an employee prior to termination. Within many types of organizations (e.g., retail sales and insurance) profitability is maintained by hiring an employee who eventually terminates after a relatively long tenure of employment. Thus for the purposes of this examination, the length of time that an employee remained with the organization subsequent to testing or 365 days (whichever was less), was used as the criterion on which the predictive measures were evaluated. This criterion enabled the author to gather more company relevant turnover information than would have been available had a dichotomous (i.e., terminate-remain) criterion been utilized.

Issues in the Study of Turnover

Considerable interest has been shown recently in the study of employee turnover (Fishbein, 1967; Locke, 1976; Mobley, 1977; Newman, 1974; Porter & Steers, 1973). Justification for increased emphasis on the study of turnover can be seen in the economic cost incurred by an organization as a result of employee turnover (Zimmerer, 1971; Jeswald,

1974). Specifically, these authors suggest that the cost of locating or recruiting new employees in terms of both administrative cost as well as managerial time can be extremely costly. Costs involved in the selection process include administrative time, testing materials, and managerial time. In addition, there is often lost performance as a result of the development and/or training period, which is often quite extensive in the case of highly technical or skilled jobs. Thus, from the sole perspective of examining the individual's performance these and other factors will have significant costs for the organization.

Within organizations in which there is a sequential or reciprocal relationship among co-workers, the result of a termination can have a significant impact on the performance of the work group as well (Zimmerer, 1971). Such decreases in work group productivity are often associated with a similar decrease in worker morale (Price, 1977). Thus, it is readily apparent that the organizational costs which result from high employee turnover can be severe and far-reaching.

In recent years, several authors have begun to speculate that turnover may have some beneficial consequence for the organization (Farris, 1971; Price, 1976; Zimmerer, 1971). Specifically, these authors suggest that the infusion of new individuals into the organization can result in new ideas and novel approaches to traditional problems for the organization. In addition, employee terminations often result in the removal of poor or nonperforming employees (Porter & Steers, 1973). Finally, from the employees' perspectives, a termination may result in their acquiring more fulfilling and satisfying

jobs (Porter & Steers, 1973) or removing themselves from emotionally unhealthy environments.

In recent years, authors have attempted to differentiate between different types of employee turnover. The most widely supported classification involves the distinction between involuntary versus voluntary terminations. It has been suggested that the study of turnover should focus on voluntary terminations since these events are more likely to be manageable and under the control of the organization (Porter & Steers, 1973). Although this author would concur that voluntary terminations are under the control of the organization to a greater extent than involuntary terminations, I would not go so far as to suggest that the organization has no control over involuntary withdrawals. Evidence of such control can be seen in the minimum physical health requirement for employment in many organizations, to avoid terminations due to illness, the preference for hiring women with career orientations, to avoid pregnancy terminations, and finally, the preference of organizations for individuals with a history of geographic stability. All of these examples are instances of attempts by organizations to deal with the involuntary termination of potential employees. For the organization, financial costs of a voluntary versus involuntary termination should be nearly identical. As a result, the failure of researchers to include involuntary terminations in their studies of the turnover process is often a result of their attempts to deal with a statistically more homogeneous population rather than concerns for understanding the turnover process.

Recent reports by Hinrichs (1971, 1975) and Lefkowitz and Katz (1969) have questioned the methodology used in classifying types of turnover. Their criticism has been directed toward the exit interview as a methodology for collecting valid turnover information. Specifically, these authors have found that exit interviews, when conducted by management personnel, tended to yield results which were quite different from those obtained by outside consultants who served as interviewers or from follow-up questionnaires which were administered three months after termination (Lefkowitz & Katz, 1969; Lopez, 1965). Other researchers have criticized the technique because of the difficulty of obtaining trained interviewers, the unknown accuracy of the interviewee's comments, and the possibility of the employee being reluctant, and sometimes, unwilling to discuss frankly the reasons for departures, thus distorting their reasons (Kreuter, 1951; Schoenfeld, 1957; Yourman, 1965). Where recognition of these shortcomings has been acknowledged postseparation follow-up is often advocated either by means of a mailed questionnaire or a telephone survey (Heneman & Kern, 1956; Kreuter, 1951; Lefkowitz, 1967; Yourman, 1965). Proponents of the voluntary and involuntary distinction suggest that many involuntary terminations result from administrative decision and, therefore, are reliable and valid to the extent administrative records are accurate. Similarly, they suggest that terminations which result from relocation or illness are likely to be reported accurately by the terminating employee (Steel, 1980). While it is likely that there will be increased accuracy in the reporting of unavoidable reasons for termination, a problem arises

with individuals who claim unavoidable reasons for terminations when, in fact, they are terminating on a completely voluntary basis. Distortions such as these are the major causal factor in the unreliability of turnover classification. Thus, until researchers can resolve the methodological problems involved in the classification of types of turnover, I would suggest that turnover be broadly defined as a single event void of any classification.

Statement of the Problem

Until very recently, research in job survival has been characterized by studies which are designed for bivariate type analyses (Mobley, Griffith, Hand, & Meglino, 1979; Price, 1977; Wanous, Stumpf, & Bedrosian, 1979). Even in studies where multiple predictors of job survival have been collected, multivariate analyses have not been utilized to assess the relative importance of individual predictors or groups of predictors either in hierarchical or collectively. The result has been that in reviews of the turnover literature, authors have assembled long lists of turnover correlates which take on varying degrees of importance across different studies. In addition, contradictory findings have often occurred. The review process has resulted in some confusion on the part of researchers about what characteristics of individuals or organizations are predictive of turnover.

Recent trends appearing in the study of turnover indicate that researchers are beginning to move away from the oversimplified bivariate approach and have begun to develop theoretical models of the turnover process. Most notably, the work of Mobley and his colleagues (Mobley,

1977; Mobley, Griffith, & Meglino, 1979) has offered a theoretical model and multivariate approach to the study of turnover. Other researchers have offered empirical support for the Mobley model; however, much of this work has been conducted within the context of military organizations (Miller, Katerbery, & Hulin, 1979; Hom, Katerbery, & Hulin, 1979; Mobley, Griffith, Hand, & Meglino, 1979) and hospitals (Steel, 1979; Mobley, Horner, & Hollingsworth, 1978). As a result, there is a necessity to assess the generalizability of these findings to other types of individuals and occupational fields.

The purposes in the investigation reported here are fourfold. The first was an attempt to evaluate the generalizability of the results of prior research within the context of a retail sales organization. The second was to evaluate the utility of including an organizational commitment component in the Mobley model of turnover. The third was to assess the additional predictive validity which could be gained by including a measure of employability-mobility in the prediction of turnover. This gain was measured both linearly and as part of a linear joint function. Finally, there was an attempt to explain the lack of previously demonstrated relationship between turnover behavior and other forms of organizational withdrawal. Thus, this present investigation was an inquiry into the validity and generalizability of the Mobley et al. (1978) model as well as an attempt to expand its predictive capabilities.

CHAPTER I

LITERATURE REVIEW

The volume of data resulting from researchers' attempts to find useful and valid predictors of turnover is quite extensive. While numerous reviews of the literature have been conducted, it is worthwhile to summarize and update these reviews with respect to current empirical findings.

Predictors of Turnover

Within the scientific community, a prerequisite to the development of predictive models has been the verification of relationships between the components as hypothesized for the model. To the extent that a model is an extension and continuation of valid interrelationships between its components, then the model itself will be valid. However, a model which is based on unproven relationships never gets past the hypothetical stage. Thus, to establish the validity of Mobley's (1977) model, it is essential that the underlying relationships be examined. In the following review data are presented which are relevant to a test of the Mobley model's component interrelationships and to component validation as predictors of turnover behavior. First some biographical and demographic variables frequently studied in conjunction with turnover in general are presented.

Biographical and Demographic Predictors

Age. Perhaps the most widely studied relationship between a personal factor and turnover has been the study of an individual's age. Researchers have studied this relationship within the context of the male clerical workers (Minor, 1958; Fleishman & Berniger, 1960), factory workers (Ley, 1966), public service organization trainees (Downs, 1967), scientist and engineers (Bassett, 1967; Farris, 1971), and male office workers (Shott et al., 1963). The conclusion reached by these researchers with the exception of Hellriegel and White (1973), who reported no differences has been there is a negative relationship between age and turnover. However, the strength of this relationship has characteristically not been of large magnitude, typically explaining less than 7 percent of turnover variance. One possible explanation for the small magnitude of the relationship is that an individual's age is closely related to many other variables and thus age alone accounts for relatively little additional criterion variance.

Tenure. Several authors have examined the relationship between employee tenure and turnover behavior. These studies have been conducted within numerous occupational categories including hospital employees (Mobley et al., 1978), and female clerical workers (Fleishman & Berniger, 1960; Robinson, 1972; Waters et al., 1976). Results of these studies have without exception shown a negative relationship between tenure and employee turnover. In fact, Mangione (1973) suggested that, based on the results of his multivariate study, employee tenure was one of the best single predictors of turnover behavior.

Family size and responsibilities. Authors who have examined the relationship between family size and turnover have drawn mixed conclusions. Knowles (1964) in a study of 56 male factory workers found a negative correlation between family size and turnover. Conversely, Stone and Athelsan (1969) found a positive relationship between family size and turnover for a sample of female physical therapists. As a result, no definitive conclusions can be drawn concerning the relationship between family size and turnover.

Inconsistent findings also have been found for the relationship between family responsibility and turnover. While in at least one study it was found that high responsibility is associated with longer tenure (Federico et al., 1976). However, most authors have found greater family responsibility to be positively related to withdrawal, (Guest, 1955; Robinson, 1972; Marsh & Mannari, 1977). Thus while the weight of the evidence tends to indicate a positive relationship between family responsibility and withdrawal from the organization, the results have not been in total agreement.

Sex. Sex has not been thoroughly studied for a relationship with turnover. As a result, there is no conclusive evidence about the direction or degree of relationship. However, in a study of female Japanese manufacturing employees, Marsh and Mannari (1977) found women to have higher rates of turnover than men. Differing conclusions were drawn by Mangione (1973) who found no relationship between sex and turnover behavior.

Job Satisfaction

Perhaps the relationship which has been most thoroughly studied by investigators has been the relationship between job satisfaction and withdrawal. In a study by Hulin (1966) that author concluded that when a terminated employee was matched with two individuals remaining within the organization, significant differences could be demonstrated between the stayers and terminator on mean satisfaction scores of the Job Descriptive Index (JDI; Smith, Kendall, & Hulin, 1969). Hulin concludes, based on his examination, that future terminators can be identified up to 12 months prior to their actual termination behavior through the use of the JDI. Recent studies which are more correlational in nature have indicated a consistent, yet moderate, negative relationship between overall job satisfaction and turnover. However, the amount of criterion variance accounted for has often been quite small (Marsh & Mannari, 1977; Mobley, Horner, & Hollingsworth, 1978; Newman, 1974; Waters & Roach, 1973). One notable exception to these findings was reported by Koch and Steers (1978) who found a nonsignificant relationship between a Job Descriptive Index total score and turnover behavior. While a small-to-moderate negative relationship generally has been established between job satisfaction and turnover behavior, the amount of unique variance accounted for by job satisfaction (i.e., partial correlation coefficient) when combined with organizational commitment and behavior intentions may become nonsignificant (Marsh & Mannari, 1977; Mobley, Horner, & Hollingsworth, 1978).

Several authors have examined the relationship between components of job satisfaction and withdrawal behavior. One of the components

often examined is the degree of satisfaction an individual has with his co-workers. The results from a number of studies indicate a nonsignificant relationship between turnover behavior and satisfaction with co-workers (Kraut, 1975; Mobley, Horner, & Hollingsworth, 1978; Newman, 1974; Waters, Roach & Waters, 1976). Somewhat different conclusions were drawn by Koch and Steers (1978), who found a significant negative relationship between satisfaction with co-workers and turnover behavior. Such disparate findings lead this reviewer to conclude that little or no relationship exists between turnover behavior and satisfaction with co-workers.

A second often reported component of job satisfaction involves the hypothesized relationship between satisfaction with pay and turnover behavior. With the exception of the results reported by Mangione (1973) who reported a statistically significant negative relationship, most authors have found lack of relationship between satisfaction with pay and turnover (Koch & Steers, 1978; Kraut, 1975; Mobley, Horner & Hollingsworth, 1978; Waters, Roach & Waters, 1976).

While many other components of job satisfaction have been examined, the results have been similar to those reported above. In general, nonsignificant or extremely weak relationships have been reported and in other cases conflicting data are presented. When one combines these conflicting findings with the fact that component job satisfaction accounts for an extremely small proportion of unique criterion variance, one is forced to conclude that more effective prediction might be made by using composite satisfaction scores or by building predictive models

of turnover. In this latter case, job satisfaction may well be an important antecedent of actual turnover behavior.

Some authors have used the expectancy model as a conceptual framework for the study of turnover. These authors hypothesize that the degree to which an individual's expectations for a job are met will have a significant negative relationship with turnover behavior (Porter & Steers, 1973).

Dunnette, Arvey, and Banas (1973) report that individuals who left their jobs show a greater discrepancy between their expectations for their jobs and their report of actual job experience, than do those who have remained on the job. However, since data for this study were collected from terminators sometime subsequent to departure, the possibility of postseparation distortion seems likely. In a related study, Wanous (1973) found that a realistic job preview and description, as opposed to a one sided all positive description, lowered both an individual's expectations, as well as the thoughts of quitting. However, this effect did not carry over to influence actual turnover behavior.

Results reported by Farr, O'Leary, and Bartlett (1973) and Iljen and Seely (1974) suggest that when individuals are given realistic information about a job prior to their accepting that job, lower turnover resulted. Unfortunately, an individual's expectations and subsequent experiences were not actually assessed in either of the two studies. Therefore, it is difficult to determine the actual effect that realistic information can have on turnover behavior. As a result of the findings reported above, it can be contended that while

individuals' expectations for a job may have some small effect on their ultimate tenure with an organization, the magnitude of that relationship has yet to be conclusively demonstrated. Thus it would appear that in attempting to explain the turnover process, it would be better to examine components other than job satisfaction and individual expectations for predictive utility in anticipating turnover behavior.

After a review of the relevant literature, Locke (1976) concluded that while there seems to be consistent and negative relationship between job satisfaction and turnover behavior the magnitude of the correlations measuring the relationship has typically been less than .40. This being the case, it would not seem useful to continue to concentrate our study on this relationship to the exclusion of potentially more fruitful examinations.

Organizational commitment. Another recent approach to the prediction of turnover beyond that achieved by job satisfaction has been proposed by Porter and labelled organizational commitment. As a result, a number of researchers have recently examined both the antecedents and consequences of organizational commitment (Porter et al., 1974; Steers, 1977). Porter's definition of commitment is an employee's identification with and involvement in a particular organization. In summarizing Porter's definition of organizational commitment, Mobley et al. (1979) suggest that an individual with high organizational commitment is characterized by

. . . (1) A strong belief in the acceptance of an organization's goals and values, (2) a willingness

to exert considerable effort on behalf of the organization, and (3) a definite desire to maintain organizational membership.

Porter et al. (1976) has suggested that organizational commitment may contain components of both job satisfaction and intention to remain within a particular organization.

Because organizational commitment is a more direct measure of employees' affiliation for their particular organization (as opposed to their particular job), it has been hypothesized that organizational commitment will be a more immediate precursor of actual turnover behavior than job satisfaction. The rationale behind this hypothesized relationship suggests that an employee's decision to terminate his employment with a particular organization involves quite simply his rejection of the organization in question. However, it does not necessarily follow that the terminating employee rejects the particular position or job. In fact, it is highly probable that a terminating employee may accept a very similar position with the same knowledge, skill, and task requirements within another organization.

A test of the hypothesized superior predictive ability of organizational commitment over job satisfaction was conducted by Porter et al. (1974). These authors compared the predictive ability of organizational commitment to the 5 JDI scales. Their results led them to conclude that organizational commitment was useful in predicting voluntary termination across various time periods to a much greater extent than job satisfaction. These results were supported in a later study by Hom et al. (1979). Mobley et al. (1979) has suggested that

the inclusion of withdrawal intentions as a component of organizational commitment may account for the increased predictive ability of this construct over job satisfaction. This possible explanation is implied by Porter's operational definition of commitment (Mowday et al., 1979; Porter et al., 1974; Steers, 1977). In a related study Mirvis and Lawler (1977) reported a significant and negative relationship between one component of commitment (organizational involvement) and turnover behavior.

To summarize the results of studies examining the relationship between organizational commitment and employee turnover, it would be accurate to state that significant and negative relationships have typically been conducted, organizational commitment has consistently been found to be superior to job satisfaction in the prediction of employee turnover. Recognizing the importance of organizational commitment in the prediction of turnover, one might regard its inclusion in a predictive model of employee turnover as warranted.

Mobley's Model

Locke (1976) reviewed the prior turnover literature and concluded his summary by suggesting a change in direction for future studies of the turnover process. Many reviewers have agreed with Locke's conclusions and they have gone even further than he did in stressing the need for better developed conceptual models of the turnover process (Forrest, Cummings & Johnson, 1977; Porter & Steers, 1973; Price, 1977; Mobley, Griffith, Hand & Melino, 1979). Porter and Steers (1973) conclude in their review article that much more time should be spent in studying the

psychology of the withdrawal decision process, because our understanding of how this process works is far from complete. In response to these and other author's suggestions, Mobley (1977) proposed a heuristic model (see Figure 1) of the employee withdrawal process and one year later he proposed an abbreviated version of the model (see Figure 2). In the original model Mobley identified a number of possible precursors to actual employee turnover. A schematic representation of the earlier model can be seen in Figure 1. Specifically Mobley's original model shows that employee satisfaction or dissatisfaction is the direct result of the individual's evaluation of the existing job. The satisfaction literature abounds with reports by researchers who have examined this relationship. Among the models which have been proposed to explain this relationship are the value-percept discrepancy model (Locke, 1969, 1976), an instrumentality-valence model (Vroom, 1964) a met expectations model (Porter & Steers, 1973), and a contribution/inducement ratio (March & Simon, 1958). At this point no single model has been shown to be superior to the others in explaining the relationship between satisfaction and evaluation of the job. Thus, comparative studies of these and other explanatory models are still greatly needed.

The second major relationship shows that one, if not the most probable, consequence of job dissatisfaction is that it stimulates the cognitive process thinking of quitting. Mobley (1977) was able to demonstrate a moderate and consistent relationship between measures of job satisfaction and survey reports of thinking of quitting. A significant relationship between the frequency with which a person

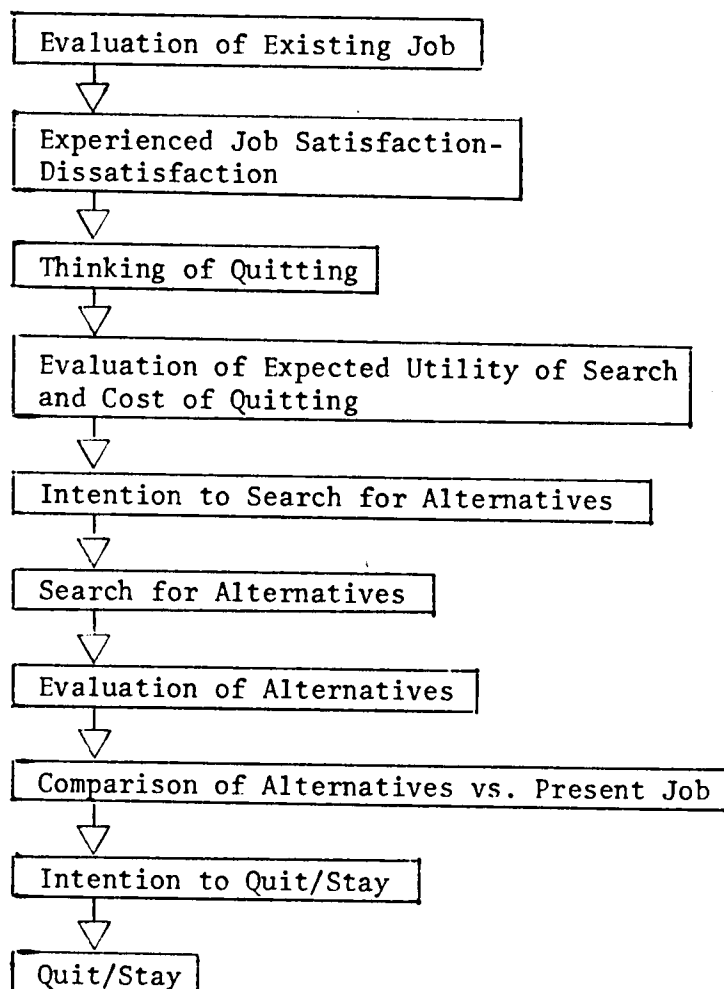


Figure 1. The employee turnover decision process.

Source: Mobley, W. H. "Intermediate Linkages in the Relationship between Job Satisfaction and Employee Turnover" (Journal of Applied Psychology, Vol. 62, 1977), p. 238.

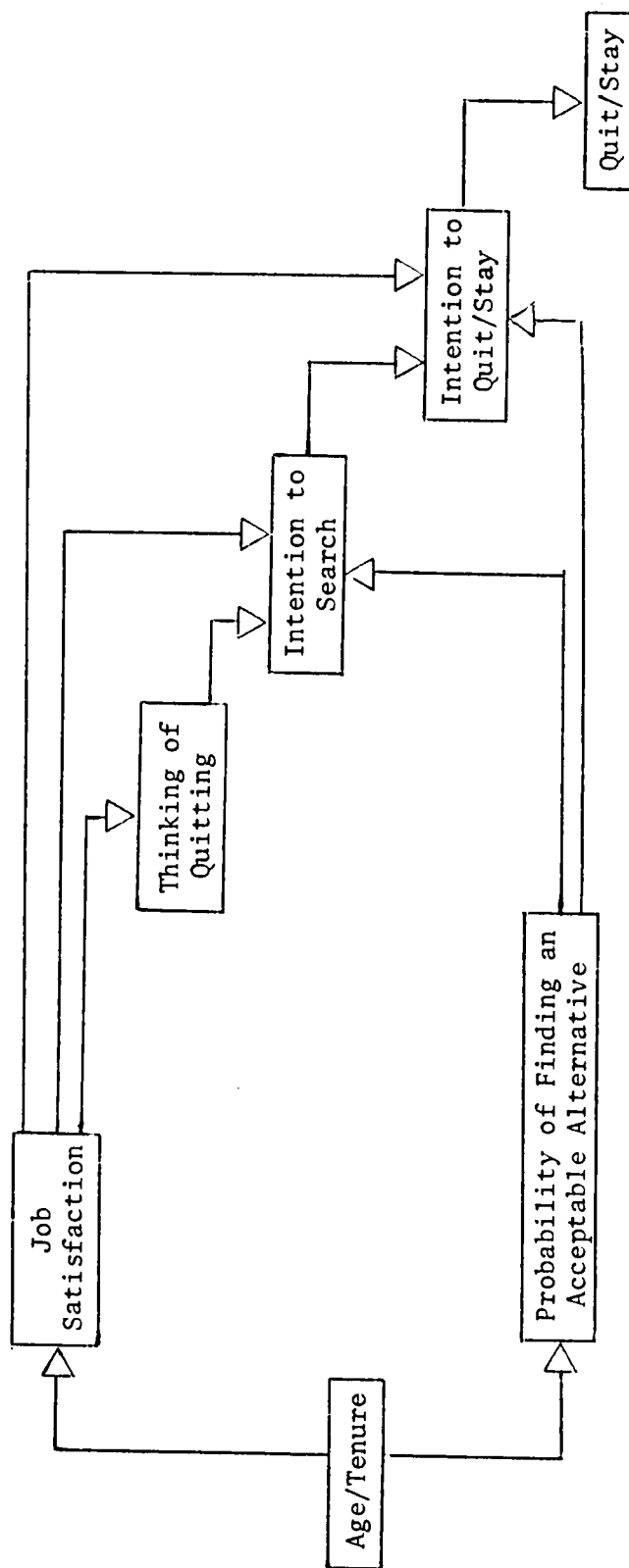


Figure 2. A simplified representation of intermediate linkages in the employee withdrawal decision process.

Source: Mobley, W. H., Horner, S. O., & A. T. Hollingsworth, "An Evaluation of Precursors of Hospital Employee Turnover." (Journal of Applied Psychology, Vol. 63, 1978), p. 410.

thinks of leaving his job and his actual withdrawal was demonstrated by Atkinson and Lefferts (1972).

The third major relationship in the model is between the process of thinking of quitting and the intention to search for alternative means of employment. Included in this latter process are the evaluation of expected utility of the search process, the actual search for alternative jobs, and the evaluation or comparison of these alternatives with the present job. While many researchers have acknowledged that the availability of alternatives can have a significant impact on an individual's ultimate decision to withdraw from an organization, few authors have included this variable in examining turnover (Locke, 1976). Two researchers did, however, find evidence that inclusion of perceived alternatives enhanced the understanding of employee withdrawal intentions (Scheneider, 1976; Steel, 1980). It is important to note that this step in the Mobley model refers to the employee's "perception" of what alternatives are open to "self." These perceptions may agree with or be quite different from what is actually available to the individual. Thus this concept is quite similar to March and Simon's (1958) construct "perceived ease of movement."

Studies on both the conceptual level (Mobley, 1977; Price, 1977) and empirical level (Dansereau, Cashman & Graen, 1974) have offered support for the relationship between an individual's perception of alternative jobs available to the person and the decision to terminate current employment. Thus, one can make a strong argument for the inclusion of such a step in any model of employee turnover.

The next to last component of the model suggests that the employee's cognitive evaluation of the chances of finding alternatives to working in the present job will directly affect that employee's intention to terminate employment. It further suggests that intention to turnover would be the immediate precursor of actually leaving the job. While intention to turnover is a relatively new component to turnover models, the rationale for its inclusion is based on sound theory. Specifically, this component builds upon the early work of Dulany's (1961, 1962) theory of propositional control, Locke's (Locke, 1968; Locke, Cartledge & Knerr, 1970) task motivation model, and in particular Fishbein's (Fishbein, 1967; Fishbein & Ajzen, 1975) model of the relationships among beliefs, attitudes, intentions, and behaviors. While theoretical support is helpful in justifying the inclusion of specific variables in a predictive model, the necessity for empirical support cannot be overlooked. Thus a brief summary of empirical studies in which the intention-to-turnover/turnover relationship were examined seemed warranted.

As mentioned previously, the use of intention-to-turnover-measures as predictors of actual turnover behavior is a relatively new approach. As a result only four published studies could be located which used this construct. Waters, Roach and Waters (1976) conducted a multiple predictor study of the turnover process. The results of their analyses indicated that, of the predictors they examined (i.e., intention to remain, JDI, and biographical data), intent to remain on the job was the best single predictor of turnover, accounting for 18 percent of the

variance, while the JDI work scale accounted for an additional 7 percent. These authors went on to demonstrate that intention to remain continued to have a significant relationship with turnover even when the variance accounted for by all of the other variables was partialled out. Newman (1974), in a direct test of the Fishbein model's ability to predict turnover in the field, found that while the magnitude of relationship between intentions and actual turnover behavior did not approach the average correlations ($\bar{X}_r = .70$) reported by Fishbein (1973) in lab studies, it was superior to any single or combined JDI measure of satisfaction. He concludes his article by suggesting that future research should aim toward the examination of situations in which stronger relationships might be found. Mobley (1978) tested a simplified version of his turnover model on a group of hospital employees. His study resulted in a correlation ($r = .49$) between intention to quit and actual turnover within 1 year. This relationship was found to be much stronger than was any of the JDI component measures of satisfaction or an overall satisfaction measure. In addition to this, his study offered support for the model presented in Figure 2, page 20. Finally, Hom, Katerberg and Hulin (1979) conducted a study which assessed the relative predictive power of Fishbein's behavioral intention model, job satisfaction, and Porter's organizational commitment model on a group of 484 national guardsmen. These authors' results indicate that intention to reenlist was the best single predictor of the actual reenlistment behavior, which is consistent with the results of the other studies described above. In addition, these authors found that both the behavioral

intention model and commitment model were superior to satisfaction in the ability to predict reenlistment, and that the Fishbein model was slightly superior to commitment measures. These authors go on to say that:

. . . after removing the effect of reenlistment intention from the attitudinal measures, the part correlation between organizational commitment and reenlistment was not clearly stronger than the part correlation between job satisfaction and reenlistment. Thus, the predictive efficiency of organizational commitment may reside not in its assessing a more relevant employee attitude, but rather in its serving as an attitudinal scale containing items measuring intention to withdraw from the organization.

In summarizing the results of studies which have examined the relationship between intention-to-turnover and actual turnover, it can be said that authors have consistently found the magnitude of this relationship is greater than the relationship between turnover and either a measure of job satisfaction or an organizational commitment measure (Waters et al., 1976; Newman, 1974; Fishbein, 1973; Mobley, 1978; Hom et al., 1979). While it can be argued that the inclusion of an intention-to-turnover measure is an essential component of modern turnover models, one could argue that modifications to existing models might increase the amount of criterion (turnover) variance accounted for. Just such a hypothesized model is presented below.

A Modified and Moderated Version of the Mobley Model for Predicting Employee Turnover

The purpose in this investigation was to test empirically the casual relationships indicated by the proposed model (see Figure 3). It was hypothesized that each component of the proposed model would be

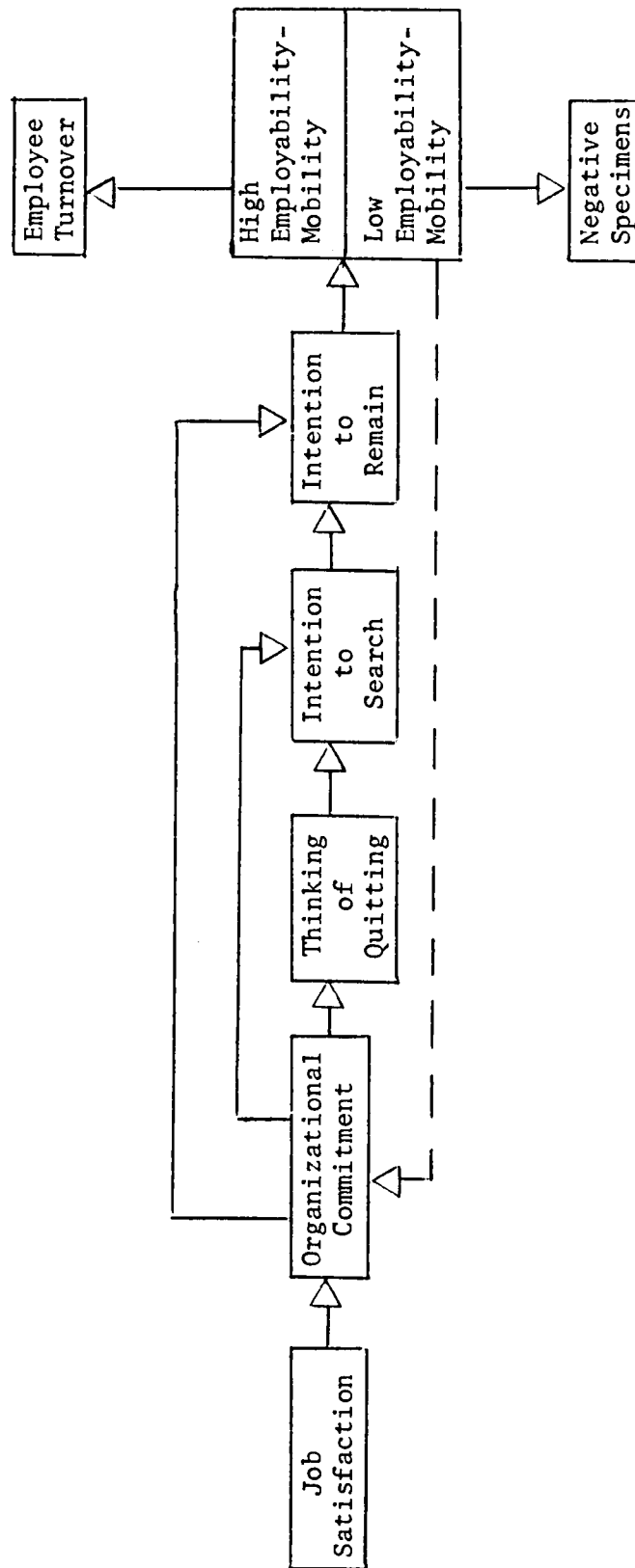


Figure 3. Proposed model for the employee turnover process.

the primary outcome of the preceding step as shown. Thus, it was hypothesized that a statistically significant relationship would be demonstrated between each adjacent component of the model. Therefore it was assumed that in stepwise regression analysis; the immediate antecedent of each component would be the initial variable to enter into the regression equation and that this initial variable would account for a significant amount of criterion variance as measured by the squared multiple correlation coefficient, R^2 . The validity of this initial hypothesis was evaluated by separate stepwise regression equations in which each component of the proposed model beginning with organizational commitment was used as the dependent variable and all preceding variables in the model were utilized as predictors. Thus, the evidence supporting this initial hypothesis was obtained by testing the following subhypothesis: that organizational commitment was the primary outcome of job satisfaction in this model of the turnover process and that a statistically significant relationship exists (Hypothesis 1A). Hypothesis 1B is stated as organizational commitment significantly and directly influenced an individual's thoughts of quitting. This hypothesis was consistent with earlier findings in which a strong relationship between job satisfaction and organizational commitment were found (Porter et al., 1973). The rationale for predicting that organizational commitment demonstrates a relationship which was closer to actual turnover behavior than job satisfaction, in a model of turnover, was supported by authors who have demonstrated that organizational commitment is often a better predictor of turnover than is job satisfaction (Koch &

Steers, 1976; Porter et al., 1974; Steers, 1977). In examining the consequence of high organizational commitment, Steers (1977) found strong support for the proposition that "Commitment is associated with increases in an employee's desire and intent to remain within an organization." In light of this finding, one could justifiably conclude that organizational commitment directly affected an employee's thoughts of quitting. Thus for this subhypothesis it was assumed that organizational commitment would be the initial variable to enter into the stepwise regression equation, and that it would account for a significant amount of criterion variance relative to an individual's thoughts of quitting.

The third subhypothesis was used to test whether an individual's thoughts of quitting relative to the other precursors of an individual's intention to search was the initial variable to enter into the stepwise regression equation, and whether an individual's thoughts of quitting accounted for a significant amount of criterion variance (Subhypothesis 1C). Subhypothesis 1D is stated to suggest that an individual's intention to search for alternative positions was the immediate precursor of an individual's intention to remain within an organization. Statistically, it was hypothesized that the component intention to search would be the initial component entering into the stepwise regression model using intention to remain as the criterion variable, and that intention to search would account for a significant amount of criterion variance. The final subhypothesis (1E) was that the linear joint function, as represented by the interaction of intention to remain with

and employability-mobility scale was the best single predictor of actual persistence behavior and that this component accounted for a significant amount of criterion variance. Support for Hypothesis 1 was indicated by the degree to which the requirements for each of the subhypotheses were met.

The second major hypothesis involved the use of the combined employability-mobility measure to moderate the relationship between intention to remain and actual turnover behavior. This employability-mobility measure was constructed by combining a number of biographical data items collected on each employee. It was predicted that the relationship between intention to remain and actual persistence behavior would be much stronger for a person who was high on the employability-mobility measure than it would be for a person who had a low employability-mobility score. Thus the statement of Hypothesis 2 suggests that the employability-mobility measure acts as a moderator variable by modifying the relationship between intention to remain and actual persistence behavior, both when the employability-mobility measure is dichotomized, as well as when it is entered into a multiple regression equation as a continuous variable. Three subhypotheses were generated to test the validity of the second hypothesis. These three subhypotheses are as follows: First, it was hypothesized that the employability-mobility measure, when dichotomized at the mean, would significantly affect the bivariate correlations between the components of the modified Mobley model and actual turnover behavior (Hypothesis 2A). The second subhypothesis (Subhypothesis 2B) was used to predict that when the

employability-mobility measure was dichotomized at the mean the results of least squares regression analyses using intention to remain and its precursors as predictors would be statistically significant for individuals who were high in terms of their employability-mobility scores, and that a nonsignificant predictive relationship would be the result for individuals who were low on the employability-mobility scale. The third and final Subhypothesis (2C) suggested that the employability-mobility measure used as a continuous variable and allowed to interact with intention to remain, so as to form a linear joint function would account for a significant amount of actual persistence behavior variance, even after the inclusion of both of these variables as direct predictors of persistence behavior. Thus, it was predicted that these would be statistically significant change in R^2 , from the inclusion of the interaction term in a stepwise regression model subsequent to the inclusion of both components as direct predictors. In essence, this second hypothesis suggested that an objective measure of an individual's employability-mobility would modify the relationship proposed by Mobley's model of turnover.

The third and final hypothesis is used to describe the relationship between intention to remain and the frequency of negative "performance specimens" for employees as rated by their supervisors. The term "performance specimen" as used in this study, refers to uncommonly different observable behaviors of either a positive or negative nature. Specimens typically are less deviant from mean performance behavior and elicit greater rater variance than do critical incidents. Specifically, it was postulated that the employability-mobility scale would moderate

the relationship between intention to remain and the frequency of negative behavior specimens for employees as rated by their supervisors (Hypothesis 3). It was suggested that an individual having a combination of low intention to remain with a low employability-mobility score would exhibit a greater number of negative behavior specimens than would an employee having some other combination of intention to remain and employability-mobility.

A summary of the hypothesized relationships can be seen in Figure 4.

Hypothesis 1. That each step in the proposed model will be the primary determinant of the subsequent step.

Hypothesis 1A. Organizational commitment is significantly related to job satisfaction.

Hypothesis 1B. Organizational commitment is a significant and direct influence on an individual's thoughts of quitting.

Hypothesis 1C. An individual's thoughts of quitting is the best predictor of that individual's intention to search.

Hypothesis 1D. An individual's intention to search for alternative positions is the immediate antecedent of an individual's intent to remain within an organization.

Hypothesis 1E. The linear, joint function (i.e., interaction of intention to remain with employability-mobility) is the immediate precursor of actual turnover behavior.

Hypothesis 2. The employability-mobility measure moderates and modifies the relationship between intention to remain and actual turnover behavior.

Hypothesis 2A. The dichotomized employability-mobility measure significantly moderates the bivariate correlations of the modified model and actual turnover.

Hypothesis 2B. Significant linear prediction of turnover by the hypothesized model occurs only for individuals who are above average on the employability-mobility scale.

Hypothesis 2C. The linear joint function accounts for a significant amount of additional turnover variance, subsequent to the direct prediction by both employability-mobility and intent to remain.

Hypothesis 3. Individuals with low intention to remain combined with low employability-mobility are rated by their supervisors as demonstrating a higher frequency of negative behavior specimens than employees having some other combination of intention to remain and employability-mobility.

Figure 4. Hypotheses to be evaluated in this investigation.

CHAPTER II

METHOD

Research Site and Sample

The sample used in this investigation consisted of retail sales employees who were employed in three locations of a local department store chain located in small southeastern U.S. cities. This sample was composed of 241 employees (predominantly female, $N = 216$ or 89.6 percent). The average age in the sample was approximately 28 years with an average organizational tenure of 3.4 year. Employees tended to be married (63.7 percent) and to be at least high school graduates (93.2 percent).

Measurement Scales

The data for this empirical investigation were collected in conjunction with a larger research project emphasizing the selection of sales personnel.

Job satisfaction. The scale used to measure job satisfaction was the Job Descriptive Index (JDI; Smith, Kendall & Hulin, 1969; see Appendix B). The JDI is reported to measure satisfaction with five aspects of the subjects' jobs: supervision, co-workers, promotion, pay, and work. Scoring procedures as well as psychometric properties of the instrument are discussed in Smith et al. (1969). In addition, the unweighted sum of the five scale scores was used as a measure of overall satisfaction. The use of this unweighted sum is consistent with the methodology of Koch and Steers (1978) and Porter et al. (1974).

The internal consistency of the instrument as measured by the coefficient, alpha, was .69 (Cronbach, Gleser, Nanda, & Rajaratnam, 1972).

Organizational commitment. A 15 item questionnaire (see Appendix) originally developed by Porter et al. (1974) to measure the degree to which subjects felt committed to the organization was used in this study. Each item of the questionnaire asked the subject to express agreement or disagreement with the item on a seven-point Likert scale, ranging from "strongly agree" to "strongly disagree." Included in this instrument were items pertaining to the person's acceptance of organizational values, willingness to exert a great deal of effort to achieve organizational goals and loyalty to the organization. In an attempt to reduce response bias the wording on six items was reversed. The internal consistency of this instrument as measured by the coefficient alpha was found to be .87 in the present study (Cronbach et al., 1972).

Decision process indices. Three single items were used to represent and to measure the decision processes indicated in Mobley's (1978) simplified model of the turnover process. These variables are presented in the order as proposed in the modified model and can be seen in the Appendix.

Thinking of quitting. This component of the model was measured by a single question.

The responses were measured on a 100 point scale, and the question was presented as shown below:

How often do you think about quitting your job?

0 - means you never think about quitting your job.

100 - means you think about quitting all the time.

(Use any number between 0 and 100)

Intention to search. A single question was also used to measure this component of the model. As with the previous item, a 100 point scale was used to measure the employee's intentions. The question is presented below:

Taking everything into account, how likely is it that you will make a real effort to find a new job with another employer within one year from now?

0 - means it is not at all likely that you will try to find a new job.

100 - means it is certain that you will try to find a new job.

(Use any number between 0 and 100)

Intention to remain. A single item was used to measure this final component of the decision making process. This item was measured on a 100 point scale in which 0 meant a high probability of termination within one year and 100 indicated a strong intention to remain with the organization at least one more year. The actual question is presented below:

If you had it your own way, how much would you like to be working for the store one year from now?

0 - means you definitely would not like to be working for
the store one year from now.

100 - means you definitely would like to be working for
this store one year from now.

For example:

85 (means you are relatively certain that you want to remain
at this store for at least one year).

15 (means you are relatively certain that you would prefer
not to be working for this store one year from now).

(Use any number between 0 and 100.)

Employability-Mobility measure. This construct was measured via a number of biographical and demographic questionnaire items. In Figure 5 are listed the items which were used in assessing each of the constructs. As can be seen in the figure, six items were used to measure the employability component. These items were age of the employee (coded in years); educational level completed (coded 1-20); previous work experience (coded in years); and finally three aptitude measures (verbal, numerical, and clerical) taken from the Short Employment Tests (SET, Bennett & Gelink, 1951). Mobility measures were also solicited from each employee. Five variables were used to measure this component. These variables were marital status (coded 1 = not married, 2 = married); number of dependents; whether the individuals rented or owned their current residences (coded 1 = rent, 2 = own); type of residence (coded 2 - house, 1 = other); and finally distance from work to residence (coded in miles). Prior to the

Measures of Employability

Age

Educational Level

Years of Work Experience

SET

Verbal

Numerical

Clerical

Measures of Mobility

Marital Status

Number of Dependents

Rent or Own Residence

Type of Residence

Distance from work

Figure 5. Variables used to measure the Employability-Mobility component of the modified model.

weighting of these biographical items, each variable was transformed into a T score (i.e., mean = 50, STD = 10).

Employee turnover. This criterion measure was a computation, in days, of the length of time after individuals were tested until they terminated their employment or one year, whichever was less. Thus, nonterminating employees were coded 365 and terminating employees were coded in days less than 365. The rationale for using this measure was that it permitted prediction of turnover not only in the absolute sense, but also in terms of the length of time an employee could be expected to remain with the organization subsequent to testing.

Measurement of negative behavioral specimens. The collection and development of the performance specimen checklist was based upon an extensive job analysis. The job analysis was conducted in three steps. The first step consisted of a questionnaire which was administered to all sales employees and section leaders. As a part of this questionnaire, employees were asked to list activities and behaviors which they felt represented exceptionally good (or poor) performance of a sales clerk. The second step involved conducting interviews with all section leaders in the respective stores. These interviews were used both to supplement and to clarify the response received on the questionnaire. The final step involved an extensive interview with each store manager. The purpose of this interview was to assess whether company policy and procedures as described by the managers were in line with the responses of the sales personnel.

Based on this three step job analysis, a performance appraisal system was developed and used in this study. Of specific interest herein was the behavioral checklist which was developed. Specifically, the checklist was used to evaluate employees on nine dimensions (i.e., dependability, job procedures, sales ability, customer service, company policy and job knowledge, product knowledge, initiative, judgement, and employee relations) with six positive and six negative specimens for each dimension. For the purposes of this study only the negative items were used. A total score for each dimension was computed by giving the negative items only a weight of negative one and summing across all items and across all dimensions. The result of this summation was an overall negative specimen score for each employee. It is important to note that under the model proposed, it was hypothesized that there would be a greater number of negative behavioral specimens for employees who had low intention to remain and low employability-mobility measures although not necessarily significantly different overall performance ratings from other employees.

Statistical Analyses

The initial step of the analyses required that empirical weights be determined for the biographical items comprising the employability-mobility measure. A description of this process is given below, and is followed by the remaining statistical analyses.

Development of the employability-mobility measure. The ability of researchers to deal with the complexities of more elaborate methods of

prediction has been greatly enhanced since the advent of new high-speed computers (Borko, 1962). However, the introduction of more complex models into the area of turnover prediction must be justified on the basis of increased efficiency in prediction, and not on the basis of mathematical elegance or the pursuit of mathematical complexity. The goal of prediction is today what it has always been—more efficient prediction. When multiple regression is employed, it is assumed that an additive combination of predictor variables, each of which is weighted according to its unique contribution to the criterion variance, can best predict the criterion variable in question. Further, it is assumed that a given value of the criterion variable is a simple additive function of any combination of predictor variables which yields the same weighted sum. Should a situation be encountered in which the relationship between the pattern of predictors and the criterion variable is shown to be a function of a third variable. Then the simple multiple regression model would not do justice to the situation. To the extent that the residual variable resulting from the prediction of the criterion variable through a simple multiple regression model varies in a nonrandom fashion as some function of a newly introduced group of weighted variables, then this new group of weighted variables should improve the overall prediction of the criterion variable in question.

Ghiselli (1956, 1960, 1963, 1968) emphasizes the fact that goal of prediction is to develop a method which forecasts criterion scores which differ as little as possible from actual obtained criterion scores. That is, the goal of prediction is to minimize the absolute value of

the difference between the predicted and criterion scores. As a result, Ghiselli goes on to argue that any procedure which minimizes the absolute value of the predicted versus actual criterion difference is, therefore, by definition, a good prediction procedure. Saunders (1956) alleges that there are "many examples of situations in which the predictive validity of some psychological measure varies systemically in accord with some other independent psychological variable" (page 209). He originally coined the term "moderator variable" to refer to these examples of varying predictive validity.

Operationally, Ghiselli has suggested that the criterion to be used in the identification of such moderator variables is the absolute value of the difference between predicted and actual criterion scores. Ghiselli has referred to this value as his statistic "D." The problem with this methodology is that the direction of the difference is not captured. For Ghiselli's purpose (i.e., labeling individuals as predictable or not predictable), the direction of the difference was of no interest. For the purpose here, the problem with Ghiselli's approach lies in the classification of individuals as not predictable. Wiggins (1973) suggests that a

. . . problem encountered in Ghiselli's approach is the fact that, in practice, predictions must be withheld for sizeable portions of the total population of subjects ("unpredictables"). This fact contrasts with conventional multiple regression prediction in which predictions are made for all individuals. (page 66)

Unlike Ghiselli's goal of labeling people as predictable or unpredictable, obviously resulting in a subgroup of nonpredicted individuals, the development of the moderator used here was for the

prediction of termination behavior for all individuals. This being the case, the direction of errors in prediction as well as the magnitude of these errors were important for this study. The residual scores resulting from a least squares linear regression using intention to remain as well as the other hypothesized precursors of employee termination were used as a criterion which was regressed on the employability-mobility items. Identification of the biographical items and the two-step approach to the empirical development and the process of weighting the employability-mobility measure is given below.

The steps for empirical development and weighting of the employability-mobility measure components were as follows:

The first step involved the prediction of turnover behavior using intention to remain and all other precursors of actual turnover behavior as mapped by the modified Mobley model. For this analysis, the criterion measure and all predictors were transformed into T scores (i.e., mean = 50, STD = 10). The results of the least squares regression analysis are presented in Table 1 below. These results indicate a statistically significant prediction of actual turnover behavior could be made from the hypothesized precursors of turnover behavior ($F = 5.12$, $p < .001$). In addition, the table indicates that the hypothesized model accounts for 11 percent of the criterion variance. While this procedure minimizes the sum of the absolute value of the differences between predicted and actual criterion scores for all individuals, it is obvious that both the sign and the magnitude of this difference will vary from individual to individual. The distance between the resulting regression line of

TABLE 1
RESULTS FOR LEAST SQUARES REGRESSION ANALYSIS OF
TURNOVER BEHAVIOR ON INTENTION TO REMAIN AND
HYPOTHESIZED PRECURSORS

Source	df	SS	MS	F	R ²	Beta Weight
Regression	5	2331.90	466.38	5.12*	.11	
ERROR	204	18568.10	91.02			
TOTAL	209	20900.00				
Intercept						53.31
Intention to Remain						.199
Intention to Search						-.181
Thinking of Quitting						-.040
Organizational Commitment						-.065
Job Satisfaction						-.021

Note. N = 210

*p < .001.

predicted criterion scores and an individual's actual criterion score, as measured algebraically by the residual error score, indicates both the direction and magnitude of the error of prediction for an individual. The algebraically signed residual values, as opposed to the absolute values suggested by Ghiselli (1963), were used as the criterion in Step 2 of the developmental process.

In the second step of the developmental process, the residual score was regressed on the biographical items described above using a least squares solution. The results of this analysis indicated that the employability-mobility measures were statistically significant in their ability to predict the signed residual scores ($F = 2.94$, $p < .01$) and accounted for 14 percent of the criterion variance. The results can be seen in Table 2 below and the results suggest that much of what has been considered "random" error is, in fact, systematical variance in a linear function. The ability of the employability-mobility items to account for significant amounts of this variance suggests that these variables might be used to moderate the relationship between intention to remain and actual turnover behavior in a moderated regression model.

Internal consistency of measures. The psychometric properties of the Job Descriptive Index (JDI) have been published elsewhere (Smith, Kendall & Hulin, 1969). However, when an instrument is administered to different populations, its properties tend to change slightly. Thus, the internal consistency of the JDI was computed for the sales population used in this study. Specifically, the five scale scores were used as the units of measurement. The rationale for this was that the composite

TABLE 2

RESULTS FOR LEAST SQUARES REGRESSION ANALYSIS OF RESIDUAL
VARIANCE ON THE EMPLOYABILITY-MOBILITY MEASURES

Source	df	SS	MS	F	R ²	Beta Weight
Regression	11	2932.31	266.57	2.94*	.14	
ERROR	198	17967.69	90.75			
TOTAL	207	20900.00				
Intercept						17.07
Age						.193
Marital Status						.028
No. of Dependents						.099
Educational Level						.030
Rent or Own Residence						.140
Type of Residence						.127
Distance Traveled to Work						-.060
Years of Work Experience						.146
SET Verbal						.047
SET Numerical						.023
SET Clerical						.011

Note. N = 210

*p < .01

satisfaction score, not the individual scale scores, was used in this study. The appropriate index of this relationship, Cronbach's coefficient alpha, was used.

The second measure for which an estimate of the internal consistency was appropriate was the organizational commitment scale. To be consistent with the other items the scales of negatively phrased items were reversed. As was the case with the JDI, Cronbach's coefficient alpha was used as the index of internal consistency.

For evaluating the reliability of the performance appraisal instrument which was developed, the scores of negative specimens were reversed and the internal consistency was computed for each dimension and for the total instrument. For the latter, two forms of internal consistency were computed. First, all items were included as if they were measuring a single dimension (e.g., job performance). In this instance the KR-20 formula was used to assess the reliability. The second analysis used the nine scale scores as the unit of measurement and the coefficient alpha was computed to determine internal consistency.

Test of model. A model such as the one proposed here cannot be evaluated with a single test of significance. Instead, it must be shown that the general pattern of relationships among components of the model is consistent with those which are hypothesized. For example, one would expect components which are closer to the actual turnover decision to have the higher bivariate correlation coefficient with actual turnover. Similarly, one would expect components in the model to be more closely related (in terms of bivariate correlation

coefficients) to other components near them in the decision process than to components which are more distant. Thus, the hypothesized relationships described above are presented in a table of correlation coefficients (see Table 3).

The second level of evaluation of the total model consisted of five stepwise multiple regression equations using measures of actual turnover, intention to remain, organizational commitment, intention to search, and thinking of quitting as the dependent variables. For each dependent variable the standard partial regression coefficients and the multiple correlation coefficient were computed and reported. By examining the magnitude and the significance of the standardized regression coefficients B within each equation, one is able to assess the direct effect of each predictor on the respective dependent variables while other variables are held constant. In addition, to assessing direct relationships, one can examine the value of using the employability-mobility measure as moderator variable by examining the magnitude and significance of the standardized beta weight for its interaction with intention to remain. I hypothesized that the magnitude of the beta weight for the interaction term would be larger than the beta weight for intention to remain alone, when actual turnover was used as the criterion. The correlational analyses and the multiple regression were used to test the hypothesized relationships inherent in the proposed model.

Test for significant moderating effect. As indicated previously, it was hypothesized that the employability-mobility measure would moderate

TABLE 3
DESCRIPTIVE STATISTICS AND INTERCORRELATION MATRIX

Variable	Mean	S.D.	2	3	4	5	6	7
1. Job Satisfaction	140.85	40.37	.55***	-.45***	-.38***	.39***	.15*	.18*
2. Organizational Commitment	78.77	16.07		-.54***	-.52***	.59***	.20**	.19*
3. Thinking of Quitting	30.30	34.04			.56***	-.45***	-.08	-.22*
4. Intention to Search	35.21	40.20				-.59***	-.27***	-.28**
5. Intention to Remain	71.29	33.73					.23***	.30***
6. Employability/Mobility	50.00	3.75						.40***
7. Turnover Behavior	315.23	105.92						

Note. 210 ≤ N ≤ 241

***p < .001

**p < .01

*p < .05

the relationship between the components of the proposed model (i.e., job satisfaction, organizational commitment, thinking of quitting, intention to search and intention to remain) and actual turnover behavior. The validity of this hypothesized effect was evaluated via three techniques.

First, the sample was dichotomized based on the mean of the employability-mobility measure. Separate Pearson product moment correlation matrices were then computed for the two subgroups. Statistically significant differences between corresponding correlation coefficients were used as indicators of the hypothesized moderator effect.

The second set of analyses involved a subgrouping of the employee sample based on mean employability-mobility scores as described above. The split was then followed by the computation of separate least squares regression equations for the two samples. It was hypothesized that the regression equation would statistically predict turnover behavior only for the high employability-mobility subgroup. In addition, it was predicted that significantly different regression slopes would result for each of the two samples (high and low employability-mobility).

The final test of a significant moderating effect was accomplished via a hierarchical regression analysis (Cohen & Cohen, 1975). Specifically, it was expected that the inclusion of the linear joint function would account for a significant amount of criterion variance subsequent to the inclusion of both intention to remain and the employability-mobility measure as direct predictors of turnover behavior.

The hypothesized moderating effect of employability-mobility was tested utilizing each of the three procedures described above.

Test of the negative specimen hypothesis. To test the hypothesized relationship, the distribution of negative specimen scores was dichotomized on both the employability-mobility measure and the intention to turnover measure. Individuals were then categorized into four groups based on the classification above. A one way analysis of variance was then computed using the total number of negative behavioral specimens as the dependent variable. For significant main effect a Duncan post hoc analysis was planned to determine which differences were significant. It was predicted that individuals with a combination of low intention to remain and low employability-mobility measure would exhibit significantly more negative behavior specimens than would any of the other three groups.

Data collection. Predictive information was collected via questionnaires which were distributed by the research team on-site during normal working hours. All subjects were informed that participation in this study was voluntary, and the participation rate exceeded 90 percent. To assure that participants' responses remained confidential, they were assigned identification (ID) numbers. The matching of individuals' names with ID numbers was necessary in order to match questionnaire responses with turnover data. Turnover data taken from the official personnel files, were collected for the total sample (n = 241) one year after the initial questionnaire administration.

CHAPTER III

RESULTS

In Table 3, page 47, the means and standard deviations for all variables used in this study are presented. In addition Pearson product moment correlation coefficients were computed between each pair of variables. These results are also seen in Table 3. There are slight differences in the number of cases used in computing these correlations in that a pair-wise (e.g., the case is omitted only if one of the variables in that particular analysis is missing) rather than case-wise (e.g., a case is omitted if any variable is missing) treatment of missing data was utilized. The rationale for this pairwise deletion was to permit utilization of as many of the data as possible.

Evaluation of Hypothesis 1

Hypothesis 1 states that each step in the proposed model would be both significantly correlated with and predicted by the immediately preceding step in the proposed model (see Figure 3, page 25) and that each preceding step will be the most important predictor of the subsequent step.

Tests of the following subhypotheses were used to draw conclusions relevant to Hypothesis 1.

Hypothesis 1

Hypothesis 1A: A significant relationship can be demonstrated between job satisfaction and organizational commitment. Since job

satisfaction is the only step preceding organizational commitment in the proposed model, regression analysis yields no information beyond that offered through bivariate correlational analysis. However, for predictive purposes, regression weights were computed. The correlational analysis (see Table 3, page 47) results in statistically significant relationship between job satisfaction and organizational commitment ($r = .55$, $p < .001$). The results of the regression analysis can be seen in Table 4.

Hypothesis 1B

Hypothesis 1B: the variable immediately preceding thinking of quitting (i.e., organizational commitment) in the modified Mobley model will be the most important predictor of criterion variance. Table 5 shows the results of the stepwise regression analysis, examining this hypothesis. The results show that, of the variables preceding thinking of quitting in the modified model of turnover, organizational commitment is the variable most predictive of an individual's thoughts of quitting ($F = 90.56$, $p < .001$). The second step of the stepwise regression provides evidence job satisfaction also contributes significantly to the amount of explained variance, (i.e., change in R^2) for the dependent variable, thoughts of quitting ($F = 7.96$, $p < .01$).

These results support the hypothesized temporal ordering of the predictor variables as presented in the modified Mobley model (i.e., job satisfaction predicts organizational commitment, etc.). Specifically, the data suggest that while both organizational commitment and job satisfaction account for significant portions of explained variance, it

TABLE 4
RESULTS OF STEPWISE REGRESSION ANALYSIS FOR PREDICTORS
OF ORGANIZATIONAL COMMITMENT

Predictor	Beta	Multiple <u>R</u>	R^2 Change
Job Satisfaction	.57	.57	.324***

Note. N = 210

*** $p < .001$

TABLE 5
RESULTS OF STEPWISE REGRESSION ANALYSIS FOR PREDICTORS
OF THINKING OF QUITTING

Predictor	Beta	Multiple <u>R</u>	<u>R</u> ² Change
Organizational Commitment	-.55	.55	.303***
Job Satisfaction	-.19	.57	.026**

Note. N = 210

*** $p < .001$

** $p < .01$

is organizational commitment which appears to be the most important precursor of thinking of quitting. Thus, there is support for the model with respect to the hypothesized inclusion of organizational commitment in a model of turnover as well as for its temporal placement.

Hypothesis 1C

Hypothesis 1C: the suggested precursor of an individual's intention to search for alternative positions was an individual's thoughts of quitting, and that the former would have a direct causal relationship on the latter. The results (see Table 6) support the hypothesized relationship. The measure of employees' thinking of quitting (as defined above) was the initial variable entered into the regression model with statistically significant predictive ability ($F = 106.90$, $p < .001$). The variable thinking of quitting also accounted for the largest amount of explained criterion variance ($R^2 = .339$). Organizational commitment was also demonstrated to account for a statistically significant amount of remaining unexplained criterion variance. ($\Delta R^2 = .084$; $F = 30.16$, $p < .001$). With respect to job satisfaction, while it did enter into the model in the third step, it did not account for a statistically significant amount of remaining criterion variance ($\Delta R^2 = .001$, ns). As a result, job satisfaction was removed in the fourth step of the regression analysis. Statistically support of the relationships hypothesized was provided.

Hypothesis 1D

Hypothesis 1D: An employee's intention to remain with an organization or, conversely, terminate his employment, is a direct

TABLE 6
RESULTS OF STEPWISE REGRESSION ANALYSIS FOR
PREDICTORS OF INTENTION TO SEARCH

Predictor	Beta	Multiple <u>R</u>	R^2 Change
Thinking of Quitting	.58	.58	.339***
Organizational Commitment	-.34	.65	.084***
Job Satisfaction	-.04	.65	.001

Note. N = 210

*** $p < .001$

function of the immediately preceding (i.e., intention to search for alternative positions). The results of the step-wise regression model evaluating this hypothesis are presented in Table 7. These results suggest that while an employee's intention to search for alternative positions was significantly predictive and did account for a significant amount of criterion variance, it was not found to be the most important single predictor of intent to remain. Rather, the variable organizational commitment was found to be most predictive of intention to remain ($F = 156.89$, $p < .001$) and to account for the greatest amount of criterion variance ($R^2 = .430$).

Only these two variables (i.e., intent to search and organizational commitment) met the initial probability level ($p < .5$) for entry into the stepwise regression model; however, for the sake of completeness, a second regression model with a much more lenient F to enter probability restriction ($p < .99$) was used to determine the additional contributions made by the remaining hypothesized precursors of the criterion intention to remain. While this regression model demonstrated that intention to search did account for a statistically significant amount of criterion variance, ($R^2 = .092$, $p < .001$) importance relative to the other precursors was less than that of the component organizational commitment. As a result, hypothesis 1D is not supported by the results of this analysis.

Hypothesis 1E

Hypothesis 1E: the linear joint function, which results from the interaction of intention to remain with the combined employability-mobility

TABLE 7
RESULTS OF STEPWISE REGRESSION ANALYSIS FOR
PREDICTORS OF INTENTION TO REMAIN

Predictor	Beta	Multiple <u>R</u>	<u>R</u> ² Change
Organizational Commitment	.66	.66	.430***
Intention to Search	-.37	.72	.092***
Thinking of Quitting	.03	.72	.000
Job Satisfaction	.02	.72	.000

Note. N = 210

*** $p < .001$

measure (defined earlier) will be the immediate precursor of actual persistence behavior. Thus, it is predicted that this joint function will be the best predictor of termination, as well as accounting for the greatest amount of explained criterion variance. The results of the stepwise regression analysis (see Table 8) indicate that, as predicted, the joint term was the first variable to enter the regression equation ($F = 51.5$, $p < .001$) and that this term accounted for a significant amount of criterion variance ($R^2 = .198$). The second variable to enter into the equation was the employability-mobility measure ($F = 5.23$, $p < .05$) which accounted for a significant increment of criterion variance ($\Delta R^2 = .02$). Intention to remain was the third variance to enter the regression equation ($F = 19.45$, $p < .001$) and accounted for a statistically significant amount of criterion variance ($\Delta R^2 = .067$). Two additional variables (i.e., thoughts of quitting and organizational commitment) met the probability level ($p = .5$) for entry into the model. However, in neither case was the additional amount of explained variance significant at the .05 level. Since the joint function entered into the regression equation as predicted by the modified Mobley model the hypothesis (1E) was supported.

Evaluation of Hypothesis 1

The evaluation of Hypothesis 1 is a direct result of the statistical tests relevant to each of the preceding subhypotheses. The validity of the modified Mobley model is dependent upon the degree to which the components of the model interact and behave as expected. To the extent one is unable to predict each succeeding step in the model, then either

TABLE 8
RESULTS OF STEPWISE REGRESSION ANALYSIS FOR
PREDICTORS OF ACTUAL TURNOVER BEHAVIOR

Predictor	Beta	Multiple R	R ² Change
Joint Function (employability- mobility × intention to remain)	.45	.45	.198***
Employability- Mobility	.23	.47	.020*
Intention to Remain	.15	.53	.067***
Thinking of Quitting	-.12	.54	.011
Organizational Commitment	-.11	.55	.006
Intention to Search	-.10	.55	.005
Job Satisfaction	-.04	.55	.001

Note. N = 210

***p < .001

*p < .05

theoretical or operational flaws are present. The empirical results presented above indicate that four of the five stepwise regression analysis resulted in support for the relationships mapped out by the modified model; the best predictor of a particular stage in the hypothesized model was the immediately preceding stage. In each of these four instances, the expected predictor was the first to enter into the stepwise regression equation and accounted for the greatest amount of criterion variance. In all instances, the hypothesized variable was statistically significant beyond the .001 level.

The single instance in which the empirical analyses did not support the model's hypothesized relationship was when the variable intention to remain was regressed on the prior components of the model. In this instance, the variable organizational commitment rather than intention to search was the first variable to enter into the regression equation. However, intention to search was the second variable entering into the equation, and it accounted for a highly significant amount of criterion variance ($R^2 = .09$, $p < .001$). An explanation for this unexpected result may be that the termination process implies rejection of the organization but not necessarily rejection of the job. This being the case, one might expect that an individual's attitude toward the organization (i.e., commitment) would be more directly related to his expressed intention to remain than was originally hypothesized. Additionally, Mobley et al. (1979) suggested that possibly the inclusion of a withdrawal intention in Porter's organizational commitment scale might explain the higher than expected relationships between these two

constructs. Additional study is required to test the correctness of these two explanations; but this was not the purpose of the present investigation and as a result, no definitive conclusions can be drawn.

However, the evidence taken as a whole, strongly supports the modified Mobley model proposed with the one area of concern being the relationship between organizational commitment and intention to remain. Further investigations are needed to assess the true nature of the observed relationship between organizational commitment and intention to remain. It is particularly noteworthy that the organizational commitment component of the modified model was demonstrated to have a stronger relationship with an individual's thoughts of quitting than did job satisfaction. Once again, I would suggest this relationship can be attributed to the fact that individual decisions to terminate employment do not necessarily reflect individual dissatisfaction with a particular job, but more likely, it indicates individual rejection of the employing organization.

Of perhaps greater importance was the demonstrated moderating effect that the employability-mobility measure had on the employee withdrawal process. Specifically, it was demonstrated that the interaction of this term, along with an individual's intention to remain within the organization was most predictive of actual termination behavior. It can be suggested that future examinations of employee withdrawal behavior should include both an objective measure of employability and mobility as well as measures of individual behavioral intentions.

Evaluation of Hypothesis 2

Hypothesis 2: the employability-mobility measure which was defined earlier moderates the relationship between an individual's intention to remain and his actual turnover behavior. The statistical evaluation of this hypothesis was accomplished by testing the following three subhypotheses.

Evaluation of Subhypothesis 2A

Subhypothesis 2A: The bivariate correlation as measured by the Pearson product moment correlation coefficient between each of the precursors of actual turnover behavior (the most important of which is intention to remain). The subhypothesis predicts they will be statistically significant only for individuals who are above the mean in terms of the employability-mobility measure, and individuals who are below the mean will demonstrate nonsignificant bivariate relationships between the hypothesized precursors and actual turnover behavior. The results confirmed that all components of the hypothesized model were significantly ($p < .05$) related to actual turnover behavior (see the correlation above the diagonal in Table 9). Conversely, the correlations between each component of the model and actual turnover behavior for individuals who had lower than average employability-mobility scale scores (i.e., those to the left and bottom in Table 9) showed nonsignificant ($p > .05$) relationships with actual turnover behavior. Therefore, subhypothesis 2A is supported by the evidence.

TABLE 9
INTERCORRELATION MATRIX MODERATED BY
EMPLOYABILITY-MOBILITY

Variables	1	2	3	4	5	6
1. Job Satisfaction	-	.58***	-.48***	-.53***	.45***	.25*
2. Organizational Commitment	.53***	-	-.55***	-.50***	.62***	.21*
3. Thinking of Quitting	-.39***	-.53***	-	.66***	-.42***	-.29**
4. Intention to Search	-.22*	-.59***	.50***	-	-.53***	-.35***
5. Intention to Remain	.32***	.67***	-.45***	-.68***	-	.38***
6. Turnover Behavior	-.18	.00	.01	.00	-.09	-

Note. N = 113 for below average employability-mobility (below diagonal)

Note. N = 97 for above average employability-mobility (above diagonal)

*** $p < .001$

** $p < .01$

* $p < .05$

Subhypothesis 2B

Subhypothesis 2B: when dichotomized at the mean, the weighted employability-mobility measure will moderate the predictive accuracy (i.e., the amount of explained criterion variance) for the precursors of actual persistence behavior. The results of separate least-squares regression analyses for low and high employability-mobility individuals can be seen in Tables 10 and 11 below. These two analyses indicate that as hypothesized, the prediction of actual persistence behavior is statistically significant ($F = 4.29$, $p < .01$), only for individuals who are above average on the employability-mobility scale.

Conversely, the results presented in Table 11 demonstrate a lack of relationship between the hypothesized precursors of actual turnover behavior when an individual's employability-mobility measure is below average ($F = 1.57$, $p = ns$). To test for a significant difference in prediction, the multiple correlations resulting from the separate regression analyses presented in Tables 10 and 11 were transformed into Fisher's Z scores (Gilford & Fruchter, 1973; p. 166). The results indicate a nonsignificant difference between the multiple correlation coefficients when comparing the regression equations for low versus high employability-mobility individuals ($Z = 1.42$, $p > .05$).

When examining results presented above, one must conclude that the weight of the evidence fails to support this subhypothesis. While the predictability of the separate regression equations was as hypothesized (i.e., significant for individuals with high employability-mobility scores, nonsignificant for individuals with low employability-mobility scores), a test of the difference between the multiple

TABLE 10

RESULTS OF LEAST-SQUARES REGRESSION OF HYPOTHESIZED PREDICTORS
OF TURNOVER BEHAVIOR FOR INDIVIDUALS ABOVE AVERAGE
IN EMPLOYABILITY-MOBILITY

Source	df	SS	MS	F	R ²	Beta Weight
Regression	5	26.61	5.32	4.29**	.19	
ERROR	91	112.96	1.24			
TOTAL	96	139.57				
Intercept						-.326
Intention to Remain						.364
Intention to Search						.170
Thoughts of Quitting						.138
Organizational Commitment						.198
Job Satisfaction						.088

Note. N = 97

**p < .01

TABLE 11
RESULTS OF LEAST-SQUARES REGRESSION OF HYPOTHESIZED
PREDICTORS OF TURNOVER FOR INDIVIDUALS BELOW
AVERAGE IN EMPLOYABILITY-MOBILITY

Source	df	SS	MS	F	R ²	Beta Weight
Regression	5	2.27	.453	1.57	.07	
ERROR	107	30.87	.288			
TOTAL	112	33.13				
Intercept						.402
Intention to Remain						-.132
Intention to Search						-.024
Thoughts of Quitting						-.025
Organizational Commitment						.141
Job Satisfaction						-.149

Note. N = 113

correlation coefficients resulted in a nonsignificant difference. As a result, hypothesis 2B is not supported by the empirical data.

Evaluation of Subhypothesis 2C

This third subhypothesis differs from the previous two in that the employability-mobility measure remains in its continuous form. Saunders (1956) argued that modifications to a mathematical model for multiple linear regression should be made to account for prediction when the moderator is a continuous variable. The model underlying multiple regression implies that the relationship between predictors and the criterion will be the same for all levels of the prospective moderator. To test the validity of this assumption, an interaction term was developed by multiplying the employability-mobility measure by intention to remain. Ezekiel and Fox (1959) have labeled this interaction term as a "linear joint function." It might be useful to view this term as the correlational counterpart to the interaction term in an analysis of variance (Saunders, 1956; Lee, 1961). The inclusion of the linear joint function in the regression model results in a breakdown of the criterion variance into an additive (linear) combination of variance due to direct prediction by the predictors and a nonlinear component which results from the interaction term. If a negative sign for the regression weight of the interaction term appears, then this indicates that individuals who have high values of the moderator variable are not well predicted by the model. On the other hand, a positive sign indicates that individuals with high values of the moderator are well predicted. If the hypothesized moderating effect is nonsignificant,

then the beta weight corresponding to the interaction term will be equal to zero thus causing the interaction term to drop out of the model and the conventional multiple regression equation to remain.

The appropriate statistical test for the hypothesized linear joint function is not a comparison between the original multiple regression equation void of all moderators with the moderated regression model, but rather involves a comparison of the multiple correlation obtained from using the linear joint function with the multiple correlation of the model using both components of the interaction term as direct linear predictors. Thus, it must be shown that the linear joint function results in significant improvement in accounting for criterion variance beyond that accounted for by the direct linear prediction by the components of the joint linear function independently. The results relating to this test are given below (see Table 12). As the table indicates, the linear joint term accounted for a statistically significant amount of the criterion variance even when both intention to remain and the employability-mobility measure had been previously forced to enter the equation ($\Delta R^2 = .051$, $p < .001$). This evidence supports earlier findings of other authors who have suggested that interaction effects are as plausible in studies of individual differences as they are in the area of experimental psychology (Frederiksen and Melville, 1954; Saunders, 1955, 1956; Lee, 1961).

The final test of this third subhypothesis involved a comparison of the multiple correlation coefficient for the total moderated regression model versus a model including only the direct prediction by the

TABLE 12

RESULTS OF HIERARCHICAL REGRESSION USING TURNOVER BEHAVIOR
AS CRITERION AND INTENTION TO REMAIN, EMPLOYABILITY-
MOBILITY AND THE LINEAR JOINT FUNCTION
HAS PREDICTORS

Source	Beta Weight	Multiple <u>R</u>	<u>R</u> ² Change
Employability- Mobility	.43	.43	.192***
Intention to Remain	.21	.48	.043***
Employability- Mobility × Intention to Remain	-.26	.53	.051***

Note. N = 210

*** $p < .001$

employability-mobility measure and finally a model void of any moderating effects. The results of these analyses show a statistically significant improvement in amount of criterion variance accounted for when comparing the multiple correlation coefficients for the moderated regression model, which included the linear joint function, versus the model which is lacking this interaction term ($F = 15.95$, $p < .001$). Finally, the amount of explained variance (R^2) for the moderated model was compared to the R^2 value for the regression model devoid of both the linear joint function and the employability-mobility measure. These results show a highly significant improvement in the amount of additional criterion variance accounted for by the total moderated regression model ($F = 22.43$, $p < .001$). These results, when combined with the information presented in Table 12, offer strong support for this third subhypothesis.

The evaluation of the validity of hypothesis 2 is a direct result of the degree to which the requirements of the three related hypotheses were met. The empirical evidence presented above strongly supports subhypotheses 2A and 2C. However, the data pertinent to subhypothesis 2B indicate that while the statistical significance of the separate regressions behaved as hypothesized (i.e., statistically significant only for individuals who were high on the employability-mobility measure), the direct test for differences in the amount of criterion variance accounted for proved to be nonsignificant.

Although subhypothesis 2B was not supported by the data, the remaining evidence strongly supported the hypothesized moderating effect of the employability-mobility measure. Thus, based on the data taken

in total, one can conclude that sufficient empirical evidence has been presented to warrant the acceptance of hypothesis 2.

Hypothesis 3

The third and last hypothesis examined in this study is that individuals having a combination of low intention to remain with a low employability-mobility score exhibit a greater number of negative behavior specimens as rated by their first-line supervisors, than individuals having some other combination of employability-mobility and intention to remain. To evaluate this hypothesis, four categories of individuals were created on the basis of their scores on the employability-mobility measure and the intention to remain measure. The resulting four classifications were: (1) high employability-mobility, high intention to remain, (2) high employability-mobility, low intention to remain, (3) low employability-mobility, high intention to remain and (4) low employability-mobility, low intention to remain. The results of a one way analysis of variance can be seen in Table 13. A statistically significant difference in the classification means does exist ($F = 6.66$, $p < .001$). To determine the location of the mean differences a Duncan post hoc analysis was performed on the subgroup means. The results of this analysis indicate two statistically different ($p < .05$) clusters of means (see Table 14). However, results did not support the hypothetical difference that individuals who measured low on their intention to remain, as well as low on the employability-mobility measure, would be rated significantly higher on the negative behavioral specimen criterion (more negative items checked by supervisors).

TABLE 13

RESULTS OF ANALYSIS OF VARIANCE USING FREQUENCY OF RATED
 NEGATIVE SPECIMENS AS THE DEPENDENT VARIABLE AND
 A CLASSIFICATION OF INDIVIDUALS BASED ON MEAN
 EMPLOYABILITY-MOBILITY AND INTENTION TO
 REMAIN AS THE INDEPENDENT
 VARIABLE (CLASS)

Source	df	SS	MS	F
CLASS	3	691.54	230.51	6.66***
ERROR	206	7129.74	34.61	
TOTAL	209	7821.28		

Note. N = 210

***p < .001

TABLE 14
RESULTS OF DUNCAN POST HOC ANALYSIS OF MEAN DIFFERENCES
IN NEGATIVE SPECIMEN RATINGS

Classification	Mean	Duncan Grouping*
Below Average Intention to Remain × above Average Employability-Mobility	8.30	A
Above Average Intention to Remain × above Average Employability-Mobility	6.04	A
Below Average Intention to Remain × below Average Employability-Mobility	5.68	A & B
Above average Intention to Remain × below Average Employability-Mobility	3.60	B

*p < .05

As a result of this evidence, one must conclude that there is no empirical support for the negative specimen difference which is hypothesized. Thus, the empirical data fails to support hypothesis 3.

CHAPTER IV

DISCUSSION

The study of turnover for many years was characterized by the reporting of bivariate correlations between various predictors and actual turnover behavior (Mobley et al., 1979; Porter & Steers, 1973). However, in recent years empirical investigation of turnover behavior has been more along the lines of model building and the comparative analysis of various proposed models (Miller, Katerberg, & Hulin, 1979; Holm, Katerberg, & Hulin, 1979; Mobley et al., 1979).

Following the model building and testing approach there were three rationales for the study reported here. First, including an organizational commitment component as a precursor of an employee's thoughts of quitting in a model of turnover was evaluated. Second, including an employability-mobility measure as both a direct predictor and a linear joint function was evaluated. Finally, the relationship of an interaction between the employability-mobility measure and intention to remain with the frequency of negative performance specimen variance was assessed. Each of these relationships was indicated in the modified Mobley model presented (see Figure 3, page 25).

The results of the empirical analyses with respect to the initial component of a modified and moderated regression model indicate that a statistically significant bivariate relationship exists between job satisfaction and turnover behavior. These results are consistent with those of other authors (Marsh & Mannari, 1977; Mobley, Horner &

Hollingsworth, 1978; Newman, 1974; Waters & Roach, 1973), who have reported a small to moderate bivariate relationship between overall job satisfaction and turnover behavior. While the initial analyses for the total sample did support the relationships described above, subsequent correlation analysis for the dichotomized sample (i.e., moderated by the employability-mobility measure) indicates a significant relationship between job satisfaction and turnover behavior occurs only for individuals who are above average on the employability-mobility scale.

This finding suggest that the job satisfaction-turnover relationship may be more complex than previously thought. The necessity for taking into account the employability-mobility of sample members in the study of turnover has been demonstrated. The failure of previous researchers to account for this seemingly important component, may in part explain the conflicting evidence about job satisfaction and turnover (e.g., Koch & Steers, 1978).

While the importance of demonstrating a significant relationship between job satisfaction and turnover should not be minimized, it is equally important from the standpoint of this investigation to demonstrate that a significant relationship exists between job satisfaction and organizational commitment. The results show a significant and positive relationship between these two components of the model. The positioning of these two variables in the hypothesized model was supported by the data which indicated a stronger relationship between organizational commitment and the following step in the model (i.e., thinking of quitting)

than with job satisfaction. This was further demonstrated in the stepwise regression analyses for the subsequent dependent variables thinking of quitting, intention to search, intention to remain, and actual turnover behavior (see Tables 5 through 8, pages 53 through 59). These results support the findings of Porter et al. (1974) and Steers (1977) who suggest that organizational commitment is a better predictor of turnover than is job satisfaction.

The addition of the organizational commitment component to the simplified Mobley model (Mobley et al., 1978) was an innovation here in the prediction of employee turnover. Prior investigations have been focused on the relative predictive ability of models of turnover, but have not attempted to combine components into a more general and complete model of the turnover process (i.e., Hom et al., 1979; Miller et al., 1979). The results reported here indicate that the inclusion of an organizational commitment component as an outcome of job satisfaction and an antecedent of thoughts of quitting, can be justified on both rational and empirical grounds.

On a rational basis, it can be argued that individuals' decisions to terminate their employment with a particular organization involve a rejection by these individuals of the organization, but not necessarily of the job. In fact, it is highly probable that a terminating employee will accept an identical or very similar position requiring the same knowledge, skills and abilities within another organization.

On an empirical level, it was demonstrated that the correlation between organizational commitment and thinking of quitting was larger

than that of thinking of quitting with job satisfaction. The results of the stepwise regression of the criterion thinking of quitting on organizational commitment and on job satisfaction both resulted in significant standardized regression weights (i.e., partial correlation coefficients). While organizational commitment was the initial variable entering into the regression equation a statistically significant amount of remaining criterion variance was accounted for by job satisfaction as well.

Additional stepwise regressions computed for the components intention to search and intention to remain indicate that in both instances organizational commitment accounted for a statistically significant amount of criterion variance. In the former analysis, organizational commitment was the second variable to enter into the regression equation, while in the latter, organizational commitment was the initial predictor entered.

The results of both the regression analyses and the correlational analyses tend to support Porter's contention that organizational commitment may contain components of both job satisfaction and intention to remain (Porter et al., 1976). The results of the correlation analyses for the total sample indicated a stronger relationship between organizational commitment and turnover than between job satisfaction and turnover. This finding when combined with the results of the stepwise regression analysis using actual turnover behavior as a criterion (see Table 8, page 59) tends to support the position taken by Porter et al. (1974) of the greater predictive ability of organizational

commitment over job satisfaction in the prediction of employee turnover. This support, however, is quite weak since neither organizational commitment nor job satisfaction accounted for a significant amount of criterion variance subsequent to the inclusion of both the moderating effect (i.e., employability-mobility) and the behavioral intentions in the prediction of actual turnover behavior. In addition, it was demonstrated that the employability-mobility scale moderated the relationship between both job satisfaction and organizational commitment and actual turnover behavior, such that no relationship existed for individuals who were below average on the employability-mobility measure.

The hypothesized placement of the component thinking of quitting in a model of turnover was initially tested by Mobley et al. (1978). In that study a statistically significant prediction was demonstrated for thinking of quitting and intention to search. The results reported here provide support for the relationships demonstrated by Mobley and his colleagues. Specifically, the results of this analysis show that the immediate precursor of an individual's intention to search is the component thinking of quitting.

Mobley et al. (1978) indicate that their study did not deal with the concepts of organizational commitment (Porter et al., 1974; Steers, 1977) or job attachment (Koch & Steers, 1978). Mobley et al. suggest, however, that organizational commitment and job satisfaction have been shown to be better predictors of turnover than are traditional measures of job satisfaction. This being the case, they suggest the need to determine whether intentions are most appropriately seen as a component

or a consequence of organizational commitment. The results of the investigation described herein indicate that the best positioning of the organizational commitment in a model is prior to individuals' thoughts of quitting or behavioral intention.

The next model component evaluated in the present study was that of intention to search which few authors have examined as a predictor of turnover. However, Locke (1976) and Mobley et al. (1978) offered evidence that intention to search was the most predictive of intention to quit of all they examined. Support for this contention was offered by Miller et al. (1979) who found that in 9 out of 15 bivariate correlation comparisons the relationships between intention to search and adjacent constructs in the model were larger than correlations with constructs that were not immediate precursors or followers of that component.

The results here do not provide support for Mobley et al. (1978) who suggest a direct causal relationship between intention to search and intention to remain. Rather it is suggested that organizational commitment may be more closely related to intention to remain than is intention to search. While the magnitude of the relationship was not predicted a priori by this investigator, the results obtained were not totally unexpected since Porter et al. (1976) have suggested that organizational commitment may contain components of intention to remain with a particular organization. This being the case, one might justifiably argue that it is the operationalizing of organizational commitment that leads to its strong relationship with intention to remain, rather than its true theoretical, construct meaning.

As discussed above, the component thinking of quitting was evaluated to be the immediate precursor and most predictive of intention to search. The final behavioral intention examined in this study and the one hypothesized to be most closely related to actual turnover behavior is that of intention to remain. Numerous investigators have established the superior predictive ability of intention to remain (or conversely intention to quit) over the constructs organizational commitment (Miller et al., 1979; Hom et al., 1979), job satisfaction (Mobley et al., 1978; Miller et al., 1979; Hom et al., 1979), demographic variables (Mobley et al., 1979) and expected job content (Mobley et al., 1979). With the exception of employability-mobility which was used as a component of the linear joint function, intention to remain showed a stronger bivariate correlation with actual turnover behavior than did either job satisfaction or organizational commitment. Such a result helps to confirm the work of the above authors demonstrating that individuals' intention to remain within a particular organization is more closely and directly linked to actual turnover behavior than are the other hypothesized direct predictors of turnover behavior. When the total moderated regression model was computed, intention to remain was the only component to enter significantly the stepwise regression equation subsequent to the inclusion of both the linear joint function and the employability-mobility measure. This finding adds support to the hypothesized superior predictive utility of intention to remain over the other components of the model.

Perhaps the greatest contribution resulting from this study was the demonstration of the statistically significant interaction effect

between intention to remain and an individual's employability-mobility. This type of interaction term which has been given the label "linear joint function" (Ezekiel & Fox, 1959) indicates that the relationship between intention to remain and actual turnover behavior varies as a function of individual employability-mobility. Specifically, the results indicate a significant increase in the magnitude of the relationship between intention to remain and actual turnover behavior as the employability-mobility of individuals increases. Previously researchers have not examined the moderating effect of employability-mobility as related to intention to turnover. However, other related variables have been shown to have a similar moderating effect.

Dansereau, Cashman, and Graen (1974) demonstrated that individual expectancy of finding an alternate but comparable work position moderated the relationship between job attitudes and actual turnover behavior. The results reported in this study partially support these authors' findings in that one might expect a strong relationship to exist between expectancy of finding an alternative position and an individual's employability-mobility. However, these results differ in that a more objective measure of an individual's employability-mobility was used to moderate the relationship. As was argued earlier, it is the reality of the situation in terms of actually acquiring a new job that moderates the intention-behavior relationship, rather than individual perception of the probability of finding an alternative position.

Taking a somewhat different approach, Lounsbury, Horst and Steel (1979) as reported in Steel (1979) identified a variable they call

"belief in remaining" which predicted one year turnover better than intent to remain.

Steel (1979) went on to say:

Intention to remain may be more usefully employed when modified by certain yet to be identified situational constraints. Its predictive capabilities may be enhanced by employing it as a simultaneous rather than terminal predictor. It may prove most useful when utilized as an interactive variable. Its interactions with other measures (e.g., job satisfaction, evaluation of alternatives) may provide real insights into the explanation of turnover variance. . . . The leap from behavioral intentions to the act may prove to be a longer one than was first believed. (pp. 74-75)

My results strongly support the hypothesized interaction effect initially set forth by Steel. For example, the linear joint function accounted for a statistically significant amount of additional criterion variance even subsequent to the direct prediction of both intention to remain and employability-mobility. In addition, it was demonstrated that when the sample was dichotomized at the mean of the employability-mobility measure, no correlation between the components of the modified Mobley prediction model and actual turnover behavior was significant for individuals who were below average on the employability-mobility measure. Additional statistical analyses (e.g., separate least squares regression equations for the dichotomized samples) demonstrated that a statistically significant predictive function could be established between the components of the simplified Mobley model with the addition of organizational commitment and actual turnover behavior. However, the relationship was only for individuals who were above average on the employability-mobility scale.

These results suggest that future investigators of turnover behavior should pay particular attention to the employability and mobility of their employee samples. Otherwise unexpected or contradictory findings are likely to result from faulty theorizing rather than from subgroup differences. Future investigations should not be focused solely on the development and improvement of direct predictors of turnover, but should also identify the situations and/or constraints under which the validity of the direct prediction equation will be modified.

An attempt was made to explain the lack of relationship between turnover behavior and other forms of organizational withdrawal. From a logical perspective it was hypothesized the frequency of negative behavioral performance specimens as rated by supervisors would be an indication of an alternative form of withdrawal. Evidence supporting a positive relationship between two forms of withdrawal (i.e., absenteeism and turnover) has been presented by Melbin (1961) who concluded that high absenteeism represented a first stage and turnover the final stage of an employee's process of withdrawal from the organization. Other authors, most noticeably Hill and Trist (1955), have argued that absenteeism and turnover are alternative forms of withdrawal behavior. Their logic suggests that one form of withdrawal may substitute for another. They go on to suggest that one way an individual may deal with dissatisfaction and job stress is by withdrawing, in a psychological sense, from the organization. This psychological withdrawal need not necessarily imply a physical separation from the organization. In a

related study Beehr and Gupta (1978) found a positive relationship between different forms of withdrawal behavior. However, they suggest that the magnitude of the relationships among withdrawal forms were only low to moderate. They also suggest that the lack of stronger relationships may be due to other correlates which greatly modify and influence turnover behavior. An example of one such variable was presented by Behrend (1953) who suggested that labor market conditions had a strong impact on actual turnover, but may have had a lesser impact on alternative forms of withdrawal. To the extent that these different forms of withdrawal are differentially impacted as a result of an extraneous variable, then the identification and use of that variable may be helpful in explaining the extremely low prediction-turnover relationships reported in the literature.

Just such a variable was hypothesized to affect the relationship between turnover behavior and alternative forms of withdrawal. Specifically, it was hypothesized that individuals who were above average in terms of employability-mobility would have actual turnover behavior as a realistic vehicle for withdrawal from the organization. Conversely, it was hypothesized that individuals who were below average on the employability-mobility measure were less likely to have actual turnover behavior as a viable form of organizational withdrawal. As a result, it was hypothesized that for this latter group of individuals, withdrawal from the organization would be operationalized more in a psychological sense than in actual termination behavior. The measure of psychological withdrawal utilized in this study was the frequency of negative behavior

specimens identified with each individual as rated by their supervisor when completing a performance appraisal form.

The results of the empirical analysis failed to support this hypothesized explanation. Specifically, the frequency of negative behavior specimens for individuals with a combination of low intention to remain and low employability-mobility was not significantly different from the frequency of negative behavior specimens for individuals with other combinations of intention to remain and employability-mobility. The failure to find significant differences might be attributed to the fact that the negative performance specimens were not all indicative of withdrawal behavior. Thus, a criterion problem may have accounted for the lack of differences which resulted in this study.

Future investigators of the employee withdrawal process might benefit from considering organizational terminations as only one form of withdrawal behavior. These researchers should then establish the magnitude and direction of the relationships between alternative forms of withdrawal and also attempt to establish the conditions under which those relationships are valid. Evidence of continuing progress in the study of the employee withdrawal process can be seen in this study as well as those of Mobley and his colleagues (Mobley et al., 1979; Mobley et al., 1978; Hom et al., 1979; Miller et al., 1979). However, the need to establish the conditions under which these predictive models are valid, remains an important area for future investigations.

There are five areas related to the study of employee turnover which warrant further investigation. The listing of these areas is not intended as an indication of the relative importance of each area.

Rather, each area is essential to a better understanding of the employee withdrawal process.

The first area warranting additional investigation involves the generalizability of the Mobley model (Mobley, 1977; Mobley et al., 1978; Mobley et al., 1979) to additional samples of employees, occupations, and organizations. As was reported earlier, the great majority of studies evaluating the validity of the model have been done within the context of military and health care organizations. The modified Mobley model was used here with a retail sales organization and results demonstrate the model's validity for a sample of 210 sales personnel. However, the need to demonstrate validity for the Mobley model within additional service, manufacturing, processing and high technical organizations remains. Only through demonstrating the validity of current turnover models within such organizations, will it be possible to assess the generalizability of the models.

The failure of researchers to provide organizations with predictive models and explanations of the contexts in which those models are valid has led to the study of turnover being justified solely in terms of theoretical interest. While theory in and of itself does have value, it is to the application of this theory that scientific efforts should be directed. The translation of these theoretical concepts into practical applications is the responsibility of researchers and managers working with and within organizations.

The primary application of the moderated turnover model described herein is for manpower planning purposes. The organization in which

these data were collected as in the past continues to have high employee turnover within two of their retail department stores. The application of this model will allow management to plan in advance the hiring, training, and administrative requirements for the upcoming year. This will allow for more effective future utilization of personnel and resources than was allowed in the past. However, additional analyses further explaining the situational constraints of this model are needed.

Along similar lines is the need for future research to examine all employee turnover concurrently. The distinction often made between types of turnover (i.e., voluntary versus involuntary) has apparently resulted from researchers' desires to work with a more homogeneous population than the true decision process differences. The argument suggesting that organizations have little or no control over involuntary terminations appears to be inaccurate. Organizations have for many years expressed a preference for employing individuals with career aspirations, a history of geographic stability, and/or fewer family responsibilities. This quite obviously is an attempt by these organizations to control, a priori, the number of involuntary terminations within their work force. From an organizational point of view, the cost resulting from a voluntary termination should be nearly identical to those which result from involuntary termination, the one difference being severance pay which is given to an organizationally initiated employee termination. These arguments, as well as the fact that we are unable at this point to develop a methodology for accurately

classifying types of turnover, leads this author to suggest as was the case in this study that future investigations consider all turnover simultaneously.

The third recommendation suggests that it is time for investigations which examine the relationship between alternative forms of withdrawal behavior. Reviews by Price (1977) and Porter and Steers (1973) indicate a little or no relationship has been demonstrated among various alternative forms of withdrawal. Newman (1974) suggests that the actual termination of an employee may, at least in part, be a function of the control that the individual has over future employment. This suggests that an index of employee control might be used to moderate the relationship between alternative forms of withdrawal behavior, in the present study an attempt to do so was made by using a measure of individuals' employability-mobility to explain the lack of relationship between alternative forms of withdrawal and turnover behavior. While the results failed to support the hypothesized relationship, the need for additional study seems warranted. It is suggested that in future theoretical development, attempts be made to incorporate employee decision processes with respect to turnover into the larger context of employee decisions and attitudes concerning their employment.

The fourth recommendation is that theorizers should begin developing more eclectic models of the turnover process. Specifically, it is suggested that in the future investigators should attempt to assess not only the relative predictability of various models of turnover, but also the combined predictability of alternative models. Through the

combination of the components from various predictive models, a model might be developed which is superior to any currently proposed model. In the study reported here, it was hypothesized that the inclusion of an organizational commitment component into the simplified version of Mobley's model would result in significantly improved prediction of employee turnover. While the inclusion of organizational commitment did not significantly improve the overall prediction of the moderated model, it did appear to improve our understanding of the employee withdrawal process. Specifically, it was demonstrated that organizational commitment appears to be a direct result of job satisfaction and is an immediate precursor of individuals' thoughts of quitting. Studies which examine and more clearly define the employee withdrawal process are greatly needed.

The fifth and final recommendation is for the investigation of the relationship between behavioral intentions and actual turnover behavior. It was demonstrated that the utility of behavioral intentions for predicting employee turnover was moderated by individuals' employability-mobility. Also, a predictive relationship exists only for individuals who are above average in terms of employability-mobility. Thus, the results of this investigation suggest that a nonlinear relationship exists. While the existence of potential moderators has been suggested by other authors (Steel, 1979; Mobley et al., 1979), the identification of individual employability-mobility as actual moderators was unique to this study. The existence of other potential moderators such as occupational control (Newman, 1974), nonwork values and interests

(Dubin et al., 1975) and situational constraints (Lounsbury et al., 1979) have been hypothesized. Such empirical investigations are to be applauded while at the same time stressing the need for additional studies. Through a process of identifying the factors constraining relationships between turnover and various valid predictors, real improvements can be made in understanding the employee turnover process.

The moderated model described and evaluated herein was developed in an attempt to improve and expand previous predictive models of the employee withdrawal process. Evidence presented suggests that the inclusion of organizational commitment in a model of the employee withdrawal process aids, empirically, in the understanding of that process. In addition, it was demonstrated that a nonlinear relationship exists between intention to remain and actual turnover behavior. Further investigations of this relationship are necessary and are strongly encouraged.

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APPENDIX

FUTURE WORK PLANS

An individual's job is one of the most important things in his or her life. Most people have thought, at one time or another, about staying or leaving their job. The following questions deal with your future work plans in this regard.

1. If you had your own way, how much would you like to be working for (name) one year from now?

In the blank following the arrow below, please write the number between 0 and 100 which best describes your feelings based on the following scale:

0 - means you definitely would not like to be working for (name) one year from now.

100 - means you definitely would like to be working for (name) one year from now.

For example:

85 - means you are relatively certain that you want to remain at (name) for at least one year.

15 - means you are relatively certain that you would prefer not to be working for (name) one year from now.

(Use any number between 0 and 100.)

2. Taking everything into account, how likely is it that you will make a real effort to find a new job with another employer within one year from now?

0 - means it is not at all likely that you will try to find a new job

100 - means it is certain that you will try to find a new job.

(Use any number between 0 and 100.)

3. How often do you think about quitting your job?

0 - means you never think about quitting your job.

100 - means you think about quitting all the time.

(Use any number between 0 and 100.)

4. How much longer do you intend to work for (name)?

_____ Years

QUESTIONNAIRE

Sex: Male _____ Female _____

Age: 16-21 _____ 22-30 _____ 31-40 _____ Race: American Indian _____
 41-50 _____ 51-60 _____ 61-70 _____ Black _____
 Over 70 _____ Caucasian _____

Marital Status: Married _____ Oriental _____
 Single _____ Other _____
 Divorced _____
 Widowed _____
 Other _____

Number of Dependents: _____

What type of work does your spouse do? _____

What is your highest level of Educational Attainment? (Circle one)

6 7 8 9 10 11 12 College Years 1 2 3 4

Graduate School Years 1 2 3 4

Check your highest educational degree attained.

High School Diploma _____

Associates Degree (2 years college) _____

Bachelor's Degree (4 years college) _____

Master's Degree _____

Are you currently enrolled in school? Yes _____ No _____

Where? _____

Do you have any relatives working for (name)? Yes _____ No _____

Do you rent or own your current residence? Rent _____ Own _____

What type of residence do you live in: House _____
 Apartment _____
 Mobile home _____
 Condominium
 or Townhouse _____
 Other _____

How far do you live from the store in which you work? _____ miles.

How do you get to work? Drive own car _____
Relative brings me _____
Bus _____
Walk _____
Car Pool _____

Have you ever been discharged from a job? Yes _____ No _____

How long were you employed in your previous job _____ Years _____ Months

What type of work was involved in your previous job? _____

How long have you worked for (name)? _____ Years _____ Months

Did you have any previous sales experience before you came to (name)?
Yes _____ No _____

How much experience? _____ Years

Are you employed full-time or part-time by (name)? Full-time _____
Part-time _____

How many hours per week do you usually work? _____ hours.

Would you like to work more hours than you currently do? Yes _____ No _____

Which (name) store do you work in? Oak Ridge _____
West Town _____
Midland _____
Athens _____

Which department do you work in? _____

Have you previously worked in any other department? Yes _____ No _____
Which one? _____

How many (nonvacation) days have you missed for any reason in the last six months? _____ days.

Please list any hobbies you have. _____

How long have you been a section leader? _____ Years _____ Months

Did you work for (name) as a sales clerk before you became a section leader? Yes _____ No _____

If so, for how long? _____ Years _____ Months

How many employees do you currently supervise? _____

VITA

Terrence Leonard Eugene Guth, the son of Dr. and Mrs. Eugene Guth, was born in South Bend, Indiana, on April 11, 1953. He relocated in 1955 to Oak Ridge, Tennessee, where he attended public schools and was graduated from Oak Ridge High School in June 1971. Following his high school graduation he enrolled at Rice University at Houston, Texas, where he received a Bachelor of Arts degree in psychology in May 1975.

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