3 1293 10100 1216

THESIS

This is to certify that the

thesis entitled

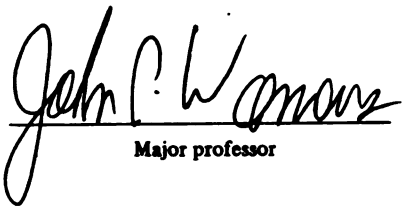
Career Role Transitions Within Organizations:
A Study of Role Stress and Coping Strategies

presented by

Janina Carol Latack

has been accepted towards fulfillment
of the requirements for

Ph.D. degree in Management

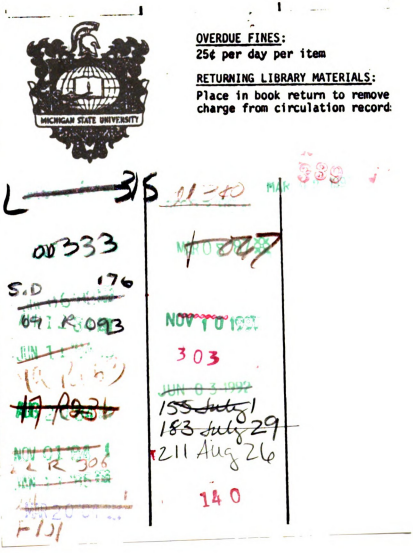


Major professor

Date January 5, 1981

O-7639

LIBRARY
Michigan State
University



CAREER ROLE TRANSITIONS WITHIN ORGANIZATIONS: A STUDY OF ROLE STRESS AND COPING STRATEGIES

By

Janina Carol Latack

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Management

1981

ABSTRACT

CAREER ROLE TRANSITIONS WITHIN ORGANIZATIONS:
A STUDY OF ROLE STRESS AND COPING STRATEGIES

By

Janina Carol Latack

This study examined career role transitions as a stress-coping process. A causal model was developed integrating role theory with the literature on psychosocial stress. The model hypothesized that level of job stress associated with a career transition, and level of performance in the new role are the direct result of three factors: (1) the magnitude of the career transition, (2) the resulting role ambiguity and role overload, and (3) the coping strategies employed. It was further hypothesized that coping strategies are jointly determined by stressors at work (role ambiguity and overload) and stressors away from work (personal life transitions).

Data were collected from 109 managerial and professional employees in a manufacturing firm and an osteopathic hospital. The questionnaire instrument included a scale to measure coping strategy developed for this study.

Examination of the coping scales suggested that two coping strategies were being tapped: situational coping (taking action on, and cognitively re-evaluating the stressful situation) and symptomatic coping (jogging, meditating, drinking, etc.).

The data showed that for these two organizations career transitions are synonymous with upward promotions, and the employees making career transitions within the organization are younger, better educated with less than 10 years' organizational tenure.

Results of correlational and path analyses lent only weak support for the hypothesized causal sequence. The correlation between magnitude of career transition and job stress was statistically significant but of dubious practical significance. The hypothesized link between personal life transitions and coping strategy was supported. Individuals experiencing a large number of personal life transitions were more likely to adopt a symptomatic coping strategy for dealing with job stress. While the interpretation is speculative, the results also suggested that role ambiguity may generate symptomatic coping while role overload is negatively related to symptomatic coping.

Other results were not supportive of the model. Contrary to expectations, magnitude of career transition was unrelated to role ambiguity and was negatively related to role overload. That is, the greater the magnitude of the career transition, the less likely an employee would feel overloaded. Suggested explanations were lack of a standard against which to evaluate work load, and the positive value placed on promotions. It was concluded that if a career transition is a stress-coping process, it operates via

mechanisms other than the role variables and coping strategies examined here.

While not hypothesized a priori, there was a strong, positive correlation between magnitude of career transition and the number of personal life transitions. A post-hoc hypothesis suggested was that a major career transition could act as a "trigger" event for personal life instability.

The implications of these findings are discussed for both research and practice. It was suggested that future studies continue to explore the links between structural variables in nonwork and attitudinal/behavioral variables at work. Research designs should emphasize intra-individual analyses over time. It was also suggested that organizations may be missing career development opportunities afforded by lateral or downward moves, and that managers should be aware of the potential impact of major career transitions on employees' personal lives.

© Copyright by
Janina Carol Latack
1981

ACKNOWLEDGMENTS

There are several people who contributed a great deal to this dissertation. In the course of helping me to do what I wanted to do, each one in his/her own way lent valuable insight, encouragement, and support while displaying incredible (and at times undeserved) patience throughout the process. I am grateful for what they gave to me.

I appreciate the members of my committee - John Wanous as Chairman, Ben Schneider, Neal Schmitt, and Tim Hall. They not only contributed complementary expertise but established a professional collegiality and good humor with me that was beyond what I had been told to expect by others who have preceded me in this process. I hope to maintain a professional relationship with each of them throughout my career.

My husband Joe helped enormously and cheerfully carried the major responsibility for our nonwork life. His support and flexibility, not to mention his gourmet cooking, provided a warm home life during a stressful time. My son Andrew was born and grew to be an amazing and delightful two-year-old during this time. I am grateful for the unconditional smiles and love he gives me.

I thank my parents for giving me more than parental love and encouragement. My mother did the majority of the typing and editing, always under pressure. The quality of the final product reflects her excellent work. My father inspired me by going back to school to get a Ph.D. long before mid-career change became fashionable.

And finally, I'm thankful for Larry Foster's perseverance. When he first asked me, "Why don't you get a Ph.D.?", I laughed.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

CHAPTER I

INTRODUCTION AND REVIEW OF LITERATURE

This study examines two processes of current interest to organizational researchers: career transitions and stress. While a career transition may be an occupational change which involves a change of organizations as well, many career transitions occur as an ongoing feature of organizational life when employees move from one job to another in the same organization. While stress in organizations may be caused by a variety of individual and organizational factors, a common theme in the stress literature is that change can cause stress because it taxes the individual's adaptive capacity (Holmes & Rahe, 1967) and may create situations, temporary or chronic, which threaten to exceed the individual's capacity to respond (McGrath, 1976).

Therefore, studying career transitions using a stress model may shed light on a particular stress process in organizations that is commonplace as organizations seek to achieve goals in the areas of internal staffing, career development and affirmative action.

Definition of Terms

Since there are a variety of definitions for the terms "career," "career transition," and "stress," it is appropriate to specify how they will be used here.

Career and Career Transition. Based on Hall (1976), "career" is defined as a process or sequence of work-related experiences. Over time, the individual moves through a series of work roles and the accumulation of these role-related experiences constitutes the individual's career. An underlying assumption of Hall's view is that a career is not only the objective, formal roles occupied, but the individual's perceptions, attitudes and feelings toward those role-experiences - the "subjective" career.

Hence, a career transition could legitimately be viewed as an objective, observable change in role activities or as a subjective alteration in one's view of, or involvement in, the work role. In this study, an intra-organizational career transition will be defined as occurring when an individual moves from one formally designated organizational role to another within the same organization. The subjective view of this transition is the coping process and the stress experienced in conjunction with the role transition.

Stress. Some writers have argued that stress is an imprecise term and should be used as a "collective term for an area of research" (Lazarus, 1966, p. 27). Reviewing recent definitions, however, (Appley & Trumbull, 1967;

McGrath, 1976, 1970; Schuler, 1980; Sells, 1980) a working definition[1] can be derived. Various conceptual definitions (stress as stimulus, response, and person-environment interaction) have been reviewed elsewhere (Beehr & Newman, 1978; Cox, 1978; Schuler, 1980).

Stress is defined here as the result of a dynamic process in which the individual faces a stressor situation (demand, constraint or opportunity) the resolution of which is uncertain and to which important outcomes are attached. The level of stress symptoms displayed (e.g., anxiety) as a result of this complex dynamic process is moderated by personality and situational factors. Stress level is further thought to depend on an important intervening variable, the coping process.

A Model of Career Transitions as a Stress-Coping Process

The following section summarizes the theoretical model for the present study. Following this overview, the literature on which the model is based is reviewed and related to the variables included in the model.

The purpose of this research is to trace the process through which one type of change in organizations, a career role transition, may create stress. The model in Figure 1-1 illustrates the hypothesized causal process tested. As indicated in the model, the research examined:

---

[1]This definition draws most directly upon definitions proposed by Schuler (1980) and McGrath (1976).

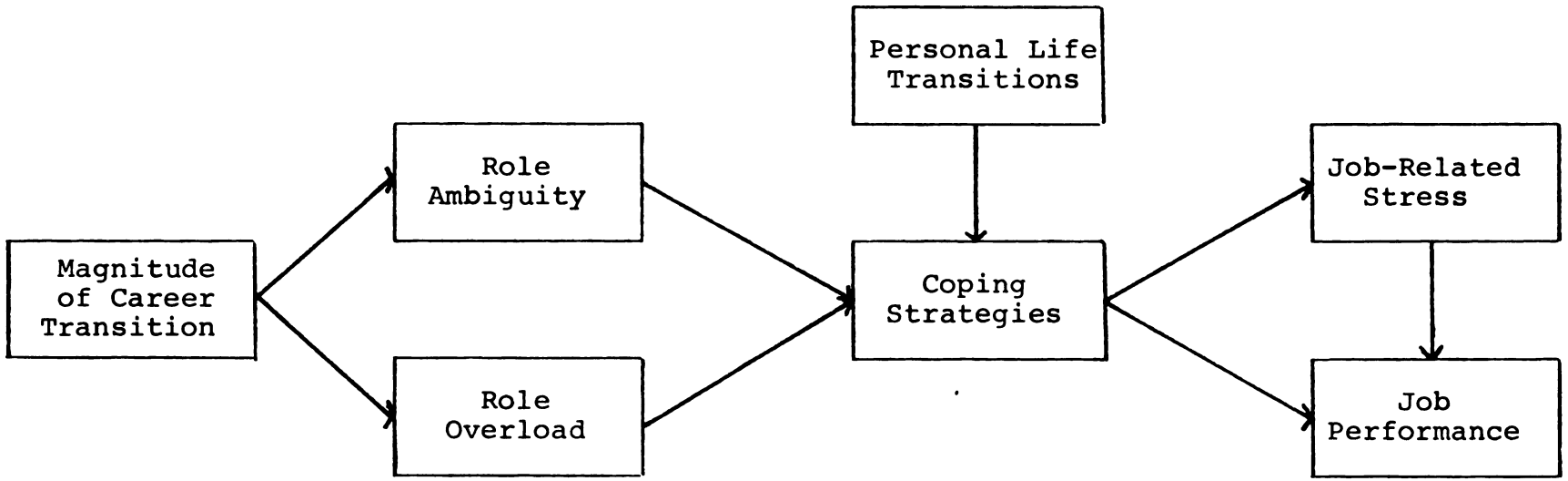


Figure 1-1. A model of career transitions as a stress-coping process.

1. The extent to which magnitude of career transition contributes to role ambiguity and role overload (work stressors).
2. The influence of work stressors as well as personal life transitions (nonwork stressors) on work-related coping strategies.
3. The impact of coping strategies on experienced stress (job-related anxiety) and job performance.

While the literature review which follows is supportive of the model as drawn, a popular competing model, which posits stress as the intervening variable and coping as the dependent variable, was also tested for comparison.

The model presented in Figure 1-1 suggests that the process through which a career transition may create stress is dependent first on the magnitude of the transition. A change to a job which is very similar to the previous job should, other things equal, be less stressful than a change to a job which is radically different. The intervening mechanisms, however, are important determinants in the process. From a role theory viewpoint, a career transition constitutes taking on a new organizational role (Graen, 1976; Katz & Kahn, 1978). Therefore, magnitude of the transition may effect stress through the creation of uncertainty as to how the job should be done (role ambiguity) and the perception that the job is beyond one's resources and capabilities (role overload). A bigger change should contribute to higher levels of ambiguity and overload.

The central and most complex intervening process in the model is the use of coping strategies. Clearly, individuals vary in the strategies they use to cope with a career transition. It would seem that some strategy or combination of strategies may be more effective than others for lowering stress and facilitating effective performance in the new role. As the literature review which follows will show, however, there is no clear basis for deciding which strategy will be most effective.

Finally, the relationship between work and nonwork is viewed as an influential factor in the career transition process. Transitions occurring in an individual's nonwork life concurrent with a career role transition should also determine the nature of coping strategy at work. That is, if an individual's adaptive resources are being taxed in the nonwork domain at the same time they are being taxed at work, this should affect the type of coping strategy employed during a career transition. Again, the literature offers no clear basis for specific hypotheses related to personal life transitions and coping strategies at work, but the influence of personal life on work, and vice versa, seems undeniable.

The underlying assumption in the model is that effective coping strategies are those which lower stress and contribute to good job performance. The well-known "inverted U" (Selye, 1956) hypothesis argues that there are situations where an increase in stress may be desirable,

in that moderate amounts of stress are stimulating and motivate performance. The present study does not dispute that there may be some situations where this is true. However, research on performance in learning situations (Spielberger, O'Neil, & Hansen, 1972; Zajonc, 1965) would suggest that during the transitional stage when an employee is learning a new role it would be advantageous to lower anxiety. Indeed, in this particular setting with managers, many of whom may function at moderate levels of anxiety most of the time (Jennings, 1965), it may not be possible to sample individuals on the left-hand side of the "inverted U."[1] Hence, the goal would be to assist employees in reducing stress from high to moderate, rather than eliminating stress entirely.

In summary, the research is exploratory and conceptual and is intended to contribute toward a theoretical model of coping with career transition stress.

Literature Related to the Model

As a base for the research model, literature in the following areas has been reviewed and will be summarized in this section:

1. Psychosocial stress and coping
2. Occupational and role stress
3. Life changes and illness

---

[1]Appreciation is expressed to John Wanous for his insights on this issue.

4. Work and nonwork

5. Organizational socialization

Psychosocial Stress and Coping

There is a large body of literature on psychosocial stress spanning the disciplines of psychology, social psychology, psychiatry, epidemiology, and psychosomatic medicine. (See Beehr & Newman, 1978; Caplan, 1971; Cooper & Payne, 1978; House, 1974; Kagan & Levi, 1974; McGrath, 1976 for reviews.)

Early stress research focused on describing reactions to acute stress situations such as combat, hazardous occupations, concentration camps, life-threatening illness or surgery, and environmental disasters. (See Abram, 1970; Janis, 1958; McGrath, 1970 for reviews.) There is a considerable body of laboratory research on psychosocial stress (reviewed in Harris, Mackie & Wilson, 1956; Lazarus, 1966; and McGrath, 1970) in which participants are presented with interpersonal conflict situations (Crider, 1970), introduction of piece rate incentive systems (Levi, 1967), emotionally upsetting films (Lazarus, 1966), and failure, criticism, unpredictability, or work load experiments (Harris, Mackie & Wilson, 1956).

More recently there has been interest in the study of stress as a recurring factor in everyday living and working (McGrath, 1976). A list of factors which may cause stress (stressors) in the work and nonwork domain is presented in Table 1-1. Medical researchers have focused on

Table 1-1

Sources of Psychosocial Stress (Stressors)[a]

Nonwork Stressors	Work Stressors
Family and Peer Relationships	**Organizational Policies**
Marriage	Inequitable or inadequate performance evaluation
Marital difficulties or separation	Pay inequities
Marital reconciliation	Ambiguous or arbitrary policies
Divorce	Rotating work shifts
Death of spouse or close family member	Frequent relocation
Spouse starting or stopping work	Idealistic job descriptions in recruiting
Pregnancy	Undefined or conflicting goals
Birth or adoption	**Organizational Structure**
In-law troubles	Low participation in decisions
Illness of close family member	Lack of growth or promotional opportunity
Children leaving home	Size
Sexual difficulties	Excessive formalization
Dissatisfaction with friendships	Division of labor and excessive specialization
Community Roles	Interdependence of organizational units
Problematic social relationships	**Working Conditions**
Adding or deleting social activities	Crowding
Law violations	Poor spatial arrangements
Detention in jail or other institution	Excessive noise, heat or cold
Change in residence	Improper lighting
Entering a new school	Safety hazards; toxic chemicals; air pollution; radiation
Starting or finishing formal schooling	**Interpersonal Relationships**
School difficulties	Inconsiderate or inequitable supervisors
Economic Roles	Lack of recognition or acceptance
Financial difficulties or insecurity	Lack of trust
Taking on a mortgage or loan	Competition
	Difficulty delegating responsibility
	Conflict within and between groups
	Job Demands
	Repetitive work
	Time pressures and deadlines
	Underutilization of abilities
	Responsibility for people
	Overtaxing of abilities

Table 1-1 (cont'd.)

Nonwork Stressors	Work Stressors
Lifestyle	**Career Concerns**
Change in eating/ sleeping habits	Underpromotion/overpromotion
Vacation	Mid-career crisis
Major alteration in living environment	Obsolescence
	Unmet expectations and goals
	Job insecurity
	Job change
	Retirement
	Role Processes
	Role conflict
	Role ambiguity
	Role overload

[a]Adapted from Levi (1967), Holmes and Rahe (1967), and Van Sell, Schuler, and Brief (in press).

physiological and disease indicators linked to these stressors such as hypertension and heart disease (Kagan & Levi, 1974), while organizational researchers have focused on the psychological and behavioral indicators such as anxiety, boredom, job dissatisfaction, low job performance, and turnover (Matteson & Ivancevich, 1979). From this research, it is becoming increasingly clear that both the physical and psychological indicators of stress can be linked to social-psychological factors in the workplace (Caplan, Cobb, French, Harrison, & Pinneau, 1975; Kasl, 1978), but the underlying processes are unclear, and the inter-relationships between stress at work and away from work remain virtually unexplored (Kasl, 1978).

Presently, there is a growing recognition of the inevitable and complex linkages between psychological, physiological, and behavioral processes related to stress, as well as the undeniable connection between personal life and work life stress. Accordingly, a convergence of interest across disciplines has emerged, and interdisciplinary research has been recommended which integrates physiology, psychology, sociology, and medicine in the study of stress processes (Matteson & Ivancevich, 1979; Schuler, 1980).

Models of Psychosocial Stress. Models of psychosocial stress on which such interdisciplinary research might be based view stress as a person-environment interaction process (Cox, 1978; Kahn, Wolfe, Quinn, Snoek, & Rosenthal,

1964; Lazarus, 1966; McGrath, 1976; Schuler, 1980). That is, stress is a response of certain individuals in certain situations; no stressor listed in Table 1-1 evokes stress or the same amount of stress in all people. As indicated in the definition of stress offered earlier (p. 3), the key variables in the transactional viewpoint are the factors in the situation (stressor), some type of perceptual or cognitive appraisal process of the amount of uncertainty and importance of outcomes, a decision concerning appropriate response or coping strategy and the accompanying "experience" of stress as displayed in stress symptoms, emotionally, physiologically, and behaviorally. While each model reviewed has its own approach to the complexities of the process, a composite linear model can be derived and is presented in Figure 1-2. It represents recurring themes across all of the models.

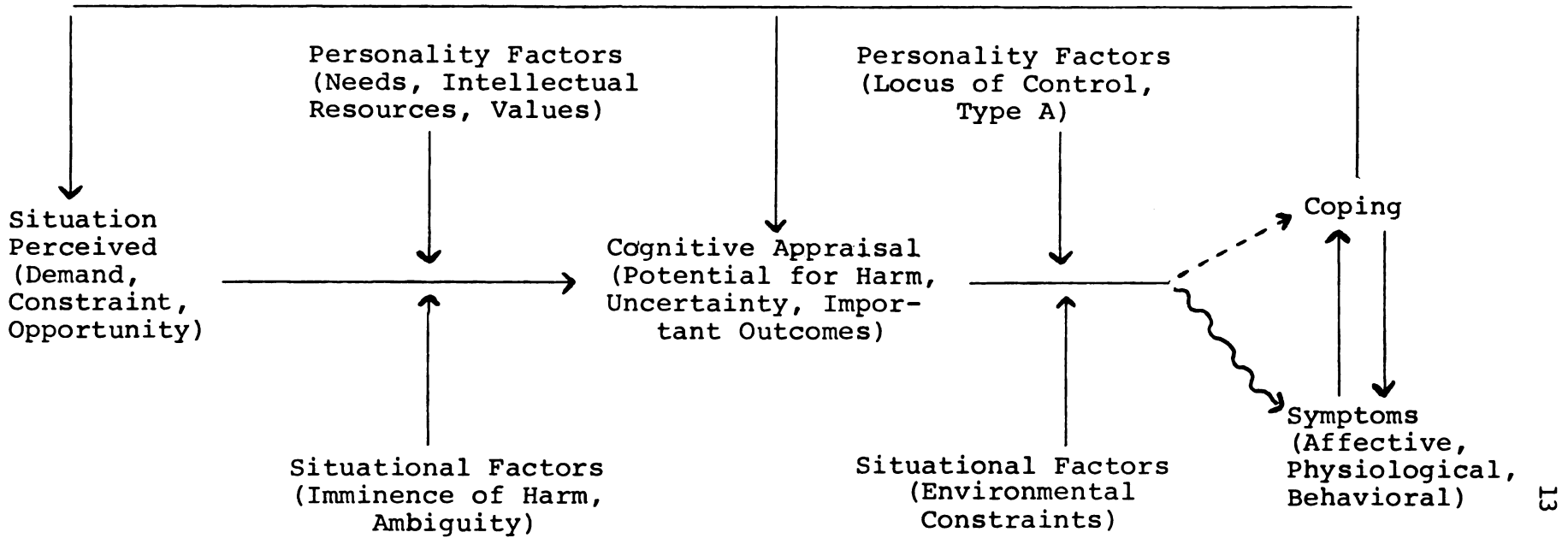


Figure 1-2. A composite model of psychosocial stress and coping.[1]

[1]Based on Cox, 1978; House, 1974; Lazarus, 1966; McGrath, 1976.

The disputed linkage indicated by dotted and wavy lines concerns what is viewed as the intervening process. There is long tradition in psychology which views anxiety as the intervening process (Brenner, 1953; Freud, 1959). Alternatively, it is argued, most forcefully by Lazarus (1966, 1976), that anxiety is the result, not the precipitator, of coping. Essentially there are two classical and contradictory hypotheses: "I see the bear, I feel scared, I run." vs. "I see the bear, I run, and because I am running, I feel scared." Lazarus essentially argues as follows: "I see the bear, I run, I may feel scared but not nearly as scared as I would feel if I hadn't run or hadn't been able to run."

So long as we persist in positing linear unidirectional models, this dispute will probably not be resolved, and certainly not by cross-sectional studies such as the present one where the time factor and the feedback cycles inherent in the stress-coping process cannot be accommodated. However, scientific inquiry advocates that the most parsimonious model be tested before it is discarded. The linear model tested here suggests that at any given point in time stress experienced in conjunction with a new career role will be determined by stressors encountered and coping strategies currently employed. Thus, coping is cast as an intervening variable, as Lazarus postulates, because a snapshot is being taken of the ongoing process depicted in Figure 1-2.

Conceptual Views of Coping. Conceptualizations of coping reflect some agreement (Monat & Lazarus, 1977) that coping refers to efforts to master conditions of harm, threat, or challenge. Pearlin and Schooler (1978) state that coping refers to "...behavior that protects people from being psychologically harmed by problemmatic social experience..." (p. 2). McGrath (1970) states that coping is an array of covert and overt behavior patterns by which the organism can actively prevent, alleviate, or respond to stress-inducing circumstances. In the model tested here, coping is generated in response to the stress-inducing circumstances of role ambiguity and role overload.

One of the earliest classifications of coping is the fight, flight, or freezing phenomena observed in animals exposed to danger (Cannon, 1929; Gray, 1971). Lazarus (1966, 1976) has presented two coping categories: direct action and palliation. Direct action strategies refer to behaviors aimed at eliminating or preventing potentially harmful consequences. Palliation refers to behavior designed to moderate the psychophysiological effects of stress.

Conceptualizations of coping specifically related to role processes have been offered (Hall, 1972; Kahn et al., 1964; Pearlin & Schooler, 1978). In a study of role conflict, Hall developed a model of coping behaviors based on Levinson's (1959) three-part definition of role: structurally given demands, personal role conception, and role behavior. Hall logically derived three coping categories:

changing structural role demands or directly altering others' expectations (Type I); personal role redefinition or altering one's personal conception of the role (Type II); reactive role behavior or coping by trying to satisfy all demands (Type III).

Kahn et al. (1964) posit two dimensions of coping: dealing with the objective situation (i.e., causes or stressors) through problem-solving behavior and dealing with emotional reactions (i.e., consequences or stress symptoms) through withdrawal, hostility, aggression, or group affiliation.

In a study of coping in work and personal life roles, Pearlin and Schooler (1978) distinguish three types of coping on the basis of function performed: responses that modify the situation; responses that control the meaning of the situation; and responses that control or minimize the stress response itself.

A taxonomy of coping strategies can be derived from recurring themes identified in the foregoing conceptualizations. Based on the target of the coping strategy, there appear to be three categories:

1. Taking Action on the Stressor Situation. Individuals can cope by responding directly to, or altering, the situation, or by altering their relationship to the situation. For example, if an individual is experiencing stress because of role ambiguity, s/he might meet with a supervisor to clarify what is expected on the job. If an individual is confronted with conflicting expectations

from co-workers, s/he might cope by trying to meet all expectations appropriately, or by removing him/herself temporarily or permanently from the stressful situation.

2. Altering Cognitions of the Stressor Situation. Altering the perceptual process (cognitive reappraisal) can serve a coping function by re-evaluating the situation so that it does not seem so stressful. For example, an individual facing role ambiguity may devalue the job vis-a-vis other life roles so that s/he worries less about what to do on the job.

3. Controlling the Stress Symptoms. Attempts to directly alter the stress symptoms are the most widely publicized coping techniques. Examples would be exercise, or the use or abuse of drugs and alcohol in order to relieve the affective and physiological stress symptoms.

Empirical Evidence on Coping with Job Stress. Empirical evidence on coping with job-related stress is limited (Newman & Beehr, 1979; Van Sell, Brief, & Schuler, in press). In the classic work on role stress in organizations, Kahn et al. (1964) identified several examples of action-coping strategies (withdrawal, rejection, and evasion) which were observed to be somewhat effective in reducing outcomes of role stress, particularly job dissatisfaction. However, a computerized search of the literature revealed only four studies that systematically investigated more than one of the three strategies (Anderson, 1976, 1977; Burke & Belcourt, 1974; Hall, 1972; Pearlin & Schooler, 1978). Three of the

studies evaluated the impact of coping strategy on some type of stress symptom (Anderson, 1976, 1977; Hall, 1972; Pearlin & Schooler, 1978).

Anderson (1976, 1977) studied coping responses of a sample of 90 entrepreneurs whose small businesses had been damaged or destroyed by flood. Structured interviews were used to elicit critical incidents which described coping. Coping strategies were categorized according to the Kahn (1964) typology presented earlier. Problem-solving coping behaviors were associated with lower reported stress and higher organizational performance levels than emotion-centered coping behaviors. Hall (1972) found that satisfaction with the way college-educated women dealt with multiple life roles was significantly related to use of a structural redefinition coping strategy ($\underline{X}^2 = 15.3$, $\underline{p} < .01$) in a pilot sample (n = 109) with results approaching significance ($\underline{X}^2 = 3.51$, $\underline{p} < .07$) for the main sample (n = 170). In the pilot sample, satisfaction was unrelated to either coping through personal role redefinition or coping through reactive role behavior. In the main sample, however, coping through reactive role behavior was negatively related to satisfaction ($\underline{X}^2 = 7.15$, $\underline{p} < .01$). Further, women who used structural redefinition and did not use reactive role behavior were more satisfied than women who used some other combination of coping strategies. The biggest impact on satisfaction, however, was the simple act of coping per se vs. not coping or having no conscious strategy at all.

Pearlin and Schooler (1978) studied the efficacy of coping mechanisms across several life roles (marriage, parenting, household economics, and occupation) in a sample of 2300 people representative of the Chicago area. While they found support for the notion that coping reduces stress symptoms elicited by stressors in other life roles, coping had the least impact within the occupational role. Work stressors examined were inadequacy of rewards, noxiousness of the work environment, depersonalization, and role overload. The only strategy that reduced stress (feelings of worry and tension) related to these work stressors were cognitive strategies (devaluing the job, and thinking how much better one's job is now than a year ago). These cognitive strategies explained less than 2% of the variance in stress.

Burke and Belcourt (1974) used a short questionnaire to obtain data from 137 Canadian managers on levels of occupational stress and coping responses. Open-ended questions asked about useful ways of handling job pressure and tensions, effective and ineffective methods or reducing tensions in specific situations which the managers described as stressful to them. The eight most frequently used strategies consisted primarily of actions on the stressor situation, and coping responses reported as effective differed according to stressor situation based on chi square analysis (significance levels not reported). Role overload and pressure for better job performance were effectively

dealt with by analyzing the situation and changing the strategy of attack. Inability to influence a supervisor's decisions was effectively coped with by talking to others.

In Table 1-2, examples of coping strategies from the studies reviewed are classified into one of the three categories in the proposed taxonomy. This categorization must of necessity be tentative since the studies reflect different levels of specificity and since the target of the coping behavior is not always apparent. The studies summarized in Table 1-2 show that the emphasis has been on coping via action on the stressor situation, and the limited evidence suggests that this is the most effective strategy (Anderson, 1976, 1977; Burke & Belcourt, 1974; Hall, 1972). However, one study found that neither action nor cognitive reappraisal was effective (Pearlin & Schooler, 1978). Therefore, it appears that additional research is needed which comprehensively and systematically compares the impact of all three strategies of coping in job settings. The present study compared the impact of all three coping strategies on job-related stress and job performance.

Table 1-2

Taxonomy of Coping Strategies From Studies of Job-Related Stress

Author(s)	1. Action on Stressor Situation	2. Altering Cognitions	3. Controlling Symptoms
Anderson (1977)	Problem-solving behaviors:[a] (e.g., obtaining resources to counter loss). Emotion-centered behaviors:[a] (e.g., withdrawal, group affiliation).		
Burke & Belcourt (1974)	Working harder and longer. Analyzing situation and changing strategy of attack. Talking to others. Delegating work. Withdrawing physically from the situation.		Agressing and ventilating feelings. Changing to an engrossing nonwork or play activity.
Hall (1972)	Type I: Structural Role Redefinition Eliminating role activities based on agreement with role senders. Support from others outside role set (hire help). Support from inside role set (delegate). Problem-solving with role senders to redefine role. Role integration - redesigning roles so they can be performed in a mutually reinforcing manner. Changing societal definition of role. Type II: Personal Role Redefinition Establishing priorities without negotiating. Overlooking role demands. Rotating attention among roles - selective attention. Compartmentalize roles: minimize overlap; full attention to each role while in it. Eliminating roles or role activities without agreement of role senders.	Type II: Personal Role Redefinition Changing attitudes toward role - reduce cognitive dissonance. Attaching greater weight to one's own self-sent expectations.	

Table 1-2 (con't.)

Author(s)	1. Action on Stressor Situation	2. Altering Cognitions	3. Controlling Symptoms
Hall (1972) (con't.)	Type III: Reactive Role Behavior Planning, scheduling, and organizing better. Working harder to meet all demands; devote more time and energy.		
Pearlin & Schooler (1978)	Optimistic Action: Take some action to get rid of difficulties; talk to others to find a solution.	Optimistic Action: (Notice people who have more difficulties than you do.) Substitution of rewards: (The most important thing about my job is that it provides me the things I need in life; I can put up with a lot on my job as long as the pay is good; time solves most problems.) Positive Comparisons: (Work life is better than a year ago; work life will be better a year or so from now; work life is better than the jobs of most other people you know.) Selective ignoring: (Tell yourself difficulties are unimportant; try to pay attention only to your duties and overlook them; remind yourself that for everything bad there is something good.)	

Empirical Evidence on Coping in Other Settings. Given the limited number of studies directly related to coping and work role processes, it is worthwhile to consider other empirical evidence, much of it from laboratory research, on the impact of coping on stress symptoms.

Lazarus (1966) reports on several laboratory studies where cognitive reappraisal strategies were associated with lower psychological and physiological stress symptoms. For example, when participants were shown emotionally upsetting films of people injured or killed in industrial accidents, both emotional and physiological stress symptoms varied according to the commentary accompanying the film (no commentary, a commentary on the seriousness of industrial safety, and a commentary reminding participants that they were seeing actors who were not actually injured). Schacter and Singer (1962) injected subjects with epinephrine (a common stress hormone which stimulates the autonomic nervous system). They were able to produce very different affective states (anger vs. euphoria) based on the cognitive processes induced by exposing participants to confederates who were angry or happy. They concluded, "Cognitive factors are the major determinants of the emotional labels we apply to common states of sympathetic arousal" (p. 380).

Lacey, Kagan, Lacey and Moss (1963) found that pattern of autonomic nervous activity (heart rate, skin conductance and respiration) depended upon the subject's mode of dealing cognitively with environmental input (taking in vs. shutting

out and concentrating). Friedman, Mason and Hamburg (1963) presented evidence that cognitive defense coping is inversely related to emotional and physiological indicators of stress. Wolff, Friedman, Hofer, and Mason (1964) studied parents of children dying of leukemia and noted that among parents who used a denial coping strategy (convincing themselves that the child would not die, continuing to plan for schooling and other activities, assuming a cure would be found in time), output of stress hormones was lower than that observed in a comparison group of parents who did not practice denial.

Frankenhaeuser and Rissler (1970) found that adrenaline levels were lower when participants could control or avoid an electrical shock than when exposed to unpredictable and uncontrollable shock.

Studies of combat situations reviewed by Gal and Lazarus (1975) indicate that active, motor-behavioral coping is associated with lower psychological stress symptoms than passivity (i.e., not being able to take any action). However, the act of coping itself often elevates, at least in the short run, the physiological responses commonly measured as stress indicators. In the longer run, however, the physiological state of those who could cope actively returned to normal sooner than those who were not actively coping.

Perhaps the strongest evidence that coping behavior impacts physical health indicators of stress in the long

run is found in the literature on Type A personality (Friedman & Rosenman, 1974). Type A personality is described as follows: Highly competitive achievement orientation, a sense of time urgency, an unrelenting drive; and an aggressive, restless, impatient and hostile manner. It is "...a characteristic manner with which some persons habitually respond to their environment" (Jenkins, Zyzanski, & Rosenman, 1978, p. 25). This type of coping behavior has been repeatedly linked to heart disease in a growing number of prospective and retrospective studies. (See Jenkins, 1976 for a review.) Kasl (1978) has suggested that Type A personality is incompletely explicated as a construct because it includes environmental factors, personality factors, and coping behaviors. However, the coping strategy most characteristic of the Type A person is action on the situation - working harder, faster, longer, etc.

Though the study is weak methodologically, Cathcart (1977) concluded that coping behavior directed toward controlling symptoms (physical fitness programs, decreasing smoking, and weight loss) improved unspecified medical measures of "zest and overall physical health" in a four-year study of executives.

The coping literature reviewed here exemplifies the same lack of consensus as that related to coping with job stress. In most studies, only one category of coping was investigated, precluding the comparison across coping categories. But, unlike the organizationally based coping

studies, where action on the situation was frequently judged effective, the studies in this section show that in some situations, particularly those where altering the situation is impossible, as in the case of parents of leukemic children, a cognitive strategy may be effective. Finally, the symptomatic strategies which are so popular, gelusil, jogging, and gin (Seitzer, 1979), remain nearly unevaluated as they pertain to the dependent variables of interest in this study.

Furthermore, with the exception of laboratory studies, nearly all of the coping studies reviewed examine strategies in a wide variety of situations. If it is true that stress is an interaction (Bowers, 1973; Endler & Hunt, 1976) between the situation (stressor) and the individual (coping strategy), then it would seem worthwhile to study individuals in the same stressor situation to judge the relative impact of different coping strategies on stress. The present research is intended to contribute insights as to relative impact of the three strategies for two specific stressor situations (ambiguity and overload) during a career transition process.

Literature on Occupational and Role Stress

Occupational Stress. As noted earlier, an expanding body of literature on occupational stress has established a connection between the various work stressors listed in Table 1-1 (p. 9) and a variety of deleterious effects on employee and organizational well-being. A list of these

stress symptoms, both short-run and long-run effects, is presented in Table 1-3. While the causal chain between occupational stressors and stress-related disease is complex, the general theme from empirical studies suggests that stressors in the work place evoke the short-term psychological (e.g., anxiety) and physiological (e.g., increased pulse rate, elevated hormone levels) stress symptoms. To the extent that these psychological and physiological deviations from normal functioning persist over time, they precipitate diseases which we have come to associate with long-run stress effects such as ulcers, coronary heart disease, and even some forms of cancer (Levi, 1974; Schuler, 1980). Compounding these effects are, of course, certain types of symptomatic coping strategies such as overeating, smoking, and abuse of drugs and alcohol which have independent deleterious effects on health. The message is quite clear that knowing how to reduce or manage occupational stress would be beneficial knowledge (McLean, 1978).

Table 1-3

Individual Symptoms of Stress[a]

1. Physiological

   - Short-term: heart rate, GSR, respiration, headache
   - Long-term: ulcer, blood pressure, heart attack
   - Non-specific: adrenaline; noradrenaline; thymus deduction, gastric acid production; ACTH production

2. Psychological Responses (Affective and Cognitive)

   - Fight or withdrawal
   - Apathy, resignation, boredom
   - Regression
   - Fixation
   - Projection
   - Negativism
   - Fantasy
   - Expression of boredom with much or everything
   - Forgetfulness
   - Tendency to misjudge people
   - Uncertainty about whom to trust
   - Inability to organize self
   - Inner confusion about duties or roles
   - Dissatisfaction
   - High intolerance for ambiguity, do not deal well with new or strange situations
   - Tunnel vision
   - Tendency to begin vacillating in decision making
   - Tendency to become distraught with trifles
   - Inattentiveness: loss of power to concentrate
   - Irritability
   - Procrastination
   - Feelings of persecution
   - Gut-level feelings of unexplainable dissatisfaction

3. Behavior

   a. Individual Consequences

      - Loss of appetite
      - Sudden, noticeable loss or gain of weight
      - Sudden change of appearance:
        Decline/improvement in dress
        Sudden change of complexion (sallow, reddened, acne)
        Sudden change of hair style and length
      - Difficulty breathing
      - Sudden change of smoking habits
      - Sudden change in use of alcohol

Table 1-3 (cont'd.)

b. Organizational Consequences

- Low performance - quality/quantity
- Low job involvement
- Loss of responsibility
- Lack of concern for organization
- Lack of concern for colleagues
- Loss of creativity
- Absenteeism
- Voluntary turnover
- Accident proneness

[a]Schuler, 1980

While the notion of environmental changes (Levi, 1974) and life changes (Holmes & Rahe, 1967) as stress-inducing is prevalent in general stress literature, studies which specifically examine occupational and career change from a stress viewpoint are relatively rare. Jennings (1967, 1971) has studied upwardly mobile executives and has observed that successful managers, i.e., those who are promoted to, and perform well in, the top organizational levels, are those who have made rapid progress through several positions in the organizational hierarchy. This rapid upward progression fosters the ability to adapt quickly and respond to change and crisis. Jennings has observed, however, that stress is involved in the mobility process and that it can lead to "mobility fatigue" (Jennings, 1971).

There is also empirical evidence that occupational change can be stressful. Epidemiological studies show a connection between job changes and coronary heart disease (CHD). For example, Syme, Hyman, and Enterline (1964) found that individuals with CHD experienced more occupational changes and had been fewer years in their principal occupation than matched controls. However, data from a 30-year study of a cohort of 1160 men in the Bell System showed no differences on indices of mobility (number of promotions, changes of job assignment, number of job titles, demotions, intra-company moves) across three groups: deceased from CHD, deceased from another cause, and survivors (Lehman, Schulman, & Hinkle, 1967). However,

Jenkins, Rosenman, and Friedman (1966) found that men with "silent" myocardial infarction were more likely to have received a promotion in the previous three years.

The type of job change appears to have some impact. For example, Kasl and French (1962) compared the effects of demotion and promotion among men who had changed jobs. Men who were demoted showed an increase in diagnosed illness on voluntary dispensary visits, whereas men who showed an increase in job status decreased the number of dispensary visits even though as a group they were older. Theorell (1978) studied construction workers to look at job changes occurring within a one-year period (extra work, responsibility problems, conflicts in the job, threats of unemployment). A two-year follow-up showed increased responsibility to be the most predictive of CHD risk factors. Finally, Cobb (1974) found in a longitudinal study of a plant closing that temporary unemployment and job changes caused an increase in physiological stress symptoms (elevated norepinephrine levels) which persisted for as long as one year after the plant closing.

While findings of these studies are anything but unanimous, it does appear that job changes have been linked with both short-run and long-run stress symptoms. Furthermore, in discussing the confusing evidence from studies of occupational mobility, Kasl (1978) has specifically suggested that a distinction be made between intra-company and inter-company moves, and advocates looking at the magnitude

of the change involved.

Role Stress. The literature applying role theory (Katz & Kahn, 1978; Newcomb, 1950) to organizational stress offers support for the notion that role ambiguity and overload are common in organizations and are linked with dysfunctional individual and organizational outcomes indicative of experienced stress (Kahn et al., 1964; Van Sell et al., in press). Role ambiguity is defined as uncertainty about the requirements of the role or about the outcomes and evaluation of role behavior. Role overload has been defined as being asked to do more than time or resources permit (Katz & Kahn, 1978).

In the Kahn et al. study (1964), the importance of role ambiguity and overload as stress factors is indicated by responses of their representative sample of the U. S. labor force. In this survey, 35% of the sample was disturbed by lack of a clear idea of the scope and responsibilities of their job and 45% were disturbed by a feeling that they have too heavy a workload.

In discussing sources of role ambiguity, Kahn et al. (1964) specifically mention frequent personnel changes, noting not only that employee turnover is a source, but also that frequent transfers and reassignments within organizations are common. When a person is new to a job assignment, s/he is learning the role, an experience fraught with ambiguity. They go on to hypothesize that when ambiguity persists people get feelings of futility

and apathy and are no longer motivated to try to cope. By extension, it could be argued that not only is role ambiguity prevalent in a career transition because ambiguity is inherent in the assumption of a new role, but also feelings of being overloaded, due to the newness of the situation, might also be high. Furthermore, the motivation to cope in ways that lead to effective job performance is high in the early stages of role occupancy.

Empirical evidence has associated role ambiguity and overload with a variety of stress symptoms including anxiety, tension, depression, increased heart rate, and other CHD risk factors such as increased cholesterol, as well as dissatisfaction, absenteeism, turnover, and low performance (Van Sell et al., in press). In the Kahn et al. (1964) study, role ambiguity was linked to feelings of job-related tension. Laboratory research (reviewed in Van Sell et al., in press) suggests that role ambiguity in groups is associated with lower group productivity, dissatisfaction with the group experience and psychological withdrawal. Longitudinal studies suggest that role ambiguity is higher among employees who are tense, dissatisfied and who leave the organization. In a study particularly relevant to the present research, Johnson and Graen (1973) studied role-making processes in the early months after organizational entry. They found role rejectors (those who felt their present position was unimportant for their future career) were characterized by higher levels of ambiguity concerning supervisor

preferences. The turnover rate was higher among role rejectors, and the ambiguity concerning supervisory expectations increased over time. Caplan and Jones (1975) found that increase in perceived work load and role ambiguity were independent causes of changes in tension and anxiety in users of a computer system before and during a shutdown period. Role ambiguity was also associated with depression and resentment. However, Miles (1975) in a repeated measures study did not find support for a causal relationship between role ambiguity and job-related tension.

Similar results concerning role ambiguity have been found in correlational studies. The most extensive study (Caplan, Cobb, French, Harrison, & Pinneau, 1975) found role ambiguity to be associated with job dissatisfaction, anxiety, and boredom. Ivancevich and Donnelly (1974) report that role ambiguity is positively related to job tension, physical stress symptoms (trouble sleeping, etc.), and propensity to leave. Brief and Aldag (1976) found role ambiguity to be positively related to anxiety, tension, propensity to leave and termination of employment, and negatively related to job performance. Paul (1974) found role ambiguity to be positively related to tension, and Hamner and Tosi (1974) found it positively related to perceptions of threat and anxiety. There are inconsistencies, however, and the connections identified above are not always found. For example, the positive relationship between role ambiguity and propensity to leave is not

consistently observed (Hamner & Tosi, 1974; Paul, 1974; Rizzo, House, & Lirtzman, 1970). The correlation of role ambiguity with job satisfaction (Keller, 1975; Tosi, 1971; Tosi & Tosi, 1970) as well as with job threat and anxiety (Tosi, 1971) does not appear consistently.

Numerous studies have linked role overload, conceptualized in a variety of ways to psychological and physiological stress symptoms. As previously noted, Caplan and Jones (1975) in a longitudinal investigation found increases in perceived work load were causally implicated in increased tension and anxiety. In another longitudinal investigation, Friedman, Rosenman, and Carroll (1958) found a correlation between overload and CHD risk factors (cholesterol level and blood coagulation). In their study of tax accountants, they found elevated levels of both factors as the tax deadline approached, with a return to normal two months later. Gupta and Beehr (1979) found role overload to be positively associated with absenteeism and involuntary turnover. Beehr, Walsh, and Taber (1976) found role overload to be positively associated with fatigue and tension, and negatively related to satisfaction. Several studies (see House, 1974) have associated role overload (e.g., working excessive hours, holding more than one job) with CHD morbidity and mortality in general. Feelings of being overburdened are associated with higher levels of CHD risk factors (Brooks & Mueller, 1966; Chapman, Reeder, Massey, Borun, Picken, Browning, Coulson, & Zimmerman, 1966).

However, this connection is not always found (Caplan et al., 1975; Schar, Reeder, & Dirken, 1973). A recent study, published as part of the renowned Framingham studies on heart disease (Haynes & Feinleib, 1980) concluded that the combination of a demanding family life and outside job responsibilities may have a direct effect on heart disease among working women. Those working women who had raised three or more children had significantly higher rates of heart disease than did housewives in otherwise comparable circumstances. There was no difference between working women and housewives on other CHD risk factors such as cigarette smoking, high blood pressure, and high cholesterol.

In summary, the literature on occupational change and role stressors (ambiguity and overload) was reviewed to establish a connection between these variables and stress symptoms. While fraught with many inconsistencies, these studies suggest that occupational change and role stressors are stress-inducing. Further, the evidence connecting occupational change and role overload with stress symptoms is based on the often advocated "hard" measures of both independent (e.g., number of job changes, plant closing, tax deadlines, number of children, in addition to full-time employment) and dependent (physiological measures of CHD factors, heart disease) variables. Furthermore, the contradictory results found in these studies would suggest that exploration of intervening processes, such as coping,

could help to explain why these stressors evoke stress symptoms in some groups of people and not others.

Life Transitions and Illness

Research linking life changes with stress, operationalized as the onset of illness, is found in the work of Holmes and Rahe (1967) and others (e.g., Graham & Stevenson, 1963; Holmes & Masuda, 1973, 1974). This research centers on events pertaining to "major areas of dynamic significance in the social structure of the American way of life" (Holmes & Rahe, 1967, p. 216) - family constellation, marriage, occupation, economics, residence, group and peer relationships, education, religion, recreation, and health. The events of interest can be negative, as in those commonly labeled as "stressful" (e.g., death of a spouse, divorce) or extremely positive (e.g., outstanding personal achievement, completing a Ph.D.). The connecting assumption is that when there is a "cluster of social events requiring change in the ongoing life adjustment" (p. 213) there is stress related to the degree of psychosocial readjustment required to cope with the impact (Masuda & Holmes, 1978). The emphasis in this line of research is on degree of change required from an existing steady state and not on the psychological meaning, emotion, or social desirability of the event. Hence, in this view, change per se is stressful, and the phenomenon is additive both in terms of number and magnitude of the events. That is, the more changes experienced, and the greater their magnitude

(i.e., the greater the adaptation required), the more stress the individual will have. This notion is a consistently recurring theme throughout the stress literature, namely, that stress is an additive taxation of the system (Levi, 1974; Schuler, 1980; Selye, 1956).

Criticism of this methodology and the underlying assumptions have been offered (Dohrenwend & Dohrenwend, 1974; Gunderson & Rahe, 1974; Rabkin & Streuning, 1976). Methodological issues concern retrospective recall of life events, variation in individual coping abilities, psychological aspects of illness behavior, weights and meaning of negative and positive events and time relation of events to illness. The central substantive criticism is the failure of this research to address the underlying processes through which life transitions become associated with disease (Kasl, 1978; Nelson, 1974). Specifically, the impact of coping is thought to be important (Mechanic, 1975).

In spite of these criticisms, the fundamental concept, as well as the empirical evidence linking an accumulation of life changes to subsequent illness, remains intact (Masuda & Holmes, 1978). In this line of research, effects of events associated with work, such as the career transitions which are studied here, are confounded with the effects of nonwork events. The empirical literature in this vein is extensive, (see Dohrenwend & Dohrenwend, 1974 and Gunderson & Rahe, 1974 for reviews), and has concentrated upon documenting the direct association between life changes and illness rather

than the underlying mechanisms through which this connection occurs. Much of the research has emanated from the work of Hawkins, Davies, and Holmes (1957); Rahe, Meyer, Smith, Kjaer, and Holmes (1964); Holmes and Rahe (1967). This line of inquiry has focused on identifying life changes (stressors) in the work, home, family, finances, and community arenas based upon clinical studies of patients. The list of events, referred to as the Schedule of Recent Experience (SRE), is weighted according to the degree of readjustment required. The scaling procedure has resulted in a weighting scheme of Life Change Units (LCU's) which are summed to yield a score reflecting the amount of life change and corresponding tax on the individual's adaptive system during a given time period.

Initial evidence was based on retrospective studies. More recently, prospective studies have also documented that a build-up of LCU's occurs in the six months-one year preceding the onset of illness and that the correlation between magnitude of LCU's and severity of illness (based on physician ratings) is positive and significant (Holmes & Masuda, 1974; Rahe, 1974). The number of LCU's which typically separates those who contract severe illnesses from those who remain relatively healthy is 150, and the build-up of LCU's in the six months preceding illness onset has been frequently found to be from 150 to 300.

In a series of prospective studies using Naval personnel (Rahe, 1974), SRE data were collected and subsequent

illness rates were monitored. Based on analysis of variance procedures, a significant association between LCU score and reported illness was observed. Participants were divided into groups based on LCU decile scores and illness rates were observed to be significantly, positively related to LCU decile. Participants with events in several clusters (work, marital, home, personal, social) tended to have higher rates than those with events in a single cluster. A prediction equation developed on the six events most predictive of illness with the developmental sample also produced a significant multiple correlation for the cross-validation sample ($n = 194$, $r = .19$, $p < .05$). When subjects were divided into high risk (upper 30%) and low risk (lower 30%) based on LCU data for six months prior to the start of a tour at sea, the high risk group had nearly 90% more first illnesses throughout the cruise. A similar empirical strategy has been used to predict injury rates for football players (Bramwell, Masuda, Wagner, & Holmes, 1975).

Over a six-year period, Theorell and Rahe (1975) studied men and women who experienced a heart attack and survived, some of whom subsequently died. Among those who subsequently died, a significant build-up of LCU's was observed, peaking approximately seven to 12 months prior to death ($n = 67$; $F = 4.38$, $p < .05$). Further, physiological symptoms of stress based on cardiographic monitoring showed significant correlations with LCU's. Monitoring hormone (epinephrine) suggests that LCU's correlate positively with physiological

stress symptoms. Significant intrasubject correlations were observed between epinephrine output over a 12-hour period on the day prior to weekly clinic visits and total LCU reading for the week prior to the visit.

Validity evidence for this approach has been presented based on the similarity in weighting attached to life events across various types of groups, both within the original scaling sample (Holmes & Rahe, 1967) and in subsequent samples compared with the original sample (Holmes & Masuda, 1973; Ruch & Holmes, 1971). In the original sample, comparison of subgroups' rankings (male-female, under 30, 30 to 60; less than college educated, college graduates, etc.) yielded Spearman rank order correlations of above .90 in all cases except for the comparison between blacks and whites. Ruch and Holmes (1971) compared a college sample with the original group (Spearman's rho .97) and correlations between groups of 7th, 9th, and 11th graders, college freshmen and the original sample yielded a Spearman's rho of .78. Ruch and Holmes (1971) also compared the magnitude-estimation method with Thurstone's method of paired comparisons and obtained a Spearman's rho of .93 between the two methods.

Test-retest reliability varies widely from .90 with highly educated subjects and a one-week interval to .56 for subjects of average education with six to eight months between tests (Rahe, 1978).

In summary, despite the methodological shortcomings, the consistent trend across studies repeatedly confirms that a volume of changes across various life roles in a short period of time is stressful and leads to subsequent disease. The literature reviewed here would suggest that, to the extent that a career transition coincides with changes in the nonwork life of an individual, stress experienced in the adaptation process would be greater than if the career transition were the only change occurring. Thus, the research on life events suggests that in order to understand the stress experienced in a career role transition, we must examine concomitant changes in the employees' nonwork roles.

Therefore, the present research examines, as indicated in Figure 1-1 (p. 4), the impact on coping of the simultaneous occurrence of personal life transitions (i.e., the Holmes and Rahe Life Changes minus the work-related items) and a career transition. If it is correct to assume that stress is additive and individual coping resources are finite, then the extent to which coping resources are being taxed in the arena of personal life should have an effect on coping strategies at work.

Work and Nonwork

The foregoing discussion assumes a close linkage between the work and nonwork domain, a linkage which has not been adequately explored conceptually or empirically at this point (Kabanoff, 1980; Near, Rice, & Hunt, 1980; Quinn & Staines, 1977). Therefore, it is useful to briefly

consider some of the conceptual and empirical work addressing the complex work-nonwork interrelationship.

Interest in relating work to nonwork can be traced back to the writing of social philosophers such as Marx and Engels (1939), Durkheim (1947), and Weber (1947), all of whom suggested that work structures had fundamental impacts on, and indeed were inseparable from, other social structures. However, the emphasis on unraveling the interplay between work and nonwork as a major social issue is a relatively recent phenomenon (Wilensky, 1960; Work in America, 1973).

Wilensky (1960) identified two viewpoints on the nature of this relationship: the spillover and the compensatory hypothesis. The spillover hypothesis states that attitudes and activities at work will be positively related to attitudes and activities in the nonwork domain. That is, dissatisfaction and alienation at work generalize to nonwork life and vice versa. Individuals whose work activities are characterized by variety and challenge will engage in similar activities away from work and vice versa. The compensatory hypothesis posits a negative relationship between work and nonwork, such that stultifying jobs are compensated for by pursuing challenge and satisfaction in leisure and vice versa.

A third hypothesis has been offered (Bergmaier & Borg, 1979), referred to as the segmentation hypothesis, based on Dubin's Central Life Interest Scale (Dubin,

Champoux, & Porter, 1975). The segmentation hypothesis argues that there is no relationship between work and nonwork; rather, that the centrality of work in the individual's life determines the arena in which preferred (i.e., satisfying) activities are pursued.

Research in this area has tended to support the spillover hypothesis in that positive correlations are commonly observed in studies relating a variety of structural and attitudinal/behavioral variables across the two domains. (See Near, Rice, & Hunt, 1980; Orpen, 1978; Rousseau, 1978 for reviews.) However, recent critiques of this literature (Kabanoff, 1980; Near et al., 1980) have suggested that work-nonwork hypotheses are oversimplified and non-mutually exclusive such that adequate tests are difficult to formulate. Three examples of interpretive ambiguities illustrate their concern, and then the manner in which the present research addresses their concern will be explained.

Orpen (1978) and Rousseau (1978) have pointed out that the spillover hypothesis appears to hold for white collar and managerial samples where work tends to be central to the individual (segmentation hypothesis), whereas the compensatory hypothesis appears to have received more support with extreme (e.g., commercial fishing) or onerous (e.g., auto workers) conditions, i.e., among employees whose jobs tend to be less psychologically central.

Furthermore, tests of the spillover-compensatory view often relate job satisfaction to such global variables as

life satisfaction (Kasl, 1978) or mental health (Kornhauser, 1965). Such relationships have been shown empirically (Bergermaier & Borg, 1979; Near et al., 1980) to reflect not interdependent domains so much as overlapping domains. That is, job satisfaction, i.e., satisfaction with one life role, is a subset of life satisfaction, i.e., satisfaction across all life roles. Positive correlations between the two may merely document that well-being at work contributes to well-being in general, regardless of the centrality of work to the individual. This is intuitively sensible based solely on the amount of time spent in the work role. Viewed in this light, job satisfaction-life satisfaction relationships become conceptually analagous to uncorrected item-total correlations. In short, it is unclear whether the spillover-compensatory views are concerned with work vis-a-vis life in general or the work role vis-a-vis other life roles.

In yet another vein, Wanous (1980) has speculated that the spillover and compensatory hypothesis might be reconciled if a more dynamic viewpoint is adopted. He suggests that perhaps when satisfaction in one domain is increasing it spills over to other domains, but when satisfaction is decreasing in one domain, people try to compensate in another life role. Thus, we must concern ourselves not only with level of satisfaction across work and nonwork but also with dynamic shifts in source of satisfaction over time.

Studies which correlate parallel dimensions (i.e., variety, challenge in work and leisure; job and leisure satisfaction) can offer limited insight into such dynamic issues. As Near et al. (1980) point out, it has been two decades since Wilensky (1960) identified the two work-nonwork viewpoints discussed here, and yet "...little has been done by way of specifying the psychological and social processes by which work can influence nonwork and vice versa" (p. 424). They specifically suggest that studies are needed relating structural variables in one domain to attitudinal/behavioral variables in another domain.

The present study responds to the issues raised here by conceptually specifying one dynamic process through which work and nonwork may be related. A structural variable in the nonwork arena (personal life transitions) is related to behavioral (coping and performance) and attitudinal (job-related stress) variables in the work domain. The model attempts to trace the process through which personal life transitions impact the work arena. As depicted in Figure 1-1 (p. 4), personal life transitions are hypothesized to influence stress and performance indirectly through their impact on level and type of coping strategy. Work and nonwork are specifically delineated, as the endogenous variables all pertain to the job situation and the exogeneous variable (personal life transitions) deals only with nonwork roles (personal, family, financial).

Organizational Socialization

A career role transition represents a "resocialization" process (Katz, 1978, 1980) that may occur repeatedly throughout the individual's organizational career. It is therefore appropriate to consider the literature on organizational socialization as a background for the present study.

Organizational socialization refers to the process by which a person learns the values, norms, and required behaviors which permit him/her to assume an organizational role (Van Maanen, 1976; Van Maanen & Schein, 1979). While it is recognized that this process occurs throughout the career (Schein, 1971), the prevalent emphasis in this literature is on the initiation of the newcomer from the outside into the system (Becker, Geer, Hughes, & Strauss, 1961; Schein, 1968) following organizational entry (Wanous, 1977). This "breaking in" phase is viewed as stressful because the organization is felt to be most persuasive and the individual has few guidelines and little social support for the self-identity which s/he brings to the organization (Van Maanen, 1976). Empirical evidence has shown that there is a "reality shock" experience due to unmet expectations during this time (Wanous, 1976), that there is high turnover (Graen, 1976), and that the two may be connected (Katzell, 1968). Further evidence has shown this initial period to be important because it impacts later organizational experiences. For example, Berlew and Hall (1966)

found that later performance depended on early job challenge and psychological success.

Recently there has been interest in organizational socialization over the course of the career, including intra-organizational role transitions (Katz, 1979; Van Maanen, 1977). It is suggested that individuals undergoing any organizational transition are in an anxiety-producing situation and are more or less motivated to reduce it by learning the functional and social requirements of the role. Colleagues and superiors guide the individual in learning the new role and "ultimately can provide the individual with a sense of accomplishment and competence (or failure and incompetence)" (p. 215). Thus, "...organizational socialization is ubiquitous, persistent and forever problematic" (Van Maanen & Schein, 1979, p. 213). The importance of socialization processes throughout the individual's organizational career is underscored in that the stability and productivity of any organization ultimately depend upon the way newcomers to various positions come to carry their roles.

While considerable empirical attention has been devoted to the early socialization experiences of a newcomer (see Graen, 1976 and Van Maanen, 1976 for reviews), considerably less attention has been directed toward intra-organizational moves occurring later in the individual's organizational career.

Katz (1978) has argued that the experiences associated with socialization and resocialization are different and should be studied separately. Empirical support for this argument is found in studies that reveal marked differences in job satisfaction that are related to organization tenure (e.g., Van Maanen & Katz, 1976) and in studies showing that determinants of job satisfaction differ during socialization as a newcomer and resocialization after transfer or promotion within the organization (Katz, 1978). During resocialization, feedback from the job is significantly related to overall job satisfaction, whereas the relationship is nonsignificant for newcomers. This finding leads Katz (1978) to conclude that during the resocialization phase, the overriding concern is establishing competence in the new job.

Thus, from the literature on socialization, we might hypothesize that the type of career transition studied here may also involve some reality shock and that experiences during the transitional period could have an important impact on an individual's later organizational career success. Furthermore, while studies are lacking on how individuals actually negotiate the resocialization phase, the available evidence does support the notion advanced here that role ambiguity and overload may be particularly problematic to individuals during a career transition because these stressors introduce uncertainty concerning how or whether this important outcome, i.e., the demonstration of competence, can be attained. Therefore, the present research examining coping strategies during resocialization may

yield insights about this important time period. If coping strategies can distinguish those individuals who progress through this transition process keeping stress under control and performing well, we would have information about how employees and organizations could manage the resocialization process.

Theoretical and Practical Contribution of the Research

From a theoretical standpoint, the research is intended to address three important issues. First, Hall (1976) has identified a need for theoretical models and theory-based research on career development processes in organizations. The model developed and tested here concerns one important and relatively unexamined aspect of the organizational career development process, specifically, the transition from one organizational career role to another. Following the recommendation of Weick (1979), who has advocated increased use of interdisciplinary research frameworks, the model integrates two bodies of literature from social psychology (role theory and psychosocial stress) and brings them to bear on a subject which has traditionally been under the purview of personnel psychologists, namely, employee movement within organizations.

The second more specific theoretical issue addressed is the question of how people cope with role ambiguity and role overload. Despite the large body of literature on role stressors, coping processes remain virtually unexamined (Van Sell, Brief, & Schuler, in press). While role

ambiguity and overload should be particularly evident during a transitional time, these stressors are prevalent among employees in a variety of organizational situations. Thus, the study of transitional coping processes may yield insights applicable to employees at other stages of their organizational careers as well. Furthermore, it is likely that being new on a job assignment motivates an employee to adopt coping strategies that will not only manage individual stress but will also lead to effective job performance. Hence, the opportunity exists during a transitional period to identify coping strategies which have beneficial effects from both individual and organizational points of view.

Finally, the inevitable connection between work roles and personal life roles is of current interest but conceptualization of the processes through which these domains interrelate is not well developed as yet. The present research attempts to shed light on the relationship between personal and work-life stressors by examining the career role transition process in conjunction with nonwork role transitions.

From a practical standpoint, organizations should find the research valuable for several reasons. Generally speaking, there are social and legal developments which suggest intraorganizational personnel shifts may occur more frequently and that these moves may play an increasingly important role in organizational career development. These developments are affirmative action pressures and the

growth in the number of new employees with MBA degrees which together have created an expanding group of individuals with high expectations for continued career growth. Such expectations for career growth have traditionally been met largely through upward promotion. Simultaneously, however, the retirement age has been raised to 70 and may be abolished entirely, and economic growth has slowed, leaving less room in the upper levels of many organizations. This means that employee movement of all kinds, not just upward promotion, will play a more predominant role in meeting employee expectations for career growth while enabling organizations to meet legal pressures in the areas of affirmative action and age discrimination. Therefore, since personnel shifts may be more frequent and more important in the future, it would be beneficial for organizations to understand the impact of this process on employees.

Specifically, organizations have always been concerned with efficient movement of employees to new organizational roles. Knowledge of factors that contribute to and alleviate stress during transitions should enable organizations to make informed decisions about the nature and timing of career transitions. In addition, if coping strategies can be identified that keep stress at a manageable level and contribute to effective job performance, training programs or organizational changes could be implemented to smooth the transition process. In the long run, the present

research may prove applicable not only to career transitions but to management of stress in other organizational processes.

Summary

This chapter has presented a model for research on career transitions as a stress-coping process. The key underlying assumptions are:

1. Career transitions in organizations are common and recurring stress processes which tax individual adaptive capacities and create uncertain situations which have important consequences for the individual.
2. Coping strategies which are effective are those which lower (not raise) stress and facilitate good job performance.

The development of the model was based on literature reviewed in five areas: psychosocial stress and coping; occupational and role stress; life transitions and illness; work and nonwork; and organizational socialization. This literature suggested that a variety of coping strategies can lower stress symptoms, but the relative effects of different coping strategies, especially those applicable to job stress, have rarely been examined. Evidence was also presented that occupational changes as well as role ambiguity and overload are linked to short- and long-term stress symptoms, and that a build-up of life changes across multiple life roles is associated with illness. A review

of literature exploring relationships between work and nonwork lent support primarily to the spillover hypothesis, but more specific, process-oriented research, such as the present study, has been advocated. The socialization literature suggested that resocialization is a potentially problematic process throughout the organizational career, and that it merits further empirical attention.

The model hypothesized that level of job-related stress and job performance during a transitional time are influenced by the magnitude of the career transition, role ambiguity and overload, and coping strategies employed. It was further hypothesized that work-related coping strategies would be a function not only of work stressors (role ambiguity and overload) but of nonwork stressors (personal life transitions). Three types of coping strategies were examined: action on the stressor situation, cognitive reappraisal of the stressor situation, and controlling stress symptoms.

The research is intended to contribute to theory-building in the areas of organizational career development, coping strategies related to role processes, and the interrelationship between work and nonwork. Practical application of the research findings could be made to decisions about the nature and timing of career transitions, as well as to training programs and organizational changes which could smooth the transition process and contribute to employee well-being and productivity.

CHAPTER II

METHODOLOGY

Research Design

The design involved a pre-established setting with pre-established groupings of individuals. Data were collected at one point in time. This type of design is classed as "pre-experimental" by Campbell and Stanley (1963) and is labeled a static group comparison.

In studies such as this, threats to internal validity exist, and therefore a hypothesized causal relationship may be spurious (Cook & Campbell, 1979). A key difficulty, as discussed earlier, is the inherent inadequacy of studying at one point in time what can only be properly viewed as a process over time. This problem was discussed earlier along with models of psychosocial stress and coping.

Once the decision has been made, however, to accept this limitation in research strategy, one must address the concern that some additional variable(s) not included in the design might alternatively explain the relationship between hypothesized cause and effect. In a field setting there are almost unlimited "additional variables" which might impact the stress-coping model. Two have been selected for inclusion in the design as variables to be controlled statistically: boundary spanning activity and social desirability.

The literature on role ambiguity has repeatedly suggested that boundary spanning activity is an antecedent of role ambiguity (Van Sell et al., in press). Therefore, in the present study it is possible that role ambiguity could be caused not by the magnitude of career transition but by an increase in boundary-spanning activity. A three-item measure of change in boundary spanning activity was taken from Leifer and Huber (1977) so that the effects of this variable could be controlled.

A second potential confounding variable, social desirability, may have an influence because of the demand characteristics inherent in a questionnaire about stress. Particularly among managers and professionals, it may be that individuals wishing to present a socially desirable image may deny that they feel anxious in relation to their jobs. Indeed, the literature on Freudian psychology and defense mechanisms would suggest that some individuals may cope by denying feelings of anxiety entirely. In addition, action coping strategies may be more consistent with the occupational self-image (Holland, 1973) held by managers than cognitive reappraisal or symptomatic strategies. This would suggest that social desirability could be a confounding variable for self-reported coping strategies as well.

The Crowne-Marlowe Social Desirability Scale (1964) has been used as a measure of the extent to which individuals describe themselves in favorable, socially desirable

terms in order to achieve approval of others. Validity and reliability evidence (Wiggins, 1968) suggests that continued use is warranted, but Lillibridge (cited in Robinson & Shaver, 1973) has suggested that the basic dimension of the scale is denial rather than need for approval. This makes the scale particularly appropriate for the present study. Two subscales of the Crowne-Marlowe scale, identified empirically by Lillibridge, are Deny Bad Qualities and Assert Good Qualities. That is, culturally undesirable but common attributes are denied, while culturally desirable but probably untrue attributes are claimed by the individual. These two subscales identified by Lillibridge were used by Caplan et al. (1975) to assess the impact of denial on job stress symptoms.

The original response scale calls for a "True-False" response to a list of 14 items (e.g., "I never hesitate to go out of my way to help someone in trouble."). The sentiment in the pilot study group was that a "True-False" response format to such absolute statements would yield unreliable data from an educated sample. The argument was that one result of the educational process is that people tend not to think in terms of absolutes. Therefore, such a scale would be likely to generate hostility and the resulting data would reflect responses to this hostility rather than to question content. Therefore, the scale was changed to "Accurate-Inaccurate" on the grounds that people may be willing to label an absolute statement as

accurate or inaccurate in describing themselves, while saying that the same statement is True or False would be viewed as overly arbitrary. It was felt that this made the scale more realistic and more likely to generate a response reflecting desire to claim or not claim the attributes described.

Participants

Participants were managerial and professional employees in two medium-size organizations in central Michigan: a manufacturing firm in the transportation industry and an osteopathic hospital. Both organizations were experiencing some turmoil before and during the time the study was conducted. Conversations with personnel staff indicated that employee job changes were commonplace and viewed as desirable for both the organization and the individual. Job mobility in the manufacturing firm occurred because of commitment to promotion from within and because of cyclical fluctuations in the automotive industry. Layoffs of both hourly and salaried employees occurred prior to and during data collection due to economic difficulties in the automotive industry. The hospital experienced the high turnover characteristic of health care settings and was in the midst of an expansion and renovation program.

Of the 135 employees contacted in the two organizations (104 in the manufacturing firm; 31 in the hospital), 109 agreed to participate for a response rate of 81%. The

response rate from the hospital (n = 26, 84%) was slightly higher than that from the manufacturing firm (n = 83, 80%).

For those employees declining to participate, lack of time was the reason given in 90% of the refusals. Nearly all other refusals were passive-aggressive (agreeing to complete the survey each time they were contacted but failing to turn in a completed questionnaire after two follow-up contacts). Two individuals gave lack of interest in the topic and distaste for filling out questionnaires as reasons for refusal.

The participants reflect a range of occupations, ages, and organizational and job tenure. Demographic characteristics of the participants by organization are presented in Table 2-1. Significant mean differences across the two groups were found on age, number of dependents, job and organizational tenure and the distributions with regard to sex were significantly different. No significant differences between organizations were found on any other variables.

Table 2-1

Sample Description

	Manufacturing Firm (n = 83)	Hospital (n = 26)	Total (n = 109)
Means			
Age	40	36	39
Education (# years post-high school)	3.7	4.8	4
Organizational Tenure (in years)	12.9	5	11
Job Tenure (in months)	25.8	15.8	23
Dependents	2.4	1.6	2
Frequencies			
Sex			
Males	74	7	81
Females	9	19	28
Occupation			
Accounting/Finance	2	0	2
Management/Administration	49	20	69
Engineering	16	0	16
Personnel	10	5	15
Computer Specialists	1	0	1
Purchasing	1	0	1
No Response	4	1	5
Type of Move			
Promotion	34	17	51
Lateral	2	3	5
Downward	1	0	1
Promotion and Lateral	18	3	21
Downward and Lateral	0	0	0
Level			
First	47	4	51
Middle	32	18	50
Top	2	3	5
No Response	1	2	3

Nearly three-fourths (72%) of the sample had changed jobs in the 15 months prior to data collection. Whenever response rate is less than 100%, there is always the possibility that participants differ from nonrespondents in some systematic way. A comparison of participants and nonrespondents on demographic characteristics (age, sex, organizational and job tenure) revealed no significant differences between the two groups. It is possible that individuals refusing to participate because of lack of time may be "ineffective" copers with respect to role overload. Alternatively, it seems intuitive that some people would be threatened by the topic of job stress, and therefore nonrespondents, while citing lack of time, may actually be using refusal as a means of defense or denial that they feel job stress. However, these hypotheses were not tested.

Procedures

Experience Survey

An experience survey (Sellitz, Wrightsman, & Cook, 1976) was conducted over the summer of 1979. An experience survey involves interviewing individuals knowledgeable about the phenomenon of interest to determine the dimensions appropriate for the study. An unstructured interview was conducted and tape recorded with 15 individuals who had changed jobs in their organizations within the last year. The selection of variables included in the model, particularly role ambiguity and role overload, was partially influenced by these interviews. Further, it was apparent

that all three categories of coping strategies (action, reappraisal, symptomatic) were represented in the transition process. While interviewees were able to remember nonwork events occurring at the time of the career transition, none was able to articulate the impact of these events on his/her work life.

Pilot Study

The purpose of the pilot study was to test instructions and content of the questionnaire, as well as length of time required for completion. Pilot study participants were doctoral students, counselors at a local community college, an educational salesperson, two professors, and a physician. While this did constitute a managerial/professional sample, the educational level was somewhat higher than that expected in the organizational sample. Therefore, completion time was assumed to represent a lower bound estimate. Further, the research interest and experience of the group enabled critical evaluation of questionnaire content vis-a-vis the purpose for which it was intended.

Based on suggestions from the pilot study group, two entire sections of the questionnaire were deleted, and several response scales and items were reworded.

Data Collection

A list of potential participants was drawn from personnel records to include all managerial and professional employees who changed jobs within the organization in the

15 months prior to data collection, along with a random sample of managerial and professional employees who had not changed jobs during that time. Since magnitude of career transition was operationalized as a continuous variable running from "no transition" to "very big transition," the "no change" group represented the zero anchor point on the continuum.

The time frame of 15 months was selected based on the experience survey, informal surveys of personnel staff and vocational counselors, and the author's five years of experience as a counselor in college placement offices. Further, Jennings (1967) has stated that most managerial jobs can be learned in a year and a half to two years. Therefore, a 15-month time period, while somewhat arbitrary, should cover the transition period when most of the learning and adjustment on a new job takes place.

Participants and their supervisors were initially contacted via organizational memo from the personnel manager. The memo introduced the researcher, explained the project, and provided phone numbers to which questions could be directed. Simultaneously, a notice about the upcoming research appeared in the employee newsletter. The researcher made follow-up phone calls to all participants to schedule group data collects on-site, met the groups in a conference room on-site, and remained available while participants completed the survey. Those participants who could not be scheduled for a group session were given the

survey to complete on their own time and return.

Supervisors of participants were contacted to obtain performance evaluations and judgments about strategies used by the participant to cope with job stress. Supervisory surveys were sent through internal mail along with a personal note requesting cooperation.

Participant and supervisory questionnaires appear in Appendices A and B. Since additional data were collected but not analyzed for the dissertation, questionnaire items pertinent to this analysis are boxed.

Data Analysis

Data were analyzed using correlational analysis and calculation of path coefficients for path analysis (Wright, 1968). The scales for measuring perceptions of magnitude of career transition and coping which were developed for this research were evaluated by examination of internal consistency, item-total and item-scale correlations.

Path analysis is a method of decomposing and interpreting linear relationships which enables causal interpretation of a limited set of hypotheses (Kim & Kohout, 1970). It is appropriate for testing models such as the one proposed here, where a definite causal ordering can be justified by logic and previous research. Computer analysis was performed using the Statistical Package for the social sciences (SPSS) (NIE, Hull, Jenkins, Steinbrenner, & Bent, 1970), and LISREL IV (Joreskog & Sorbom, 1978).

Instruments and Scale Construction

Magnitude of Career Transition

Two methods of assessing magnitude of career transition were developed, an objective measure based on Hall (1979), and a perceptual measure.

Objective Measure. The objective measure was based on Hall (1979) who has suggested that magnitude of career transition can be conceptualized as the number of organizational and occupational dimensions which change when an individual moves from one job to another. In Table 2-2 Hall's scheme is presented. The four dimensions relevant to intra-organizational career transitions are circled (job, level, function/occupation, and occupational field). The compounding factors circled are represented in this study as personal life transitions and the operational definitions of these variables are discussed later in the chapter.

Hall defines job as formal job title and/or position location. Thus, a secretary I in the marketing department working for marketing analyst A, who changes to a job as secretary I working for marketing analyst B, has made a job change; a branch manager in a bank who goes from manager of branch A to manager of branch B has similarly made a job change. A change in level can be a promotion or a demotion. Hall treats occupation and function as one dimension but, since he defines function as a formal organizational department or unit, it would be possible to change occupations without changing functions, and vice versa. Occupation is

Table 2-2

Magnitude of Career Transition[a]

	Job	Organization	Institution Type	Level	Function/ Occupation	Occupational Field
High	X	X	X	X	X	X
	X	X	X		X	X
	X	X			X	X
	X			X	X	X
	X				X	X
	X	X	X	X	X	
	X	X	X		X	
	X			X	X	
	X	X			X	
	X				X	
	X	X	X	X		
	X	X		X		
	X			X		
	X	X	X			
	X	X				
Low	X					

X = Change in that dimension

[a]Hall (1979)

Compounding Factors

- Family Change
- Life Stage Change
- Spouse Career Change
- Geographical Change
- Other Major Life Change

defined here as one of the Bureau of Census' 417 occupational categories, and occupational field is defined by Holland's (1973) six occupational categories.

Table 2-3 shows the scaling of this variable, with a zero score assigned to no job change and a score of 12 assigned to a career transition in which all possible dimensions change. Hall views magnitude as covering not only the number of dimensions which change but the intensity of change involved in each dimension. That is, a change of jobs is low intensity while a change of occupational field is high intensity. Therefore, a change in level, up or down, in the same organizational unit is viewed, all other things being equal, as less of a change than a move across a formal organizational boundary to a new function (Schein, 1971). A move across an organizational boundary is less of a change than a move to an entirely new occupation. Hall views the intensity ranking as tentative, and as essentially an empirical question. Empirical guidance for scaling these various types of moves is not available at present, but it is hoped that later analysis of the present data will contribute empirical evidence as to how the scale should be weighted and/or ordered. For the present, a unit weighting scheme which retains Hall's ordering is used (Table 2-3). The reliability of this scaling method was assessed by comparing the author's scoring of moves with those of the assistant to the Director of Salaried Personnel. An agreement rate of just over 90% was obtained.

Table 2-3

Scaling Magnitude of Career Transition

Change in:	Scale Value
Job + Level + Occupation + Function + Occupational Field	12
Job + Occupation + Function + Occupational Field	11
Job + Level + Occupation + Occupational Field	10
Job + Level + Occupation + Function	9
Job + Occupation + Occupational Field	8
Job + Occupation + Function	7
Job + Level + Occupation	6
Job + Level + Function	5
Job + Occupation	4
Job + Function	3
Job + Level	2
Job	1
No Change	0

Perceptual Measure. Magnitude of career transition can also be operationalized according to how big the change "feels" to the person who is experiencing it. A five-item global measure was developed to assess how big and significant the change was for the individual. A sample item is, "When I moved to this job, it felt like a big change" (strongly disagree to strongly agree).

Role Stressors

Role ambiguity was assessed by six items from a scale developed by Rizzo, House, and Lirtzman (1970). Role overload was measured by two items from the role conflict scale of Rizzo et al. (1970) which are more conceptually consistent with the definition of role overload presented earlier. Additional items were selected on the basis of content and used verbatim from Beehr, Walsh, and Taber (1976), Caplan et al. (1975), and Quinn and Staines (1977) to complete an eight-item scale.

Coping Strategies

A scale for measuring the three coping strategies was developed using the following procedure. The researcher wrote an initial pool of items from the statements reported in empirical studies on job stress (Table 1-2, p. 21), from tape recordings of the experience survey interviews, and from a brainstorming session with academic colleagues interested in job stress. The original pool of items for the action-coping scale consisted of 23 items (e.g., "Get together with my supervisor to discuss this"). The

cognitive reappraisal scale consisted of 13 items (e.g., "Remind myself that work isn't everything"). The symptomatic coping scale was composed of 27 items (e.g., "Get extra sleep or nap; do physical exercise, etc."). Four counselors at a local community college acted as judges for item clarity after being provided with the three conceptual definitions on page 16. They were asked to sort the scale statements into one of the three categories. Given that the categories are relatively gross categories, the decision rule was that any item not unanimously classified into the appropriate scale would be dropped. While the average inter-judge agreement for all items was .82, four items were dropped from the first scale, two from the second, and three from the third.

The resulting items appear in Appendix A. A multimethod strategy was used to assess coping strategy, based on self-report and supervisory description.

Personal Life Transitions

Personal life transitions were assessed using Schedule of Recent Experience (Rahe, 1975). Since the original scale includes both personal and work-related items, the work-related items were deleted. The scale is composed of 33 items asking if a particular transition (e.g., marriage, death of a child, beginning or closing school or college) has occurred within the last year. Items were weighted according to the normative weights developed by Holmes and Rahe (1967). The normative weights have shown remarkable

consistency across samples (Holmes & Masuda, 1974). The scale items used and their corresponding weights are presented in Table 2-4.

Table 2-4

Personal Life Transition Items [a]

Item	Weight
Home and Family	
Death of spouse	100
Divorce	73
Marital separation	65
Death of a close family member	63
Marriage	50
Marital reconciliation	45
Major change in health or behavior of a family member	33
Becoming pregnant or wife becoming pregnant	40
Addition of a new family member(adoption or birth of a child, relative moving in)	39
Major change in arguments with spouse	35
Child leaving home	29
In-law problems	29
Spouse beginning or ceasing work outside the home	26
Major change in living conditions (home improvements or a decline in home or neighborhood)	25
Change in residence	20
Major change in family get-togethers	15
Health	
Major illness or injury	53
Major change in sleeping habits	16
Major change in eating habits	15
Personal and Social	
Legal troubles resulting in your being in jail	63
Sexual difficulties	39
Death of a close friend	37
Outstanding personal achievement	28
Beginning or ceasing school or college	26
Major change in personal habits (dress, friends, life style)	24
Changing to a new school or college	20
Major change in type or amount of recreation	19
Major change in social activities	18
Vacation	13
Minor violations of the law	11
Financial	
Major change in financial state (i.e., increased or decreased income)	38
Major purchase, mortgage or loan	31
Foreclosure on mortgage	30

[a] Rahe, 1975

Job-Related Stress

Job-related stress was operationalized with a self-report measure of anxiety. Anxiety is defined as subjective, consciously perceived feelings of apprehension and tension, accompanied by or associated with activation or arousal of the autonomic nervous system (Spielberger, O'Neil, & Hansen, 1972). Since anxiety connected with the job situation is the variable of interest, a state anxiety measure (rather than a trait anxiety measure) was selected. Items were drawn from Caplan et al. (1975) and from the Subjective Stress Scale (SSS) (Berkun, Bialek, Kern, & Yagi, 1962) as adapted by Carroll (1979). Validity evidence from a variety of field and laboratory experiments has indicated that self-report SSS scores co-vary significantly with fluctuations in physiological stress indices (Berkun et al., 1962).

Job Performance

Job performance was measured by asking each participant's supervisor to complete the Minnesota Satisfactoriness Scale (MSS) (Carlson, Dawis, England, & Lofquist, 1963).

CHAPTER III

RESULTS

Scale Intercorrelations and Reliabilities

The intercorrelations among variables are presented in Table 3-1 with internal consistency reliability estimates in parentheses on the diagonal. Scale means and standard deviations are presented in Appendix C.

Significant positive correlations were observed between the two magnitude of career transition variables, and between personal life transitions and both magnitude of career transition variables. Consistent with previous research, both role ambiguity and role overload are positively related to job stress. Personal life transitions are positively related to symptomatic coping. Both magnitude of career transition variables correlate negatively with role overload, and the objective magnitude of career transition measure correlates positively with job-related stress.

Turning to the control variables, boundary spanning is positively and significantly related to role overload and all three coping variables, and is negatively related to social desirability. Social desirability is negatively related to self-reports of symptomatic coping. With the exception of the intercorrelations between role ambiguity and role overload, and between the coping scales, the other correlations are not significantly different from zero.

Table 3-1

Intercorrelations Among Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Magnitude-Career Transition (Obj)	(.90)[a]											
2. Magnitude-Career Transition (Per)	.66***	(.63)										
3. Role Ambiguity	.03	-.04	(.72)									
4. Role Overload	-.26**	-.27**	.41**	(.80)								
5. Action	.09	-.01	-.03	.04	(.77)							
6. Cognitive Reappraisal	.08	-.03	-.09	.04	.43***	(.84)						
7. Symptomatic	-.02	-.04	-.08	-.05	.10	.21**	(.70)					
8. Personal Life Transitions	.26**	.31***	-.04	-.12	-.16*	-.13	.33***	(.72)				
9. Job-Related Stress	.16*	-.11	.38***	.20**	-.12	-.15	.01	.13	(.88)			
10. Job Performance	.03	-.08	-.13	-.01	.06	.03	.00	-.02	-.03	(.87)		
11. Social Desirability	.00	-.08	-.14	-.08	-.05	-.05	-.24**	-.16	-.10	-.05	(.70)	
12. Boundary Spanning	-.08	.03	-.04	.20*	.22**	.22**	.21*	.02	-.02	.08	-.22**	(.68)

[a]Interjudge agreement

*p <.05
**p <.01
***p <.001

Magnitude of Career Transition. As previously explained, the objective measure of magnitude of career transition consisted of scoring the number of dimensions which changed for each individual: job, level, occupation, function, occupational field. As shown in Table 2-3 (p. 68), the scores on this scale ranged from 0 to 12. Reliability of this scoring system based on interjudge agreement was .90 (see p. 67).

For the perceptual measure, the "no change" group was assigned a score of zero. It will be recalled that the "no change" group was scored zero on the objective measure. Therefore, the only individuals whose perceptions of transition are relevant are those who in fact have made a career transition, as defined in this research. Therefore, the appropriate score for the "no change" group on the perceptual measure is zero as well. Empirical justification for this measurement procedure is found in the correlation between the two measures. When the perceptions of the entire sample, including the "no change" group, were used to compute the correlation between the objective and perceptual measure, $r = .17$ ($p < .05$). When the "no change" group ($n = 31$) was scored zero, the correlation is .66 ($p < .001$) as presented in the correlation matrix on page 75.

The internal consistency of the perceptual measure of magnitude of career transition, scored as above, was .63, and the correlation between the perceived and objective

measures was .66 ($p < .001$). The size of the intercorrelation suggests that these two measures can be legitimately viewed as multiple indicators of magnitude of career transition. Alternatively, the two measures could be combined into a single measure. However, one of the chief advantages of the LISREL program is the option of using multiple measures of theoretical constructs. Using the logic of confirmatory factor analysis, LISREL extracts the common variance of the two indicators and uses this common variance in evaluation of the structural model. Hence, the two magnitude of career transition measures were retained as separate measures so they could be employed in this fashion.

Table 3-2 presents the frequency distribution for the objective measure. The distribution reflects the fact that most of the job changes were promotions; hence, the points on the scale which do not involve a change in level are not represented in this sample. The exceptions are scale values 11 and 4. It appears that lateral moves not involving promotion occur at the end points of the scale.

Role Stressors. The internal consistency estimates for role ambiguity and role overload were .72 and .80 respectively. For role ambiguity, the internal consistency for this sample was somewhat lower than those reported by Rizzo, House and Lirtzman (1970) who found reliabilities of .78 and .81 across two samples. However, the present estimates fall within the range of

Table 3-2

Frequency Distribution for Objective Measure of Magnitude of Career Transition

Change in:	Scale Value	Frequency
Job + Level + Occupation + Function + Occupational Field	12	12
Job + Occupation + Function + Occupational Field	11	4
Job + Level + Occupation + Occupational Field	10	6
Job + Level + Occupation + Function	9	5
Job + Occupation + Occupational Field	8	0
Job + Occupation + Function	7	0
Job + Level + Occupation	6	2
Job + Level + Function	5	19
Job + Occupation	4	0
Job + Function	3	4
Job + Level	2	26
Job	1	0
No Change	0	31

those reported by Schuler, Aldag, and Brief (1977) who reported reliabilities ranging from .71 to .83 across six samples.

Coping Scales. For the coping scales dealing with the situations of role ambiguity and role overload, the initial intent was to obtain a cross-situational measure. That is, participants were asked to report how they cope with uncertainty about what they are supposed to do in their jobs (role ambiguity). Then, they were asked how they cope when they do not have adequate time, staff, or resources to do all of the assignments or tasks they were expected to do (role overload). The reliability of the action coping measure for role ambiguity was .68 and for cognitive reappraisal for role ambiguity it was .66. The reliability of the action-coping measure for role overload was .75 and for cognitive reappraisal for role overload it was .78. However, the measures for action coping correlated .63 across the two situations and therefore the two measures were combined into a summary score of action coping. Similarly, the measures for cognitive reappraisal coping correlated .65 across the two situations and were combined as well.

The inter-scale correlations for supervisory assessment of coping strategies indicated that the attempt at a multi-method approach to the measurement of coping did not work either. The correlation between the action and

cognitive reappraisal coping scales was .65. Action and cognitive reappraisal were conceptualized as separate theoretical constructs. The high correlation between the two measures indicates a lack of discriminant validity. Thus, the supervisory assessment measures were dropped from the analysis. It is possible that supervisors simply do not know their people well enough to provide rational answers to questions about how they cope with stressful situations at work. While there were virtually no missing data on these scales, anecdotal comments from several supervisors supported this interpretation.

Personal Life Transitions. The personal life transitions scale was computed by summing the normative weights for each item for each six-month time period within the last year. Thus, the possible values on this scale ranged from 0 to 2890. The internal consistency for this scale was .72.

Job-Related Stress. Job-related stress was measured using a self-report scale of job-related anxiety. The internal consistency was .88.

Control Variables. The inclusion of the Crowne-Marlowe (1964) Social Desirability Scale was designed to control for the demand characteristics of the questionnaire. It was hypothesized that social desirability could influence self-reports of job-related anxiety and/or coping strategies. While there was no correlation between this scale and

job-related anxiety, the internal consistency of the Crowne-Marlowe Scale was only .63. This scale was, however, negatively correlated with symptomatic coping. This indicates that social desirability may have been a problem in that participants wishing to present a socially desirable image report fewer symptomatic coping strategies.

Boundary spanning was included because of its previous association with role ambiguity and role overload. It was positively associated with role overload, but not with role ambiguity. It was, however, also significantly positively related to all three coping strategies, and negatively related to social desirability. The reliability of the boundary spanning measure was .68.

Job Performance. Supervisory assessments on the Minnesota Satisfactoriness Scale (MSS) yielded an internal consistency estimate of .87, but this measure did not correlate with any of the other variables in the study.

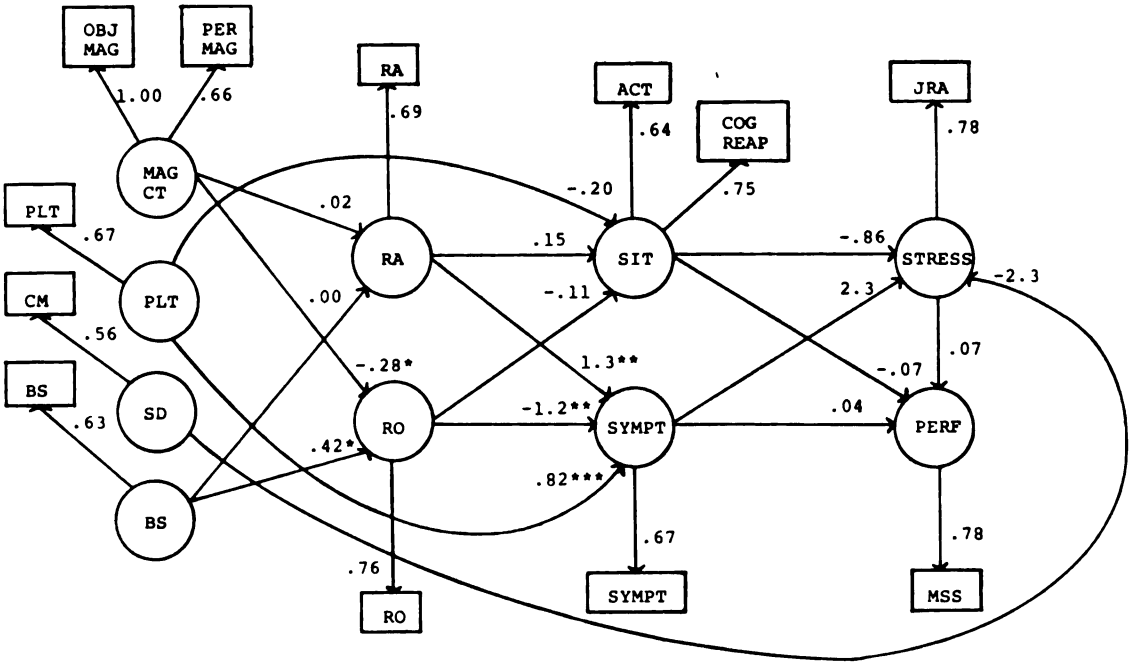
Path Analyses

The hypothesized model presented in Figure 1-1 (p.4) was examined by an approach to path analysis using maximum-likelihood analysis of structural equations. The competing model, which hypothesizes stress as the intervening process between stressor situation and coping was also examined for comparison purposes. It will be recalled that this competing model is characterized by the "I see the bear, I

feel scared, I run" analogy. The computer program used was LISREL IV (Joreskog & Sorbom, 1978). This approach relies on the logic of confirmatory factor analysis to evaluate the measures of the underlying theoretical variables and applies a full information maximum likelihood analysis to the hypothesized causal relations specified a priori.

The initial model evaluated is presented in LISREL format in Figure 3-1, along with the results of the initial path analysis. There are four exogenous (independent) variables: magnitude of career transition, personal life transitions, and the two control variables (social desirability and boundary spanning). Exogenous variables are those for which the causes are either unknown or are not of interest in the model. The first two variables, magnitude of career transition and personal life transitions, were included because of interest in evaluating causal linkages with the subsequent variables in the model.

The remaining seven variables are considered to be caused by variables preceding them and are labeled endogenous (dependent) variables. The arrows connecting the circles represent direct causal linkages. For example, stress is viewed as caused directly by the three coping variables and indirectly by the other variables in the model. Performance is caused directly by the three coping variables and stress.



Intercorrelations Among Residuals

Independent Variables	1	2	3	4
Magnitude of Career Transition	1.0			
Personal Life Stressors	.35	1.0		
Social Desirability	-.02	-.79	1.0	
Boundary Spanning	-.13	-.14	-.43	1.0

Dependent Variables	1	2	3	4	5	6
Role Ambiguity	.83					
Role Overload	.82	.72				
Situational Coping	.00	.00	.94			
Symptomatic Coping	.00	.00	.44	.10		
Job Stress	.00	.00	.00	.00	.63	
Job Performance	.00	.00	.00	.00	.00	.99

Figure 3-1. Standardized parameter estimates for hypothesized model of career transitions, coping and stress.

MAG CT = magnitude of career transition; PLT = personal life transitions; SD = social desirability; BS = boundary spanning; RA = role ambiguity; RO = role overload; SIT = situational coping; SYMPT = symptomatic coping; ACT = action; COG REAP - cognitive reappraisal; STRESS = job-related stress; PERF = job performance; OBJ MAG = objective measure for magnitude of career transition; PER MAG = perceptual measure of magnitude of career transition; CM = Crowne-Marlowe Social Desirability Scale; JRA = Job-related anxiety; MSS = Minnesota Satisfactoriness Scale.

*p < .05
**p < .01
***p < .001

The circles in Figure 3-1 represent the underlying theoretical constructs in the model and the rectangles represent the observed measures of each theoretical construct. Each underlying construct has only one observed measure with the exception of magnitude of career transition which has two indicants - the objective (OBJ MAG) and the perceptual (PER MAG) measure. Each observed measure is an indicant of only a single construct, though this need not be the case (Maruyama & McGarvey, 1980). Each of the observed measures is a function of some weight(s) (designated in LISREL terminology as λ x [lambda x] for independent variables and λ y [lambda y] for dependent variables), plus a residual. These residuals contain both unique and error variance.

There are two distinct components to the LISREL program: a measurement model relating observed variables to theoretical variables, and a structural model estimating interrelationships among theoretical variables. For the initial measurement model, residuals for the independent and dependent observed variables were fixed, based on empirical estimates of the reliabilities of the measures. The objective measure of magnitude of career transition was fixed at 1.00 as a reference indicator. Therefore, the path estimate relating the perceptual measure to the underlying construct is equal to the correlation between the two measures ($\underline{r}$ = .66, $\underline{p}$ < .001).

The results of the structural evaluation of the model are shown in the standardized path coefficients relating the theoretical variables. Standardized path coefficients are simpler to interpret than unstandardized coefficients and are appropriate for cross-sectional data where the model is tested within a single population (Maruyama & McGarvey, 1980).

In the initial LISREL runs, effort was expended to solve measurement problems for the coping variables. These initial runs are described in Appendix D because they are instructive as to how one can work with LISREL to obtain a satisfactory measurement model, a necessary prerequisite to meaningful interpretation of the structural model. In addition, some of the minor structural revisions from earlier runs were retained in the analysis presented here.

Figure 3-1 presents standardized parameter estimates for the initial model. There was a significant path[1] linking boundary spanning with role overload ($t = 2.33$, $p < .05$) in the positive direction. In addition, the path for personal life transitions and symptomatic coping is

---

[1]Significance levels (t values) are calculated by comparing the size of the path coefficient to the standard error for that path. Thus, path coefficient/standard error must exceed 1.96 for the .05 level, 2.33 for the .01 level, and 3 for the .001 level.

significant (t = 4.2, p < .001) and positive. The path linking role ambiguity and symptomatic coping is significant and positive (t = 2.6, p < .01). The path from role overload to symptomatic coping is significant and negative (t = 2.6, p < .01). Since the role ambiguity → symptomatic coping parameter reflects a reversal in sign from the zero order correlation, it fits the statistical definition of a suppressor effect, and results from intercorrelation among role ambiguity and role overload. None of the other parameter estimates is significant.

The lower portion of Figure 3-1 presents estimates of the intercorrelations among the residuals for both independent and dependent variables. The residual variance for each of the dependent variables in the model is found on the diagonal. These residual variances reflect the variance unaccounted for by the model; subtracting this figure from 1 is equivalent to R^2 for that dependent variable. Correspondingly, the square root of this value gives the multiple R.

The LISREL program also computes a reproduced correlation matrix based on the parameter estimates and applies a X^2 test of significance of the difference between the reproduced and observed matrix. This enables one to evaluate the overall fit of the model to the data. Thus, in addition to examining path coefficients between variables,

and the multiple R for the dependent variables, it is necessary to examine the residuals obtained when the reproduced and observed correlation matrices are compared. Over half of the residuals are < .05, a rule of thumb that has been suggested by Kerlinger and Pedhazur (1973, p. 318).

None of the residuals exceeded .25, but there was one residual of .23 for job-related stress with the perceptual magnitude of change variable. Other noticeable residuals (.19 and .18) were observed for action and cognitive reappraisal with boundary spanning.

The average value of the residuals is .06. The $\underline{X}^2$ test with 42 degrees of freedom is 68.72 ($\underline{p}$ < .01). Since $\underline{X}^2$ tests are nearly always significant with large samples, a more appropriate way to use this statistic is to examine the $\underline{X}^2$/df ratio. In this model the ratio is 1.6. While there is no set criteria, a ratio of less than 10 is considered satisfactory. This suggests that the initial model is a satisfactory fit to the data.

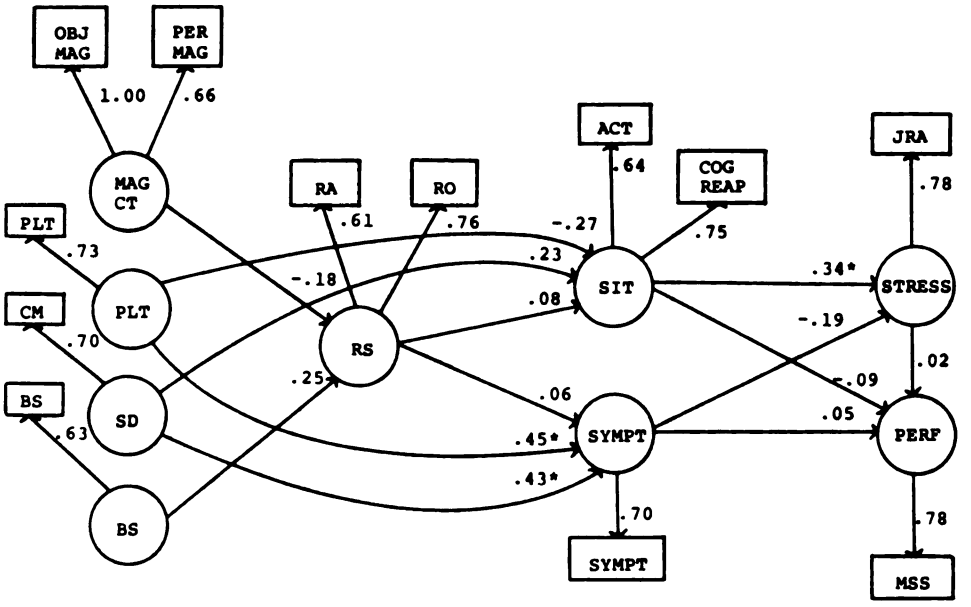
Despite the fit of the model, there was some indication, based on LISREL estimates in excess of 1, and differences in sign between parameter estimates and zero-order correlations, that the intercorrelation among role ambiguity and role overload could be causing suppressor effects (see Appendix D). Therefore, an additional run was made, treating role ambiguity and role overload as two indicants of the same underlying construct. In this case the

theoretical model has been somewhat revised in order to accommodate solutions to measurement difficulties associated with the role stressor variables.

The results are presented in Figure 3-2. As in the initial analysis presented in Figure 3-1, personal life transitions are positively linked with symptomatic coping. However, the other results differ from the previous analysis in that situational coping is positively linked with job-related stress ($t = 2.12$, $p < .05$), and social desirability is negatively linked with symptomatic coping. The remainder of the paths are nonsignificant.

Examination of the residuals showed them to be uniformly low, with the exception of those between role ambiguity, role overload and stress and again between two situational coping variables. The X^2 with 47 degrees of freedom is 93.80 ($p < .0001$). The X^2/df ratio is 2.0 indicating that this model is a reasonable fit.

Concerning evaluation of the competing model, researchers do not agree on the proper approach to evaluating alternative models. Some have argued for a theory-trimming procedure (Heise, 1969) in which all nonsignificant paths are deleted and the "trimmed" model is reevaluated (Griffin, 1977). However, others have criticized this approach as tantamount to using, in an exploratory fashion, a methodology designed to be confirmatory (Maruyama &



Intercorrelations Among Residuals

Independent Variables

	1	2	3	4
Magnitude of Career Transition	1.0			
Personal Life Transitions	.27	1.0		
Social Desirability	.06	-.32	1.0	
Boundary Spanning	-.13	-.04	-.56	1.0

Dependent Variables

	1	2	3	4	5
Role Stressors	.90				
Situational Coping	.00	.43			
Symptomatic Coping	.00	.48	.49		
Job Stress	.00	.00	.00	.89	
Job Performance	.00	.00	.00	.00	.99

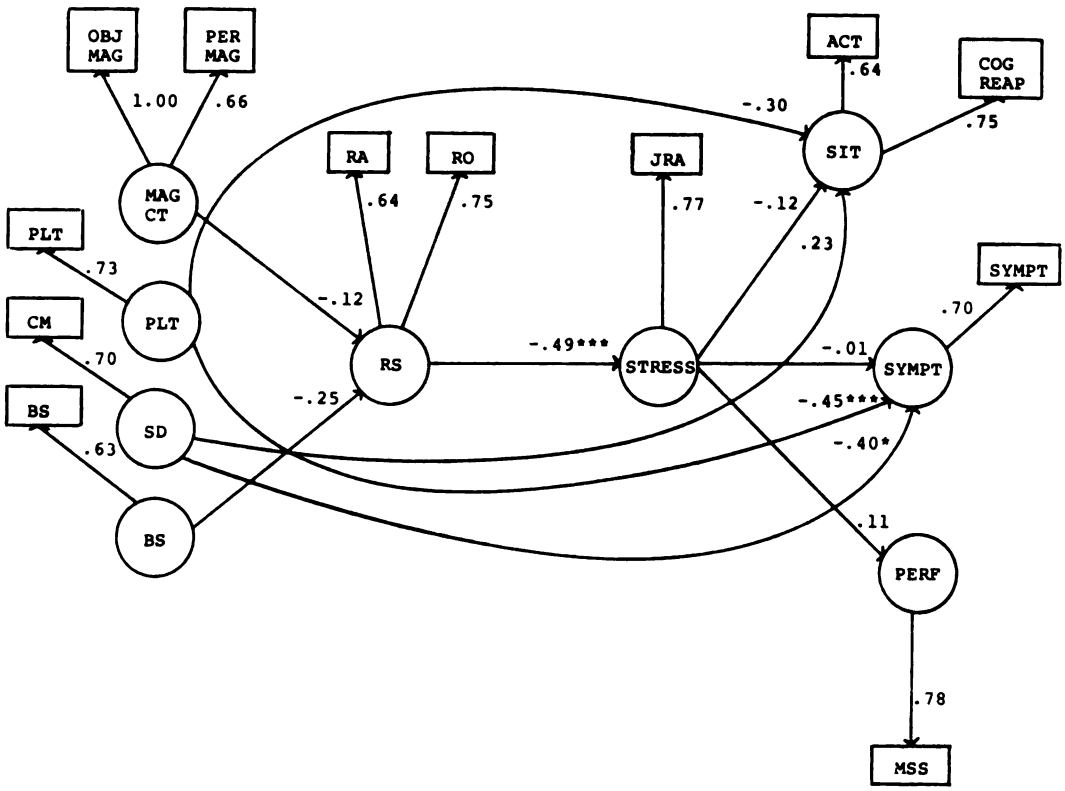
Figure 3-2. Standardized parameter estimates for Model 2.

*p < .05
**p < .01
***p < .001

RS = Role stressors

McGarvey, 1980). At the other extreme, one could adhere strictly to the acceptance of the empirical shortcomings of the initial model, redesign the theory and test it on a new sample. When there exists another plausible ordering of the variables in the model, however, the researcher bears some obligation to examine which of the two competing models best fits the observed data. Both the literature and the residual matrix indicate that a model with stress as the intervening variable might be appropriately compared with the initial model.

Figure 3-3 presents standardized parameter estimates for the model placing stress as the intervening variable. Significant paths were observed linking role stressors with job-related stress in the negative direction (t = 3.14, p < .001). However, when the sign of a parameter estimate is inconsistent with the sign of the zero order correlations, as in this case, the effect is most probably due to a suppressor effect caused by the intercorrelation of preceding variables in the model. In this case, the intercorrelation of boundary spanning and role overload may account for the reversal in sign of the correlation. Other significant paths are consistent with the previous model, and link personal life transitions with symptomatic coping (t = 2.28, p < .05) and social desirability with symptomatic coping (t = 2.10, p < .05).



Intercorrelations Among Residuals

Independent Variables	1	2	3	4
Magnitude of Career Transition	1.0			
Personal Life Stressors	.26	1.00		
Social Desirability	.05	-.32	1.0	
Boundary Spanning	-.13	-.05	-.55	1.0

Dependent Variables	1	2	3	4	5
Role Stressors	.91				
Situational Coping	.00	.98			
Symptomatic Coping	.00	.48	.51		
Job Stress	.00	.00	.00	.71	
Job Performance	.00	.00	.00	.00	.99

Figure 3-3. Standardized parameter estimates for Model 3.

*p < .05
**p < .01
***p < .001

Examination of the residual matrix again indicates no major problems. The largest residuals observed are, as noted in the previous model, those linking boundary spanning with the situational coping variables. The $\underline{X}^2$ with 49 degrees of freedom is 84.62 ($\underline{p} < .001$). The $\underline{X}^2/df$ ratio is 1.73 indicating that this model is also a good fit to the observed data.

Summary

In this section the scale reliabilities and intercorrelations were presented, along with results of path analyses using the LISREL (Joreskog & Sorbom, 1978) program for maximum-likelihood evaluation of structural equations. The initial model tested was the theoretical model presented in Chapter I. Revisions associated with earlier measurement problems were presented in Appendix D. A second analysis was done in an attempt to further refine the measurement model by treating the role stressors as a single theoretical construct. Finally, the third model evaluated was the competing model suggested by the literature review which cast stress, measured as job-related anxiety, as the intervening variable. Table 3-3 compares the three models evaluated, on indicators to fit to the data, and presents multiple $\underline{R}$ values for each model. It can be seen that the three models are virtually identical in terms of overall fit to the

Table 3-3

Summary of Results for Path Analyses: Three Alternative Models of Career Transitions, Stress and Coping

Model	Significant Paths	Average Value of Residuals[a]	$\underline{X}^2$/df Ratio	R
1	Magnitude of career transition → role overload (-). Boundary spanning → role overload (+). Role ambiguity → symptomatic coping (+). Role overload → symptomatic coping (-). Personal life transitions → symptomatic coping (+).	.06	1.6	Role Ambiguity = .42 Role Overload = .53 Situational Coping = .24 Symptomatic Coping = .95 Job-Related Stress = .61 Job Performance = .11
2	Personal life transitions → symptomatic coping (+). Social desirability → symptomatic coping (-). Situational coping → job-related stress (+).	.05	2.0	Role Stressors = .32 Situational Coping = .27 Symptomatic Coping = .71 Job-Related Stress = .33 Job Performance = .10
3	Role stressors → job-related stress (-). Personal life transitions → symptomatic coping (+). Social desirability → symptomatic coping (-).	.06	1.73	Role Stressors = .29 Situational Coping = .13 Symptomatic Coping = .70 Job-Related Stress = .53 Job Performance = .08

[a]Observed-Reproduced Correlations

observed data, as indicated by the average value of the residuals and the $\underline{X}^2$/df ratio. However, Model 1 yields the greater amount of conceptually interpretable information based on significant paths. Both Model 1 and 2 explain more variance in the dependent variables than does Model 3, as indicated by the multiple $\underline{R}$'s.

CHAPTER IV

DISCUSSION

The maximum-likelihood approach to path analysis is an efficient and flexible methodology enabling one to test the plausibility of competing theoretical models. While it cannot deduce causal relations, it can demonstrate the inadequacy of some theories and, conversely, can identify those models which resist elimination.

If the analysis of the structural evaluation of the model is to be successful, however, the adequacy of the measurement model must be assured (Asher, 1976). Therefore, initial versions of the model reflected attempts to solve measurement problems. In the original model, magnitude of career transition was to be measured by two indicants, one objective and one perceptual. Further, it was intended that the three coping variables be treated as separate theoretical constructs so that the relative effects of each on the dependent variables could be evaluated. Finally, role ambiguity and role overload were initially treated as separate constructs. The initial runs showed that the coping variables shared too much common variance, i.e., were sufficiently intercorrelated that large suppressor effects were observed. These problems rendered interpretation of the initial model a questionable exercise and revisions were undertaken.

These revisions are described in Appendix D. Further consolidation of the measurement model involved collapsing role ambiguity and role overload into a role stressors construct.

Evaluating the Hypothesized Model

From the standpoint of overall fit, the hypothesized model is no better than the competing model which views stress, not coping, as the intervening process. As shown in Table 3-3 (p. 93), both models yielded an acceptable fit to the observed data. As previously noted, the fit of each model is indicated by the low average value of the residuals obtained when the observed correlations were compared to the correlations reproduced from the structural estimates of the model. The close fit is also indicated by the $\underline{X}^2$/df ratios which were 2 or less.

In addition to the general indicators of fit, however, the models must be evaluated in terms of conceptual interpretability and variance accounted for in the dependent variables. According to these criteria, the results for Models 1 and 2 do not lend particularly strong support to the hypothesized model. The only significant parameter that is consistent with the hypothesized model is the positive association between personal life transitions and symptomatic coping strategies. If the entire process through which a career transition influences stress and

performance were as originally hypothesized, however, each of the linkages diagrammed in Figure 3-1 would show statistically significant parameter estimates. The competing model fared no better in this regard, though as previously noted, some problems with measurement of variables may remain, and may cause interpretive difficulties with this model.

Examining the proportion of variance accounted for by the models, the original hypothesized model accounts for the largest amount of variance in the dependent variables. The largest proportion of variance accounted for is in symptomatic coping ($\underline{R}^2$ = .90) and job-related stress ($\underline{R}^2$ = .37). The smallest amount of variance accounted for is in job performance ($\underline{R}^2$ = .01), situational coping ($\underline{R}^2$ = .06) and role ambiguity ($\underline{R}^2$ = .18). Of the three models, the competing model (see Figure 3-3, p. 91) explains the smallest amount of variance in each of the dependent variables.

Results in Support of the Model as Hypothesized

As predicted, there was a link between personal life transitions and symptomatic coping strategies which indicates that individuals facing a substantial number of transitions in their personal lives tend to adopt a symptomatic approach to coping at work. This relationship held across all three models evaluated and is consistent with the correlation matrix.

There were also links for both role ambiguity and role overload with symptomatic coping. However, the high inter-correlation between role ambiguity and role overload makes it difficult to unravel their separate effects and makes interpretation of the path estimates speculative. However, the positive path for role ambiguity could suggest that this type of stressor generates symptomatic coping. Confronted with uncertainty at work, people engage in tension-relieving activities such as jogging or meditation. For role overload, however, this situation may not generate this type of coping strategy. This is not surprising since individuals over-loaded at work may work longer hours and therefore allow themselves little time for jogging, meditation and other diversions.

Results Not Supportive of the Model

The data do not strongly support the hypothesized model, but they yield some interesting insights into the career transition process. It was hypothesized that the magnitude of a career transition would influence stress through creation of role ambiguity and role overload. However, no evidence was found to support this notion. Instead, Figure 3-1 (p. 83) reveals that there was no association between the magnitude of career transition and role ambiguity. Concerning role overload, there is a significant effect in the negative direction. This was

opposite of what was expected and suggests the greater the magnitude of career transition, the less likely the individual will experience role overload. Explanation of this unexpected result was not found in the literature as none of the studies reviewed looked at magnitude of career transition or job tenure as related to role overload. However, these results might be explained in terms of the individual's expectations, and in terms of the expectations of others, at various points during his/her job tenure. Role overload must be perceived as a deviation from some standard of what should be accomplished. When an employee assumes a new role, particularly one that is a radical departure from the previous role, s/he may simply lack a standard against which work load can be evaluated. It is difficult to feel like one is not doing enough work when one is still in the process of determining exactly how much is to be done. Correspondingly, even if the work load is clear cut, an employee may simply not expect him/herself to be equal to all of the tasks, given the newness of the job. Concerning expectations of others, it may also be that employees new to the job are given the benefit of the doubt with respect to work overload. Indeed, role senders may make a particular effort not to expect too much of this person during the transition phase.

In sum, the occupant of a radically new role may not only be in a state of "blissful ignorance" about how much work there is to do, but may also be the beneficiary of relatively lower work-load expectations, both self-sent and from others in the role set. Hence, these people experience less role overload than those making minor transitions, or who have been in their jobs a long time (i.e., no change) and who carry the full weight of both self-sent and organizational expectations as to how much work they should be able to accomplish.

An alternative explanation could be found in the fact that nearly all the transitions were promotions. Since promotions are often desired by employees, the hoped for event may simply be inconsistent with perceptions of overload. That is, if I have wanted it and waited for it, how can I feel overloaded by it?[1] Perceptions of overload may be too dissonant with the desired occurrence of a promotion. Alternatively, it may be that those employees who are advanced to very different roles are the ones most capable of handling the work load. Hence, they report less role overload simply based on superior capability. While empirical attention specifically relating role overload to upward mobility is scarce, an underlying theme in many studies of managerial success is ability to withstand the pressures of

---

[1]Recognition is given to Ben Schneider for this idea.

organizational life (Bray, Campbell, & Grant, 1974; Jennings, 1971) and role overload is most certainly a contributing factor in those pressures.

Turning to relative impact of the two coping strategies on job-related stress, the results are again not as expected. No impact of coping on stress was observed in Model 1. In Model 2, situational coping strategies were associated with higher, not lower, levels of self-reported stress. Symptomatic strategies had no impact. This may reflect that many action-oriented strategies represent potentially stress-inducing situations (e.g., talking with one's supervisor). In addition, cognitive reappraisal strategies suggest the "work of worrying" (Janis, 1958), or trying not to worry (i.e., "trying not to get concerned"). Thus, in the short-run at least, situation-focused coping may actually elevate stress. The symptomatic strategies, while offering temporary relief, may not generate a resolution for the causes. Hence the stressful situations remain unresolved, and stress levels remain unaffected.

Finally, the relationship between stress and performance was nonsignificant. The original hypothesis had been that for managers and professionals in a career transition the stress-performance relationship might be negative. If the relationship did deviate from linear (Selye, 1956), it could not be reflected in a linear model such as the present one.

The path linking boundary spanning and role ambiguity was not significant, but the link to role overload was significant. This suggests that its inclusion as a control variable was appropriate. In addition, the negative association between social desirability and self-reports of symptomatic coping suggests that managers and professionals who seek to maintain a favorable public image report fewer non-work-related strategies used to deal with tension at work. This could interfere with accuracy of results on this variable but did not seem to be a problem on the situational coping variables.

While not tested causally, there was a strong linkage between personal life transitions and both magnitude of career transition variables. Since these correlations are based on what are essentially three independent methods of data collection, it is unlikely that method variance is inflating these correlations. The perceptual measure asked for a self-evaluation of the degree of career change, the objective measure, as previously described, was based on the Hall's (1979) classification scheme, and the personal life transitions measure asked for a simple recall of whether or not certain events did or did not occur in the last year. Therefore, the link between transitions in personal life and career appears particularly worthy of discussion.

It could be that personal life instability provides a driving mechanism that causes employees to devote more time and energy to work, leading to organizationally initiated promotions. A recent study by Vincino and Bass (1978) is not supportive of this interpretation, however. They found that managers who performed at a higher than predicted level (based on earlier managerial assessment scores) had experienced less, not more, personal life instability during that time. Conversely, changes in job responsibilities could precipitate reevaluation and rearrangement in one's personal life (divorces, behavior changes in family members). Most probably, the interrelationship is of a reciprocal nature, over time at least. However, given that the time frame of this study considered personal and career transitions occurring within the same year, it is perhaps a more plausible interpretation that the major career transition precipitates personal life instability. That is, a major job change could act as a "trigger event" for personal life upheaval which follows in relatively close proximity timewise. If, on the other hand, personal life upheaval were driving the individual to work harder and devote more energy to the job, which in turn resulted in an organizationally initiated promotion, it is reasonable to assume that this process takes time to work. It would be reasonable to suggest that the impact should take longer than a

year to emerge, and would be further constrained by the availability of openings in the organization to which h/she could move. Therefore, given the time frame of the present study, the career transition as trigger event hypothesis may be the more plausible interpretation.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

From this analysis, several conclusions can be offered regarding the nature of career transitions, as well as stress-coping processes, in organizations. Conceptual implications and methodological challenges are put forth for future research, and the practical implications of the results are discussed.

Conclusions

1. While this study attempted to incorporate the full range of different kinds of career transitions, the overwhelming majority were in one category: upward promotion. Out of 78 employees who changed jobs, only eight made lateral job changes that did not also involve a move upward in the hierarchy, and only one employee moved downward. In this sample at least, organizational career transitions still occur primarily in the context of upward mobility.

2. On the basis of a cross-sectional comparison, the magnitude of a career transition is not predictive of job-related stress. Employees making a major career transition report no more job-related stress than do employees making a minor transition or no transition at all.

3. The causal effect of the magnitude of a career transition on role ambiguity was not supported. Employees making major career transitions experienced no more role ambiguity than those making minor transitions or no transition at all.

4. Instead of contributing to perceptions of role overload, the magnitude of a career transition actually appeared to insulate employees from these perceptions. Employees making major career transitions perceived less role overload than their colleagues who had made minor transitions or no transition at all.

5. Employees did attempt to cope with role ambiguity, but used strategies aimed at alleviating tension rather than strategies aimed at resolving or mentally reappraising the situation. Role overload, however, was associated with lowered levels of tension-relieving coping strategies.

6. Coping strategies aimed at resolving or mentally reappraising the situation appeared to raise, not lower, stress, while symptomatic strategies (jogging, drinking, etc.) had no impact at all.

7. No relationship between stress and job performance was observed nor did coping strategies differentiate good performers from poor performers.

8. The strongest and most consistent finding was that individuals experiencing a large number of transitions in their personal lives were more likely to employ symptomatic coping strategies for dealing with job stress.

9. While not tested causally, there was a strong connection between personal life transitions and both the structural (job, level, function) measure and perceptual (how big the change felt) measure of magnitude of career transition. The direction of the driving mechanism behind this relationship was discussed, and it was suggested that a career transition could be acting as a "trigger event" for personal life transitions.

Conceptual Implications and Methodological Challenges

The first conceptual implication is that, while the literature reviewed supports the notion of change as stress-inducing, it appears that if a career transition is a stress-inducing process, it may operate via other mechanisms than role ambiguity and role overload. Future studies, rather than attempting to fit models into previous theory and research using a heavily quantitative approach, should adopt a more exploratory strategy. It may be that we do not yet know enough about career transitions as a phenomenon to integrate this experience with role stress research, however eminently sensible the association may appear on its face. Tracking individuals through the career transition process, using case studies and interviews to supplement questionnaire measures, may suggest a range of causal factors and coping strategies associated with this experience.

Second, the nature of the linkage between work and nonwork was illuminated by this research. Not only are major career transitions positively associated with personal life transitions, (spillover hypothesis), but one structural factor in the nonwork domain (personal life transitions) was shown to be a determinant of behavior in the work domain (coping strategy). Thus, while we might expect individuals undergoing a major career transition to focus coping strategies on the job situation, if those same individuals are also experiencing personal life transitions, the strategies deal not with the job but with diversion from the job. Thus on the simplest level we see support for the "spillover" (Wilensky, 1960) between parallel domains for a white collar sample, (i.e. major transitions at work positively associated with transitions in personal life). Perhaps more importantly, however, we see one process through which work and nonwork become linked - via coping strategy adopted to deal with the career domain. In light of the results showing that situational coping strategies are linked with higher, not lower, job stress, it may be that an individual facing major transitions in both arenas will not accept the increase, even temporarily, in stress that might occur with situationally focused coping. Future research on work/nonwork linkages might do well to continue in this vein, linking structural variables in one arena to

attitudinal/behavioral variables in the other domain. This approach appears to offer more promise than merely correlating parallel dimensions (e.g., work-nonwork satisfaction) across domains.

From a methodological standpoint, the considerable measurement and design limitations of the present study suggest improvements to be undertaken in subsequent research. Measurement problems related to generating scales to measure coping strategies created a major problem. Intercorrelated scales created difficulties in evaluation of the model, so future studies should initially focus on measuring independent dimensions of coping. While empirical techniques such as factor analysis and multidimensional scaling may help, more creative methodologies for scale development are needed. A checklist, in addition to being prone to social desirability error, may also suffer from scale use tendencies. Further, a checklist may be inadequate to tap the highly individualistic nature of the coping process. Participant diaries and tape recordings of actions and thoughts should be considered as methodological strategies which could be used to generate data to categorize into scale scores.

From a design standpoint, there are two considerations, one concerning time perspective and the other concerning level of analysis. The present study, based on cross-sectional data, suggested that both the

hypothesized model and the competing model fit the data. This suggests that it would be more appropriate to study stress using the reciprocal causality view presented in Figure 5-1. This figure shows that the models evaluated are not really "competing" so much as they are two halves of a cyclical process, both of which received support in this analysis. The results of this analysis suggest that the model in Figure 5-1 would be a more accurate basis for future studies. This cyclical model outlines a process whereby cognitions about stressors evoke stress reactions which generate coping strategies directed towards three targets - the situation, the perceptions or the symptoms. These coping strategies in turn, influence subsequent stress levels through the direct and indirect linkages shown. The implausibility of testing this model with cross-sectional data, despite the mechanical ability of the LISREL program to do so, is readily apparent. A powerful test of this model would collect data over time employing multiple indicators of stress and coping, and evaluate these data using the LISREL approach to path analysis.

A note about level of analysis is also appropriate. Since stress and coping are highly individualistic processes, it would seem that the level of analysis might appropriately be intra-individual, rather than across individuals. The questions of how stress-coping processes

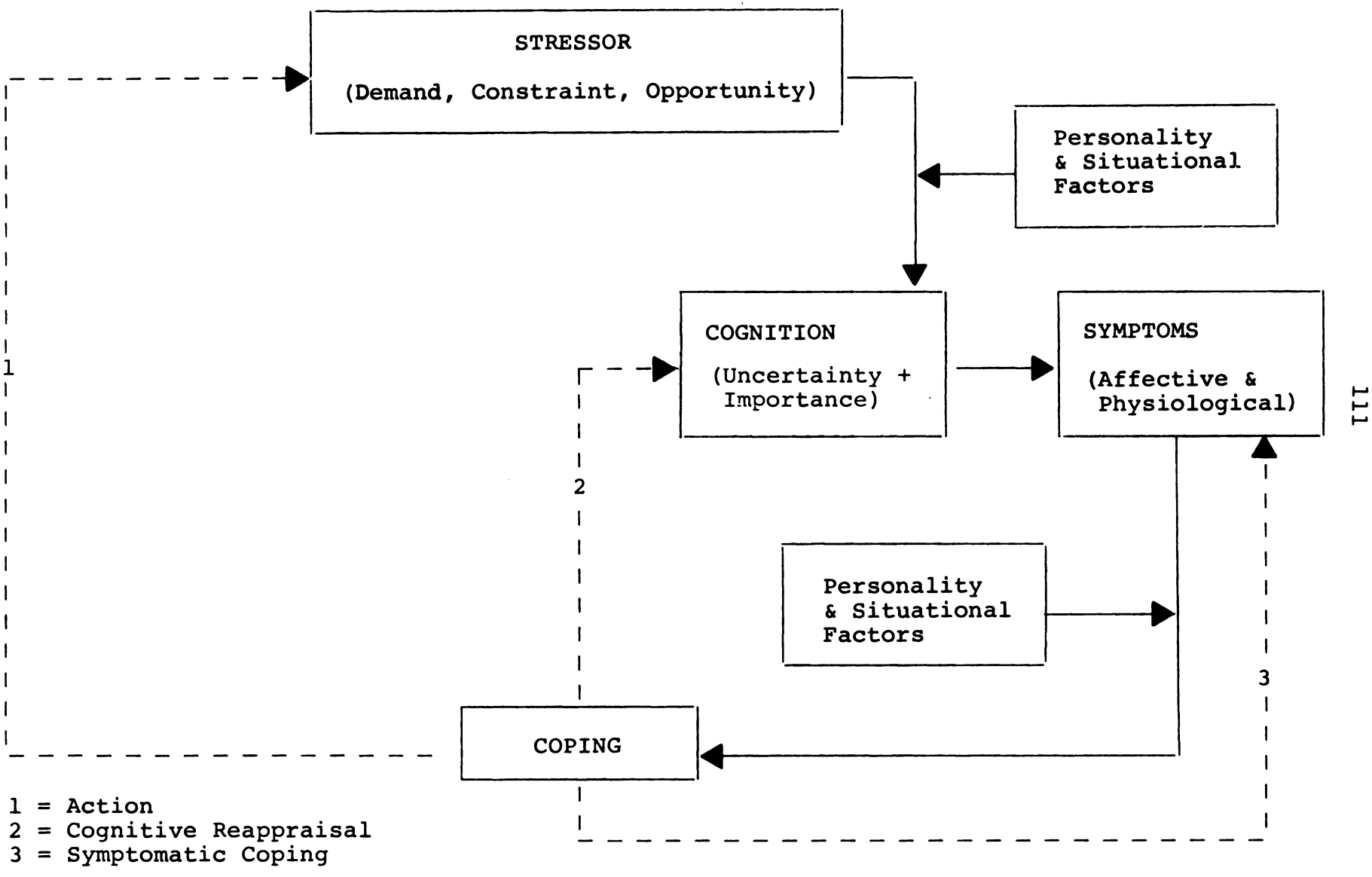


Figure 5-1. A reciprocal model of the stress-coping process

operate within an individual over time is perhaps a more salient question than attempting an across-individual comparison at one point in time. If this level of analysis were used, effects which could not be isolated by the present cross-sectional design might emerge. For example, while levels of role ambiguity may not differ across individuals based on magnitude of career transition, levels of ambiguity experienced, and coping strategies adopted, may differ for an individual at different points in time as she/he goes through the career transition process. These variables may thus still influence outcome variables, such as stress or job performance, on an intra-individual level.

Implications for Practice

The results of this research have several implications for organizations interested in career transitions and employee stress. First, there is little in the present study to indicate that employees making major career transitions experience any more stress due to role ambiguity than employees who make little or no job change. Indeed, another factor associated with stress, role overload, seems less prevalent among employees who have just moved to a job with very different responsibilities than it is for employees moved to similar jobs, or who haven't moved at all. This is consistent with Jennings' (1967)

conclusion that lack of mobility is more stressful than mobility, particularly in the face of widely held organizational norms that place value on upward mobility. Organizations wishing to alleviate stress due to overload might be able to do so, temporarily at least, by movement of employees to different organizational roles. If the organizations in this study are reflective of other types of organizations, it appears that the full range of career movement possibilities has yet to be tapped since the emphasis remains on upward promotion.

Second, it is common for stress management programs marketed to organizations to focus on symptomatic coping strategies, such as relaxation training and meditation. However, the results of this study did not show these strategies to be effective in reducing job stress. Conversely, coping strategies aimed at taking action on the situation or mentally re-thinking the situation were associated with higher, not lower, stress levels. It may be, however, that the action/cognitive reappraisal approach to stress management may temporarily increase stress because the strategies themselves constitute stressful situations from interactions with the boss or co-workers, or from trying not to worry. Though the present study could not evaluate this notion, it seems eminently sensible that coping strategies addressing causal factors, while they may initially increase stress, may in the long

run be associated with lower stress levels. It appears that it is not so much temporary stress periods, but rather unrelenting stress which persists at high levels over time, that is problematic (House, 1974). Therefore, organizations may wish to consider stress management programs that are situationally focused as perhaps offering more long-range assistance to employees.

Third, it appears that employees do not focus coping strategies on the job when confronted with ambiguous or overload situations at work. If organizations believe that coping which focuses actions and thoughts on the job situation is desirable behavior in itself, in addition to whatever long-run stress management effects it may have, then managers should study the organizational factors which may be contributing to ambiguity and overload. If employees do not cope with these situations, then organizational factors causing them should be investigated and alleviated. In short, the organization bears some responsibility for stress management other than simply trying to teach employees how to cope with things as they are.

Finally, the magnitude of personal life transitions and the magnitude of major career transitions are highly correlated. Thus, it may be appropriate from an employee relations point of view for managers to at least be aware that a major job move may be accompanied by major personal

life transitions. If off-the-job transitions are occurring simultaneously, coping strategies may not be as closely focused on job situations as would be expected of employees new to their jobs. Rather than concluding the employee is not interested, or will not work out in the new position, understanding supervision and perhaps a moderate work load may assist the employer in gaining a solid foothold in the new position, while at the same time negotiating the transitions away from work. On a more fundamental level, organizations could be more cognizant of, and responsible for, the impact of intraorganizational employee career transitions on employees' personal lives. In a pro-active vein, personal counseling and seminars might be offered focusing on coping with change, both on and off the job, and the reciprocal impacts of work and personal life.

APPENDIX A

PARTICIPANT QUESTIONNAIRE

MICHIGAN STATE UNIVERSITY

GRADUATE SCHOOL OF BUSINESS ADMINISTRATION
DEPARTMENT OF MANAGEMENT

EAST LANSING • MICHIGAN • 48824

STRESS AND COPING SURVEY

General Instructions

This survey is designed to find out how people cope with job stress. The research is part of my doctoral dissertation and represents the initial study in a program of research. In addition, the information you provide will be used to develop a seminar on stress management which you will have the opportunity to attend at a later time. At the seminar, feedback will be provided and participants will have an opportunity to explore coping strategies related to the results of the survey. I hope you will answer the questions honestly and accurately so that this study and the seminar will provide new insights.

There are several sections to the survey covering such issues as your career, your present job, events in your non-work life and your reactions to these things. Please read the directions for each section so that you will understand how to respond. Some parts may seem repetitious to you, but the issues are complex and require detailed study.

As you answer the questions, I would like you to give your most typical thoughts and feelings about each topic. I realize that people have "good days" and "bad days" which cause variations in how they see their world. However, it would help me most if you can answer in terms of your most typical reaction.

Your participation in this research is completely voluntary. While the results of this study may not benefit any one individual, the information you provide will help us understand what people do to cope with stress, and will suggest ways organizations might help people cope effectively and/or reduce the stress employees experience in the future.

Your identity will be kept strictly confidential. No one in your organization, not your supervisor nor anyone else, will know your responses to the questions. When I receive your questionnaire booklet I will detach the identification sheet and assign a code number to your answer sheet. I am the only person who will have access to the list of code numbers assigned to individuals.

I am asking you to fill in your name and organization for two reasons: First, with your permission, I would like to collect general ratings of your job performance from the appropriate person, i.e., your immediate supervisor or the person to whom you report. Second, I plan to request a selected number of interviews at a later time, so I need names for this purpose as well. So please sign the consent form on the back of this page, and fill in your name and organization along with the other information requested.

Date ____/____/____

BACKGROUND INFORMATION

Age: _____ Marital Status: Single ____ Married _____

Sex: M_____ F_____ Widowed ___ Divorced ____

Number of Dependents (exclude self): _____

Education completed (check one):

_____ High school degree

_____ Some business college or technical school experience

_____ Some college experience other than business or technical school

_____ Business college or technical school degree

_____ College degree

_____ Some graduate work

_____ Master's degree or higher

Starting with your present job and going backwards, please list the jobs you've held in your career. For each job, specify whether it was with your present organization (PO) or a former organization (FO). List part-time or temporary jobs only if they are career-related.

Job Title	Organization (PO or FO)	What Type of Move Was it? (check more than one if applicable)		
		Promotion	Lateral	Downward

When did you assume your present job? _____
Date

When did you find out that you would be moving to your present job? _____
Date

FROM THIS POINT ON, PLEASE RECORD YOUR ANSWERS ON THE BLUE ANSWER SHEETS PROVIDED. DO NOT WRITE IN THIS BOOKLET UNLESS SPECIFICALLY ASKED TO GIVE A WRITTEN RESPONSE. BEGIN WITH THE ANSWER SHEET MARKED "1".

COMPARING YOUR PRESENT JOB TO YOUR PREVIOUS JOB. This section asks you to compare your present job to the job you held just before this one. The emphasis here is on a descriptive comparison; not whether you like one job more than the other. When you see the words "your previous job", they refer to the job you held just prior to your present job.

Below are listed activities which may be involved in jobs. You are asked to rate each activity by answering the question below. Mark the appropriate space on your answer sheet using the scale below.

Are you spending more or less time in this activity in your present job than in your previous job?

Much Less Time	Somewhat Less Time	About The Same	Somewhat More Time	Much More Time
1	2	3	4	5

1. Coordinating work of people outside your own work unit.
2. Activities with people outside your organization.
3. Interacting with people in other units or departments of your organization.
4. Facing situations that are potentially frustrating to important goals or values you have for yourself.
5. Facing situations where you are challenged to excel, to see what you can really do.
6. Facing situations that you are not sure you can handle, where the consequences are personally important to you.

Next, comparing your present job to your previous job, how much do you agree or disagree with the following statements? Mark the appropriate space on your answer sheet according to the scale below.

Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1	2	3	4	5

In my present job:

7. The sources of information I use (e.g., written, pictorial, data, materials in process, natural environment, mechanical devices) are the same as in my previous job.
8. The level of education, skills or experience required is the same as in my previous job.
9. The types of people with whom I have contact on the job (e.g., executives/officers, supervisors, clerical, public, customers, etc.) are the same as in my previous job.
10. The nature of the working conditions (amount of office space, type of location, noise, availability of parking, etc.) is the same as in my previous job.
11. The work schedule (regularity or irregularity of hours, time of day worked, number of hours worked, etc.) is the same as in my previous job.
12. The pay procedures (salary vs. hourly; commission, bonuses, etc.) are the same as in my previous job.
13. The type of clothing worn on the job is the same as in my previous job.
14. On a day-to-day basis, my activities are very similar to my previous job.
15. When I moved to this job, it felt like a big change.
16. I view taking this job as a significant event -- a critical decision in my career.
17. I feel my job activities are very important to my future career.
18. I have responsibilities which are very different from those in my previous job.

Here are some words to describe the way people may feel. Mark the response that tells how often you feel that way when you think of yourself and your present job.

Almost Never	Not Very Often	Sometimes	Quite Often	Nearly All The Time
1	2	3	4	5

Please be sure you are at space 42 on your answer sheet.

42. Nervous	49. Fearful	56. Relaxed
43. Safe	50. Worried	57. Anxious
44. Afraid	51. Secure	58. Fidgety
45. Jittery	52. Alarmed	59. Scared
46. Panicky	53. Tranquil	60. Uneasy
47. Wonderful	54. Indifferent	61. Tense
48. Comfortable	55. Apprehensive	

All of us occasionally are bothered by certain things. How often since you've been in your present job have you had the following?

Almost Never	Not Very Often	Sometimes	Quite Often	Nearly All The Time
1	2	3	4	5

62. Trouble getting up in the morning	71. Heart pounding or racing
63. Pains in back or spine	72. Dizzy spells
64. Trouble sleeping	73. Hands sweating so they feel clammy
65. Feeling fatigued	74. Loss of appetite
66. Headaches	75. Nightmares
67. Loss of weight	76. Skin problems
68. Gain of weight	77. Colds
69. Upset stomach	78. Hands tremble enough to bother you
70. Shortness of breath for no apparent reason	

119. Compared to others in jobs comparable to yours, how much are you absent from work? Mark on your answer sheet the number that corresponds to the appropriate response. (Do not count professional meetings or other job-relevant activities; exclude vacations.)

Much Less	Less	About Average	More	Much More
1	2	3	4	5

120. Compared to others in comparable jobs, how frequently are you late for work, i.e., arrive later than you should?

Much Less Frequently	Less Frequently	About Average	More Frequently	Much More Frequently
1	2	3	4	5

YOU MAY WISH TO TAKE A BREAK AT THIS POINT -- TO GET UP AND WALK AROUND, OR GET A CUP OF COFFEE, OR TO JUST RELAX FOR A FEW MINUTES BEFORE CONTINUING.

Now I am going to ask about your reactions to another job situation. You will see the same list of possible reactions as you saw under Situation A. Only this time, think of how typical each reaction is of you in this particular situation.

SITUATION B: YOU GET CONFLICTING REQUESTS FROM TWO OR MORE PEOPLE, OR CONFLICTING EXPECTATIONS FROM THE SAME PERSON.

Hardly Ever Do This	Seldom Do This	Occasionally Do This	Frequently Do This	Almost Always Do This
1	2	3	4	5

Please be sure you are at space 151 on your answer sheet.

151. Get together with my supervisor to discuss this.

152. Avoid being in this situation if I can.

153. Tell myself that time takes care of situations like this.

154. Remind myself that other people have been in this situation and that I can probably do as well as they did.

155. Think of ways to use this situation to show what I can do.

156. Try to be very organized so that I can keep on top of things.

157. Talk with people (other than my supervisor) who are involved.

158. Try to keep away from this type of situation.

159. Remind myself that work isn't everything.

160. Anticipate the negative consequences so that I'm prepared for the worst.

161. Try to see this situation as an opportunity to learn and develop new skills.

162. Put extra attention on planning and scheduling.

163. Delegate work to others.

164. Separate myself as much as possible from the people who created this situation.

165. Try not to get concerned about it.

166. Try to think of myself as a winner -- as someone who always comes through.

167. Tell myself that I can probably work things out to my advantage.

168. Devote more time and energy to doing my job.

169. Try to get additional people involved in the situation.

170. Do my best to get out of the situation gracefully.

171. Accept this situation because there is nothing I can do to change it.

172. Think about the challenges I can find in this situation.

173. Try to work faster and more efficiently.

174. Decide what I think should be done and explain this to the people who are affected.

175. Set my own priorities based on what I like to do.

176. Give it my best effort to do what I think is expected of me.

177. Request help from people who have the power to do something for me.

178. Seek advice from people outside the situation who may not have power but who can help me think of ways to do what is expected of me.

179. Work on changing policies which caused this situation.

180. Throw myself into my work and work harder, longer hours.

Other (please list here) _____

Finally, this is the last job situation and it ends this section of the survey. Again, look at the list of possible reactions, repeated as before, and rate how typical they are of you in SITUATION D.

SITUATION D: YOU DO NOT HAVE ADEQUATE TIME, STAFF OR RESOURCES TO DO ALL OF THE ASSIGNMENTS OR TASKS YOU ARE EXPECTED TO DO.

Hardly Ever Do This	Seldom Do This	Occasionally Do This	Frequently Do This	Almost Always Do This
1	2	3	4	5

Please be sure you are at space 211 on your answer sheet.

211. Get together with my supervisor to discuss this.

212. Avoid being in this situation if I can.

213. Tell myself that time takes care of situations like this.

214. Remind myself that other people have been in this situation and that I can probably do as well as they did.

215. Think of ways to use this situation to show what I can do.

216. Try to be very organized so that I can keep on top of things.

217. Talk with people (other than my supervisor) who are involved.

218. Try to keep away from this type of situation.

219. Remind myself that work isn't everything.

220. Anticipate the negative consequences so that I'm prepared for the worst.

221. Try to see this situation as an opportunity to learn and develop new skills.

222. Put extra attention on planning and scheduling.

223. Delegate work to others.

224. Separate myself as much as possible from the people who created this situation.

225. Try not to get concerned about it.

226. Try to think of myself as a winner -- as someone who always comes through.

227. Tell myself that I can probably work things out to my advantage.

228. Devote more time and energy to doing my job.

229. Try to get additional people involved in the situation.

230. Do my best to get out of the situation gracefully.

231. Accept this situation because there is nothing I can do change it.

232. Think about the challenges I can find in this situation.

233. Try to work faster and more efficiently.

234. Decide what I think should be done and explain this to the people who are affected.

235. Set my own priorities based on what I like to do.

236. Give it my best effort to do what I think is expected of me.

237. Request help from people who have the power to do something for me.

238. Seek advice from people outside the situation who may not have power but who can help me think of ways to do what is expected of me.

239. Work on changing policies which caused this situation.

240. Throw myself into my work and work harder, longer hours.

Other (please list here)_____

Has Not Occurred Within the Last Year	0-6 Months Ago	7-12 Months Ago	Happened in Both Time Periods	—Omit—
1	2	3	4	5

Financial

Within the last year have you:

36. Taken on a major purchase or a mortgage loan, such as a home, business, property, etc.
37. Experienced a foreclosure on a mortgage or loan?
38. Experienced a major change in finances, e.g., increased or decreased income?
39. Credit rating difficulties?

Please use the following scale to answer the questions below:

I Have No Such Person(s)	Not At All	A Little	Somewhat	Very Much
1	2	3	4	5

How much do these people go out of their way to make your work life easier for you?

40. Your immediate supervisor
41. Other people in your work group
42. Your spouse
43. Other person who is a love relationship
44. Your friends
45. Your relatives

Are you at ease when you are talking with each the following people?

46. Your immediate supervisor
47. Other people in your work group
48. Your spouse
49. Other person who is a love relationship
50. Your friends
51. Your relatives

How much can each of the following be relied on when things get tough at work?

52. Your immediate supervisor
53. Other people in your work group
54. Your spouse
55. Other person who is a love relationship
56. Your friends
57. Your relatives

How much is each of the following people willing to listen to your personal problems?

58. Your immediate supervisor
59. Other people in your work group
60. Your spouse
61. Other person who is a love relationship
62. Your friends
63. Your relatives

PLEASE RECORD YOUR ANSWERS TO THE LAST TWO QUESTIONS RIGHT IN THIS BOOKLET.

YOUR FEELINGS ABOUT YOUR JOB. Circle the number below the pair of faces that best describes how you feel about your job.

6 5 4 3 2 1

YOUR FEELINGS ABOUT YOUR LIFE IN GENERAL. Circle the number below the pair of faces that best describes how you feel about your life as a whole.

6 5 4 3 2 1

Thank you very much for being part of this study. Completing a survey such as this can be a stressful experience in itself! Please remember that the feelings and reactions you have noted in relation to your job may be quite common experiences. Furthermore, thinking about stress and ways of coping can be useful in helping to identify sources of stress and in finding effective ways to deal with them. Best wishes to you in your career. Please feel free to write any comments or reactions to this survey in the space below. Use the reverse side if needed.

APPENDIX B

SUPERVISORY QUESTIONNAIRE

MICHIGAN STATE UNIVERSITY

GRADUATE SCHOOL OF BUSINESS ADMINISTRATION
DEPARTMENT OF MANAGEMENT

EAST LANSING · MICHIGAN · 48824

STRESS AND COPING SURVEY

Supervisory Instructions

The individual whose name appears on the back of this sheet is participating in a research study on coping with job stress. He/she has given me permission to contact you in order to obtain information about his/her job performance and reactions to job situations. It is hoped that this study will suggest ways organizations might help people cope effectively and/or reduce the stress employees experience on the job.

Your responses will be anonymous, identified only by a code number which has been assigned. No one, not the individual you are rating nor anyone else, will know your individual responses to the questions. Feedback reports, available from me, will be in the form of aggregated data, based on averages across the organizations participating in the study.

It will take 10 to 20 minutes to complete the attached survey. In the first section, please record your responses right in this booklet. At the end of the first section, you will be asked to use the blue answer sheet provided for the rest of your answers. Please return both this booklet and the completed answer sheet to me in the stamped envelope provided within 10 days. If you have questions or comments on this survey, I would be pleased to talk with you in person or by telephone at (517) 353-5415.

Thank you very much for assisting me in my research. The information you provide will be very helpful to me in completing my doctoral dissertation.

Janina C. Latack

Janina C. Latack
Department of Management

PERFORMANCE EVALUATION. **Please consider this individual's performance in his/her present job as it compares to the performance of other employees in comparable positions. If she/he is the only one, how does she/he compare with those who have done the same work in the past? Circle the number of the appropriate response.**

1. How does the quality of his/her work compare with the work of other people in comparable positions?

Much Worse	Worse	About the Same	Better	Much Better
1	2	3	4	5

2. Would you consider this person for a promotion to a position of more responsibility of you could make the decision?

Definitely Not	Probably Not	I'm Not Sure	Probably Yes	Definitely Yes
1	2	3	4	5

3. Do you think this person would do better in some other kind of job?

Definitely Yes	Yes	I'm Not Sure	No	Definitely No
1	2	3	4	5

4. If the decision were up to you, would you give him/her a raise in pay right now?

Definitely Not	Probably Not	I'm Not Sure	Probably Yes	Definitely Yes
1	2	3	4	5

5. How frequently, compared to others, does she/he circumvent or ignore accepted policies or procedures?

Much Less Frequently	Less Frequently	About Average	More Frequently	Much More Frequently
1	2	3	4	5

6. Compared to others, how often does she/he make a mistake, i.e., a bad decision?

Much Less Frequently	Less Frequently	About Average	More Frequently	Much More Frequently
1	2	3	4	5

DESCRIBING THE PERSON. In this section you are being asked to describe, not evaluate, this individual according to how she/he typically reacts when faced with job stress. I am particularly interested in how this person reacts to stressful situations like the following: Feeling unsure of what she/he is supposed to do in the job; receiving incompatible requests from two or more people, or conflicting requests from the same person; not having adequate time and/or resources to complete the work expected of him/her. You are asked to respond in terms of how you think this individual would typically react based on a list of items. Use the following scale to mark your response on your answer sheet. If the individual would typically react in a manner not listed, write this at the end under "Other."

Would Hardly Ever Do This	Would Seldom Do This	Would Occasionally Do This	Would Frequently Do This	Would Almost Always Do This
1	2	3	4	5

He/she would (could be expected to):

1. Get together with supervisor to discuss this.
2. Avoid being in this situation if he/she could.
3. Tell him/herself that time takes care of situations like this.
4. Remind him/herself that other people have been in this situation and that he/she can probably do as well as others have done.
5. Think of ways to use this situation to show what he/she can do.
6. Try to be very organized so he/she can get on top of things.
7. Talk with people (other than supervisor) who are involved.
8. Try to keep away from this type of situation.
9. Remind him/herself that work isn't everything.
10. Analyze the negative consequences so that he/she is prepared for the worst.
11. Try to see this situation as an opportunity.
12. Put extra attention on planning and scheduling.
13. Delegate work to others.
14. Separate him/herself as much as possible from the people who created this situation.
15. Try not to get concerned about it
16. Try to think of him/herself as a winner--as someone who always comes through.
17. Get extra sleep or nap.
18. Drink a moderate amount (i.e., 2 drinks) of liquor, beer or wine.
19. Drink more than a moderate amount of liquor, beer or wine.
20. Take tranquilizers, sedatives, or other drugs.
21. Do physical exercise (jogging, exercycle, dancing, or other participative sports.
22. Practice transcendental meditation.
23. Use biofeedback training.
24. Use relaxation training.
25. Seek company of friends.
26. Seek company of family.
27. Eat or snack.
28. Tell him/herself that he/she can probably work things out to advantage.
29. Devote more time and energy to doing the job.
30. Try to hire additional people.
31. Do his/her best to get out of the situation gracefully.
32. Accept this situation because there is nothing to be done to change it.
33. Think about the challenges he/she can find in this situation.
34. Try to work faster and more efficiently.
35. Decide what he/she thinks should be done and explain this to the people who are affected.
36. Set own priorities based on what he/she likes to do.
37. Give it his/her best effort to do what is expected.
38. Request help from people who have the power to do something for him/her.

APPENDIX C

SCALE MEANS, STANDARD DEVIATIONS AND MAXIMUM VALUES

Scale Means, Standard Deviations and Maximum Values

	$\bar{X}$	S.D.	Maximum Value[a]
Magnitude of Career Transition (Objective)	3.7	4.2	12
Magnitude of Career Transition (Perceptual)	13.7	10	25
Role Ambiguity	14.2	4.1	30
Role Overload	21.2	6.4	40
Action	108.6	10.5	190
Cognitive Reappraisal	65.3	10.5	110
Symptomatic Coping	50	8.5	120
Personal Life Transitions	189	141.77	2089
Job-Related Stress	47.8	10.1	100
Job Performance	33	4.6	49
Social Desirability	10.7	1.9	35
Boundary Spanning	11	2.7	15

[a]Maximum value possible on that scale.

APPENDIX D

PRELIMINARY INVESTIGATIONS OF THE MEASUREMENT MODEL

The initial LISREL run treated the perceptual and objective measures of magnitude of career transition as multiple indicants of the same underlying construct. The three coping variables were treated as separate theoretical constructs, each with only one indicant. The correlations among the residuals for both independent and dependent variables were fixed at zero.

Even though this initial run yielded a $\underline{X}^2/df$ ratio of 3.3, there were large residuals associated not only with the measurement of these variables, but also with the reproduced correlation matrix when compared with the observed correlation matrix. In addition, LISREL estimates in excess of 1 suggested that suppressor effects could be operating.

If the analysis of the structural evaluation of the model is to be successful, the adequacy of the measurement model must be assured (Asher, 1976). Therefore, subsequent runs reflected attempts to solve measurement problems indicated in the initial run. In essence, the subsequent runs indicated that the coping variables shared too much common variance to be treated as separate theoretical constructs. The resulting suppressor effects created problems of interpretation and suggested that the three variables should be combined in some fashion.

In the second run, the residuals for role ambiguity and role overload, as well as those for the coping variables, were allowed to covary. This illustrates one of the

advantages of the LISREL program over OLS regression used by SPSS (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1970). That is, one need not adopt the rather unrealistic assumption of uncorrelated residuals, an assumption which is particularly unrealistic in a field setting when the researcher uses a cross-sectional design. Rather, these intercorrelations can be estimated and taken into account in evaluating the structural model.

In addition, the second run allowed estimates of paths to the uniqueness associated with both independent and dependent variable measures. In addition, the nonsignificant path between social desirability and stress was replaced with paths linking social desirability to coping. This final revision represents a test of the other hypothesis for this control variable, i.e., that social desirability could influence self-reports of coping strategies.

Results for the second run indicated that, while the fit of the model to the data had been improved ($\underline{X}^2/df = 1.7$), there were again large residuals associated with the coping variables. This indicated that measurement problems still existed.

A third run was made in which the residuals for all of the independent variables were allowed to covary. The three coping variables were treated as multiple indicants of the same underlying construct. This was done in an attempt to solve the problems with large residuals associated with those variables. Results indicated a

poorer fit ($\underline{X}^2$/df ratio = 3.1) than the second run, and large residuals still appeared with the coping measures. It appeared that this considerably simplified model still did not solve the measurement problems. The third coping scale had particularly large residuals, four of which were in excess of .22.

Based upon the fact that the residuals were not altered by the simplified model, and in fact were made worse, revisions again focused on the coping scales. It appeared that in the fourth run the coping variables should be treated as two constructs, one focused on the situation (action and cognitive reappraisal) and one focused on symptoms (symptomatic). These revisions yielded a good fit to the data ($\underline{X}^2$/df = 1.1), a conceptually interpretable model, and low residuals (average value = .05) when reproduced correlations were compared with observed correlations.

The foregoing runs indicate the types of revisions that may appropriately be made to refine the measurement model so that analysis of the structural model can be meaningfully undertaken.

While the correlational and path analyses were not supportive of career transitions as a stress process, t-test comparisons of mean differences between the two groups (career transition vs. no career transition) yielded some interesting data. Significant mean differences are presented in Table E-1.

While there were no mean differences on job stress, role ambiguity, or coping, the career transition group is significantly younger, better educated, and has been with the organization for a shorter time period. As expected, the group perceives significantly less role overload, and has experienced significantly more in the way of personal life transitions.

These results confirm that intra-organizational mobility is concentrated among younger employees, though, in terms of organizational tenure (mean of 9½ years), these employees can by no means be considered to be in their initial organizational career stage.

The difference in personal life transitions is striking, even though in terms of age the no-change group could be said to be at higher risk for many of these occurrences (children leaving home, death of a spouse, etc.). It may be that the career transition group has been moved within the organization precisely because these people handle overload appropriately in the eyes of those who promote them. And, it may be that the means through which they

handle the work load inflicts some personal instability, though one study discussed earlier (Vincino & Bass, 1978) is not supportive of this theory.

APPENDIX E

T-TEST COMPARISONS OF

CAREER TRANSITION/NO TRANSITION GROUPS

Table E-1

T-Test Comparisons of Career Transition/No Transition Groups

Variable	T-Value	Career Transition (n = 78) $\bar{X}$	S.D.	No Career Transition (n = 31) $\bar{X}$	S.D.
Age	-3.76***	37	9.9	44	10.8
Education (years beyond high school)	3.29***	4.4	1.7	3.3	1.6
Organizational Tenure (years)	-2.40*	9.5	8	13.8	10
Role Overload	-2.54*	20	6.2	23.2	6.4
Personal Life Transitions[a]	2.84**	216.4	140	137.9	131

*p <.05

**p <.01

***p <.001

[a]Score on Personal Life Transition items taken from Rahe (1975).

REFERENCE NOTES

Reference Notes

1. Carroll, S. J. Personal conversation. University of Maryland, November 16, 1979.

2. Wanous, J. P. Personal conversation, August, 1980.

BIBLIOGRAPHY

BIBLIOGRAPHY

Abram, H. S. (Ed.). Psychological aspects of stress. Springfield, Ill.: Charles C. Thomas, 1970.

Anderson, C. R. Coping behaviors as intervening mechanisms in the inverted-U stress-performance relationship. Journal of Applied Psychology, 1976, 61, 30-34.

Anderson, C. R. Locus of control, coping behaviors, and performance in a stress setting: A longitudinal study. Journal of Applied Psychology, 1977, 62, 446-451.

Appley, M. H., & Trumbull, R. Psychological stress. New York: Appleton, Century Crofts, 1967.

Asher, H. B. Causal modeling. Beverly Hills: Sage Publications, 1976.

Bailyn, L., & Schein, E. H. Life/career considerations as indicators of quality of employment. In A. D. Biderman & T. F. Drury (Eds.), Measuring work quality for social reporting. New York: John Wiley & Sons, 1976.

Becker, H. S., Geer, B., Hughes, E. C., & Strauss, A. Boys in white: Student culture in medical school. Chicago: University of Chicago Press, 1961.

Beehr, T. A., & Newman, J. E. Job stress, employee health, and organizational effectiveness: A facet analysis, model and literature review. Personnel Psychology, 1978, 31, 663-699.

Beehr, T. A., Walsh, J. T., & Taber, T. D. Relationship of stress to individually and organizationally valued states: Higher order needs as a moderator. Journal of Applied Psychology, 1976, 61, 41-47.

Bergermaier, R., & Borg, I. Structural relationships among facets of work, nonwork, and general well being. Paper presented at the 39th Annual Meeting of the Academy of Management, Atlanta, Georgia, 1979.

Berkun, M. M., Bialek, H. N., Kern, R. P., & Yagi, K. Experimental studies of psychological stress in man. Psychological Monographs, 1962, 76, (15, Whole No. 534).

Berlew, D., & Hall, D. T. The socialization of managers: Effects of expectations on performance. Administrative Science Quarterly, 1966, 11, 207-223.

Bowers, K. S. Situationism in psychology: An analysis and a critique. Psychological Review, 1973, 80, 307-336.

Bradburn, N. The structure of psychological well-being. Chicago: Aldine, 1969.

Bramwell, S. T., Masuda, M., Wagner, N. N., & Holmes, T. H. Psychosocial factors in athletic injuries: Development and application of the social and athletic readjustment rating scale (SARRS). Journal of Human Stress, 1975, 2, 6-20.

Bray, D. W., Campbell, R. J., & Grant, D. L. Formative years in business. New York: Wiley, 1974.

Brenner, C. An addendum to Freud's theory of anxiety. International Journal of Psycho-Analysis, 1953, 34, 18-24.

Brief, A. P., & Aldag, R. J. Correlates of role indices. Journal of Applied Psychology, 1976, 61, 468-472.

Brooks, G. W., & Mueller, E. Serum urate concentrations among university professors. Journal of American Medical Association, 1966, 195, 415-418.

Burke, R. J., & Belcourt, M. L. Managerial role strain and coping responses. Journal of Business Administration, 1974, 5, 55-68.

Campbell, D. T., & Stanley, J. C. Experimental and quasi-experimental designs for research. Chicago: Rand McNally, 1963.

Cannon, W. B. Organization for physiological homeostasis. Physiological Review, 1929, 9, 339-430.

Caplan, R. D. Organizational stress and individual strain: A social-psychological study of risk factors in coronary heart disease among administrators, engineers and scientists. Ph.D. dissertation, University of Michigan, 1971. Dissertation Abstracts International, 1972, 32, 6706B-6707B.

Caplan, R. D., Cobb, S., French, J. R. P., Jr., Harrison, R. V., & Pinneau, S. R., Jr. Job demands and worker health: Main effects and occupational differences. U. S. Dept. of H.E.W., Washington, D.C.: 1975.

Caplan, R. C., & Jones, K. W. Effects of work load, role ambiguity, and Type A personality on anxiety, depression, and heart rate. Journal of Applied Psychology, 1975, 60, 713-719.

Carlson, R. E., Dawis, R. V., England, G. W., & Lofquist, L. H. The measurement of employment satisfactoriness. Minneapolis, University of Minnesota, 1963.

Cathcart, L. M. Four year study of executive health risk. Journal of Occupational Medicine, 1977, 19, 354-357.

Chapman, J. M., Reeder, L. G., Massey, F. L., Jr., Borun, E. R., Picken, B., Browning, G. G., Coulson, A. A., & Zimmerman, D. H. Relationships of stress, tranquilizers, and serum cholesterol levels in a sample population under study for coronary heart disease. American Journal of Epidemiology, 1966, 83, 537-547.

Cobb, S. Physiologic changes in men whose jobs were abolished. Journal of Psychosomatic Research, 1974, 18, 245-258.

Cook, D. T., & Campbell, D. T. Quasi-experimentation: Design and analysis issues for field settings. Chicago: Rand McNally, 1979.

Cooper, G. R., & Payne, R. (Eds.). Stress at work. New York: Wiley, 1978.

Cox, T. Stress. Baltimore: University Park Press, 1978.

Crider, A. Experimental studies of conflict-produced stress. In S. Levine & N. A. Scotch (Eds.), Social stress. Chicago, Aldine, 1970.

Crowne, D., & Marlowe, D. The approval motive. New York: John Wiley and Sons, 1964.

Davis, L., Cherns, A. B., & Associates. The quality of working life. Volume I: Problems, prospects and the state of the art. New York: The Free Press, 1975.

Dohrenwend, B. A., & Dohrenwend, B. P. (Eds.). Stressful life events: Their nature and effects. New York: John Wiley and Sons, 1974.

Dubin, R., Champoux, J. R., & Porter, L. W. Central life interests and organizational commitment of blue collar and clerical workers. Administrative Science Quarterly, 1975, 20, 411-421.

Durkheim, E. Division of labor in society. Glencoe, Ill.: The Free Press, 1947.

Endler, N. S., & Hunt, J. M. Sources of behavioral variance as measured by the S-R inventory of anxiousness. In N. S. Endler & D. Magnusson (Eds.), Interactional psychology and personality, Washington, D. C.: Hemisphere Publishing Co., 1976.

Frankenhaeuser, M., & Rissler, A. Catecholamine output during relaxation and anticipation. Perceptual Motor Skills, 1970, 30, 745-783.

Freud, S. Inhibitions, symptoms and anxiety. London: Hogarth Press, 1959.

Friedman, M. D., & Rosenman, R. H. Type A behavior and your heart. Greenwich, CT: Fawcett Press, 1974.

Friedman, M. D., Rosenman, R. H., & Carroll, V. Changes in serum cholesterol and blood clotting time in men subjected to cyclic variation of occupational stress. Circulation, 1958, 17, 852-861.

Friedman, S. B., Mason, J. W., & Hamburg, D. A. Urinary 17-hydroxycorticosteroid levels in parents of children with neoplastic disease: A study of chronic psychological stress. Psychosomatic Medicine, 1963, 25, 364-376.

Gal, R., & Lazarus, R. S. The role of activity in anticipation and confronting stressful situations. Journal of Human Stress, 1975, 2, 4-20.

Graen, G. Role-making processes within complex organizations. In M. D. Dunnette (Ed.), Handbook of industrial organizational psychology. Chicago: Rand McNally, 1976.

Graham, D. T., & Stevenson, I. Disease as a response to life stress. In H. I. Lief, V. F. Lief, & N. R. Lief, (Eds.), The psychological basis of medical practice. New York: Harper & Row, 1963.

Gray, J. The psychology and fear of stress. London: Weedenfeld and Nicholson, 1971.

Griffin, L. J. Causal modeling of psychological success in work organizations. Academy of Management Journal, 1977, 20, 6-33.

Gunderson, E. K. E., & Rahe, R. A. (Eds.). Life stress and illness. Springfield, Ill.: Charles C. Thomas, 1974.

Gupta, N., & Beehr, T. A. Job stress and employee behaviors. Organizational Behavior and Human Performance, 1979, 23, 373-387.

Hall, D. T. A model of coping with role conflict: The role behavior of college educated women. Administrative Science Quarterly, 1972, 17, 471-486.

Hall, D. T. Careers in organizations. Pacific Palisades, Cal.: Goodyear Publishing, 1976.

Hall, D. T. Mid-career "change". There's less there than meets the eye. Paper presented at the Annual Meeting, Academy of Management, Atlanta, Georgia, 1979.

Hamner, W. C., & Tosi, H. W. Relationships of role conflict and role ambiguity to job involvement measures. Journal of Applied Psychology, 1974, 59, 497-499.

Harris, W., Mackie, R. R., & Wilson, C. L. Performance under stress. (Technical Report VI.) Human Factors Research, 1956. (Cited in Levi, 1974).

Hawkins, N. G., Davies, R., & Holmes, T. H. Evidence of psychosocial factors in the development of pulmonary tuberculosis. American Review of Tubercular Pulmonary Disease, 1957, 75, 768-780.

Haynes, S. G., & Feinleib, M. Women, work and coronary heart disease: Prospective findings from the Framingham heart study. American Journal of Public Health, 1980, 70, 133-141.

Heise, D. Problems in path analysis and causal inference. In E. Borgatta (Ed.), Sociological methodology. San Francisco: Jossey-Bass, 1969.

Holland, J. L. Making vocational choices: A theory of careers. Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1973.

Holmes, T. H., & Masuda, M. Life change and illness susceptibility. In J. P. Scott & E. C. Senay (Eds.), Separation and depression: Clinical and research aspects. Washington, D.C.: American Association for the Advancement of Science, Publication No. 94, 1973, 161-186.

Holmes, T. H., & Masuda, M. Life change and illness susceptibility. In B. S. Dohrenwend & B. P. Dohrenwend (Eds.), Stressful life events: Their nature and effects. New York: John Wiley and Sons, 1974.

Holmes, T. H., & Rahe, R. W. The social readjustment rating scale. The Journal of Psychosomatic Research, 1967, 11, 213-218.

House, J. S. Occupational stress and coronary heart disease. A review and theoretical integration. Journal of Health and Social Behavior, 1974, 14, 12-27.

Ivancevich, J. M., & Donnelly, J. H. A study of role clarity and need for clarity for three occupational groups. Academy of Management Journal, 1974, 17, 28-36.

Janis, I. L. Psychological stress. New York: John Wiley and Sons, Inc., 1958.

Jenkins, C. D. Recent evidence supporting psychologic and social risk factors for coronary disease. The New England Journal of Medicine, 1976, 294, 987-994, 1034-1038.

Jenkins, C. D., Rosenman, R. H., & Friedman, M. Components of the coronary prone behaviour pattern: Their relation to silent myocardial infarction and blood lipids. Journal of Chronic Disease, 1966, 19, 399-609.

Jenkins, C. D., Zyzanski, S. J., & Rosenman, R. H. Coronary prone behavior: One pattern or several? Psychosomatic Medicine, 1978, 40, 25-43.

Jennings, E. E. Executive in crisis. East Lansing: Division of Research, Graduate School of Business Administration, Michigan State University, 1965.

Jennings, E. E. The mobile manager. New York: McGraw-Hill, 1967.

Jennings, E. E. Routes to the executive suite. New York: McGraw-Hill, 1971.

Joreskog, K. G., & Sorbom, D. LISREL IV: Estimation of linear structural equation systems by maximum likelihood analysis. Chicago: National Educational Resources, Inc., 1978.

Kabanoff, B. Work and nonwork: A review of models, methods and findings. Psychological Bulletin, 1980, 88, 60-77.

Kagan, A. R., & Levi, L. Health and environment-psychosocial stimuli: A review. Social Science and Medicine, 1974, 8, 225-241.

Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, D., & Rosenthal, R. A. Organizational stress. New York: Wiley, 1964.

Kasl, S. V. Epidemiological contributions to the study of work stress. In C. L. Cooper & R. Payne, Stress at work. New York: Wiley, 1978.

Kasl, S. V., & French, J. R. P., Jr. The effects of occupational status on physical and mental health. Journal of Social Issues, 1962, 18, 67-89.

Katz, D., & Kahn, R. The social psychology of organizations. New York: John Wiley, 1978.

Katz, R. Job longevity as a situational factor in job satisfaction. Administrative Science Quarterly, 1978, 23, 204-223.

Katz, R. Socialization processes within organizations: Career development considerations. Paper presented at the 39th Annual Meeting of the Academy of Management, Atlanta, Georgia, 1979.

Katz, R. Time and work: Toward an integrative perspective. In B. Staw & L. Cummings (Eds.), Research in organizational behavior, Vol. II. Greenwich, Conn.: JAI Press, 1980.

Katzell, M. R. Expectations and dropouts in schools of nursing. Journal of Applied Psychology, 1968, 52, 154-157.

Keller, R. T. Role conflict and role ambiguity: Correlates with job satisfaction and values. Personnel Psychology, 1975, 28, 57-64.

Kerlinger, F., & Pedhazur, E. Multiple regression in behavioral research. New York: Holt, Rinehart and Winston, 1973.

Kim, J. O., & Kohout, F. Special topics in general linear models. In N. H. Nie, C. H. Hull, J. G. Jenkins, K. Steinbrenner, & D. H. Bent, Statistical package for the social sciences. New York: McGraw-Hill, 1970.

Kornhauser, A. Mental health and the industrial worker. New York: Wiley, 1965.

Lacey, J. I., Kagan, J., Lacey, B. C., & Moss, H. A. The visceral level: Situational determinants and behavioral correlates of autonomic response patterns. In P. H. Knapp (Ed.), Expression of emotions in man. New York: International Universities Press, Inc., 1963, 161-196.

Lazarus, R. S. Psychological stress and the coping process. New York: McGraw-Hill, 1966.

Lazarus, R. S. Patterns in adjustment (3rd ed.). New York: McGraw-Hill, 1976.

Lehman, E. W., Schulman, J., & Hinkle, L. E., Jr. Coronary deaths and organizational mobility. Archives of Environmental Health, 1967, 15, 455-461.

Leifer, R., & Huber, G. P. Relations among perceived environmental uncertainty, organization structure and boundary spanning behavior. Administrative Science Quarterly, 1977, 22, 235-247.

Levi, L. Stress: Sources, management, prevention. New York: Liveright Publishing Corporation, 1967.

Levi, L. Psychosocial stress and disease: A conceptual model. In E. K. E. Gunderson & R. Rahe (Eds.), Life stress and illness. Springfield, Ill.: Charles C. Thomas, 1974.

Levinson, D. Role, personality and social structure in the organizational setting. Journal of Abnormal and Social Psychology, 1959, 58, 170-180.

Margolis, B., Kroes, W. H., & Quinn, R. P. Job stress: An unlisted occupational hazard. Journal of Occupational Medicine, 1974, 16, 659-661.

Maruyama, G., & McGarvey, B. Evaluating causal models: An application of maximum-likelihood analysis of structural equations. Psychological Bulletin, 1980, 87, 502-512.

Marx, K., & Engels, F. The German ideology. New York: International Publishers, 1939.

Masuda, M., & Holmes, T. A. Life events: Perceptions and frequencies. Psychosomatic Medicine, 1978, 40, 236-261.

Matteson, M. T., & Ivancevich, J. M. Organizational stressors and heart disease: A research model. Academy of Management, 1979, 4, 347-357.

McGrath, J. E. (Ed.). Social and psychological factors in stress. New York: Holt, Rinehart & Winston, 1970.

McGrath, J. E. Stress and behavior in organizations. In M. D. Dunnette (Ed.), Handbook of industrial and organizational psychology. Chicago: Rand McNally, 1976.

McLean, A. (Ed.). Reducing occupational stress. NIOSH Publication No. 78-140. U. S. Department of H.E.W., 1978.

Mechanic, D. Some problems in the measurement of stress and social adjustment. Journal of Human Stress, 1975, 1(3), 43-48.

Miles, R. H. An empirical test of causal inference between role perceptions of conflict and ambiguity and various personal outcomes. Journal of Applied Psychology, 1975, 60, 334-339.

Monat, A., & Lazarus, R. S. (Eds.). Stress and coping: An anthology. New York: Columbia University Press, 1977.

Mott, P. E., Mann, F. C., McLaughlin, Q., & Warwich, D. P. Shift work: The social, psychological, and physical consequences. Ann Arbor: University of Michigan Press, 1965.

Near, J. P., Rice, R. W., & Hunt, R. G. The relationship between work and nonwork domains: A review of empirical research. Academy of Management Review, 1980, 5, 415-429.

Nelson, P. D. Comment on R. H. Rahe, in E. K. Gunderson & R. H. Rahe, Life stress and illness. Springfield, Ill.: Charles C. Thomas, 1974.

Newcomb, T. M. Social psychology. New York: Dryden Press, 1950.

Newman, J. E., & Beehr, T. Personal and organizational strategies for handling job stress: A review of research and opinion. Personnel Psychology, 1979, 32, 1-43.

Nie, N. H., Hull, C. H., Jenkins, J. G., Steinbrenner, E., and Bent, D. H. Statistical package for the social sciences, (2nd ed.). New York: McGraw-Hill, 1970.

Orpen, C. Work and nonwork satisfaction: A causal-correlational analysis. Journal of Applied Psychology, 1978, 63, 391-407.

Paul, R. J. Role clarity as a correlate of satisfaction, job-related strain and propensity to leave - male vs. female. Journal of Management Studies, 1974, 11, 233-245.

Payne, D. E. Alienation: An organizational-societal comparison. Social Forces, 1974, 53, 274-282.

Pearlin, L. I., & Schooler, C. The structure of coping. Journal of Health and Social Behavior, 1978, 19, 2-21.

Quinn, R. P., & Shepard, L. J. The 1972-73 quality of employment survey: Descriptive statistics with comparison data from the 1969-70 survey of working conditions. Ann Arbor, MI: The Institute for Social Research, 1974.

Quinn, R. P., & Staines, G. L. The 1977 quality of employment survey: Descriptive statistics with comparison data from the 1969-70 and 1972-73 surveys. Ann Arbor, MI: The Institute for Social Research, 1979.

Rabkin, J. G., & Streuning, E. L. Life events, stress and illness. Science, 1976, 194, 1013-1020.

Rahe, R. H. Life change and subsequent illness reports. In E. K. Gunderson and R. H. Rahe (Eds.), Life stress and illness. Springfield, IL: Charles C. Thomas, 1974.

Rahe, R. H. Epidemiological studies of life change and illness. International Journal of Psychiatry in Medicine, 1975, 6, 133-146.

Rahe, R. H. Epidemiological studies of life change and illness. In Z. J. Lipowski, D. R. Lipsett, & P. P. Whybrown (Eds.), Psychosomatic medicine: Current trends and clinical applications. New York: Oxford University Press, 1977.

Rahe, R. H. Life change measurement qualification. Psychosomatic Medicine, 1978, 40, 94-97.

Rahe, R. H., Meyer, M., Smith, M., Kjaer, G., & Holmes, T. A. Social stress and illness onset. Journal of Psychosomatic Research, 1964, 8, 35-44.

Rizzo, J. R., House, R. J., & Lirtzman, S. I. Role conflict and ambiguity in complex organizations. Administrative Science Quarterly, 1979, 15, 150-163.

Robinson, J. P., & Shaver, P. R. Measures of social psychological attitudes (Revised ed.). Ann Arbor, MI: Institute for Social Research, 1973.

Rousseau, D. M. Relationship of work to nonwork. Journal of Applied Psychology, 1978, 63, 513-517.

Ruch, L. O., & Holmes, T. H. Scaling of life change: Comparison of direct and indirect methods. Journal of Psychosomatic Research, 1971, 15, 221-227.

Russek, H. I., & Zohman, B. L. Relative significance of hereditary, diet, and occupational stress in CHD of young adults. American Journal of Medical Science, 1958, 235, 266-275.

Sales, S. M. Differences among individuals in affective, behavioral biochemical and physiological responses to variations in work load. Doctoral dissertation, University of Michigan, 1969. Dissertation Abstracts International, 1970, 31, 8162A.

Schacter, S., & Singer, J. E. Cognitive, social and physiological determinants of emotional states. Psychological Review, 1962, 14, 379-399.

Schar, M., Reeder, L. G., & Dirken, J. M. Stress and cardiovascular health: An international cooperative study - II. The male population of a factory in Zurich. Social Science and Medicine, 1973, 7, 585-603.

Schein, E. H. Organizational socialization and the profession of management. Industrial Management Review, 1968, 2, 37-45.

Schein, E. H. The individual, the organization and the career: A conceptual scheme. Journal of Applied Behavioral Science, 1971, 7, 401-426.

Schmitt, N., Coyle, B. W., White, J. K., & Rauschenberger, J. Background, needs, job perceptions and job satisfaction: A causal model. Personnel Psychology. 1978, 31, 889-901.

Schuler, R. S. Definition and conceptualization of stress in organizations. Organization Behavior and Human Performance, 1980, 25, 184-215.

Sellitz, C., Wrighsman, L., & Cook, S. Research methods in social relations. New York: Holt, Rinehart and Winston, 1976.

Sells, S. B. On the nature of stress. In J. E. McGrath (Ed.), Social and psychological factors in stress. New York: Holt, Rinehart and Winston, 1970.

Selye, H. The stress of life. New York: McGraw-Hill, 1956.

Sheppard, H. L., & Herrick, N. Q. Where have all the robots gone? New York: Free Press, 1972.

Spielberger, C. D., O'Neil, H. F., & Hansen, D. N. Anxiety, drive theory and computer-assisted learning. Progress in Experimental Personality Research, 1972, 16, 109-148.

Switzer, L. Gelusil, jogging and gin: How executive educators deal with stress. Executive Educator, 1979, 1, 27-29.

Syme, S. L., Hyman, M. M., & Enterline, P. E. Some social and cultural factors associated with occurrence of coronary heart disease. Journal of Chronic Disease, 1964, 17, 277.

Theorell, T. Workload, life change and myocardial infarction. In A. McLean (Ed.), Reducing occupational stress. NIOSH, 1978.

Theorell, T., & Rahe, R. Life change events, ballisto-cardiography and coronary death. Journal of Human Stress, 1975, 1(3), 18-24.

Tosi, H. Organization success as a moderator of the relationship between influence and role response. Academy of Management Journal, 1971, 14, 7-20.

Tosi, H., & Tosi, D. Some correlates of role conflict and ambiguity among public school teachers. Journal of Human Relations, 1970, 18, 1068-1975.

Van Maanen, J. Breaking in: Socialization to work. In R. Dubin (Ed.), Handbook for work, organization and society. New York: Rand McNally, 1976.

Van Maanen, J. Organizational careers: Some new perspectives. London: John Wiley, 1977.

Van Maanen, J., & Katz, R. Individuals and their careers: Some temporal considerations for work satisfaction. Personnel Psychology, 1976, 29, 601-616.

Van Maanen, J., & Schein, E. H. Toward a theory of organizational socialization. In B. M. Staw and L. L. Cummings (Eds.), Research in organizational behavior, Vol. 1. Greenwich, Conn.: JAI Press, 1979.

Van Sell, M., Brief, A. P., & Schuler, R. S. Role conflict and role ambiguity: Integration of the literature and directions for future research. Human Relations, in press.

Vincino, F., & Bass, B. M. Lifespace variables and managerial success. Journal of Applied Psychology, 1978, 63, 81-88.

Wanous, J. P. Organizational entry: From naive expectations to realistic beliefs. Journal of Applied Psychology, 1976, 1, 22-29.

Wanous, J. P. Organizational entry: Recruitment, selection and socialization of newcomers. Reading, Mass.: Addison-Wesley, 1980.

Weber, M. The theory of social and economic organization. Glencoe, Ill.: Free Press, 1947.

Weick, K. E. Presentation at OB/OT Doctoral Consortium, 39th Annual Meeting, Academy of Management, Atlanta, Georgia, 1979.

Wiggins, J. Personality structure. Annual Review of Psychology, 1968, 19, 293-350.

Wilensky, H. Work, careers and social integration. International Social Science Journal, 1960, 12, 543-560.

Work in America. Report of a Special Task Force to Secretary of Health, Education, and Welfare. Cambridge: M.I.T. Press, 1973.

Wright, S. Genetic and biometric foundations (Volume 1). Chicago: University of Chicago Press, 1968.

Zajonc, R. B. Social facilitation. Science, 1965, 149, 269-274.

MICHIGAN STATE UNIV. LIBRARIES
31293101001216