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**Turnover in the High-Tech Industry: Shocks
and Sensemaking in the Unfolding Model of
Turnover**

by

Susan R. Crandall

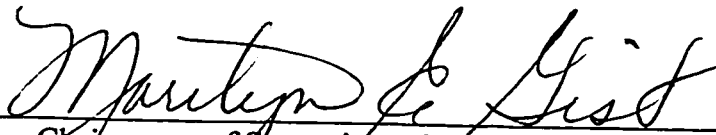
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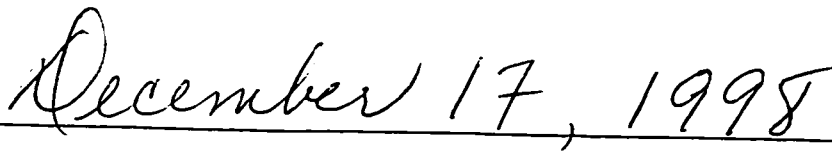
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Doctoral Dissertation

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Abstract

**Turnover in the High-Tech Industry: Shocks and Sensemaking
in the Unfolding Model of Turnover**

by Susan R. Crandall

Chairperson of the Supervisory Committee:

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This research explored the shock construct in Lee and Mitchell's (1994) unfolding model of turnover. The first study consisted of qualitative interviews conducted with professionals in the high-technology industry. Based on the results of this study, a model of shocks was created using sensemaking (Weick, 1995) theory. The model proposes that a shock occurs when an (1) event leads to a (2) cognitive adjustment of the employee's employment situation and results in (3) subsequent thoughts of quitting. The model hypothesizes that cognitive adjustment mediates the relationship between event dimensions (desirability, expectedness, and controllability) and thoughts of quitting. Attitudes (job satisfaction and organization commitment) and organization turnover are hypothesized to interact with cognitive adjustment to predict thoughts of quitting. The second study was an experimental vignette design developed to test the sensemaking model of shocks. The results of the study revealed partial support for the model: Cognitive adjustment mediated the relationship between desirability and the interaction between desirability and expectations on thoughts of quitting. The interaction between organization turnover and cognitive adjustment significantly predicted thoughts of quitting. The results are discussed in terms of their implications for the unfolding model of turnover and directions for future research.

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CHAPTER 1: INTRODUCTION

The high-technology industry is currently experiencing unprecedented shortages in information technology professionals. A recent survey conducted by the Information Technology Association of America found that one in 10 information technology jobs in the U.S. are unfilled, and that 68 percent of IT companies report staff shortages as the biggest barrier to growth. In another survey, 53 percent of engineering managers predict major delays due to a shortage of software engineers (Mandell, 1997). Many industry experts are concerned that the massive shortages in technology professionals could cause the U.S. to lose its lead in national productivity and seriously undermine the U.S.'s overall economy. These predictions underscore the need to examine the shortage of high technology professionals and how organizations can begin to rectify the situation.

There are three trends that appear to be driving the shortage of high technology workers. First, the robustness of the U.S. economy has led to industry's massive investment in information technology, with investments in computer hardware and software accounting for three-quarters of the increase in all business investment (Mandell, 1997). Second, the number of computer science graduates has fallen in the past decade (a decline of 43 percent), while the demand for computer skills has exploded. Finally, employee turnover at tech firms is on the rise. Turnover rates for information technology professionals are approaching 20-22 percent in 1998, compared to 15% in 1996 (Moskowitz, 1998). In Silicon Valley, 25% of Silicon Valley high tech employees switched jobs in 1997 - up 60% from 1989 (Schmit, 1998).

An individual firm's success in the twenty-first century will rest on its ability to retain its knowledge workers (Lee & Maurer, 1998; Mandell, 1997). The average cost of replacing a technical employee is estimated at \$123,000 (Schmit, 1998). The tangible costs include recruitment, selection, and training. The intangible costs include upheaval that results from turnover, negative publicity created by high turnover rates, and increased workloads for other employees (Cascio, 1982). In high technology, the departure of key engineers impedes new product development (Lee & Maurer, 1997; Turbin & Rosse, 1990), jeopardizing a firm's competitive advantage. As a result of these costs, employee turnover has become a major focus of scholarly inquiry.

In recent years, many authors have expressed dissatisfaction with traditional approaches to research in employee turnover (Lee & Mitchell, 1994; Mobley, Griffeth, Hand, & Meglino, 1979). Most theories focus on either economic market variables (pull theories) and/or job dissatisfaction (push) variables. While both theoretical thrusts have contributed to our understanding of turnover, these constructs may be too simplistic, and consequently yield an incomplete understanding of the turnover process (Hulin, Roznowski, & Hachiya, 1985; Mobley et al. 1979). Despite voluminous studies, research has found that models focused on attitudinal variables (push) rarely account for more than 20 percent in the variance in turnover. Research on labor-market studies often explains more than 50 percent of the variance of aggregated employee turnover; however, these results may be inflated due to aggregation biases (Lee & Mitchell, 1994).

In response to Hulin et al.'s (1985) call for simultaneous consideration of push- and pull-oriented perspectives, Lee and Mitchell (1991; 1994) developed the unfolding model of voluntary turnover. The unfolding model is primarily concerned with the cognitive decision process that individuals use when they are considering whether to leave an organization. The model's major components include *shocks* (events which initiate the leaving process), *scripts* (cognitive maps of event sequences), *images* (decision-making schemas) and the presence or absence of job alternatives. The combination of these components leads to four distinct decision paths, which form the basis of the model. The unfolding model was empirically tested on a nursing sample using a multiple case study design (Lee, Mitchell, Wise, & Fireman, 1996; Yin, 1994) and on an auditor sample using a survey design (Lee, Mitchell, Holtom, McDaniel & Hill, 1998). The results of both these studies revealed strong support for the unfolding model (i.e., people tend to use different psychological processes when leaving organizations).

In their extensive review of the turnover literature, Hom and Griffeth (1995) called for additional research into the unfolding model, which they praise for providing a fresh and more accurate depiction of the turnover process, particularly to the origin of the turnover process (i.e., shocks). While image theory (Beach, 1990) and job search models (see Hom & Griffeth (1995) for a review) are fairly well documented in the literature, the concept of shock has not been well developed (Lee & Mitchell, 1994). Defining and comprehending key constructs is an important precursor to substantive tests of the

unfolding model of turnover. Imprecision in a construct's definition can result in inadequate measures, contradictory operationalizations, and potentially conflicting results (Schwab, 1980). Understanding shocks and how they are interpreted will further our knowledge of how individuals react to external events and cognitively process the information which result in stay-or-quit decisions. In addition, it will provide managers with a more complete understanding of why employees leave organizations, and suggest methods of reducing the impact of the shocks that stimulate the turnover process.

Thus, the purpose of this dissertation is to explore the shock construct and its relationship to turnover decisions. In order to better understand how individuals experience and appraise shocks, the cognitive and behavioral processes individuals go through before and after experiencing a shock are examined. In addition, specific dimensions of shocks are posited so that we may better predict which types of events are likely to lead to shocks.

In the following chapter, I provide an overview of the unfolding model of turnover in order to clearly situate the shock construct in the nomological network. Then I review constructs that are similar to shocks which originate in theories across the social sciences. Each construct is compared to shocks, and its contribution to our further understanding of shocks is highlighted. Next, three ways in which individuals are theorized to cognitively appraise shocks are presented.

A two-pronged methodological approach was used to triangulate the shock construct (Jick, 1979). The first study, which involved qualitative interviews of high tech professionals, was designed to generate hypotheses relating to the cognitive and behavioral processes individuals go through after experiencing a shock. Utilizing the results of this study and the extant literature, I developed an integrative model of how individuals notice and interpret events as shocks, using the sensemaking literature as a theoretical backdrop. The second study, which using an experimental vignette design, was developed to test the hypotheses derived from the model. Analyses were conducted to determine if key dimensions of events, and precursors to these events, lead to thoughts of quitting. The results of this study are then presented and discussed. The final chapter discusses the theoretical and practical implications of these studies, and suggests avenues for further research.

CHAPTER 2: LITERATURE REVIEW

THE UNFOLDING MODEL OF TURNOVER

Lee and Mitchell (1994) suggest that individuals utilize different decision paths in making the decision to leave their organizations. Using a combination of four key concepts (shock, images, scripts, search and evaluation), Lee and Mitchell (1994) developed four decision paths to describe employee turnover. Which decision path is in operation depends on the individual and the situation. What follows is a summary of the unfolding model of turnover [interested readers should refer to Lee and Mitchell (1991; 1994) for a more complete description of the model]. An overview of the model is presented in Table 1.

Table 1 - Decision Path Prototypes for Leavers¹

Decision Path	Shock	Matching Script	Image Violation	Dis-affection	Job Search	Evaluation of Alternatives	Offers in Hand
1	Yes	Yes	N/A	N/A	No	No	No
2	Yes	No	Yes	N/A	No	No	No
3	Yes	No	Yes	Yes	Yes*	Yes	Yes
4A	No	No	Yes	Yes	No**	No	No
4B	No	No	Yes	Yes	Yes	Yes	Yes

N/A: The characteristic is not applicable to the decision path. The characteristic may or may not occur.

* If the shock is an unsolicited job offer or feeler, job search does not technically occur.

** No job search occurs before quitting; a job search may occur after quitting.

¹ Table adapted from Lee et al. (1998).

Decision Path 1. The first step in decision path 1 involves the occurrence of a shock, which prompts the individual to consider leaving his or her organization. Lee and Mitchell (1994) introduce the construct of shock, and offer the following general definition:

A shock to the system is theorized to be a very distinguishable event that *jars* employees toward deliberate judgments about their jobs and perhaps, to voluntarily quit their job. A shock is an event that generates meaning or has meaning about a person's job. A shock must be interpreted and integrated into the person's belief system and images...(p. 60).

Lee and Mitchell further clarify this definition by stating that “unless an event produces job-related deliberations that involve the prospect of leaving the job, it is not a shock” (p. 61).

The shock prompts a memory search for a prior similar shock and an appropriate response. The recollection brings forth a matching script (Abelson, 1976), which is defined as a cognitive mechanism “devoted specifically to the retention of the context-specific knowledge about events and event sequences and to the guidance of action on the basis of that knowledge” (Gioia, 1986: 57). The engaged script, in other words, provides guidance on which action is most appropriate given the circumstances and the expected consequences of these actions. For example, suppose an employee finds out that her husband has a promotional opportunity that requires moving to another state. Similar events have occurred previously in their marriage, and she has given up her job to follow

his career. In this instance, upon hearing the news of her husband's promotion, the employee enacts a matching script and quits her job.

Decision Path 2. In decision path 2, a shock occurs, prompting the employee to reconsider his or her attachment to the organization. In this case, however, no matching script exists to guide the employee to an immediate decision. Instead, the employee is theorized to assess his or her commitment to the organization using value, trajectory, and strategic images (Beach, 1990) that help guide decision-making. The first image is the value image, concerning one's personal values. The second image involves the employee's goals (trajectory image). The third image concerns activities directed toward goal attainment (strategic image). An image violation results in a quit decision; whereas the absence of an image violation results in the employee remaining at his or her job. For example, suppose that an employee of a cosmetics company discovers that his organization, contrary to its official policy, tests its products on animals (a shock). Since animal testing runs counter to his own values (an image violation), he then decides he can no longer work for the company and quits.

Decision Path 3. Unlike decision path 2, decision path 3 involves the presence of at least one specific job alternative. When a shock occurs, the three images (value, trajectory, and strategic) are evaluated. A fit decision leads to a person remaining in his or her job, a not-fit decision leads to some level of job disaffection. The disaffection prompts the employee to begin comparing the three images with the possible job

alternatives. A rational analysis (e.g., Subjective Expected Utility) is used to determine how to optimize one's preferences – comparing each alternative against the images and making the decision based on which is judged best. As an example, suppose a computer software engineer's current project is canceled due to a change in company strategy. This engineer has a standing offer at another high technology-firm. When the shock occurs (project cancellation), the engineer determines if it violates any images. If so, she then compares her current company against the alternative to determine which is the best match based on her values, goals, and strategic images. She then selects the option (to stay at her current firm or to leave for the other firm) which maximizes her preferences.

Decision Path 4. Sometimes employees leave their organization not because of a specific shock, but because they come to realize that their goals are not being achieved, or the organization no longer fits within their value system (image violations). This decision process is theorized to be more gradual, compared to the more immediate effect of a shock. If job dissatisfaction that results from mismatched images is very high, the employee may quit regardless of whether job alternatives exist (decision path 4a). In decision path 4b, employees engage in a decision process which includes job dissatisfaction leading to lowered commitment, job search activity, and intention to leave. Note that the turnover process described by decision path 4 is similar to traditional affect-induced turnover models (e.g., Mobley et al., 1979). Hence, the unfolding model of turnover is a complementary extension to existing theories, rather than a competing

theory. Since decision path 4 does not involve shocks, it will not be explored further in this dissertation.

Summary

Each path depicts a potential path an employee might take in the process of deciding whether to leave his or her organization. Note that the unfolding model departs from the “one size fits all” perspective that dominates employee turnover research. Instead, the model recognizes individual and situational differences in the turnover decision-making process. It parts ways from rational decision-making models (Mobley et al., 1979) by incorporating cognitive constructs such as images and scripts. Finally, it radically departs from traditional affect and attitudinal-driven (e.g., job dissatisfaction and commitment) turnover theories by suggesting that the first step in the turnover process for many individuals is the experience of a jarring event, or shock, that prompts them to consider leaving their organization. Thus, the unfolding model of turnover provides a new direction for turnover theory and research.

In the empirical tests of the model conducted by Lee and his colleagues (1996; 1998) additional analysis of their results suggested that certain shock types (namely, expected or not expected, work- or non-work related) may predict the decision path an individual uses in a quit decision. Specifically, they found that a) decision path 1 is most likely to occur with an expected and non-work shock, b) decision path 2 is most likely to occur with a work-related shock, and c) decision path 3 is most likely to occur in

conjunction with an unexpected, negative work-related shock in the nursing sample (Lee et al., 1996) and an organizational or unsolicited job offer shock in the accountant sample (Lee et al., 1998). These findings suggests that different types and interpretations of shocks may lead to different decision paths, and potentially, different decision outcomes. Exploring the characteristics and dimensions of shocks is key to establishing the construct validity of shocks, and will be explored later in this thesis. First, the definition of shock as well as related constructs in the literature are examined.

REVIEW OF RELATED CONSTRUCTS

As defined above, a shock is a jarring event that initiates the psychological decision process involved with quitting a job. In order to establish construct validity (Schwab, 1980), it is important to distinguish the conceptual similarities and differences between shocks and other related constructs. As a first step in this process, the following databases were searched for related theories and similar constructs: Business Index, PsycINFO and the Expanded Academic Index. This review of the psychological, clinical, sociological and organizational literature uncovered several theories that include a triggering event as a causal mechanism to explain behavior, including Affective Events Theory (Weiss & Cropanzano, 1996), theories of life events and stress (see Aldwin (1994) for an overview of this literature), organizational commitment (Becker, 1960; Guzzo, Nelson, & Noonan, 1992), theories of change (Bruce & Scott, 1994; Ford & Ford, 1995; Isabella, 1990; Levinson, 1986; Tannenbaum & Hanna, 1985), critical incidents

(Gundry & Rousseau, 1994) and punctuated equilibrium (Gersick, 1991). In addition, there were several theories that related specifically to an “event-withdrawal sequence”, such as role exit (Ebaugh, 1988), quitting (Dauten, 1980), turnover (Rosse & Hulin, 1985), and stress (Aldwin, 1994). An analysis of this literature revealed four constructs which appeared most relevant for our understanding of shocks: *stimulus events*, *first doubts*, *realizations* and *life events*. These constructs, and their contribution to our understanding of shocks and the unfolding model of turnover, will be reviewed next.

Stimulus Events

The unfolding model is consistent with a small but growing body of literature that recognizes turnover as an adaptive (Rosse, 1991; Rosse & Hulin, 1985) or a coping (Wright & Bonnett, 1993; 1991) process. For example, Rosse and Miller (1984) presented a model that views withdrawal (including lateness, absence and turnover) as part of a more general process of adaptation to work. They suggest that stimulus events periodically trigger an evaluation of the work situation. If the result of this evaluation is relative dissatisfaction, various remedial strategies are contemplated. Whichever strategy has the greatest perceived utility is implemented. Strategies might include behavioral or psychological withdrawal, attempts to change the work environment, or retaliation. Rosse and Hulin (1985) found that satisfied workers were most likely to implement changes on the job in response to stimulus events, whereas dissatisfied workers were more likely to report avoidance behaviors and intentions to turnover.

The stimulus event has two distinguishing characteristics: 1) the person notices it and 2) it leads the employee to realize that he or she could be better off in the subjective utility sense (Rosse & Miller, 1984). Shocks differ from stimulus events in three major ways. First, the magnitude of the stimulus event is theorized to be variable; it can range from just noticeable to a jarring event. In contrast, the magnitude of the shock to the system is theorized to be dichotomous; it is a jarring, undeniable, and a clear and present entity (Lee & Mitchell, 1994: 72). Second, whereas the stimulus event is theorized to prompt a subjective expected utility analysis only, a shock may prompt script matching (decision path 1), evaluation of images (decision paths 2 & 3), and/or subjective utility analysis (decision path 3).

Finally, stimulus events and shocks differ in terms of whether they stimulate thoughts of quitting. By definition, a shock *necessarily* leads to thoughts of quitting. It may lead to other cognitions and outcomes as well, since shocks do not always eventuate in leaving the organization. Stimulus events, on the other hand, may lead to thoughts of quitting, but they do not *necessarily* do so. They trigger an evaluation of the situation which could lead to one of several coping strategies (including quitting, lateness, absence, or work neglect). The conceptual importance of this distinction is that while stimulus events may help us understand a class of withdrawal behaviors, shocks allow us to concretize the event that initiates thoughts of quitting. In this way, we can gain a better

understanding of the specific causes and correlates of employee turnover per se, rather than a broad understanding of withdrawal behaviors in general.

First Doubts

There is also evidence from literature outside the field of organizational behavior to support the proposition that jarring events, or shocks, constitute the first stage in an individual's decision to leave a role (Dauten, 1980; Ebaugh, 1988). For example, Ebaugh (1988) found evidence of a shock-like construct in her research on role exit. Using qualitative methodology, she interviewed 173 "ex-es," including those who voluntarily left familial roles (e.g., divorce, relinquishing of child-rearing duties), occupational roles (including an extensive study of nuns), ideological roles (e.g., the ministry) and sex changes (e.g., transsexuals). From her research, she determined that regardless of the types of roles being departed, there are underlying similarities and variables that make role exit definable and unique as a social process. She concluded that a pattern exists among most leavers with regard to the sequence of events during the exit process. The first stage of this sequence involves what Ebaugh (1988) terms first doubts.

In the first stage of role exit, first doubts, role incumbents begin to question and experience doubts about their role commitment. They reinterpret and redefine a situation that had been taken for granted. Even though the individual may have been dissatisfied previously in his or her role, when doubts become conscious, the person begins to reinterpret meanings and normative expectations associated with the role. At that point,

the individual begins to search for alternative roles. Ebaugh (1988) found five categories of circumstances that give rise to first doubts: organizational changes, disappointments and drastic changes in relationships, specific events, and burnout.

Organizational change. There are two types of situations where organizational change gives rise to thoughts of leaving an organization. The first is under conditions of rapid change, where members are unwilling to accommodate. Members lose their initial commitment because their goals and interests no longer match the organization. The second situation is more gradual as organizational structures no longer accommodate the needs or interests of some of the members. For example, many medical doctors began to question their commitment to medicine with the increase in the bureaucratization of medicine (Sarason, 1977). Rather than viewing the doctor-patient relationship as a caring and cooperative one, structural changes caused them to see each patient as a potential malpractice suit. The first situation (rapid change) appears similar to a shock, which may trigger decision paths 1, 2 or 3. The second situation, on the other hand, is more gradual and is more likely to invoke decision path 4 in the unfolding model of turnover.

Disappointments and changes in relationships. First doubts sometimes emerge as a result of disillusionment when an idealized prescribed role did not turn out that way in reality. Particularly with marriage and parenthood, our society places unrealistic expectations on what it will be like to be married and start a family. In terms of organizational life, individuals enter into a job or career with particular expectations.

Porter and Steers' (1973) proposition that unmet expectations are the central determinant of turnover decisions is conceptually similar to the disappointments and changes in relationships type of first doubts. Confirming the importance of this category of first doubts, a meta-analysis conducted by Wanous, Poland, Premack, and Davis (1992) found that met expectations were correlated most closely with job attitudes, intentions to quit and, last, turnover. Hence it appears that disappointments and changes in relationships are not shocks in and of themselves, but that the evaluation of these changes may be an important dimension of the shock construct. Thus, expectations will be considered later in this thesis as a critical appraisal mechanism used in evaluating a shock.

Specific events. While an individual may have vague, unfocused feelings of dissatisfaction, some event will focus these feelings and make them conscious to the individual. Ebaugh (1988) gives the example of a physician who began re-evaluating his professional commitment following the accidental death of his son. When he started to experience chest pains a few years later, he decided to retire completely from medicine. Ebaugh's events category appears most similar to Lee and Mitchell's (1994) definition of a shock, as it is a "jarring event" that causes one to reevaluate his or her role and consider exiting from the current situation.

Burnout. In contrast to the suddenness of specific events, burnout happens over a period of time. Burnout is a negative response on the part of the individual to role-related stress. Its negative responses include: 1) exhaustion, loss of interest, lack of energy

resulting in physical symptoms such as insomnia, headaches, frequent illness as well as the emotional states associated with feelings of low self-esteem and incompetence, 2) depersonalization of relationships towards clients and patients, and 3) depression, low morale, diminished productivity and a general inability to cope with job demands and social relationships (Maslach, 1982). According to the unfolding model, individuals experiencing burnout are most likely to employ decision path 4 in the unfolding model of turnover process.

In summary, Ebaugh's research on role exit lends support to Lee and Mitchell's (1994) unfolding model of turnover. Ebaugh's (1988) description of events appears to be most conceptually similar to Lee and Mitchell's (1994) definition of shock. Nevertheless, it seems likely that the events category could be confounded with "drastic changes and disappointments" or "organizational change." For example, failure to achieve a promotion (a disappointment) or the announcement of a merger (organizational change) could also be construed as events. As such, disappointments, changes in relationships, and organizational changes may represent critical categories of shock events. Thus, four out of the five categories of first doubts are consistent with the definition of shock proffered by Lee and Mitchell (i.e., a jarring event that causes one to consider leaving one's role). Ebaugh's (1988) work highlights the importance of examining the objective characteristics of shocks. The fifth category, burnout, maps to the more gradual turnover decision-making process outlined as decision path 4. Ebaugh's (1988) findings are also

consistent with Lee and Mitchell's assertion that the unfolding model of turnover is complementary to, rather than competing with, traditional models of turnover.

Realizations

Dauten (1980) also conducted a qualitative study to examine quitting decisions. His central question was: what differentiates a successful quit decision from a non-successful one; i.e., one that the individual regrets at a later point in time. He interviewed 120 individuals who had experienced making quit decisions, including whether to quit an important relationship, make a career change, seek a divorce, or get a sex change operation. His research found that most people experience a *realization* as the first stage in the quitting process.

A sudden or overwhelming realization facilitates the end of a relationship because the event brings to light something too severe to ignore. According to Dauten (1980), the function of a realization is that:

...the experience becomes an integral part of reevaluating the relationship's future and thus a cornerstone in the process of making a decision. In successful quits the Realization becomes not a guiding star but a kind of trailing star...providing reassurance that the right path was taken, reducing doubt, regret, guilt (p. 34).

For example, one interviewee, Donna, had a realization that provoked her to think about quitting the teaching profession. After obtaining a master's degree in education in order to move to the next pay scale, Donna received a rude awakening upon opening her new paycheck. She discovered it was only seventeen dollars a week more. She commented that "it seemed to shout out to me that teaching was a dead end" (p. 41).

Consistent with the unfolding model, this realization prompted her to look at other alternatives to teaching.

Consistent with Ebaugh's (1983) research on role exit, Dauten's (1980) study provides additional support for the idea of an event stimulating the turnover decision-making process. One difference between a realization and a shock is that Dauten proposes that a realization is the *result* of some event, whereas a shock is theorized to be the objective event itself. Dauten (1980) relates several examples that clarify this distinction:

Viola would still be married had not a relentless string of major incidents forced her to a Realization (p.23).

A sudden or overwhelming Realization typically helps end a relationship simply because something becomes too devastating to rationalize or otherwise ignore. (27).

...Realization came while he was sitting on his patio in quiet contemplation (p. 28).

Hence, the realization comes as a result of cognitive processing of the event or events. Shocks, are theorized to be more closely tied to the objective context. whereas the actual event in Dauten's (1980) model plays a lesser role compared to the perceptual interpretation (i.e., a realization) of that event. Since realizations appear to involve the evaluation of goals and values, they may be more conceptually similar to image violations than to shocks (objective events) in the unfolding model of turnover. In order to fully understand the impact of shocks, its critical that we understand and differentiate the contextual and perceptual influences of events on turnover decisions. The literature on

stress and life events provides additional clarification on how cognitive processing may influence the interpretation of an event as a shock.

Life Events

A final construct that contributes to our understanding of shocks, life events, stems from the clinical and social psychological literature on stress. Life events are “objective experiences that disrupt or threaten to disrupt an individual’s usual activities, causing a substantial readjustment in that individual’s behavior” (Thoits, 1983). Life events are generally thought of as major events (such as bereavement, divorce, job loss, illness, change in work responsibilities, termination of employment, change in financial status) that happen to individuals (Aldwin, 1994; Holmes & Rahe, 1967).

Research findings suggest that the behavioral outcomes of life events may include major changes, including role changes (e.g., a doctor leaving her job as a result of experiencing heart symptoms). For example, life events may serve as an initial impetus in an individual’s decision to embark on intentional self-change (such as quitting an addictive behavior or making a career change). Self-change may occur because many life events are concerned with losing or acquiring roles (Kiecolt, 1994) or failure in the pursuit of an identity-central goal (Pyszczynski & Greenberg, 1987). For example, in a study examining women’s decisions to return to college after age 25, Martin Ross (1988) found that 63% reported a single critical life event that triggered their return to school (e.g., divorce). Since turnover is an example of losing a role (one’s job) and oftentimes is

indicative of failure of an identity-central goal (e.g., an accountant deciding to leave a firm once she realizes she won't achieve partner status), it seems plausible to extend the findings in the life event literature to that of shocks in the unfolding model of turnover.

While it may be tempting to assume that all shocks fall under the rubric of life events, several caveats are in order. First, no investigators have identified the full range of events to be included in a life-events inventory. As a result, life-event inventories may not be comprehensive (Turner & Wheaton, 1995); moreover, they may exclude some events that would precipitate leaving an organization (e.g., conflict with one's supervisor). Second, life events inventories often exclude non-events, such as not getting married (Herbert & Cohen, 1986). Organizational non-events, such as not getting a promotion or not landing a desired client, are frequently critical in terms of individual's deliberating on whether to exit. Thus, while the life-events literature provides a starting point for examining shocks, particularly in terms of the appraisal of shocks, shocks are distinct from life events.

An important contribution of research on life events concerns stress appraisal. Research on the appraisal of life events has shown that events that are appraised as negative, unexpected, and uncontrollable are most likely to cause psychological distress (Thoits, 1983). Recall that Lee et al. (1996) found that positive and expected shocks were most likely to lead to decision path 1 exits, whereas negative and unexpected shocks were correlated with decision Paths 2 and 3. In the next section, the importance of event

appraisal is explored in depth. Research on the three critical appraisal dimensions (desirability, expectedness, and controllability) of life events will be reviewed in the following section.

EVENT APPRAISAL DIMENSIONS

Most current research on stress and life events centers around the cognitive process of appraisal, which pertains to the evaluations of events and their attributes (Lazarus & Folkman, 1984; Monroe & Kelley, 1995). Cognitive appraisal is defined as “the process of categorizing an encounter, and its various facets, with respect to its significance for well-being...it is largely evaluative, focused on meaning or significance” (Lazarus, 1991, p. 31). Lazarus, a leading researcher on stress and coping, points out that appraisal is the central concept of his theoretical analysis of stress.

Lazarus and Folkman (1984) theorize that appraisal occurs in a two-stage process. The first stage, primary appraisal, involves the evaluation of the environmental situation with regard to the person’s well being. Three types of primary appraisal are posited: 1) irrelevant, 2) benign-positive, and 3) stressful. Stressful appraisals are further categorized into a) harm/loss (damage or loss has occurred), b) threat (possible damage or loss) and c) challenge (situation presents possibility for growth or gain). Secondary appraisal concerns the capability of the individual for dealing with the situation. It includes taking into account the available coping options, the capabilities of the individual for dealing with the situation, and the likelihood that a given strategy will be effective in the situation.

Lazarus and Folkman (1984) suggest an iterative process where secondary appraisals feedback on primary appraisals over a period of time.

As suggested above, three appraisal attributes that have been empirically demonstrated as salient are: desirability, expectations, and controllability (Thoits, 1983). The first two would be considered primary appraisal, whereas the controllability dimension is consistent with secondary appraisal (since it reflects information about one's ability to handle the situation). As mentioned earlier, Lee and his colleagues examined two of these dimensions (desirability² and expectedness) in their previous studies (Lee et al., 1996; Lee et al., 1998). Next, I provide a theoretical rationale for exploring these three appraisal attributes, and suggest how these findings extend to shocks and the unfolding model of turnover.

Desirability

The desirability of an event (i.e., whether it is positive or negative) is likely to influence its effects on withdrawal considerations and subsequent turnover. In a similar vein, researchers in the stress arena have examined the influence of positive and negative events on psychological and health outcomes. Although early researchers on life events proposed that both positive and negative events lead to stress, more recent research suggests little evidence supporting this supposition (Taylor, 1991; Thoits, 1983).

² Note that the "desirability" dimension discussed in this dissertation is identical to the "positive/negative shock characteristic suggested by Lee and his colleagues. It has been renamed here to be consistent with previous literature on stress and for grammatical consistency with the other dimensions.

Taylor (1991) reviewed evidence that suggested that the effects of positive and negative events are not symmetrical. She concluded that negative events produce stronger reactions, stronger physiological responses and stronger subjective feelings of affect than do positive events. Most studies conclude that psychological disturbance is more highly correlated with total undesirable change rather than total amount of change. Desirable events have either a very weak or non-existent association with depression, anxiety and tension (Thoits, 1983).

To this author's knowledge, only one study to date has examined the different effects of positive and negative stress on employee turnover. Using a sample of 282 full-time, white-collar administrative, health care, and clerical personnel, Bhagat, McQuaid, Lindholm, Segovis (1985) examined the effects of positive and negative stress on organizational outcomes. They found that negative stress (either related to job events or personal life events) was negatively correlated with job satisfaction, organizational commitment, and was positively correlated with job alienation. The authors did not, however, find a relationship between negative life or job stress on turnover intentions. However, turnover intentions was measured by the *supervisor's* perception of an employee's likelihood of turnover, which is limited as a measure of employees' intentions. Taken together, these findings suggest that negative events, which appear to be akin to shocks, may stimulate intentions to turnover.

Bhagat et al. (1985) defined positive stress as a dynamic condition in which an individual is confronted with an opportunity to be what he or she desires. These authors found that positive job-events stress and positive personal-events stress were not significantly related to job satisfaction, organizational commitment, job alienation, or turnover.

Contrary to these findings, research on role change suggests that life events can lead to the decision to change oneself even if they do not greatly increase psychological distress. For example, acquiring a new role, such as being a parent, could offer new challenges and sources of satisfaction (Kiecolt, 1994). Leaving one's place of employment can also be considered a decision to change oneself, as it also entails taking on a new role (e.g., joining a new organization or becoming a homemaker). Thus, positive shocks could lead an individual to decide to leave his or her organization if they do not fit with one's desired goals or images. For example, getting married or having a child, typically considered positive events, may not be congruent with remaining employed with one's organization.

Lee and his colleagues (1996; 1998) found evidence of both positive and negative shocks in their empirical tests of the unfolding model of turnover. They found that decision path 1 (which involves a shock and a matching script) was significantly associated with positive shocks in the study involving nurses, but this finding was not replicated in the auditor sample. Decision path 2 (which involves a shock and image

violations) was significantly associated with negative shocks in the nursing sample, but this finding was not replicated in the auditor sample. Decision path 3 (which involves a shock, image violation, and job search) was not significantly associated with either positive or negative events, suggesting an equal occurrence of positive and negative shocks.

Taken together, the literature suggests that either positive or negative shocks can create the impetus to leave one's organization. A negative shock may be interpreted as a threat to one's well-being (e.g., failure to get a promotion), whereas a positive shock may represent a challenge or opportunity (e.g., a job offer at another firm) to make a change in one's life. Furthermore, the *type* of shock may influence whether it is interpreted as positive or negative. For example, Lee et al. (1996) found that positive shocks that more likely to be personal events, whereas negative events that are interpreted as shocks are most likely to be job-related or organizational in nature. This finding supports Weick's (1995) contention that the conditions for positive affect are not abundant in most organizations. He argues that this is because organizational members have little control over interruptions, projects are more likely to be delayed than accelerated, and negative interruptions (such as reorganizations, intergroup conflict) are common.

Expectations

Events vary in the degree to which they are foreseen, or expected. Turnover researchers have explored the relationship between expectations and turnover using the

construct of “met expectations” (Porter & Steers, 1973), surprise (Louis, 1980), and the psychological contract (Robinson, Kraatz & Rousseau, 1994; Robinson & Rousseau, 1994; Rousseau, 1989). *Expectations* refer to what the employee expects to receive from his or her employer (Wanous, 1977). In her theoretical analysis of newcomer surprise, Louis (1980) defined *surprise* as “the difference between an individual’s anticipations and subsequent experiences in a new setting” (p. 237). A third construct, the *psychological contract*, refers to the perceived mutual obligations that characterize the employees relationship with his or her employer.

Hence, the study of expectations has a long history in the turnover literature. The purpose of this section is to review the literature on expectations (including met expectations, psychological contracts, and surprise) as they relate to turnover. These constructs are summarized to produce specific propositions regarding the nature of shocks in the unfolding model of turnover.

Met expectations. The construct of met expectations has been well researched in the area of employee turnover (Hom & Griffeth, 1995). Porter and Steers (1973) hypothesized that when an individual’s expectations are not substantially met (measuring the discrepancy between pre-entry expectations and post-entry perceptions), his or her propensity to withdraw would increase. Only those expectations for important aspects of the job or organization are included in Porter and Steer’s (1973) definition; expectations that are considered inconsequential or irrelevant are excluded (Wanous et al., 1992). A

meta-analysis on studies of met expectations research showed that met expectations had a corrected average correlation of .39 for satisfaction, .32 for commitment, .29 for intent to remain and .13 for job survival (Wanous et al., 1992). While these results provide promising support for the unmet expectations hypothesis, the definition of expectations is unclear (e.g., there are no criteria for assessing importance as a dimension of expectations). Furthermore, Wanous et al. (1992) reported that researchers use widely varying measures of expectations (e.g., within versus between person measures).

Psychological contract. Research on psychological contracts provides additional information about employee reactions to unexpected events (Robinson, Kraatz & Rousseau, 1994; Robinson & Rousseau, 1994; Robinson, 1996; Rousseau, 1995; Rousseau, 1989). A psychological contract is defined as the mutual obligations between an employee and employer that define their relationship. Obligations are beliefs, held by an employee or an employer, that each is bound by promise to an action in relation to the other party. These obligations may derive from implicit or explicit promises of future reciprocity. Each party possesses his or her own perceptions of the mutual obligations defining a relationship.

The psychological contract, unlike formal employment contracts, is not made once, but rather is revised throughout the employee's tenure in the organization (Rousseau & Parks, 1992). The longer the relationship endures and the more the two parties interact, with repeated cycles of contribution and reciprocity, the broader the array of contributions

and inducements that might be included in the contract (Rousseau, 1989). Events in the form of new job assignments, relocations, and organizational restructuring may create new terms for the psychological contract.

A violation of the psychological contract is a failure of one party to fulfill its obligations to the other. Such a violation can erode both the relationship and the affected party's belief in the reciprocal obligations of the two parties. For example, Robinson et al. (1994) investigated violations in the psychological contract in a study using 128 MBA graduates. Controlling for initial intentions to remain with an organization, psychological contract violations significantly predicted current (negative) intentions to remain with one's employer, accounting for approximately 16 percent of the variance. Those who actually left their employer reported a greater degree of psychological contract violation than those who had not left their employer.

Expectations v. psychological contract. Researchers of psychological contracts argue that psychological contracts and unmet expectations are separate and distinct constructs (Robinson, 1996; Rousseau, 1989). Expectations refer to what the employee *expects* to receive from his or her employer (Wanous, 1977), and are typically measured at one point in time (within the first year of employment). Psychological contracts are a specific type of expectation; they originate from the individual's belief in a *promised* outcome, stated or implied, that he or she has been offered in exchange for his or her contributions to the organization. Thus, unlike expectations, psychological contracts

entail a belief in what the employer is *obliged* to provide, based on perceived promises of reciprocal exchange. Also unlike unmet expectations, psychological contracts are revised throughout an employee's tenure with the organization.

Psychological contract violations and unmet expectations, though conceptually related and sharing some outcomes, can trigger different responses. For example, associations between contract violations and employee reactions are reported to be much stronger than those typically found between unmet expectations and employee reactions. Violated contracts, but not unmet expectations, raise issues about employer ethics, including respect for persons, codes of conduct, and other patterns of behavior associated with relationships (Rousseau, 1989).

Research has shown that an employee who *expects* a pay raise after a period of time in exchange for hard work may feel *disappointed* when that expectation is not met. However, an employee who has been *promised* a pay raise in exchange for hard work but does not receive it is likely to feel *wronged* (Rousseau, 1989; Rousseau & Parks, 1993). Unmet expectations result in feelings of disappointment while violated psychological contracts produce anger and erode trust in the relationship and thus, are expected to have more serious repercussions than unmet expectations (Rousseau, 1989).

Whereas Wanous *et al.* (1992) found significant correlations between unmet expectations and job dissatisfaction ($r=.39$), intention to leave ($r=.29$) and actual turnover ($r=.13$), Robinson *et al.* (1994) reported much stronger correlations between violations of

a psychological contract and satisfaction ($r = -.76$); intentions to stay ($r = .49$), and actual turnover ($r = .29$). These comparisons suggest that psychological contract violations, in comparison to unmet expectations, more strongly impact satisfaction, intentions to quit, and turnover.

In a longitudinal study designed to test the mediators between psychological contract breach and employee behaviors, Robinson (1996) found that unmet expectations partially mediated the relationship between psychological-contract breach and intentions to remain. She concluded that this finding offers evidence that these two constructs are in fact distinct: while psychological-contract breach produces unmet expectations, unmet expectations alone cannot account for the effects of psychological-contract breach. However, the measurements used by Robinson (1996) suggest the need for caution in interpreting these results. First, the measurement for psychological contract breach was created using discrepancy scores, which are notorious for their psychometric problems (Cronbach & Furby, 1979). Second, unmet expectations were measured at one point in time (T3) using a 2 item Likert-type scale, whereas psychological contract breach was more carefully measured at two points in time (T1 and T2) using a seven item scale previously validated by Rousseau (1990). This suggests an unfair comparison (Cooper & Richardson, 1986) between the two constructs, which may limit the validity of Robinson's (1996) conclusion.

Hence, in spite of the differences outlined by Rousseau and her colleagues and the results of the Robinson (1996) study, a direct test between the constructs of met expectations and psychological contracts has not taken place. It is highly likely that there is overlap between the two constructs. In particular, some “unmet expectations” from the original studies (Wanous et al., 1992) could be classified as psychological contracts.

Surprise. Louis’s (1980) work on surprises further developed Porter and Steer’s model of met expectations. She introduced a comprehensive taxonomy of different types of unmet expectations based on three dimensions: *level of awareness*, *focus* of the expectation, and the extent to which the expectation is *met or unmet*. She theorized that expectations vary on the level of awareness an individual has of unanticipated events, which includes emergent, tacit as well as conscious expectations. The research on met expectations meta-analyzed by Wanous et al. (1992) focused on conscious expectations, those expectations which employees could articulate and evaluate as met or unmet. For example, an employee may have an expectation that she will be promoted within one year following entry into an organization. This expectation might be conscious (employee very aware of expectation to be promoted) or tacit (employee has expectation, but may not have articulated it to self or others).

The studies on psychological contracts (Rousseau, 1995) suggest that the level of awareness in a psychological contract is always conscious. A psychological contract represents a perceived promise or obligation on the part of the organization in exchange

for performance. The individual is very aware (conscious) of this expectation, and is especially aware when the promise is broken (i.e., a contract breach). The research on psychological contracts suggests that the more aware (conscious) the employee is of the expectation, the stronger the psychological and behavioral outcomes when the expectation is unmet.

Many of the violations reported in Robinson and Rousseau's (1994) study are jarring events, and hence would be considered shocks in the unfolding model of turnover. Examples include: promises of specific compensation benefits promised which were not delivered; misrepresentation of a company's financial and market position; and the discovery that coworkers are being laid off in spite of promises that jobs were secure.

Inferring from the research summarized above, expectations are an important component of the shock construct. When an event occurs, the level of consciousness of the unmet expectation is likely to influence whether it is interpreted as a shock. Regarding the level of consciousness of the expectation, no research to date has directly connected consciousness of the expectation with turnover. However, the research on psychological contracts, which measure specific contract breaches, reports higher turnover results than the unmet-expectations literature, which tends to measure expectations more globally. In addition, research from the life events literature has shown that unexpected events tend to be more disturbing than expected events in that they result in increased psychological distress and are associated with clinical depression (Thoits, 1983). Taken together, this

research suggests when an employee has an explicit and conscious expectation in regards to a particular event, and that expectation is unmet, he or she is likely to interpret that event as a shock. Note that these unmet expectations may occur when an expectation is violated, such as *not* getting a promotion or *not* receiving a raise as expected.

Controllability

A third dimension found to be important in life events research is the extent to which an event is perceived as controllable. The belief that one can exert control over stressful events helps people cope effectively with stress (Bandura, 1977; Cohen & Edwards, 1989; Thompson, 1981). Perceived control is defined as the belief that one's own internal states and behavior influence one's environment, and bring about desired outcomes (Hobfoll, London, & Orr, 1988). A sense of mastery, defined as a feeling of being able to influence one's environment, has been found to limit the negative impact of stressful events (Hobfoll & London, 1986; Pearlin, Lieberman, Menaghan, & Mullan, 1981). Mastery enables people to feel that they can overcome obstacles, successfully solve problems, and combat impinging stress.

Those high in perceived control are better able to change their behavior in a variety of areas (e.g., addictive behaviors, adherence to preventive health regimens) (Thompson & Spacapan, 1991). Research has shown that the belief that one can control stressful events in one's life has been related to emotional well-being, successful coping with a stressful event, good health, behavioral change that may promote good health, and

improved performance on cognitive tasks (Thompson & Scacapan, 1991). Uncontrollable events are more strongly associated with psychological disturbance than controllable events, including depression and psychological distress symptoms (Thoits, 1983).

Much of the research on control has been conducted at a general level (i.e., trait) using measurement of mastery (Pearlin & Schooler, 1978) or the Locus of Control scale (Rotter, 1966). More recent research suggests that control should be measured at the domain-specific (i.e., state) level (Greenberger & Strasser, 1986; Thompson & Spacapan, 1991). For example, Dohrendwend and Martin (1979) demonstrated that perceptions of control over life events were not consistent within individuals over time but varied across situational contingencies. Remondet and Hansson (1991) explored the specific aspects of jobs, such as excessive workload and limited opportunities for growth, that can threaten perceived control. They found that these threats to control are associated with many negative outcomes such as stress, depression, absenteeism, decreased job performance and dissatisfaction. Greenberger, Strasser, Cummings, and Dunham (1989) found that, after statistically controlling for locus of control, personal control was positively correlated with satisfaction and performance for two field samples.

The situational contingencies (state) perspective on the controllability of an event has important implications for our understanding of shocks. When individuals perceive that they can have control over an event, they have more options. Thus, they are more likely to take steps to change their situation, and subsequently more likely to remain in

the organization. When individuals do not perceive that they have control over an event, they may be unable to develop coping options for dealing with that event within the context of the organization. Research has shown that decreases in personal control results in an increased tendency to withdraw (Abramson, Seligman, & Teasdale; 1978; Langer & Rodin, 1976). These findings suggest that events perceived as uncontrollable are more likely to be perceived as shocks, and result in withdrawal decisions.

Summary

In summary, several streams of research converge to suggest that events are an important causal mechanism in the decision-making processes and behaviors that lead to change. Research on stimulus events, first doubts, realizations, and life events all provide evidence that an event, whether major or minor, is often the first stage in an individual's decision-making process to leave an organization. The fact that this evidence is gathered from across the social sciences lends strong support to the importance of the shock construct in the unfolding model.

The literature suggests a wide variety of types of events that may bring about an exit. Events that are interpreted as shocks may stem from different facets of an individual's life, from personal events (e.g., death, marriage), job-related events (e.g., failure to get a promotion, conflict with one's supervisor), career-related events (e.g., a job offer) or organizational events (e.g., a merger or reorganization). The study by Lee et al. (1996) found that different decision paths were chosen depending on whether a shock

was personal, job related, or organizational. These results may suggest that the objective nature of the event itself causes the event to be interpreted as a shock. Alternatively, it may suggest that different types of events are *interpreted* differently by individuals.

Exploring the influence of perception on the interpretation of an event is consistent with several theoretical perspectives, including the transactional model of stress (Lazarus & Folkman, 1994) and sensemaking (Weick, 1995). The transactional model of stress, which theorizes that the response to an environmental challenge is largely determined by an individual's perception of that event. According to the transactional model, the psychological appraisal of an event determines the coping efforts used to mitigate the negative consequences of the problem (Lazarus & Folkman, 1994). This line of research suggests that in order to understand shocks, we need to uncover the characteristics of events that prompt individuals to interpret events as shocks.

The research on sensemaking also suggests that perceptual interpretation of events stimulate cognitive and behavioral responses (Gioia & Chittipeddi, 1991; Weick, 1995). Individuals make sense of their world by extracting cues from their contextual environment. People tend to notice and attend to cues that are salient. The research on stress and sensemaking suggests that certain dimensions may be particularly salient in the appraisal of events. Empirical studies on the event attributes of desirability, expectedness, and controllability of events suggest that these three attributes are particularly salient and likely to be noticed by individuals. Extending these findings to the unfolding model of

turnover, this suggests that shock events may also have certain salient dimensions, and these attributes may influence whether an event is interpreted as a shock.

RESEARCH QUESTIONS AND METHODOLOGICAL OVERVIEW

A tentative definition of shock, based on Lee and Mitchell (1994) is: *a jarring event that prompts one to consider leaving his or her place of employment*. In order to fully explore the shock construct it was necessary to 1) conduct exploratory, inductive research into the nature and interpretation of shocks as well as 2) deductively test the resulting hypotheses. The two-phase design consisted of a qualitative interviewing phase and an experimental vignette survey.

Combining qualitative methods with quantitative methods is useful both for triangulation (seeking convergence of results) and for when the first method is used sequentially to help inform the second method (Creswell, 1994). In this case, the results of the qualitative interviews were used to develop a model of the shock interpretation process and derive hypotheses from that model. The second study of the dissertation, which was a quantitative study, tested the model's hypotheses.

The purpose of the first study was to explore the construct of "shocks" for individuals in organizations using a qualitative interview design. The central research questions for the first phase of the study were: 1) What are the antecedent conditions that influence the interpretation of an event as a shock? 2) What types of events result in shocks? 3) What are the characteristics of shocks? 4) What causes an event to be

considered a shock (i.e. prompt initial thoughts of quitting?) and 5) What are the consequences of a shock?

The second study consisted of a 2x2x2 (desirability x expectedness x controllability) vignette survey which tested the relationship between event dimensions and thoughts of quitting. Several moderators of this relationship (including job satisfaction, organization commitment, and firm turnover) were also tested in the model. The vignette survey instrument was administered to members of computer user groups. Both paper-and-pencil and a web survey were used to collect data.

This two-phase design strategy provides both breadth (large sample size for the experimental vignette survey) and depth (detailed analysis of the qualitative interviews). These two approaches combine to provide strong basis for estimating the validity of the shock construct using multiple methods (Schwab, 1980). In addition, it contributes to the body of literature providing evidence for the validity of the unfolding model of turnover as a whole.

CHAPTER 3: STUDY 1

QUALITATIVE METHOD

A qualitative research design is appropriate for the initial exploration of shocks because the research is exploratory and the variables and theory base are unknown (Creswell, 1994; Lee, 1998). As Morse states (as cited in Creswell, 1994):

Characteristics of a qualitative research problem are: a) the concept is immature due to a conspicuous lack of theory and previous research b) a notion that the available theory may be inaccurate, inappropriate, incorrect, or biased, c) a need exists to explore and describe the phenomena and to develop theory or d) the nature of the phenomenon may not be suited to quantitative measures. (p. 120)

Inductive logic is a common approach in qualitative methodology. Categories emerge from informants, rather than being identified a priori by the researchers. This emergence provides rich context-bound information leading to patterns or theories that help explain a phenomenon. (Creswell, 1994). Qualitative data, with their emphasis on people's lived experience, are fundamentally well suited for locating the *meanings* people place on the events, processes, and structures of their lives (van Maanen, 1983).

Given the definition and features of qualitative research, the study of shocks in the unfolding model of turnover is a good match for a qualitative methodology. First, the meaning and theory of shocks is not well specified in the literature or explored in previous studies. Second, shocks are concerned with the *meaning* and *interpretation* of events and how these events fit in with the greater social and organizational *context*. Third, there is a need to theoretically specify how shocks are related to the unfolding

model of turnover. Thus, the initial exploration of the construct is better suited to a qualitative, rather than quantitative, methodology.

A qualitative interview method (Kvale, 1996; Rubin & Rubin, 1995) was used as the data collection method. Of the major qualitative data collection types (observations, interviews, documents, audiovisual materials), the interview was most appropriate for this design (Creswell, 1994; Meriam, 1988). Its advantages include the fact that it's useful when informants cannot be directly observed, informants can provide historical information about their interpretation of shocks, and it allows the researcher control over the line of questioning. Its disadvantages in this instance includes the potential for memory bias (since the interviews were conducted at a different time and place from where the shocks were experienced) and that some interviewees may not be as perceptive and articulate as others. To reduce the first disadvantage, memory bias, the interviews were conducted on individuals within six months of leaving their organization. To lessen the impact of the second disadvantage, inarticulate informants, extra care was taken to conduct the interview in a comfortable manner to encourage interviewees to talk openly. In addition, a professional sample was be used, decreasing the probability of inarticulate interviewees.

Previous researchers have used various high turnover professions as a sample, including nurses (e.g., Cropanzano, James, & Konovsky, 1993; Lee et al., 1996; Parker, 1993), accountants (Lee et al., 1997; O'Reilly, Chatman, & Caldwell, 1991; Sheridan,

1992) and engineers (Steers, 1977; Zenger, 1992). The current sample consists of individuals from the high technology industry, which was selected because it is currently experiencing high turnover rates (Mandell, 1997).

Sample

Recruitment and screening. Subjects were recruited through advertisements placed in media likely to be viewed by high technology professionals. Two ads were placed in weekly Seattle publications (*The Stranger* and *The Seattle/Eastside Weekly*), one ad was placed in The Washington State Digital Media Association monthly newsletter, and six ads were placed on an on-line newsgroup (*seattle.jobs.wanted*). The ad requested interviews with individuals in the high tech industry who either had recently left, or were considering leaving, their companies. Interviewees were given two free movie passes as an incentive to participate in the study.

Subjects responded to the ad via email or by telephone. In all, 42 individuals responded to the ads. Respondents to the ad were screened to make sure they are an appropriate fit for the study. Specifically, they were asked: 1) Were you (are you) employed full time in your organization (vs. contract, temp, part-time, etc)? and 2) Did you (are you planning to) quit your job voluntarily (vs. being laid off, downsized, terminated, etc.)? Affirmative responses to these screening questions resulted in an interview.

A total of 25 interviews were conducted. Of the 25, ten were disqualified from further analysis either because they were contract employees (2), did not experience a shock (6), or experienced a shock several years prior to the time of the interview (1). The remaining 15 subjects qualified for further coding and analysis. These subjects were full-time employees, had experienced a recent shock, and were not thinking about leaving prior to the shock event.

Sample demographics. A summary of the qualitative sample demographics is reported in Table 2. The sample consisted of 10 individuals who had left their organization (leavers) and 5 individuals who were still employed with their organization (stayers).³ There were 11 males and 4 females. The average age of the subjects was 38. Company size ranged from 5 to 20, 000, with a median size of 288. The average length of time in current position was 2.5 years. Subjects reported an average of 10.87 years of experience in the high technology industry.

Design of Interview Instrument

Prior to conducting the interviews, an interviewing protocol was developed. The interview questions were designed to address the following research questions: 1) What are the antecedent conditions that influence the interpretation of an event as a shock? 2) What types of events result in shocks? 3) What are the characteristics of shocks? 4) What

³ The terms "stayers" and "leavers" are used here for consistency with previous turnover research. The term "stayers" might be a misnomer for the current research, because I did not ascertain whether these individuals eventually left their place of employment.

causes an event to be considered a shock (i.e. prompt initial thoughts of quitting?) and 5)

What are the consequences of a shock?

The interviewing format was semi-structured. A semi-structured interview includes specific questions and an overarching topic, but it also allows the interviewer to

Table 2 - Qualitative Sample Demographics

CASE ID	STATUS	SEX	AGE	FIRM SIZE	POSITION	TENURE	YEARS IN HIGH TECH
1	Leaver	Female	28	150	Assistant Scientist	1	5
2	Stayer	Male	42	300	Technical Support Rep	1	8
3	Stayer	Female	38	20,000	Editorial Manager	1	N/A
4	Leaver	Male	N/A	400	Technical Writer	3.67	N/A
5	Stayer	Male	38	N/A	Software Development Manager	3	13
6	Leaver	Male	45	600	Manager, New Products & Process Engineering	1	20
7	Stayer	Male	40	200	Sr. Engineering Technician	8	15
8	Leaver	Male	29	275	Test Lead	1.3	1.3
9	Leaver	Male	41	5	Sr. Systems Analyst	1	12
10	Leaver	Female	29	400	Systems Administrative Program Developer	7	7
11	Stayer	Male	N/A	30	Technical Support Representative	0.42	5
12	Leaver	Female	44	20	Database Developer	2	2
13	Leaver	Male	51	8	VP Marketing & Sales	2.17	30
14	Leaver	Male	43	400	Systems Manager	5	16
15	Leaver	Male	29	500	Catalogue Manager	0.5	7
AVG.			38.23	288 ^a		2.54	10.87

a. Median

pursue emergent topics and themes and to probe more deeply than the initial planned questions. Semi-structured interviews consist of main questions, probes, and follow-ups (Rubin & Rubin, 1995). *Main questions* create a framework for the interview; they are designed to address the specific research questions and link what is asked in individual interviews to the overall design. *Probes* clarify and complete the answers, making them understandable, and signal the interviewees about the expected level of depth. They also show the interviewee that the interviewer is interested in the answers. The purpose of *follow-up* questions is to pursue newly discovered avenues, elaborate the context of answers, explore the implications of what has been said, and to test and modify emerging themes (Rubin & Rubin, 1995).

The design of the semi-structured qualitative interview is flexible and iterative. Consistent with qualitative methodology, the interview protocol was adjusted over time as new themes emerged from the data (Rubin & Rubin, 1995). The final interview protocol is shown in Appendix A.

Pilot interviews. Prior to designing the interview protocol used in the study, pilot interviews were conducted with two individuals who had recently left their place of employment. After conducting each interview, I asked for feedback from the participants about the opening statement, question format, flow of the interview, and their feelings during the interview. Participants provided feedback which aided in the development of the interview protocol.

Data Collection

Interviews were conducted during the summer of 1997. Interviews were conducted either by myself or by a colleague familiar with the purpose of the study and the interview protocol. Interviews were conducted in-person at various locations depending on the subjects choice of venue, including coffee shops, my home, the subject's home, or the subject's place of work. In cases where the interviews were conducted at the subjects place of work, they were conducted in private offices or conference rooms. All interviewees were asked permission to tape the interviews. In most cases, two tape recorders were used (one was a back-up) and notes were taken during the interviews. All interviews began with the following opening statement:

Thanks for meeting with me today. Let me tell you a little bit about my study. What I am interested in is turnover in the high tech industry. Specifically, I'm trying to find out why people leave their jobs in high tech, and the decision process they go through as they are deciding to stay or leave. I will ask you a series of questions that I have about these issues. Of course feel free to jump in at any point with other issues that I might not have covered.

Do you mind if I tape the interview? The interviews are strictly confidential. Your name will not be used, and if I use any quotes from you or about your company I will change the names. Do you have any questions before we begin?

At the close of the interview, the interviewees were asked if they had any further questions, or anything that he or she would like to add. In addition, the subjects were debriefed on the unfolding model of turnover and the complete purpose of the research. I provided each interviewee with contact information in case they wanted to contact me

later with additional questions or comments. Subjects were then given two free movie passes. Interviews lasted between 45 minutes and two hours.

Tape transcription. The interview tapes were transcribed verbatim by professional transcriptionists. In order to ensure reliable voice to paper transcription, I compared each tape with the interview output. Tapes were edited and corrected as necessary until each interview output represented an accurate record of the interview.

Data Coding and Analysis Procedures

The coding and analysis of the interviews was completed according to the processes suggested by Rubin and Rubin (1995) and Eisenhardt (1989). The coding and analysis of interviews began while the interviewing was still in process. After completing each interview and again after finishing a larger group of interviews, the data were examined. I took field notes to describe my impressions of the data and identify thematic patterns in respondent comments (Miles & Huberman, 1994). A preliminary coding sheet was developed based on the themes emerging from the interviews. The preliminary analyses indicated how to redesign interview questions to focus on central themes as I continued interviewing. The interviewing process continued until I reached theoretical saturation (given the subjects who responded to the recruitment ads). Saturation (Glaser & Strauss, 1967) is the point at which each additional interviewee adds little to what I have already learned about the shock phenomenon.

After the interviewing was complete, a more detailed and fine grained analysis of what the interviewees said was undertaken. When new themes emerged, additional coding categories were created. This process necessitated going back and recoding the original interviews according to the new coding categories. The coding categories were then integrated and reduced to a more meaningful set of underlying themes (Lee, 1998). The major themes were derived both inductively from the data set, as well as by comparing the themes with the existing literature (Eisenhardt, 1989). The final coding template is shown in Appendix B.

In the formal analysis, additional themes and concepts were discovered and linked together in order to build toward an overall understanding of the data. A tentative model was developed, and hypotheses advanced . These findings are presented in a later section.

Validity and Reliability

Reliability. Reliability in qualitative research concerns the ability of the study to be replicated in another context. One way to enhance the reliability of the study is to provide detailed information on the objectives of the research, the sample selection, the protocol for data collection, and a physical database of study materials and records (Yin, 1994). Extensive information on the procedures and materials used in this study are included in this document. Additional physical materials (such as the audiotapes, original transcribed interviews, and field notes) can be provided to interested researchers who wish to reanalyze or replicate the findings of the current study.

Validity. Internal validity in qualitative research is concerned with the accuracy of the information and whether it matches reality (Merriam, 1988). External validity, or generalization, is the judgment that the study's results can be generalized to a larger population (Lee, 1998). One way to enhance the internal validity of a qualitative study includes inviting another researcher to examine the audit trail of the key decisions made during the research process and validate that they were good decisions. Decisions about data collection, coding, analysis, and theory development were reviewed with two colleagues during the course of this study. For example, when interviews were conducted by another researcher, I used the tape transcriptions to create preliminary coding sheets. The interviewer and I then discussed the coding sheets I developed, and determined where we concurred or disagreed in our interpretation of the interviews. We then resolved any differences that emerged and developed the final coding categories. In one case, I made a preliminary decision to drop an interview subject from further analysis. I discussed this case with the interviewer to better understand the case and to see if he concurred with my decision to drop the case (he did).

Additionally, any inconsistencies or contradictions (within or across interviews) were examined and reported (Rubin & Rubin, 1995). The goal was not necessarily to eliminate inconsistencies, but rather to understand and explain why they occur within the context of the theory. The process of examining discrepant cases and alternative explanations for the study findings enhances the theoretical and analytical rigor of the

research. In addition, the findings are compared with and placed in the framework of the existing literature. This process improves the ability to create theory from cases as it enhances both the internal validity and external generalizability of the results (Eisenhardt, 1989).

Method Limitations

One limitation of the current method is the small sample size (15 interviews). Qualitative researchers place less emphasis sample size compared to the systematic examination of available cases. What is important is not so much the number of people interviewed, but whether the phenomenon (shocks) is understood by the end of the interviewing process (Kvale, 1996; Rubin & Rubin, 1995). Limiting the sample size of the interviews to a few cases makes it possible to “investigate in detail the relationship of a specific behavior to its context, to work out the logic of the relationship between the individual and the situation” (Kvale, 1996, p. 103). In essence, single cases were explored in depth to gain a deeper understanding of the meaning and interpretation of shocks and their antecedents and consequences.

Nevertheless, there are several aspects of the current sample that might limit the generalizability of the results. The sample was a convenience sample: Individuals who chose to respond to the recruitment ads may not be representative of the population of high-tech persons who are considering leaving their companies. Specifically, the recruitment ad may have attracted individuals who wanted to vent about their work

situation. This may explain why the shocks were primarily negative. Anecdotal evidence suggests that many high-tech professionals quit their organizations as a result of receiving a job offer from another firm (Schmit, 1998), yet these individuals were not represented in the sample. As a result, the interviews focus on subjects who have experienced negative job or organization-related shocks.

Qualitative research typically relies on theoretical sampling rather than statistical sampling. The goal of theoretical sampling is to replicate or extend emerging theory. As such, it is important to include a wide range of cases so that the theory developed may be extended to the broader population (Eisenhardt, 1989). As shown in Table 2, the demographics of the sample indicate a wide range of job positions, ages, company sizes and industry experience, suggesting that the results are more likely to be generalizable to the population of interest. However, stayers are underrepresented in the sample compared to leavers (5 vs. 10), which might limit the conclusions that can be drawn from the sample.

Another potential limitation of the current study is that subjects were asked to provide retrospective accounts of the leaving process. However, Lee et al. (1998) persuasively argue that recall bias is non-problematic in turnover research. Specifically, they cite evidence from empirical studies on memory which suggests that memories which are episodic (involving recollection of personal events from one's past) and self-referencing (involving events pertaining to oneself) are more vivid and hence more likely

to be accurate. Since the current research involves the recall of specific events (e.g., shocks) and self-referencing decisions surrounding those events, the memory of the leaving process is likely to be accurate.

RESULTS - STUDY 1

Shock Antecedents

The first research question guiding this study was: What are the antecedent conditions that influence the interpretation of an event as a shock? The interview protocol included two questions pertaining to the subject's work situation prior to the shock event. In addition, during the course of the interview, subjects mentioned various issues which affected their attitudes toward their job and their organization.

Respondent comments regarding their job and organization were coded according to the type of comment mentioned. Several common themes emerged across interview subjects on job satisfaction and organization commitment. Since satisfaction and commitment are central to almost all traditional models of turnover, the comments were classified according to the determinants of these attitudes as summarized by Horn and Griffeth (1995). Several additional categories also emerged from the data (discussed further below). Table 3 provides a summary of the findings for the job satisfaction and organization commitment shock antecedents.

Job Satisfaction

Job satisfaction is defined as the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs or various aspects of their jobs (Spector, 1997). Using a framework established by previous authors (e.g., Mobley et. al, 1979; Price & Mueller, 1981, 1986), Hom and Griffeth (1995) classified the antecedents to job satisfaction. These antecedents include: job complexity, role stress, group cohesion, compensation, leader-member exchange (LMX), met expectations, and negative affectivity. Four of these categories (role stress, compensation, leader-member exchange, and met expectations) emerged as classification categories in the data analysis.

Of the fifteen cases, six subjects specifically noted that they were satisfied with their jobs prior to the shock event. Of the remaining nine cases, all mentioned dissatisfaction with one or more of the antecedents of job satisfaction.

Role stress. Role stress is defined as ambiguity and conflict in work roles (Hom & Griffeth, 1995; Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). Research has found that role stress affects job satisfaction (Fisher & Gitelson, 1983; Jackson & Schuler 1985), which in turn increases withdrawal cognitions (Klenke-Hamel & Mathieu 1990; Netemeyer, Johnston, & Burton, 1990).

Table 3 - Shock Antecedents

Case ID	Case Name	Sources of Job Dissatisfaction	Sources of (non) Organization Commitment
1	Liz	Role stress	Commitment propensity Person-organization fit Company growth
2	George	Role stress Met expectations	Expected utility of internal roles Time and behavioral conflicts with work Person-organization fit Company growth
3	Jane	Role stress	Time and behavioral conflicts with work Company growth
4	Bill	Compensation Upper Management	Extra-organization loyalty Commitment propensity Company growth
5	Dan	Low ¹	Low
6	Jack	Low	Extra-organization loyalty Company growth
7	Steve	Low	Procedural justice Company growth
8	Rich	Role stress Compensation Direct management	Procedural justice Time and behavioral conflicts with work Company growth
9	Mark	Direct Management	Extra-organization loyalty
10	Lori	Role stress Direct management	Expected utility of internal roles Person-organization fit
11	Henry	Role stress Upper management Met expectations	Procedural justice Expected utility of internal roles
12	Juliette	Low Upper management	Low
13	Tim	Low compensation	Low
14	Jeff	Upper Management	Extra-organization loyalty
15	Alex	Low Role stress	Time and behavioral conflicts with work Commitment propensity Company growth

1. "low" indicates high satisfaction or high organization commitment

Seven cases noted role stress as a factor influencing their job satisfaction. For example, a test lead (Rich)⁴ described his situation as stressful due to a high workload:

I am doing the work of three people now, I will do the same somewhere else. That really irritated me also. The job grew up around me, unexpectedly fast, I didn't deal with that well enough.

In another case, a systems administrative program developer (Lori) described her job as stressful because of the demands placed on her by users:

The way that the information systems people [work] is that whenever you have to fix a problem or take something apart, you've got 40 to 400 users banging on your door because it's not working, and they need it now. So it would be very stressful, and I had a pager, and I was in charge of store systems as well as office systems, so I'd get called a lot and whenever I'd walk into a store they'd be having questions for me and doing work at a store... It's just stressful, and I definitely experienced like in the pit of my stomach kind of stuff...

A combination of unrealistic demands, high workloads, ambiguity and confusion over role demands, and long hours contributed to the stressful situations experienced by these subjects. One of these cases (Alex) noted overall job satisfaction, but also mentioned that role stress influenced his overall satisfaction with his job.

Compensation. Many studies have found that low compensation contributes to job dissatisfaction, which in turn induces turnover decisions (Hom & Griffeth, 1995; Hulin, Roznowski, & Hachiya, 1985; Price & Mueller 1981; 1986). Three cases noted

⁴ To protect the anonymity of interview subjects, names and other identifying information have been changed.

that they were dissatisfied with their level of pay. A vice president of marketing and sales

(Tim) for a small company was concerned about compensation because:

...80 percent of my income was dependent upon performance of the company, so when the company was not performing well, at least as well as we had expected, then I was taking a very large hit from an income point of view.

Rich, a test lead, expressed ongoing frustration about his low compensation

relative to others:

I mean, they made me a test lead, and I did not get much for that...after a few months there were six people in the group, and I had to train them all. I was doing most of the work because they did not know anything, and so I was working like a dog, and I still was not getting any recognition... And I knew where I stood as far as [talking to other people] about compensation and stock, more or less, anyway, and I did not feel good about it...Review time came around and I got something, but I still was making less than \$40,000 and I did not get any more share of the stock than my original offer, and basically that really annoyed me, and I kept asking for it and you know, they kept saying for one reason or another why, you shouldn't really be working for money.

Rich's frustration eventually led up to a shock when he was turned down for a raise. The third case, Bill, expressed dissatisfaction with his pay because it was not up to industry standards. These results support the research on compensation satisfaction, which concludes that satisfaction with pay is dependent on pay level, raises, and pay structure (i.e., internal equity) (Scarpello, Huber, & Vandenberg, 1988).

Leader member exchange and dissatisfaction with executive management. Hom and Griffeth (1995) postulate that poor leader member exchange may instigate dissatisfaction, and hence, turnover (Graen & Scandura, 1986; Williams & Hazer, 1986). Seven cases indicated that they were dissatisfied with management. Consistent with

leader-member exchange, three of these cases expressed dissatisfaction with their immediate manager:

He is not a good manager, no, he is not a good manager as I told you. He is new at it, he was promoted about a year ago, and he is just an engineer, he is not a manager. He is a great engineer, but a lousy manager. He is just, I won't see him for a week at a time and then he will come up and try to micro-manage, and tell you how to do your job, and he doesn't know what I am even doing, how can he tell me how to do my job (Steve).

[My manager] is hopeless, and he just says whatever, you know, I mean he is a bad manager ...So, you know, that had something to with it, the fact that I was dealing with this guy who was a pill, but you know, his managers were not doing their job if they don't manage him, I felt... and basically, you have a lot of people who are not really managing people, they are managing the strategy for the products...and their only role for human resources is to pay them as little as possible (Rich).

In the remaining four cases, the dissatisfaction stemmed from upper management, and the way in which upper management was managing the company:

A lot of it just came from not knowing how to manage the company once the company had gone from like 2 million to 8 million to 16 million to 60 million to 120 million but they didn't know what to do (Bill).

A lot of these [executives] do not care, they do not want to change the way they do things, they want to wait for five years or six years, whatever, then they can retire and know they are happy. Why mess up their lifestyle right now? That is just the mentality of overall company, really...[The] leader had no interest except his own, [he] didn't care about anybody else (Jeff).

These findings suggest that both relationships with one's immediate manager as well as satisfaction with executives influence job satisfaction, and hence, turnover.

Met expectations. Research has found that met expectations influence perceptions of job satisfaction, which in turn influence turnover (Bacharach & Bamberger, 1992;

Farkas & Tetrick, 1989; Hom, Gomez-Mejia, & Grabke, 1993; Wanous et al., 1992). Two subjects noted that they were dissatisfied because the job was not meeting their expectations with regards to promotion and transfer opportunities. In the case of Henry, he was promised in his job interview that he would receive training to move up to a systems administrator position, but the training was never provided. George, a technical support representative who wanted to provide support for a different product, explained:

[I had] lots of little expectations going in. I thought I'd have more time to do some paid study time and that's not there either, some more training is not there.

Both of these cases suggest that the expectations stemmed from a psychological contract they had with their companies. When the psychological contract was violated, they became increasingly dissatisfied with their jobs.

Organization Commitment

Organizational commitment is defined as the relative strength of an individual's identification with and involvement in a particular organization (Mowday, Porter, & Steers, 1982). Based on previous research findings, Hom and Griffeth (1995) postulate seven determinants for organizational commitment: procedural justice, expected utility of internal roles, employment security, job investments, extraorganizational loyalties, time and behavior conflicts, and propensity to commitment. After coding and classifying the data, the following antecedents emerged as classification categories: procedural justice, expected utility of internal roles, extraorganizational loyalties, time and behavior conflicts, and propensity to commitment. Two additional categories also emerged which

are consistent with the research on organization commitment (Meyer & Allen, 1997): person-organization fit and the rate of company growth.

Procedural justice. Fair procedures for allocating rewards, or procedural justice, is theorized to boost commitment, and hence retention in the organization (Folger & Greenberg, 1985; Folger & Konovsky, 1989). Research findings support the contention that fairness in the reward system affects organization commitment and intentions to quit (Folger & Konovsky, 1989; Miceli, Jung, Near, & Greenberger, 1991). Three subjects indicated that they felt the distribution of rewards was inequitable in the organization:

And I knew where I stood as far as [talking to other people] about compensation and stock, more or less, anyway, and I did not feel good about it, basically they made me feel like they were trying to treat me like a child. Just because I started with no experience...It did not take me long to be a lot more competent than any other tester there, and a better lead than the other leads (Rich).

...And there are some other things that the company has been doing that made people not too happy, and they started hiring in high-powered executives, and you know they are getting these big huge lump sums of stock options. We have a plan here where every year you get a few more shares of stock, and for what they are giving me now, it is a pittance compared to what I got when I started, it was done by the time and amount of experience you had with this product, it just meant nothing (Steve).

[The company has a] gross profit of about four million dollars. And their net profit is about one to two million a year. And so operating was sort of something that, after seeing all of the expenses that they had, and most of the other tech support people in that department get paid [only] \$10 an hour...(Henry).

These findings suggest that perceived unfairness of the reward system decrease organization commitment.

Expected utility of internal roles. An employee's commitment to his or her organization is dependent on the expected utility of internal roles, such as promotion (Mobley, 1982). Empirical research confirms a causal pathway from promotions to commitment to turnover (Cotton & Tuttle, 1986; Mathieu & Zajac, 1990; Griffeth & Hom, 1990; Price & Mueller, 1986). Three of the fifteen cases reported low expected utility of internal roles. Not surprisingly, the two cases who noted job dissatisfaction because their expectations for promotion and transfer (Henry and George) were not being met also mentioned decreased commitment due to this factor. Another case, Lori, felt there was nowhere to go in the company beyond her boss, who she felt was not capable of helping her develop.

Extra-organizational loyalty. Turnover theorists contend that organization commitment is diminished when the values of the firm conflict with an employee's professional standards (Hom & Griffeth, 1995). Four respondents noted a mismatch between their personal and professional standards, and that of the organization. In two cases, the disagreement stemmed from the company's lagging standards of technology:

My frustration was that the company was old fashioned, I guess you would say, I like to use technology and I like to do different things, and the company does not think of that mode (Jeff).

That was always a problem, you were working for a company that was behind the curve. Our slogan was "standards based connectivity." Well the problem was we weren't setting those standards anymore, we were the follower...(Bill).

Some respondents also noted that the company's lack of concern for quality was inconsistent with their professional standards:

Well there was always a conflict between [the company] and my personal views as far as quality. [The company] is a product dumper. Meaning that they don't care if it has bugs, if its ready to ship its shipping... There was never the sense of quality. And that always was a sore point with me. It was the point to where you don't want to be embarrassed to tell people where you work because the company had a reputation of product dumping (Bill).

... And so it was openly discussed about finding the least competent [ISO 9000] inspector to come in and carry out the review process. There was sort of an understanding that, this was a front that was being put on, it was difficult to get people then to cooperate, to spend the time to create the process documentation that was required [for ISO 9000], you know, because they saw through the facade...I think that there were other issues to do with claiming that a product can do x, y, and z, and delivering to the market and putting it in your customers environment when it can not do those things, when it is not stable, and knowing that your client will be relying upon this software to provide a service for their customers and that it won't reliably do that (Jack).

Another case noted that he disagreed with his company's ethics and business practices. These examples suggest that extra-organization loyalty influenced several (four) subjects commitment to their organization.

Time and behavioral conflicts with work. Research has found that when work is excessive to the point where it interferes with other outside activities, organization commitment decreases (Hom & Griffeth, 1995). Four cases reported that the excessive demands of their work environment allowed little time for outside activities, increasing stress and burnout. Jane described her situation:

...that place took up so much of my time and energy, what else do I have in my life? I live alone. I'm working so much I don't have much contact with my friends. My parents, my family is far away.

Alex, a catalogue manager for an Internet company, noted similar conflicts between work and outside interests:

...the entire time I was at [my company] I had at the end of the day or the end of the week, I had nothing left in a pool for myself, for any other activity, like gardening or anything - even if I actually had time left.

As a result of the increasing stress of his job, Alex noted that he “didn’t think he was going to last two years [at the company].” Not surprisingly, the four cases who noted time and behavioral conflicts with work also reported that role stress diminished their satisfaction levels (discussed above), suggesting an interrelationship between these two constructs.

Commitment propensity. Turnover researchers have theorized that there are differences across individuals in their propensity to become committed to an organization (Meyer & Allen, 1997; Mowday et al., 1982). Empirical studies support the relationship between commitment propensity and organization commitment (Lee, Ashford, Walsh, and Mowday, 1992; Pierce and Dunham, 1987). Three subjects indicated that they had a low propensity to be committed to their organization from the onset:

I mean working in a high tech industry - I don’t ever expect to work somewhere 10-15 years. I don’t plan on being with this next company more than two. And I think the work cycle is much shorter in high tech firms simply because of the nature of the business. It’s high stress, it’s time sensitive, people burn out , products come and go. ...The whims of the market dictate your future (Bill).

I thought I was going to be there not more than two years, because when I jointed, I felt like I wanted to make, to myself, a two or three year commitment to be there. But then after I was there probably a few months I felt like that was one to two years, there was no way I was going to last two years (Alex).

I really wasn't thinking long-term with them (Liz).

These results, along with the comments of other subjects regarding their opinion of the high tech industry, suggest that low commitment propensity may not only be a function of personality characteristics, but also dependent on the type of industry in which the employee works.

Person-organization fit. While not included in the model proposed by Hom and Griffeth, other researchers of commitment and turnover view person-organization fit as a proximal cause of organization commitment. (Meyer & Allen, 1997). A fit between the organizational culture and the employee's values is theorized to increase organizational commitment (O'Reilly & Chatman, 1986; O'Reilly, Chatman, & Caldwell, 1991). Three subjects commented that there was a disconnect between their value system and the organization's culture:

I mean, I didn't feel like I was blending in with the company culture there...And being older is another issue...Well, you know, I don't dress and have the same social interests as a lot of the other guys (George).

I think this company just wasn't a very good fit for me. I wasn't real comfortable in the work situation where I was, because my co-workers, they weren't of my age group for the most part and they certainly didn't have the same lifestyle in any sense that I did (Liz).

Hence, several cases noted that the fit between their values and the organization culture influenced their level of commitment to the company.

Company growth. Meyer and Allen (1997) postulate that organization characteristics, such as size and structure are distal causes of commitment (Mathieu, 1988; Mathieu & Hamel, 1989) affect commitment through more proximal causes, such as participation in decision making. Over half of the subjects (8) mentioned that their companies or their departments were experiencing rapid change and/or growth:

They were going through a lot of expansion. They were trying to change their emphasis, they've just been bought by a Canadian company, and it was pretty difficult working there... they were too scattered, too much going on (Liz).

It was a start-up company. And for the first four years that's all we did was just build - try to get this thing working...And it was very exciting. And then we started maturing as a company. We started getting some of these organizations in place - bean counters and regulatory people. Life got very complicated...(Steve).

There's other kind of things going on with the company, like they talk about moving from - changing locations, and they got all excited about this one location and that deal fell through and nobody's sure about where the company's actually going to be in six months. There's things like putting up sign-up sheets for training and then people signing up and they'd say, oh well, this training's been canceled, six times in a row. A lot of disorganization. They ask us to be flexible a lot (George).

This is one of the fastest growing companies ever...I didn't see the pace slowing for two to three years. Like I think it's going to be - I think it's only going to become more and more complex and more dense, there's more things having to happen. And it started being bureaucratic (Alex).

These results suggest that for individuals in the high tech industry, the rate of growth and its consequences (e.g., increased bureaucracy, disorganization) is an important commitment antecedent to examine conjunction with the occurrence of shocks.

Summary. Table 3 provides an overview of the shock antecedents classification.

While these frequencies are reported as they occurred in the interviews, it should be noted that in some cases it was difficult to ascertain whether the levels of job satisfaction and job commitment were as reported *prior* to the shock event. The interview analyses suggested that satisfaction and commitment were likely altered after shock event, and this may have biased subjects' ability to recall of levels of job satisfaction and organization commitment prior to the reported shock event. In order to overcome this difficulty, each case was carefully analyzed so that I could make an accurate assessment of job attitudes that existed prior to the shock.

The analysis of the antecedents to shocks supports traditional turnover models, which include job satisfaction and organization commitment as antecedents to turnover. Subjects reported a variety of attitudes and situations which were indicative of low satisfaction and low commitment. In addition, the analysis also supports Lee and Mitchell's (1994) contention that satisfaction and commitment are not *necessary* antecedents to withdrawal decisions. One third of the interview subjects (5) noted that they were pleased with their jobs and with the organization prior to experiencing a shock event.

Types of Shocks

The second research question guiding this inquiry was: What types of events result in shocks? Shock events were determined by classifying responses to the inquiry

“Was there a specific event that caused you to start thinking about leaving?” A variety of different types of events prompted individuals to consider quitting their jobs. Three of the fifteen cases concerned organizational events, the remaining twelve cases experienced job-related events. No personal (events outside work) shocks were reported.

The three organizational shocks were all of a different nature, suggesting that different types of organizational events can prompt thoughts of quitting. One case concerned a technical writer (Bill) whose software company had recently been acquired. During a meeting, management announced that the company was going to cancel the product he was working on. This raised fears that he would be out of a job or would have to work on a different, lower quality, product. In another case, a software development manager (Dan) heard rumors that the financial stability of the firm was in question; they were losing money and may never be profitable. In the third case, a senior engineering technician (Steve) was part of a reorganization in which he was put in the “maintenance” mode of the product, rather than research and development which he preferred. The organization-related shocks all involved decisions which were made by senior management that affected the subjects’ job security and/or the nature of their jobs.

Several themes emerged for the twelve cases who experienced job-related shocks. These shocks concerned events that indicated poor work performance, management unwillingness to meet demands for increased salaries or career mobility, peers or boss leaving the company, or a lack of support from management.

Two cases reported hearing negative feedback from their managers about their work performance. In one case, an assistant scientist (Liz) for a biotechnology company received a negative performance review. She felt the review was unfair because the manager who reviewed her had been out of the country during the performance review period. In another case, the performance feedback was more indirect. A senior systems analyst (Mark) for a small service and repair company discovered that management was lying to his clients regarding his availability (saying he was on vacation when he was actually available), resulting in a decreased paycheck. Since the interpretation of these cases are from the perspective of the employee, it is not possible to assess whether the feedback indicated *actual* poor performance, or misperceptions on the part of management.

Two cases reported that another employee leaving the company prompted initial thoughts of quitting. In one case, a database developer (Juliette) for a small medical software company reported that her immediate manager decided to leave the company. The manager brought up a list of complaints to upper management, but they refused to address his concerns, which led her to consider quitting. In another case, a technical support engineer (Henry) for an Internet access provider reported that a peer had left the company for a job in system administration. Henry also wanted to work in system administration, but the company had not kept their promise to train him for that position.

Two cases reported events that indicated that the company was not going to meet their needs for increased salary or career advancement. In one case, a test lead for an Internet media company (Rich) had asked his manager several times for a raise commensurate with his new position as a test lead. The shock came when he stated it as an ultimatum, but was told that they were not going to meet his request. In another case, a technical support representative for a software support company (George) wanted to further his career by supporting a different product. When he was told that the hours he had available would not allow him to support this product, he considered quitting his job.

Half of the job-related shocks (6 cases) concerned incidents where subjects reported a lack of support from management. In two of these cases (Jeff. and Tim), subjects reported having thoughts of quitting when it was clear to them that management was not interested in implementing their ideas, which they felt were essential for the success of the company. In another case, a senior manager of a software company (Jack) was chastised by other managers for bringing up concerns about product quality at a management offsite. In another case, an editorial manager (Jane) for a large software company was unsupported by her manager (who had been a peer) when two reports in her group complained about her. In another case, a senior catalogue manager at an Internet company (Alex) was responsible for implementing a large project. He was not able to perform his job because he did not have the authority to accomplish the project, and could not get others on board. The shock came when the CEO blamed him for the failure of the

project. Finally, a sixth case was a systems administration program developer (Lori) who had to cope with a computer crash while her manager was away for the week. When the manager returned, he received complaints from other employees about the lack of communication from the MIS group. The shock occurred when the manager stood up in a meeting and apologized for the lack of communication, rather than supporting the efforts of her group. While these six cases all reported different types of events, they all conveyed a similar theme of management not supporting the employees work efforts and not listening to employee ideas.

Shock Dimensions

The third research question guiding this study was: What are the characteristics of shocks? From the literature review, I derived three primary shock dimensions: desirability, expectedness, and control. Subjects were asked during the interview to assess each of the dimensions. Responses were then compiled for each dimension. The results of this analysis is shown in Table 4.

Desirability

The shock event was considered negative by an overwhelming majority of subjects: 14 of 15 cases considered the shock to be 'negative' or 'extremely negative'. For example, Dan, who's shock pertained to the financial security of his company, described the shock as very negative: "I already knew we were in financial trouble, and it

was the news of the prospect of it continuing, or the unknown, that sort of rocked the boat." When another subject, Rich, was turned down when he asked for a raise, he

Table 4 - Shocks

Case Name	Shock Type	Desirability	Expectedness	Control	Cognitive Reaction
Liz	Job (poor performance)	Neutral	Unexpected	Low Control	Company not a good fit
George	Job (career advancement)	Negative	Expected	Med. Control	Not valued
Jane	Job (management support)	Negative	Unexpected	Low Control	Not valued
Bill	Organizational	Negative	Unexpected	Low Control	Job security in question
Dan	Organizational	Negative	Unexpected	Low Control	Job security in question
Jack	Job (management support)	Negative	Unexpected	Low Control	Changed view of firm
Steve	Organizational	Negative	Unexpected	Low Control	Not valued
Rich	Job (compensation)	Negative	Unexpected	Low Control	Not valued
Mark	Job (poor performance)	Negative	Unexpected	Low Control	Betrayed by company
Lori	Job (management support)	Negative	Expected	Low Control	Company not a good fit
Henry	Job (peer leaving)	Negative	Unexpected	Low Control	Not valued
Juliette	Job (boss leaving)	Negative	Unexpected	Low Control	Need to make a decision
Tim	Job (management support)	Negative	Unexpected	Low Control	Not valued
Jeff	Job (management support)	Negative	Expected	Low Control	Disagreed with firm strategy
Alex	Job (management support)	Negative	Unexpected	Low Control	Disagreed with firm strategy

described the shock as “about as negative a response that I could have possibly expected from management, you know, really no encouragement whatsoever.” The finding that the shocks were rated negative by almost all cases is consistent with Lee et al.’s (1996; 1998) finding that job and organization shocks are more likely to be negative, whereas personal shocks are more likely to be positive.

Expectedness

The majority of subjects (12 of 15) stated that the shock came as a surprise. Steve, who was reorganized into the maintenance side of the product, said that this shock was “a big surprise...it was all very sudden.” Jack, who was chastised by other managers for bringing up quality concerns in a management off-site said that this came as a surprise to him: “Maybe I should not have been [surprised] but I was...probably the idealist in me was expecting a more responsive participation.” Other subjects used phrases to describe their surprise reaction such as “stunned,” “caught off-guard” or “worse than expected.” These results support the literature on sensemaking (Weick, 1995), which theorizes that an event is most likely to prompt sensemaking when unexpected events occur.

The shock event was assessed as “expected” by 3 of the 15 subjects. For example, George, who had been turned down when he requested to support a different product, said “...because I knew going in they wanted certain hours filled, and I didn’t fit that. As far as them being flexible, I didn’t see any evidence of that in other areas.” Jeff, who was trying to implement a new technology, said the shock didn’t come as a surprise because

event was consistent with other events that had previously occurred, or confirmed existing expectations (as discussed previously above). It is important to note that these expectations were *negative* expectations that developed over time by subjects who noted job dissatisfaction and/or declining organization commitment prior to the shock event. Therefore, these types of expectations differ from the positive expectations as outlined in the “met expectations” and psychological contract literature.

Control

Fourteen out of the fifteen cases reported that they did not have any control over the shock event. For example, Bill, whose product got canceled, expressed his frustration with the lack of control with this situation:

We all felt it didn't matter what was proposed individually or as a group in Bellevue. Headquarters was just not going to listen to us. They were going to do what they wanted to do, what they thought was best.

Dan, who discovered that his firm was in financial trouble, felt that “...you can only manage so much...you really don't have that much control.” Steve, who was reorganized into the maintenance group, expressed concern that he “didn't have any say-so in it. [My manager] didn't have a choice...I was pushed into a job that I really did not want to do and ...they did not give me a choice.” The fact that most subjects reported a lack of control in the shock situation is consistent with the literature on stress and life events (Aldwin, 1994; Thoits, 1983), which suggests that events perceived as low in controllability are more likely to lead to negative physical and psychological outcomes.

Cognitive Reactions to Shock Events

The fourth research question addressed in this study was: What causes an event to be considered a shock; i.e. prompt initial thoughts of quitting? In addition to the classification of shock events by type, events that prompted thoughts of quitting were also classified by the reaction that individuals had to these events. The following questions were used to analyze reactions to shock events: 1) What was your reaction to the event? 2) What did the event symbolize for you? and 3) What distinguished this event from events that occurred previously? Subjects differed in their ability to articulate and recall their reaction to the shock event. Consistent with the work of Dauten (1980) and Weick (1995), subjects frequently reported that the shock event prompted them to have a realization. In other words, it changed their perception and the way in which they viewed their employment situation.

The classification analysis revealed two *content* and two *process* categories. The two content categories include: 1) realization that the company or management did not value them, 2) conflict with company values or strategy. The analysis also revealed two *process* categories; i.e., the process by which subjects made sense of the events and interpreted them as shocks. Specifically, subjects reported that an event either 1) confirmed previous perceptions or 2) caused them interpret their situations in a different way. Since subjects often reported more than one interpretation (content, process, or both) of an event, the classification scheme contains some overlap.

Half of the subjects (seven) reported that the event made them realize that the company did not value them or their work within the company. For example, upon learning that his peer was leaving, one subject (Henry) said that this event “said to me that [the company] does care enough about its employees in order to keep them.” Similarly, the subject who learned that he was not going to be able to move to a more desirable position (George) felt that “when I wanted to go somewhere with the company I didn't have a lot of faith that they would be loyal to me.” Another subject (Tim) felt that when his manager was not responsive to his ideas, it was like “not being valued emotionally...so in the sense I was hearing ‘I do not give a shit what you have to say.’” Steve, who was reorganized into an undesirable position, felt that it was he was “stuffed off in this little box, treated like I am a resource instead of a person.” Jane was frustrated with her manager’s lack of support, and felt that it was unfair “especially after working so hard for so long, to hear this bullshit.” All of these cases report a sense of not being appreciated, recognized, or valued for one’s work. In two of these cases, subjects reported that they felt betrayed by the company, suggesting a breach in psychological contract (Rousseau, 1989).

The remaining half of the subjects (seven) reported that the event prompted them to perceive a conflict between their values and those of the company’s. For example, Jack (who was chastised for discussing quality issues at a company off-site) said that “I knew at that point that it was not going to be a productive environment for me.” Two other

cases reported that the event prompted them to realize (or confirm) that they were not a good fit for the company culture. Three of the cases reported that the event caused them to realize that they had a strong disagreement with the company strategy and/or management philosophy. These types of reactions are akin to the value image violations reported in the empirical studies by Lee and his colleagues (1996; 1998).

In addition to describing the content of their shock realizations, several subjects were able to articulate the *process* of coming to the realization and how the event influenced their thinking patterns. Some subjects reported that the event *confirmed* their previous perceptions about their work situation. For example, several subjects reported that the event “typified,” “confirmed” or “crystallized” their previous ruminations about their work situation. For example, Liz, the assistant scientist said that receiving the poor performance review “ kind of crystallized for [her] my views about working for this place.” In the case of Lori, when her boss didn’t support the work of her group, she felt that “it just kind of underlined how little he [her boss] does and he doesn’t even do the non-technical stuff that he could do well.” Not surprisingly, the four subjects who specifically indicated that the shock event confirmed their pre-existing views also reported pre-existing negative job attitudes (low organizational commitment and job dissatisfaction).

In five other cases, subjects reported that the event *changed* their views of their work situation. For example, one subject (Alex) described how his shock allowed him to

“[see] things very clearly things that were going on in the company” and that the event had thrown the whole thing “into sharp relief.” Another subject explained: “it [the shock] set me back in my thinking.” Subjects frequently described the shock event in similar terms; e.g., one that “rocked the boat,” the “defining event” or “turning point.” One subject was particularly articulate about how the shock event influenced her decision-making process:

I guess the best way to look at it was that it really tipped the scales. I had been pretty positive about the company. I mean there were obviously some problems but it really brought things to where they were kind of an even, positive/negative. It was at the point where it wouldn't take much to then tip them one way or the other, but it was an even - like okay, this is - I guess to me it symbolized okay, it's time for me to make a decision. And I don't know what the decision is going to be, it's not immediate, there's other factors I don't know that are going to happen, that are come into play, but it's - okay, it's time to open the ears, open the eyes, and see what does this mean to me in terms of my future here (Juliette).

For these subjects, the shock event forced them to view their situation in a new way.

Summary. Events classified as shocks were analyzed on three dimensions: the type of shock (objective), characteristics of shocks (desirability, controllability, and expectedness) and the cognitive reactions to shocks. A cross-case summary is provided in Table 4. Both organization and job related shocks were reported. An interesting finding was the relatively high number (7) of shocks that were classified as “lack of management support.” Contrary to the results reported by Lee et al. (1996, 1998), no personal shocks were reported. As mentioned earlier, this finding may be the byproduct of the small sample size, or possibly a result of the type of subjects who responded to the recruitment

ad. Consistent with the literature on sensemaking and life events, the majority of shocks were classified as negative, unexpected, and low in control.

The analysis of subjects' responses to shocks emphasizes the importance of including individual perceptions in construct definitions of shocks. This finding is consistent with Dauten's (1980) research on quitting, which revealed that subjects typically had realizations, or critical insights, in reaction to triggering events. According to Dauten, a strong realization is characterized by the individual's recognition of the experience as a major turning point, the remembered impact and the suddenness of the insight. These characteristics are consistent with subject's descriptions of their reactions to shock events in the current study. The interview analyses also suggest that image violations are an important component of reactions to shock events.

This finding is also consistent with Isabella's (1990) study of how manager's construe organizational events as change unfolds. In qualitative interview study of 40 managers, she found that organizational events trigger a cognitive redefinition of the current situation. Initially, events are interpreted from the context of pre-existing frames of references. As an organizational change unfolds, individuals must amend their conventional frames of reference. That is, the specific event signals that a cognitive redefinition of the event is required.

Post-Shock Reactions

The fifth research question guiding this analysis was: What are the consequences of a shock; i.e., what happens after an individual experiences a shock? Participant comments pertaining to events occurring after the initial shock were coded and analyzed. After the shock occurred, most subjects (12) experienced a typical pattern as they were making the decision to stay or to leave their organizations. During this time, participants evaluated events in light of the shock, which aided their decision making process. They continued this evaluation until they reached a final defining event in which they decided to leave. Consistent with the unfolding model of turnover, many participants reported evaluating their decision-making images for violations. In addition, also consistent with the unfolding model, some participants searched for a new job, and evaluated offers. The degree of organizational turnover also frequently influenced subject's decision-making. To ease understanding for the reader, several cases describing a typical pattern of post-shock cognitions and behavior will be described next. Following these narratives, common themes will be summarized.

Bill. Bill, a technical writer for a software company, experienced a shock when the product he was working on was canceled. Since he feared the possibility of losing his job, he immediately started searching for a new job. However, he wanted to remain with his company because they had a new version of the product coming out, and he was in charge of redoing the entire help system. In addition, he was given a substantial raise

(although his pay was still low relative to industry standards). He received another offer, but turned it down because there was aspects of the offer he didn't like. His decision to leave was influenced by the other turnover at his company:

There had always been a lot of disgruntlement, but that day [of the shock] was the day that probably started the mass exodus. And then we started hemorrhaging and having a brain drain. We lost the entire engineering development staff for the next version. We lost over 50% of the QA staff, we lost key marketing and sales people... And it's just like, if we lose the entire engineering staff, what have you got? And that's when a sense of urgency, it's like if this happens this is going to go down real quick. And I didn't want to be the last person standing on the deck. And fortunately a few key people stayed, but still I mean it hurt losing that many people. And it also hurt from a personal point, you are looking at if all these people I've worked with and considered friends, they've decided that it wasn't worth staying, then you know there is obviously... not just my...I didn't just wake up on the wrong side of bed one day. Obviously other people see this too...

The final decision to leave came when his company reversed their strategy on his product once again:

Well then in the past month, they totally reversed that, and they are now eliminating the product again and merging it. So when this other offer came along and it was a good offer, I thought that you know, I'm not going to be stupid. I refuse to go down with a sinking ship. So that was a good smooth opportunity for me to leave and go elsewhere.

He then immediately accepted the second job offer he had received. In comparing the two companies view toward their employees, he noted:

The difference between the company that I was at and the company I'm going to is that one values people as an asset, and the other one [views them as] a resource. And by resource, it's like we can go down to the stationery store and buy another pack of pencils. Well that was [my company's] view of employees was. They didn't understand the concept that if you made the employees happy, you increase productivity and they might want to stay. If someone left, well they can just be replaced. That constant turnover had a very demoralizing effect.

These comments suggest that Bill had a value image violation. After weighing his options, he decided that he would be able to gain more skills elsewhere.

Lori. Lori, a systems administrative program developer at for a grocery chain, experienced a shock when her manager failed to support the work she had done in his absence. She was also dissatisfied with the role of information systems (IS) within the company. She reflected on the situation with her boss and considering what type of work she wanted to be doing. She determined that her career goals could not be met if she stayed at the firm (trajectory image violation) and that the company culture was dysfunctional (value image violation). She started to seek other employment about one month after the shock occurred. At the same time, she was communicating with her general manager her dissatisfaction with the IS department, particularly her boss, in the hopes that her situation would change:

So I'd been looking, like I wanted to move on, but there was still a part of me that thought maybe if he got out of there and I was going to be taking over, I could make some changes.

After she wrote a six page evaluation of the situation in the IS department for a board member, her manager received his evaluation, but it was "no more than a hand slap." However, her situation remained the same. At that point:

And I thought, well , I guess it's clear. I can't like magically hope that he's going to go away and that I'm going to then be able to make my points heard in management and in the company about how information systems are used. So I just kind of hit my limit and decided now I really need to look a bit more seriously.

After that point, she decided she probably wouldn't want to stay even if they fired her boss and let her have his position. She got one offer similar to her current job at another company, but did not take it because she decided she did not want to continue working in the IS field. After she received her second offer, she accepted it and left her organization.

Juliette. Juliette, a database developer for a medical software company, experienced a shock when she found out that her boss was leaving the company. After her boss left, she realized that it was "time to open the ears, open the eyes, and see what does this mean in terms of [her] future" at the company. She decided to remain with the firm for awhile so that she could further develop her skills (she was new to the computer industry) and to see if the situation at her company would change for the better. However, many other employees started leaving the company. The other turnover affected her because she enjoyed working with her coworkers and she learned a lot from them - their leaving left her with fewer opportunities to learn. Meanwhile, the concerns of other employees were not being addressed, which increased her resolve to leave the company:

I think that even if my manager Jim had left, but that some of his concerns had been addressed, that would have made me see that they actually listened to the employees. But they didn't. So I think that had they given any credence to a specific area, that certainly - maybe not made me stay, but I would have thought a lot harder. I really loved the people I worked with....The concerns of the people who left were not being addressed, basically being discarded...It was obviously a situation that was not going to change.

In addition, she was told that she would be given training in a product she wanted to learn, but that opportunity was given to another employee. The final straw came when a 23 year-old man with no management experience was brought in to manage her group:

So as an older woman in high tech, you know, you've got all the cards stacked against you. And so I just felt at that point that it was time to hit the highway. Hit the road.

She felt she was stuck in her position and that wasn't going to have more opportunities with the company (a strategic image violation), in addition to the frustration she was having with her long commute from Seattle to the Eastside. After staying on for a time to increase her skill level, she accepted a job with another firm and left.

The Holding Pattern

These prototypical narratives reveal several common themes among the twelve cases (the three discrepant cases will be discussed later below). First, subjects reported going through a process of evaluating future events in light of the initial shock event that prompted their initial cognitions to quit. As illustrated in the narratives above, subjects typically considered themselves in a "wait and see" mode after the shock. While they had begun to consider quitting, they also wanted to remain with their companies to see if the situation was likely to change:

...my experience told me that reality was that things were not going to change. but I guess on the idealistic side, I wanted to give them a period of time to, you know, you do not always know everything...you can't decide the future, so I wanted to give it some time and see what changes might come about (Jack).

The cognitive adjustment (see above) that occurred as a result of the shock heightened their awareness to these subsequent events.

Consistent with the research on sensemaking, the shock event represents a change to the status quo, and the individual can no longer view the situation in the same light (Weick, 1995):

...I'm sure I could have convinced myself to stay longer, but once I started picking up on the cues...a lot of things that I wasn't paying attention to before, that I'd really not been talking about, not thinking about...(Alex).

In most cases, this evaluation process resulted in an eventual quit decision. In those cases that had not left their organization (stayers), they continued to evaluate events. Dan, who was concerned with the financial stability of his firm, experienced a merger which then pacified him for the time being:

At that time [after the merger], I figured, well, okay, financially the stability is no longer a question, now it is a matter of what are they going to do with this wing of their company and what the activity would be like, so it [job search and withdrawal cognitions] has subsided some and it has just been sitting. Now the major swing will be within the next few months, what will they make, actually make decisions that will actually direct this development team towards more cutting edge developments, if they opt not to go that way, then there will be a fairly big exodus out of this group, and I likely might be one of those.

In most cases, the evaluation process resulted in an eventual quit decision. The discovery of a holding pattern process is consistent with the extant literature on sensemaking and decision-making. For example, Stinchcombe (1990) postulated that, in the face of uncertainty, individuals evaluate incoming information as signs that indicate what direction the individual should choose on the basis of the way the future unfolding.

Image Violations

Lee and Mitchell (1994) theorized that a key component of many individual's decisions to leave their organization are image violations. The shock and accompanying contextual circumstances are judged for compatibility with the employee's personal values (value image), goals (trajectory image) and activities directed toward goal attainment (strategic image). Participants were asked questions to ascertain the presence or absence of image violations (e.g., did you feel your career/personal goals could be met if you stayed at your firm?). Answers to these questions, as well as spontaneous comments that emerged in the interview, were coded and classified according to the type of image violation.

All 12 cases reported instances of image violations subsequent to experiencing a shock. Three cases reported value image violations, three were trajectory image violations, and six were strategic image violations. The analysis of these cases revealed that four out of the five stayers interviewed reported strategic image violations (i.e., they were concerned that their company could not help them attain their goals). However, they were also in the "wait and see" holding pattern - if the company could meet their needs, they were willing to remain with their organization. The three individuals who reported value image violations did not engage in job search behavior, suggesting that these three cases could be classified as decision path 2 quits according to the unfolding model of turnover.

Job Search Behavior

Consistent with the unfolding model of turnover (Lee & Mitchell, 1994), 7 of the 12 subjects went through a process of job search and evaluation of alternatives. Three of these subjects (the leavers) had offers in hand when they left. The remaining four subjects were stayers - they had not yet found a suitable alternative to their current job.

Of the five subjects who did not seek another job, four (all leavers) noted that they already had other alternatives available; specifically, consulting opportunities. They expressed little concern about their ability to find work elsewhere. This finding suggests that when the availability of alternatives is high, individuals may not need to conduct a job search while still employed in their current organization. The fifth subject (a stayer) was on medical leave from work and was suffering from clinical depression - she was unsure of whether she would return to work or seek employment elsewhere.

Turnover at Firm

A common benchmark used by the subjects in evaluating their stay/quit decision was other turnover experienced at their company. About half of the respondents (8) noted that their companies were experiencing high turnover rates. In several cases, subjects reported over 40% annual turnover rates. The high turnover influenced subjects decision to leave their organizations for a variety of reasons. In some cases, interviewees mentioned that it was difficult to remain with their company because of loss of personal friends:

...on the emotional side of working here with people for so long a period of time and then having that team essentially crumble in front of your eyes, and not having any control to be able to stop that, it's outside your decision process (Dan).

And as people started leaving, the - I guess the reasons for staying dissipated and so it's ... I'm assuming that as a stone gathers moss rolling down a hill, it becomes larger and faster. And so as more people left, it threw off more and more people. I mean the rate of people who left increased geometrically...And so when you realize that fewer and fewer of your friends are there...as they became more distressed and disgruntled, their reason for staying was also dissipating (Juliette).

Respondents reported that it was difficult to remain at the company when members of their peer group were finding jobs with companies that provided more opportunities and superior pay:

As more and more people leave, it heightens your awareness of [the] opportunities out there so the temptation has gotten much more evident to me. It is one thing to think, well, maybe I should go look for another job, and another to know that some of your peers with equal or lesser talent have been able to quickly go out and find something that is fairly exciting and very rewarding both in either the atmosphere, environment, or pay scale. So, obviously the temptation to do what they have done is heightened (Dan).

High turnover rates also provided confirmation for subjects that their companies were experiencing problems.

Well, I think it tends to reinforce, you know, when you are making important decisions you want to be sure that your judgment is sound and while, just the fact that other people are doing it does not make it right or correct, if you can understand their situation, if it is sensible, then it can help you confirm your own decisions. And I think when you see that high turnover, it is indicative of a problem, and so it tends to reinforce your perception that your problems are wide spread. You see people leaving in all, you know in many departments of the company. You know this is an endemic thing and not something that is one isolated situation (Jack).

High turnover rates cause respondents to question their own commitment to their organization. First, the loss of friends or influential people creates sense a personal loss for the individual. Second, observing other employees finding better jobs at other companies increases the employee's awareness of better job alternatives elsewhere. Finally, observing other employees leave the organization confirms the employee's perception that their firms experiencing problems. It heightens the individual's awareness of leaving, and provides additional confirmation that leaving is a good decision.

The finding that turnover experienced at an organization influences an employee's decision to leave is consistent with Ebaugh's (1988) finding on the influence of cohort effects on nun's decisions to leave the nunnery. She found a "mass exodus" effect: as more nuns left, it provided support and confirmation for other nuns to quit their occupation. Although few studies have explored of the affect of firm turnover on individual turnover have been conducted, there is some evidence to suggest that colleague resignations stimulate turnover decisions (Hom & Griffeth, 1995; Mueller & Price, 1989).

Turning Point

Consistent with the narratives above, all seven of the 12 cases who were leavers reported experiencing a final defining event that confirmed their decision to quit (a turning point). While a shock prompts initial thoughts of quitting, a turning point is the point in which a decision is definitely made to quit.

We were going through some budgetary stuff and I just said, you know, I cannot be here any longer. I must leave this building and not have to come back (Alex).

Things were not getting any better, and we had recommendations from Price Waterhouse. They consulted for \$200 bucks an hour to do some of these things, and yet they [his management] did not care what the report said...So kind of listening to them as they responded to the consultant, really cemented my decision to go ahead, get vested, and then quit (Jeff).

Not surprisingly, and consistent with the turning point hypothesis, those five cases that were stayers had not yet experienced a turning point. They had not made a definite decision to leave their organization.

The finding that individual experience a final “turning point” is consistent with the research findings of Ebaugh (1988) on and Dauten (1980). Both of these studies on role-exit found evidence that the final decision to leave is usually precipitated by an specific event or insight. These authors reported that often times the event itself is not momentous, but it becomes a symbol for the individual that it is time to leave his or her role.

Discrepant Cases

A critical step in building and validating a theory is the examination of discrepant cases (Eisenhardt, 1989; Lee, 1998). As noted above, three of the fifteen cases (Liz, Mark, and Rich) were inconsistent with the typical pattern described above. In particular, none of the three cases reported going through a holding pattern and then experiencing a turning point. One possibility is that these three cases represent decision path 1 or decision path 2 quits from the unfolding model of turnover (Lee & Mitchell, 1994). One case, Liz, indicated that she had experienced a similar event in the past, suggesting a

script based (i.e., decision path 1) quit. The two other cases reported strong value-based or trajectory-based image violations, suggesting a decision path 2 quit. In addition, Lee et al. (1998) found that decision path 1 and decision path 2 quits occurred more quickly than decision path 3 quits. In these three discrepant cases, all of them made quick decisions to quit their jobs following the shock event. Taken together, these results suggest that the holding pattern and turning point may be more prevalent in decision path 3 turnover decisions than in decision path 1 or decision path 2.

Based on the analysis of the qualitative findings and the extant literature, I developed a model of the process by which events are construed as shocks. This model is depicted in Figure 1. The conceptual framework of the model is derived from research on sensemaking. Sensemaking involves the cognitive-action processes of environmental scanning, interpretation, and associated responses (Gioia & Chittipeddi, 1991; Weick, 1995). The model and its derived propositions, is summarized in the following chapter.

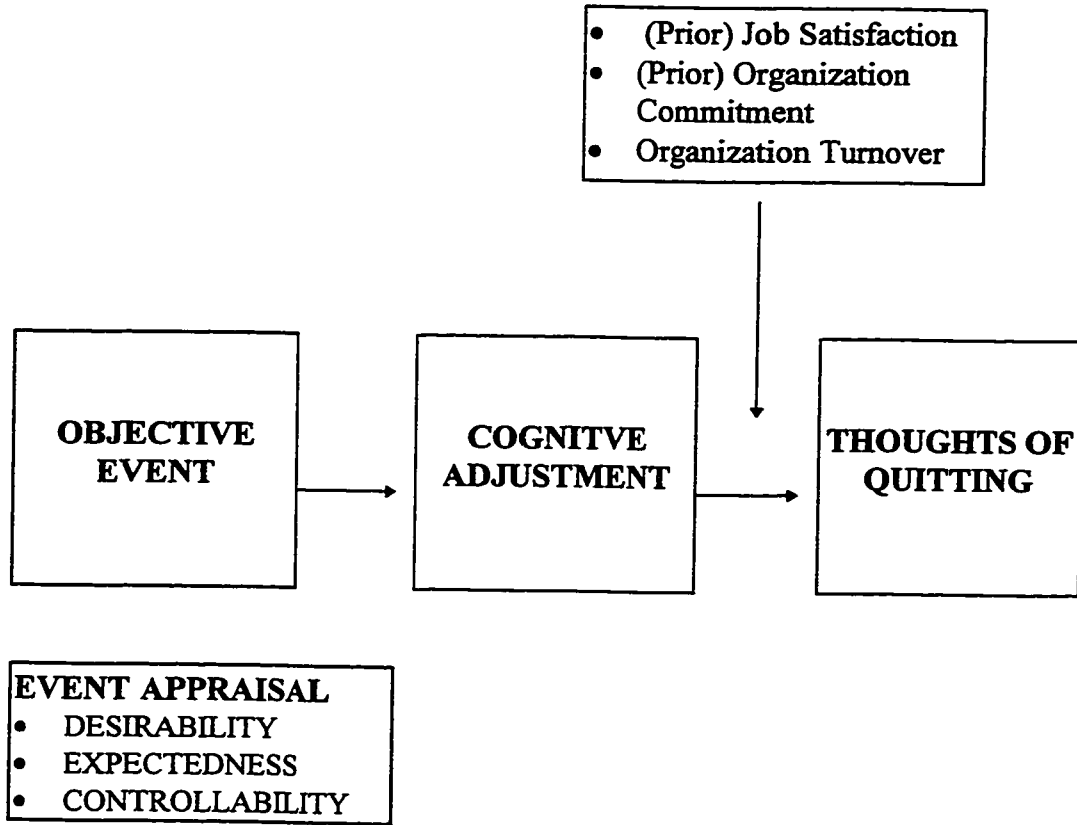


Figure 1 - A sensemaking model of shocks

CHAPTER 4: A SENSEMAKING MODEL OF SHOCKS

SCANNING AND INTERPRETATION

Events are ongoing in organizational life, and individuals are constantly making sense of their environment, a process which Weick (1995) terms sensemaking. Within the context of organizational life, members are bombarded with stimuli, some of them more salient than others. When an event occurs that is unusual or extreme, organizational members can no longer take things for granted (Weick, 1995). Instead, they make sense of these events by extracted cues from this event and its associated context.

People tend to notice stimuli that are novel, individuals or behaviors that are unusual or unexpected, behaviors that are extreme and negative, stimuli relevant to current goals, and events that are intense, sudden, bright, lit, colorful, alone or sharply drawn (Fiske & Taylor, 1991; Kiesler & Sproull, 1982). In order for an event to be interpreted as a shock, it must first be noticed. The qualitative research summarized above supports the idea that the organization and job-related events that are noticed and subsequently interpreted as shocks (i.e., those that prompt initial thoughts of quitting one's organization) tend to be negative, unexpected, and perceived as low in controllability.

Not all such events, however, will prompt thoughts of leaving the organization. In order for thoughts of quitting to occur, employees must first experience a paradigmatic shift in the way in which they view their world. Individuals redefine their frames of reference based by comparing their prior view of the situation with what appears to be

current reality, as well as their anticipation of future events (Isabella, 1990). The mismatch between their goal, trajectory and value images and their current frame of reference becomes apparent to them.

According to Starbuck (1976), frames of reference are a central organizational sensemaking device during times of change. The nature of sensemaking is retrospective: In order to make sense a distinct and jarring event, individuals must step outside their stream of experience and direct attention to that which has already passed. Individuals try to create a link between the present situation and relevant previous situations to make sense of the situation (Weick, 1995).

This process results in new insights and reconstructed frames of reference. Subjects in the current study reported that the shock event caused them to realize either that their values were out of sync with that of the organization's (image violation), or that the organization no longer valued them, or both. In some cases the shock event confirmed their view of existing reality yet caused them to realize that it was time to make a change to their situation (resulting in thoughts of quitting). In other cases, the shock event completely shifted their initial frame of reference, forcing to view reality in a new light. For the process model of shocks, we will label this new frame of reference construct *cognitive adjustment*.

For the purposes of our model, cognitive adjustment is defined as a frame of reference shift with regard to an individual's relationship with his or her organization that

occurs as a result of an objective event. The cognitive adjustment provides a way to organize understanding of event-based situations (Abelson, 1981; Isabella, 1990).

Cognitive adjustment appears to involve two major components: image violations and self-identity violations. The image violations may include value, goal, and/or strategic image violations.

The second component of cognitive adjustment involves identity violations. The link between cognitive adjustment and identity is consistent with sensemaking theory (Weick, 1995). According to Weick (1995), the establishment and maintenance of one's identity is a key concern in sensemaking. The processes that develop and maintain a person's changing sense of self operate as a result of three self-derived needs:

the need for self-enhancement, as reflected in seeking a maintaining a positive cognitive and affective state about the self; (2) the self-efficacy motive, which is the desire to perceive oneself as competent and efficacious and (3) the need for self-consistency, which is the desire to sense and experience coherence and continuity (Erez and Earley, 1993, p.28).

An individual's view of external stimuli is affected by associating and disassociating with apparent threats to one's identity, or opportunities to reaffirm these images and identities. Weick (1995) asserts that "controlled intentional sensemaking is triggered by a failure to confirm oneself" and that "sensemaking occurs in the service of maintaining a consistent, positive self-conception"(p.23). The cognitive adjustments triggered by events reported by subjects in the qualitative interviews resulted from inconsistent information to the individual's self concept. For example, many subjects

discussed threats to competence, such as the perception of not being valued or considered important by one's manager.

In summary, cognitive adjustment involves image violations, identity violations, or both. When such a cognitive adjustment occurs, thoughts of quitting result. Hence, the following hypotheses are proposed: If an organization or job-related event is negative, unexpected and uncontrollable, it is likely to trigger a cognitive adjustment.

1. Cognitive adjustment will mediate the relationship between the desirability of an event and thoughts of quitting.
2. Cognitive adjustment will mediate the relationship between the expectedness of an event and thoughts of quitting.
3. Cognitive adjustment will mediate the relationship between the controllability of the event and thoughts of quitting.
4. Cognitive adjustment will mediate the relationship between the interaction effects of the event dimensions (desirability, expectedness, and controllability) and thoughts of quitting.

The Influence of Individual Attitudes

Individual attitudes may also play a role in the interpretation of key events. Research on organization turnover has consistently found that job satisfaction and organization commitment directly affect withdrawal cognitions (Hom & Griffeth, 1995). However, the effect sizes reported are typically small, accounting for about 20% of the variance in employee turnover (Lee & Mitchell, 1994). The findings of the current study support the observations of Lee and Mitchell (1994) that decisions to turnover may or

may not be precipitated by job dissatisfaction or low organization commitment. Indeed, one third of the sample reported that they were satisfied with their job and with their organization prior to experiencing the event that prompted initial thoughts of quitting.

While job satisfaction and organization commitment may not play as strong of a role as previously believed, the results of the qualitative interviews suggest that both these attitudes may play a role in predicting thoughts of quitting. The detailed analysis of the facets of job satisfaction and organization commitment did not reveal any particular relationships between these facets and whether or not a cognitive adjustment occurred – both satisfied and dissatisfied subjects reported cognitive adjustments. However, previous researchers have found that satisfied workers were most likely to implement changes on the job in response to stimulus events, whereas dissatisfied workers more likely to report avoidance behaviors and intentions to turnover (Rosse and Hulin, 1985). This finding suggests that when a cognitive adjustment occurs, an individual may or may not have thoughts of quitting. It may be that when employees are highly satisfied and committed, these attitudes may inoculate employees from generating thoughts of quitting in response to a triggering event. Taken together, these findings suggest that the employees' prior level of satisfaction and commitment moderates that relationship between cognitive adjustment and thoughts of quitting.

5. Job satisfaction will moderate the relationship between cognitive adjustment and thoughts of quitting.
6. Organization commitment will moderate the relationship between cognitive adjustment and thoughts of quitting.

The Influence of Context—Organization Turnover

To date, social and contextual variables have played a relatively minor role in traditional models of organization turnover (Lee & Mitchell, 1994). Sensemaking, however, is a social process – it goes beyond the individual cognitive level of analysis to understand human decision making and behavior (Weick, 1995):

Human beings in interacting with one another have to take account of what each other is doing or is about to do; they are forced to direct their own conduct or handle their situation in terms of what they take into account. Thus, the activities of others enter as positive factors in the formation of their own conduct; in the face of the actions of others one may abandon an intention or purpose, revise it, check or suspend it, intensify it, or replace it. (Blumer, 1969 as cited in Weick, 1995).

The results of the qualitative analysis suggests individuals take into account the activities of others in forming and enacting their intention to leave. In particular, organization turnover (the extent to which other employees are leaving the organization), may influence thoughts of quitting.

The influence of other organization employee turnover on an individual's turnover decision has received little attention in the literature (Hom & Griffeth, 1995). The results of the qualitative study suggests that the turnover decision process may be influenced by other individuals who were leaving the organization. A high rate of organization turnover appeared to influence an individual's thoughts of quitting by 1) creating a personal sense of loss for the individual, 2) increasing awareness of job opportunities in other organizations, and/or 3) providing confirmation of the employee's new frame of reference

(cognitive adjustment). The more individuals that the employee is aware of that have left the organization, the more likely he or she is to consider leaving as a result of a cognitive adjustment.

7. Organization turnover will moderate the relationship between cognitive adjustment and thoughts of quitting.

INTERPRETATION TO EVALUATION

The qualitative analysis also explored the consequences of shocks; i.e., the cognitive and behavioral patterns individuals experience following the interpretation of an event as a shock. The patterns of behavior described by interview respondents also fit within the conceptual framework of sensemaking. Once an event is noticed, it may or may not result in an action by that individual. Sensemaking “may result in an understanding that action should not be taken or that a better understanding of the event or situation is needed, or [in people] having more and different information about the ambiguous issue” (Feldman, 1989, p. 20 as cited in Weick, 1995). Feldman’s propositions (1989) support Lee and Mitchell’s (1994) theory that shocks cause people to review their situation (comparing images, scripts, and alternatives), gain a better understanding of themselves in their interpretation of the event, which may or may not result in a turnover decision.

Isabella’s (1990) findings on evolving managerial interpretations of change events found that once a cognitive redefinition of the situation occurred, the interpretive task

switched to an evaluative one. The central question fueling this interpretive shift was “what has the event meant overall?” The qualitative research findings suggest a similar process of interpretation and evaluation. Specifically, following an event, individuals have a heightened awareness to future events that help place the shock in context, and aid their evaluation of the situation. Individuals adopt a “wait and see” perspective, or *holding pattern*, and evaluate each event in light of the new frame of reference created by their cognitive adjustment. This finding is similar to Dauten’s (1980) finding that the realization resulting from a shock becomes like a “trailing star,” providing guidance on what paths to pursue. Each event subsequent to the shock provides confirming or disconfirming evidence that their new view of the world is accurate. Decision-making researchers have found that individuals evaluate incoming information as signs of what course to take when the future is uncertain (Stinchcombe, 1990).

Meanwhile, consistent with the unfolding model of turnover, individuals may also evaluate their images for violations, as well as seek and compare job alternatives. This process continues until the individual reaches a *turning point*, i.e., the point at which a definite quitting decision occurs. The turning point is often a single event that clarifies their decision to leave. The turning point may be a relatively minor event, or the acceptance of another job offer. In their research on role exit, both Ebaugh (1988) and Dauten (1980) found evidence of a turning point. Taken together, this finding suggests

that the turning point construct is an important addition to the unfolding model of turnover.

The evaluation of discrepant cases in the qualitative research suggested that the “holding pattern and turning point” may be more prevalent in decision paths 3 than in decision paths 1 and 2. This analysis is consistent with Lee et al.’s (1998) finding that decision path 3 is a longer process than that of decision path 1 and 2. Hence, the following propositions are suggested:

Proposition 1: Following a shock event, individuals will evaluate future events for confirming evidence of their interpretation (i.e., cognitive adjustment) of the shock.

Proposition 2: Individuals who decide to quit their jobs will report a final “turning point” event, where they make a final and definite decision to leave their organization.

Proposition 3: The holding pattern and turning point will be more prevalent in decision path 3 than in decision paths 1 and 2.

In summary, the qualitative research revealed new findings regarding the antecedents, characteristics, and consequences of shocks in the unfolding model of turnover. The findings pertaining to the scanning and interpretation of events and their relationship to thoughts of quitting, summarized in model presented in Figure 1, are tested in Study 2 of this dissertation (Hypotheses 1-7). The hypotheses pertaining to the consequences of shocks (Propositions 1-3) provide useful avenues for future research.

CHAPTER 5: STUDY 2

METHODS

The second study was designed to test the sensemaking model of shocks. The study was a 2 (desirability) X 2 (expectedness) X 2 (controllability) vignette experimental design. Subjects recorded their reactions to one of eight events as if it had occurred on their current job. In order to simulate a realistic test of the model, subjects completed measures of their *actual* current job attitudes. This methodology is in contrast to most vignette studies, where subjects are “given” the entire situation and asked to imagine that they are a character in the scenario.

Sample and Data Collection Procedures

In order to obtain a cross-section of subjects across the computer industry, as well as avoid any systematic bias inherent in a single organization, survey data were collected from members of computer user groups. Computer user groups are organizations for exchanging information about computers, software, and related issues. Groups typically meet on a regular basis (usually monthly) to discuss topics of interest to their particular application or technical specialty. Only those groups that targeted technical specialties (e.g., programming languages, Local Area Networks (LANs), database development) were contacted in order to target professionals working full time in the computer industry. User groups which were aimed at novices, senior citizens, and hobbyists were excluded.

Data collection took place during the summer of 1998. Survey data were collected from computer user group members in one of two ways: 1) paper-and-pencil survey or 2) an electronic survey. The electronic and paper-and-pencil surveys were identical.. The survey is located on the World Wide Web at <http://weber.u.washington.edu/~susancr>.

For the paper-and-pencil survey, I contacted 25 computer user groups listed in the *Puget Sound Computer User* (Washington State) and requested permission to collect survey from their group members. Eight (8) groups gave me permission to attend their monthly meeting and distribute surveys. At the meeting, I explained that the objective of the research was to explore the job attitudes of high-tech professionals. Surveys were distributed along with pre-addressed postage paid envelopes. One hundred and seventy five (175) paper-and-pencil surveys were distributed to 8 computer user groups in the Puget Sound area. 76 surveys were returned, for a paper-and-pencil response rate of 43%.

In order to generate an additional means of participating in the survey, an electronic version of the survey was developed for the World Wide Web (WWW) using Hypertext Markup Language (HTML). Research suggests that the psychometric properties of paper-and-pencil and electronic tests for attitudinal and personality measures are generally equivalent (Stanton, 1998). For the electronic survey, I sent email to 9 computer user groups in the Puget Sound area (listed in the *Puget Sound Computer User*) and 23 computer user groups in California (listed on the web at www.apcug.org/apcug/locator/locusca.htm). In the email, I explained that I was

conducting research on the job attitudes of high tech professionals. I requested that they forward the mail, which included the web address for the electronic survey, to members of their user group. Two contacts responded that such requests were against the rules of their groups, so they could not forward the mail. Unfortunately, there was no way to determine the number of potential subjects who received an email request, so a traditional response rate cannot be calculated. However, a counter was programmed into the web survey that determined the number of times the web site was accessed. In all, 105 subjects completed a survey out of 207 who accessed the web survey, for a “response rate” of 51%.

All combined, 181 paper and electronic surveys were returned. Of these, 147 respondents indicated that they were employed full-time. During the data cleaning process, and additional 13 surveys were dropped from further consideration due to extensive missing data or the respondent indicating that the scenario was not realistic or applicable to their situation.

The data cleaning process resulted in a total of 134 respondents, including 49 paper surveys and 85 electronic surveys. Independent sample *t*-tests were performed on all demographic variables and scaled measures to determine if there were significant differences between the paper and electronic survey respondents. The results indicated no significant differences between the samples on demographic variables. In terms of the scaled measures, the results showed that paper-and-pencil respondents were significantly

more satisfied with their jobs than electronic respondents ($t = -2.10, p < .05$). The remainder of the scaled measures indicated no significant differences between the electronic and paper-and-pencil survey respondents. Given the relative equivalence of the two samples, they were combined for all further analyses.

Males comprised 76% of the total sample ($n = 134$). The average age was 39 years. Over half (56%) of the sample were married. As was expected, sample respondents were well-educated, with 84% indicating that they had obtained at least a 4 year college degree. Ninety-one percent (91%) indicated that they needed to work for financial reasons.

Respondents had an average of 13.4 years of experience in the high tech industry, and an average tenure at their current company of about 6 years. Most respondents (78%) indicated that they worked for companies with 100 or more employees. Respondents worked in a variety of positions, with the greatest number indicating that they were employed as product developers (28%), followed by those indicating that they worked in research and development (11%). A separate item asked respondents to indicate whether they occupied a manager or lead position, and 36% answered in the affirmative.

Experimental Manipulation

This study is a 2 (desirable/not desirable) X 2 (expected/not expected) X 2 (controllable/not controllable) vignette survey design. Paper-and-pencil surveys were distributed so that subjects randomly received one of eight vignette scenarios which

varied by event dimension (desirability; expectedness, and controllability). The web survey was programmed such that respondents would randomly receive one of the eight scenarios when they clicked on the “Take Survey” icon.

After completing the independent variable measures, subjects read a scenario which described an event. They were given the following instructions prior to reading the scenario:

In a moment, you will read about a situation. Try to place yourself in the situation – imagine that it has actually happened *to you, on your current job*. Try to imagine your feelings and reactions as vividly as you can, considering what it would be like to be in that situation. You may need to read the scenario a couple of times before you are completely familiar with the details of the situation. After reading the situation, complete the following questions, and indicate *how you would react* if you were in that situation.

Each of the scenarios involved a situation where the individual was affected by a merger. For example, the *negative/expected/no control* scenario read as follows:

In the last few weeks, you have been aware that your manager has been participating on a task force – it’s been very secretive and you are not sure what they are discussing. However, you strongly suspected that a merger might happen soon.

As you anticipated, this morning, the top executive of your company sent out a memo announcing that your company would be merging with another firm. You think that your opportunities for promotion may be limited as a result of the merger.

The scenarios were intentionally brief so that extraneous information would not prevent subjects from being able to imagine themselves in that situation. Each of the eight scenarios can be found in Appendix C.

Measures⁵

Job Satisfaction. This measure assessed the level of satisfaction with the subject's actual job. Job satisfaction was measured using the Michigan Organizational Assessment Questionnaire subscale (Cammann et. al, 1979). This scale includes three items: "All in all, I am satisfied with my job," "In general, I don't like my job" (reversed scored) and "In general, I like working here." The items are measured using a five point Likert-type scale (5=strongly agree to 1=strongly disagree). While this scale is short, previous research has reported reliabilities and validities consistent with longer job satisfaction measures (Spector, 1997). The internal consistency of these three items was $\alpha=.89$.

Organization Commitment. This measure assessed the level of the subject's commitment to his or her actual job. A measure of affective organization commitment, the Organization Commitment Questionnaire (OCQ) was used to assess commitment. This measure was chosen because research has shown that affective commitment to the organization has the strongest and most consistent relationships with desirable organizational outcomes (Meyer & Allen, 1997). Organization Commitment was measured by using the nine-item short form of the OCQ (Mowday, Porter, & Steers, 1982), substituting the word "my company" where the word "organization" appears. The short form of the OCQ, which eliminates the negatively worded items that refer to individual's desire to remain a member of the organization, was used for two reasons: 1)

⁵ All scaled measures and their associated reliabilities are shown in full in Appendix D.

to reduce the conceptual overlap between the constructs of commitment and intention to remain in the organization (Reichers, 1985) and 2) because the negatively worded items have been shown to lack stability (Tetrick & Farkas, 1988).

Sample items from the OCQ include “I talk up my company to my friends as a great company to work for” and “I really care about the fate of my company.” These items are measured using a 5 point Likert-type scale, ranging from 5=strongly agree to 1=strongly disagree. The internal consistency of the nine item scale was .89.

Organizational Turnover. Organizational Turnover is defined as the extent to which an individual perceives a high turnover rate in his or her organization. Organization Turnover was measured using a 2 item scale developed for this research. The items included “Many people I know at work have left the organization within the last year” and “My company has been experiencing a lot of turnover.” Items were again rated on a 5-point Likert-type scale, ranging from 5=Strongly agree” to 1=strongly disagree.” The internal consistency for this scale was $\alpha=.86$.

Withdrawal Cognitions. Withdrawal cognitions were measured using a 5 item scale, which included “I have experienced an event in the last 12 months that has prompted me to consider quitting my job” (rated from 5=strongly agree to 1=strongly disagree), “Do you intend to leave your company in the next 12 months?” and “How likely is it that you will leave your company in the next 12 months?,” (rated from 1=very unlikely to 5=very likely), and “If you received a job offer in the past year, to what extent

did you consider accepting it?” and “If you received a job offer today, to what extent would you consider accepting it.” These items were rated from 1=“would not consider, 3=“between casually and extensively” to 5=“very extensively”. The internal reliability for this scale was $\alpha=.84$.

Job Alternatives. The extent to which respondents perceived that they had job opportunities available outside their organization was measured using a 2 item scale adapted from Griffeth and Hom (1988). The items included “What is the probability that you can find an acceptable alternative to your job?” and “If you search for an alternative job within a year, what are the chances that you can find an acceptable job?”. The scale anchors ranged from 1=no chance, 3=50% chance, to 5=100% chance. The internal reliability for this scale was $\alpha=.92$.

Cognitive Adjustment. Cognitive adjustment is defined as a frame of reference shift with regard to an individual’s relationship with his or her organization that occurs as a result of an objective event. The cognitive adjustment scale was developed for the current study based on the analysis of the qualitative interviews in Study I. Participant comments to three interview questions [(1) What was your reaction to the event? (2) What did the event symbolize for you? and (3) What distinguished this event from events that occurred previously?] were content analyzed. Recurring comments and themes were used to develop items for the scale. The final cognitive adjustment scale consisted of 11 items developed to assess the extent to which the event would *alter* their current

perceptions. After reading the scenario, subjects were asked to indicate what their thoughts would be as a result of the situation described in the scenario. Sample items include: "I would feel more or less important than I thought," "I would feel more or less secure in my job than before," and "I would feel more or less valued than I thought." The items were rated on a 5 point scale (-2= much less,-1=somewhat less, 0=no change, 1=somewhat more, 2=much more). The internal consistency reliability for this scale was $\alpha=.94$. A principal component factor analysis of the 11 cognitive adjustment items showed that all of the items loaded on to one factor, explaining 61.3% of the variance, with an eigenvalue of 6.75.

Thoughts of Quitting. Participants were asked how they would respond to the situation presented to them in the scenario. In order to avoid demand characteristics, participants responded to 16 items, which were modified items from the exit, voice, loyalty, and neglect questionnaire developed by Rusbult, Farrell, Rogers, & Mainous (1988). The thoughts of quitting measure consisted of 3 items which included "look for a new job," "consider quitting my current job," and "think about quitting my job." Scale anchors ranged from 1=definitely would not, 3=unsure, to 5=definitely would. The internal consistency reliability for this scale was $\alpha=.93$.

RESULTS

Descriptive Statistics and Correlation Matrix

The means and standard deviations of all scaled measures are reported in Table 5 below.

Table 5 - Descriptive Statistics

	Mean	Std Dev
Job alternatives	4.16	.94
Job satisfaction	3.87	.83
Organization commitment	3.33	.71
Organization turnover	2.89	1.15
Withdrawal cognitions	2.78	1.01
Cognitive adjustment	-.24	.68
Thoughts of quitting	3.03	1.00

N = 134

In reviewing the descriptive statistics, two issues stand out. First, the mean of the job alternatives is quite high ($M = 4.16$). This reflects the strong labor market for technical professionals, as was anticipated. Second, the mean cognitive adjustment score was below 0 (which would indicate no change). This indicates that individuals tended to have a negative response to the merger scenario, regardless of their manipulated condition.

The correlation matrix is reported in Table 6.

Table 6 - Correlation Matrix

	1	2	3	4	5	6	7	8	9	10
Thoughts of Quitting	1.00	-.59 [†]	-.28 [†]	.01	.07	.07	-.43 [†]	-.34 [†]	.22*	.39 [†]
Cognitive Adjustment	-.59 [†]	1.00	.44	.02	.16	-.01	.15	.13	.00	-.04
Desirability	-.28 [†]	.44 [†]	1.00	.01	.04	.06	.04	.05	.06	-.04
Expectedness	.01	.02	.01	1.00	-.07	.00	.10	.04	.17	-.06
Controllability	.07	.16	.04	-.07	1.00	-.09	-.15	-.11	-.04	.05
Job Alternatives	.07	-.01	.06	.00	-.09	1.00	.05	.13	-.02	.15
Job Satisfaction	-.43 [†]	.15	.04	.10	-.15	.05	1.00	.76 [†]	-.33 [†]	-.63 [†]
Organization Commitment	-.34 [†]	.13	.05	.04	-.11	.13	.76 [†]	1.00	-.41 [†]	-.56 [†]
Organization Turnover	.22*	.00	.06	.17	-.04	-.02	-.33 [†]	-.41 [†]	1.00	.47 [†]
Withdrawal Cognitions	.39	-.04	-.04	-.06	.05	.15	-.63 [†]	-.56 [†]	.47 [†]	1.00

N = 134, † $p < .01$, * $p < .05$ (two-tailed)

Pilot Tests and Manipulations

Prior to conducting the actual study, two pilot tests were conducted. The main purpose of the pilot studies was to determine if the scenarios were realistic and that subjects could clearly distinguish between conditions. It was essential to check these manipulations in the pilot testing phase because they would not be included in the actual survey in order to avoid demand characteristics.

For the first pilot test, subjects were 22 undergraduate business evening degree students. As part of a discussion on survey instrument design, students were instructed to fill out a survey. I asked each respondent to provide an estimate of how long it took to

complete the survey. After all subjects had completed the survey, I facilitated a discussion on the survey, and sought feedback on unclear instructions, ambiguous wording, difficult items and items they did not like answering (Mangione, 1995).

The results for the first pilot test showed that eighty-one percent (81%) of subjects indicated that the scenario was realistic and that they were able to imagine themselves in the situation. The manipulation for the desirability factor was successful: subjects in the desirable condition viewed their scenario as significantly more desirable ($t = -3.60, p < .01$) than subjects in the undesirable condition. The manipulation for the “expected” factor was not successful: subjects in the expected condition did not view their scenario as significantly more expected than subjects in the unexpected condition ($t = -1.34, ns$). Although subjects in the control condition viewed themselves as having more control than subjects in the no control condition, this effect was only marginally significant ($t = -2.00, p < .10$).

The non-significant results for the first pilot test mandated the need for a second pilot test. Using the feedback I received from the first set of subjects as well as the results of the statistical analyses, I revised the survey instrument and the scenarios. The subjects for the second pilot test were 12 full-time working professionals.

The results showed that seventy-five (75%) of subjects indicated that the scenario was realistic and that they were able to imagine themselves in the situation. An examination of participant comments revealed that two of the three subjects who

indicated that the scenario was not realistic worked for the education and non-profit sector. Hence I concluded that the scenario was realistic and that the actual sample (high tech professionals) would be able to successfully imagine themselves in the situation presented in the scenario.

All manipulation checks were successful. Subjects in the desirability condition were significantly more likely to view their situation as positive than those in the undesirable condition ($t = 3.63, p < .01$). Subjects in the expected condition were significantly more likely to perceive that they expected the event to occur than those in the unexpected condition ($t = -5.00, p < .01$). Finally, subjects in the control condition were significantly more likely to feel that they had control in the situation than those subjects in the no control condition ($t = -3.51, p < .01$).

Preliminary Analysis

Prior to conducting the main analysis, a stepwise regression was performed with the control and demographic variables to determine which control variables significantly predicted the dependent variable (thoughts of quitting). The results of this analysis showed that significant predictors of thoughts of quitting included previous withdrawal cognitions ($\beta = .38, p = .00$) and need to work (whether or not the individual needed to work for financial reasons) ($\beta = .21, p < .01$). All other demographic and control variables were not significant at the .05 level. As a result, both withdrawal cognitions and need to work were included in all substantive tests of the model as control variables.

Multiple Regression Analysis and Results

The hypotheses in the proposed model (Figure 1) were tested via a series of regression equations. Hypotheses 1 through 3 predicted that the relationship between event dimensions (desirability, expectedness, and control) and thoughts of quitting would be mediated by cognitive adjustment.⁶ These hypotheses were tested using Baron and Kenny's (1986) regression procedures for testing mediational relationships. According to Baron and Kenny (1986), three conditions must be satisfied in order to infer mediation. First, the independent variable must affect the mediator variable. Second, the independent variable must affect the dependent variable. Third, the mediator variable must affect the dependent variable. In the final equation, complete mediation occurs if the independent variable has no effect on the dependent variable after controlling for the mediator. The results for each regression equation testing the steps for mediation are shown in Table 7. The specific results for each hypothesis are discussed below.

Hypothesis 1 predicted that cognitive adjustment would mediate the relationship between event desirability and thoughts of quitting. The first step in the analysis involved demonstrating the relationship between desirability and the proposed mediator (cognitive adjustment). The first regression equation (shown in the first two columns of Table 7) demonstrated a significant main effect for desirability ($\beta = .45, p < .01$) on cognitive adjustment.

⁶ Technically, these hypotheses could be tested using ANOVA. Regression is used here so that the results can be reported in a manner consistent with subsequent hypotheses. Since the independent variables are effect coded, the results are identical to an ANOVA model.

Table 7 - Multiple Regression Results

	<i>Step 1: Relationship between i.v. s variables and cognitive adjustment</i>		<i>Step 2: Relationship between i.v. s and TOQ</i>		<i>Step 3: Relationship between i.v.'s and TOQ, controlling for cognitive adjustment</i>	
	β	R^2	β	R^2	β	R^2
Control Variables				.18***		.18***
Withdrawal Cognitions	-.01		.37***		.36***	
Need to Work	.01		.18*		.19***	
Proposed Mediator						
Cognitive Adjustment					-.59***	.33***
Event Dimensions		.19***		.06***		.02***
Desirability	.45***		-.26***		.01	
Expectedness	.02		.06		.07	
Control	.13*		.07		.15**	
Event Interactions		.02***		.03***		.01***
Desirability *	.14*		-.22**		-.14**	
Expectedness						
Desirability * Control	.17**		-.07		.03	
Control * Expectedness	-.01		-.01		-.02	
Des * Exp * Con	.08		.04		.08	

Note: N=134. β refers to the standardized beta weight. * $p < .10$ (marginal significance). ** $p < .05$. *** $p < .01$

The next step in the analysis involved demonstrating the relationship between desirability (the independent variable) and thoughts of quitting (the dependent variable). These regression results (shown in the second two columns of Table 7) demonstrate that desirability is a significant predictor of thoughts of quitting ($\beta = -.26, p < .01$).

The third step in the analysis involved demonstrating the relationship between cognitive adjustment (the mediator) and thoughts of quitting (dependent variable). The

results showed that cognitive adjustment accounted for a highly significant proportion of the variance ($R^2 = 33\%$) in subject's thoughts of quitting ($\beta = -.59, , p < .01$). The negative sign on the beta weight suggests that more negative cognitive adjustments lead to thoughts of quitting.

The last stage of testing mediation relationships involved testing the predictive power of desirability on thoughts of quitting, after controlling for the effects of cognitive adjustment. These results are reported in the last two columns of Table 7. Hypothesis 1 was supported, since the influence of desirability on thoughts of quitting is reduced to non-significance ($\beta = .01, ns$) after controlling for the influence of cognitive adjustment. Subjects who experience a negative event are more likely to have negative cognitive adjustment, and subsequent thoughts of quitting.

Hypothesis 2 predicted that cognitive adjustment would mediate the relationship between event expectedness and thoughts of quitting. The three steps of testing mediational relationships (Baron & Kenny, 1986) were used to test this hypothesis. The results showed that expectedness did not significantly predict cognitive adjustment (the mediator) nor thoughts of quitting (the dependent variable), hence Hypothesis 2 was not supported.

Hypothesis 3 predicted that cognitive adjustment would mediate the relationship between the controllability of an event and thoughts of quitting. Baron and Kenny's (1986) three steps for testing mediational relationships were again used to test this

hypothesis. The results show that control is a marginally significant predictor of cognitive adjustment; i.e., subjects who experience events low in controllability have more negative cognitive adjustments ($\beta = .13, p < .10$). The second step of the analysis revealed that control was not a significant predictor of thoughts of quitting when cognitive adjustment was not included in the regression equation ($\beta = .07, ns$). However, control did exert a significant effect on thoughts of quitting when cognitive adjustment is inserted in the equation ($\beta = .15, p < .05$). Interestingly, this effect is in the *opposite* direction of the relationship uncovered between control and cognitive adjustment. Subjects who experience events that are high in controllability are *more* likely to report thoughts of quitting. Figures 2a and 2b illustrate these results. These results reveal that the mediation relationship proposed in Hypotheses 3 was not supported.

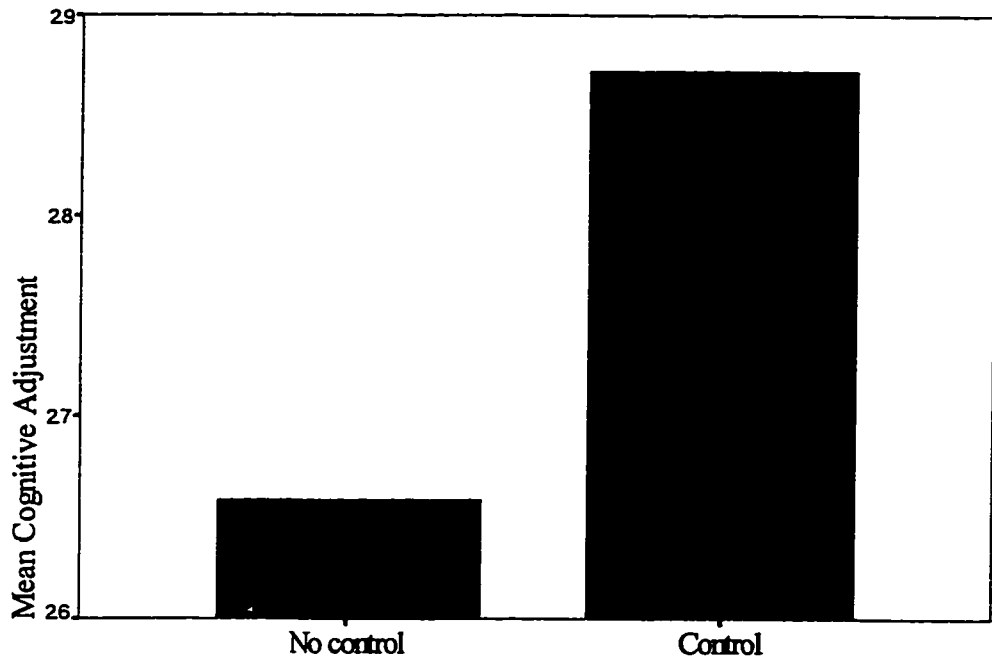


Figure 2a Effects of Control on Cognitive Adjustment

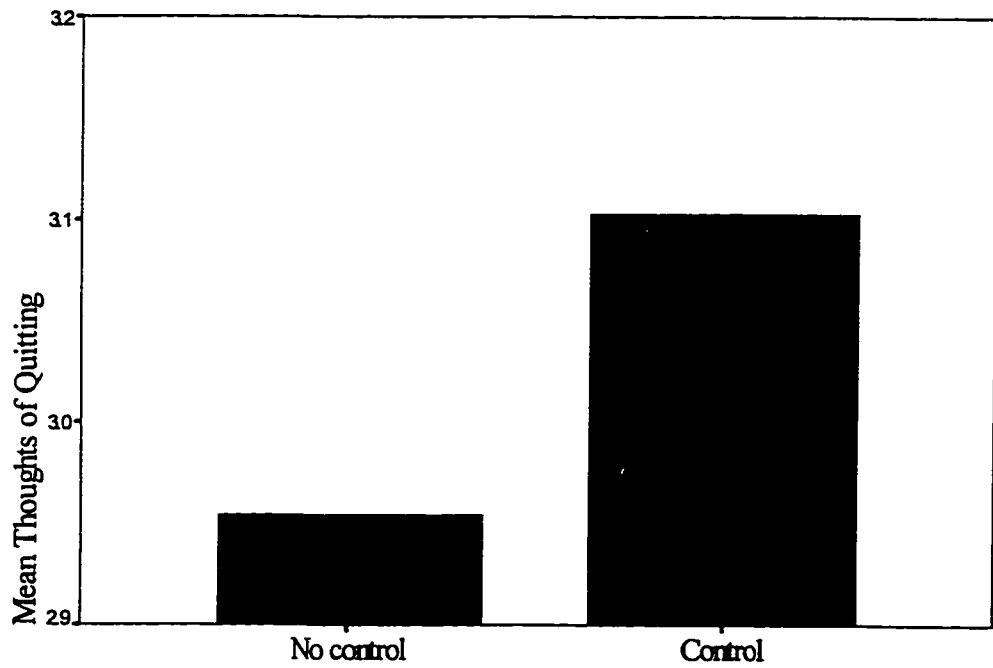


Figure 2b Effects of Control on Thoughts of Quitting

Hypothesis 4 predicted that cognitive adjustment would mediate the event dimension interactions on thoughts of quitting. This hypothesis was tested by forming the cross-products of the event dimensions (Desirability X Expectedness, Desirability X Control, Expectedness X Control, and Desirability X Expectedness X Control) and entering them into the regression equation after controlling for the main effects of each event dimension. The results for each regression equation testing the mediation relationships for the interactions are shown in the lower half of Table 7.

In the first regression equation, two of the four interaction terms accounted for a significant (albeit small) portion of the variance in cognitive adjustment ($\Delta R^2 = .02$). Specifically, subjects who experienced a positive controllable event reported significantly higher cognitive adjustment scores than subjects who experienced a positive non-controllable event ($\beta = .17, p < .05$). Similarly, subjects who experienced a positive expected event reported higher cognitive adjustment scores ($\beta = .14, p < .10$) than subjects who experienced a positive unexpected event.

The second regression equation examined the relationship between the event interactions on thoughts of quitting. The results revealed that the desirability by expected interaction ($\beta = -.22, p < .01$) was a significant predictor of thoughts of quitting. The interaction of desirability and control on thoughts of quitting, however, became non-significant.

The final regression equation revealed that the interaction between desirability and expectedness on thoughts of quitting was reduced when controlling for cognitive adjustment, but did not go to zero. These results suggest that cognitive adjustment is a *partial* mediator of the combined influence of desirability and expectedness on thoughts of quitting. Figure 3 illustrates the relationship between the desirability and expectedness interaction on thoughts of quitting.

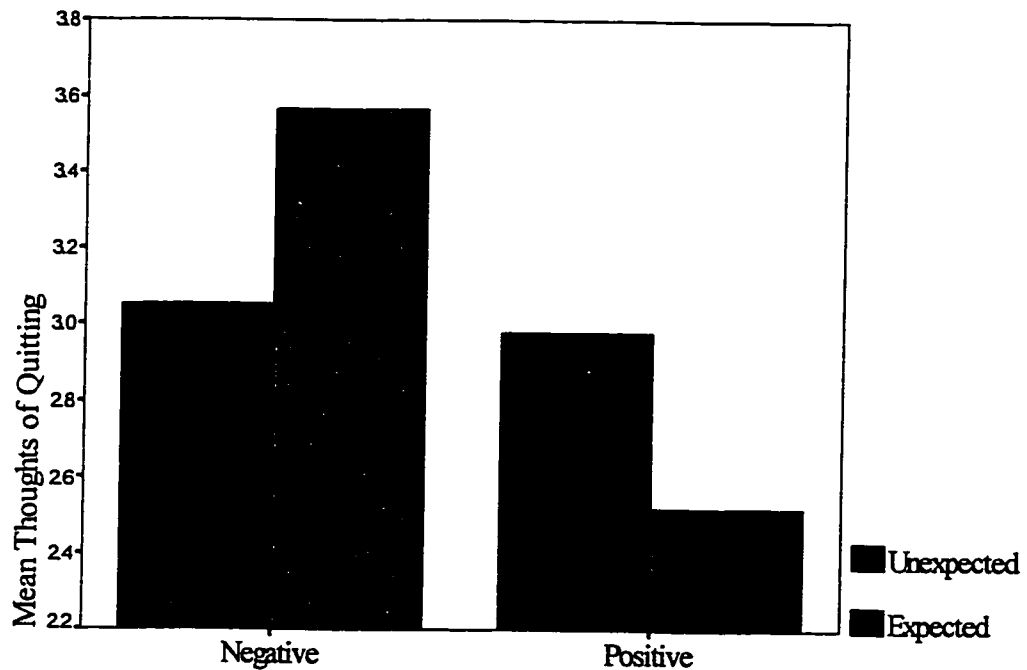


Figure 3 - Interaction of Desirability and Expectedness on Thoughts of Quitting

Events that are negative and expected resulted in higher thoughts of quitting than events that are negative and unexpected. Taken together, these results indicate partial support for Hypothesis 4.

Hypotheses 5 through 7 examined the interactions between cognitive adjustment and job satisfaction (H. 5), organization commitment (H. 6) and organization turnover (H. 7) on thoughts of quitting. Since these hypotheses predict that the mediation relations are contingent on the level of a moderator variable, moderated mediation (James & Brett, 1984) was used to test these hypotheses. Specifically, interaction terms were created by forming the cross-products of the independent variables (i.e., cognitive adjustment X job satisfaction, cognitive adjustment X organization commitment, and cognitive adjustment X organization turnover). In order to avoid problems with multicollinearity, the independent variables were centered prior to forming the interaction cross-products. This transformation reduces the correlation between the product term and the component parts of the term (Jaccard, Turrisi, & Wan, 1990). A hierarchical regression was performed, with the interaction terms entered last as a block into the regression equation after controlling for the linear effects of the predictor variables and the mediator (Cohen & Cohen, 1983; James & Brett, 1984). Significant interaction terms are indicative of moderated mediation. The results of the final regression equation are shown in Table 8.

Table 8 - Final Regression Results

	B	SE (B)	β	t	p	R² increment*
Step 1						
Withdrawal Cognitions	.24	.08	.24	2.90	.00	
Need to Work	.35	.11	.19	3.17	.00	.18
Step 2						
Job Satisfaction	-.19	.13	-.16	-1.48	.14	
Organization Commitment	-.04	.14	-.03	-.28	.78	
Organization Turnover	.00	.07	.00	.06	.95	.04
Step 3						
Desirability	.01	.07	.01	.16	.88	
Expected	.09	.06	.09	1.52	.13	
Control	.13	.06	.13	2.15	.03	.01
Step 4						
Cognitive Adjustment	-.85	.10	-.58	-8.16	.00	.30
Step 5						
Des * Exp	-.13	.06	-.13	-2.19	.03	
Des * Con	.04	.06	.04	.71	.48	
Con * Exp	-.02	.06	-.02	-.40	.69	
Des * Exp * Con	.08	.06	.08	1.31	.19	.01
Step 6						
Cog * Sat	-.16	.17	-.09	-.91	.36	
Cog * Turn	.17	.08	.13	2.12	.04	
Cog * OCQ	.06	.22	.03	.27	.78	.02

Note: Parameter estimates are for final step, not at entry.

*R² value represents the total increment for each step.

Hypothesis 5 predicted that prior job satisfaction would moderate the relationship between cognitive adjustment and thoughts of quitting. The interaction of job satisfaction and cognitive adjustment is non-significant ($\beta = -.09$, *ns*), hence Hypothesis 5 was not supported.

Hypothesis 6 predicted that prior organization commitment would moderate the relationship between cognitive adjustment and thoughts of quitting. The interaction of

organization commitment and cognitive adjustment is non-significant ($\beta=.03$, *ns*), hence Hypothesis 6 was not supported.

Hypothesis 7 predicted that organization turnover would moderate the relationship between cognitive adjustment and thoughts of quitting. The interaction of organization turnover and cognitive adjustment was significant ($\beta=-.13$, $p<.05$). This relationship is shown graphically in Figure 4.

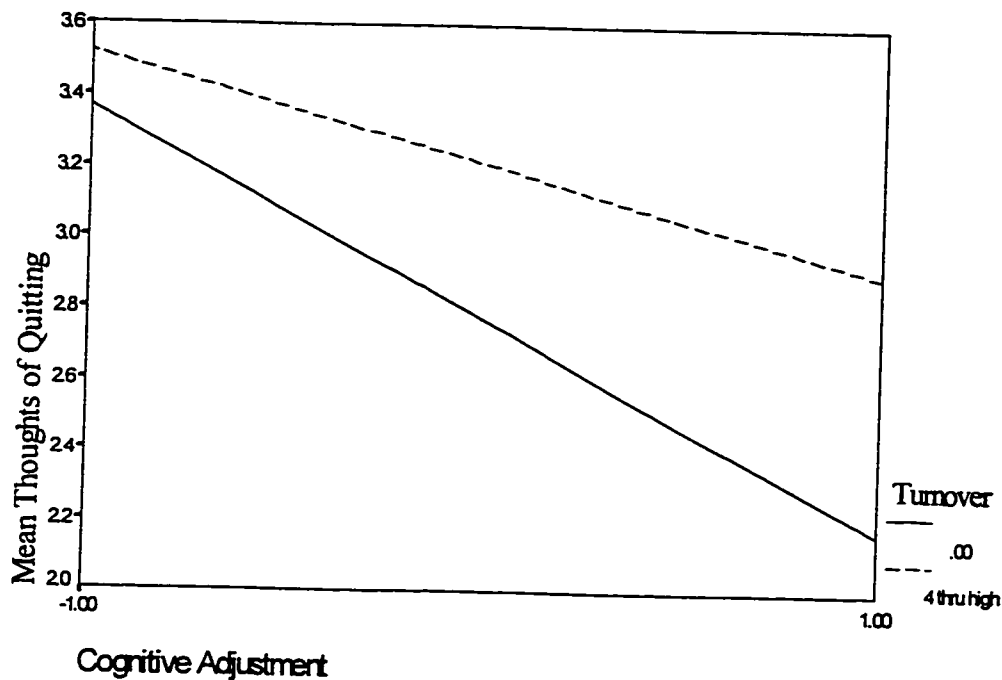


Figure 4 - Interaction of Cognitive Adjustment and Turnover on TOQ

The interaction suggests that when an individual experiences high turnover in his or her organization, they are more likely to report thoughts of quitting—even in the face of a *positive* cognitive adjustment.

Supplementary Analyses

A potential reason for the lack of significant findings for the expected dimension and the control dimension on cognitive adjustment is that the cognitive adjustment variable is scored to assess direction of the change, not the unsigned amount of change (or magnitude). In other words, whether or not an event is expected or controllable may influence the magnitude (absolute value) of change that occurs, not necessarily the direction of that change.

To explore this possibility, the cognitive adjustment items were recoded to measure the absolute value of the change: Major change (2, -2) = 2, Some change (1, -1) = 1, and no change (0=0). The 'magnitude cognitive adjustment' score was developed by calculating the mean of the 11 items. Magnitude cognitive adjustment had an average score of .65, and a standard deviation of .40, with an internal consistency $\alpha = .86$.

A preliminary analysis using stepwise regression revealed that financial need to work was the only significant control or demographic predictor of the magnitude of cognitive adjustment. Next, a hierarchical regression was performed to determine the influence of the independent variables (desirability, expectedness, controllability) and their interactions on the magnitude of cognitive adjustment. The results showed that the independent variables and their interactions were not significant predictors of the magnitude of cognitive adjustment. These results are displayed in Table 9.

Table 9 - Multiple Regression Results for "Magnitude Cognitive Adjustment"

<i>Variable</i>	<i>B</i>	<i>SE B</i>	<i>Beta</i>	<i>T</i>	<i>Sig T</i>
Need to work	.19	.06	.25	2.90	.00
Desirability	-.01	.03	-.01	-.16	.88
Expected	.03	.03	.07	.81	.42
Control	.03	.03	.07	.87	.39
Des * Con	-.04	.03	-.10	-1.11	.27
Des * Exp	-.05	.03	-.13	-1.56	.12
Des * Exp * Con	-.01	.03	-.01	-.16	.88
Con * Exp	.02	.03	.06	.65	.52

These results suggest that event dimensions, as measured in the current study, do not predict the amount of change an individual experiences. One possibility for the lack of findings is that magnitude was measured on a 5-point scale (which was then collapsed into a 3-point scale). Measuring magnitude of the cognitive adjustment on a 7-point scale might increase the variability of responses and possibly improve prediction. Another possibility is that the issue of magnitude was not captured in the current study; each factor was manipulated into only two levels, making it less likely to detect magnitude effects.

Another interesting issue to explore is to what extent the valence of cognitive adjustment influences prediction. Although the original hypotheses do not specify

directionality, the results showed that it was a cognitive adjustment in the *negative* direction that predicted thoughts of quitting. Since the data indicate that both “no change” in cognitive adjustment and “positive change” in cognitive adjustment are unlikely to cause thoughts of quitting, this suggests that collapsing these subjects into a single category may yield interesting insights about the nature of the phenomenon.

The “collapsed” cognitive adjustment variable was created by recoding cognitive adjustment as follows: Very negative(-2=-2), somewhat negative (-1=-1) and no change (0,1,2=0). Collapsed cognitive adjustment had a mean of .44, a standard deviation of .44, with an internal consistency reliability of .92. The data were analyzed using the same methodology (i.e., using regression to test for mediation and moderated mediation) to determine if the results differed from the initial hypotheses. The final regression results are displayed in Table 10. The results revealed little change in the overall findings, H1 was supported (collapsed cognitive adjustment mediated the relationship between event desirability and thoughts of quitting), H4 was partially supported (collapsed cognitive adjustment mediated the relationship between event desirability and thoughts of quitting), and H7 was supported (organization turnover moderated the relationship between collapsed cognitive adjustment and thoughts of quitting). As in the first analyses, the other hypotheses were not supported.

Nevertheless, two interesting findings emerged from these analyses. First, organization turnover is a significant predictor of thoughts of quitting ($\beta = .92, p < .03$).

This result suggests that when the influence of positive cognitive adjustment is reduced (combined with the “no change” group), organization turnover exerts a direct influence

Table 10 - Results for Collapsed Cognitive Adjustment

	<i>B</i>	<i>SE (B)</i>	β	<i>t</i>	<i>p</i>	<i>R² increment*</i>
Step 1						
Withdrawal Cognitions	.24	.08	.24	3.13	.00	
Need to Work	.35	.11	.19	3.17	.00	.18
Step 2						
Job Satisfaction	-1.41	.81	-1.17	-1.75	.08	
Organization Commitment	.45	1.00	.33	.45	.65	
Organization Turnover	.79	.36	.92	2.22	.03	.04
Step 3						
Desirability	-.02	.06	-.02	-.33	.74	
Expected	.06	.06	.06	1.05	.30	
Control	.09	.06	.09	1.61	.11	.05
Step 4						
Cognitive Adjustment	-.1.43	.15	-.63	-9.61	.00	.28
Step 5						
Des * Exp	-.12	.06	-.12	-2.15	.03	
Des * Con	.06	.06	.06	1.10	.27	
Con * Exp	-.05	.06	-.05	-.85	.40	
Des * Exp * Con	.07	.06	.07	1.32	.19	.03
Step 6						
Cog * Sat	-.41	.26	-1.08	-1.56	.12	
Cog * Turn	.26	.11	.94	2.28	.02	
Cog * OCQ	.17	.34	.36	.48	.63	.03

Note: Parameter estimates are for final step, not at entry.

*R² value represents the total increment for each step.

on thoughts of quitting. The second interesting finding is that the effects reported for the influence of control in the initial analyses are reduced to non-significance. Control does not influence collapsed cognitive adjustment ($\beta = .10$, *ns*), nor does it exert a direct influence on thoughts of quitting ($\beta = .09$, *ns*). These findings suggest that we may need to

consider the influence of positive cognitive adjustments in order to fully understand the impact of control on thoughts of quitting.

Summary of Results

In summary, the results of Study 2 revealed modest support for the sensemaking model of shocks. Hypothesis 1 was supported: Cognitive adjustment mediated the relationship between desirability and thoughts of quitting. Hypothesis 2 was not supported: the expectedness of the event did not predict thoughts of quitting. Hypothesis 3 was not supported: Cognitive adjustment did not mediate the relationship between the controllability of an event and thoughts of quitting. However, control did exert an influence on thoughts of quitting when cognitive adjustment was included in the equation, revealing that subjects in the high controllability condition were more likely to have thoughts of quitting. The results revealed partial support for Hypothesis 4: Cognitive adjustment was shown to be a partial mediator of the interaction between desirability and expectations and thoughts of quitting. Hypothesis 6 was not supported: Job satisfaction did not moderate the relationship between cognitive adjustment and thoughts of quitting. Hypothesis 7 was not supported: Organization commitment did not moderate the relationship between cognitive adjustment and thoughts of quitting. Hypothesis 8 was supported: the interaction between organization turnover and cognitive adjustment significantly predicted thoughts of quitting.

Study Limitations

One limitation of the current study is that it is a vignette design; it required subjects to respond to a hypothetical scenario designed to simulate a shock. As a result, the cognitive reactions and behavioral intentions responses may not represent the actual responses of subjects who face an actual similar shock. Nevertheless, several components of the research enhance its ecological validity. First, subjects in the pilot test reported that the scenario was realistic and that they were able to imagine themselves in the situation. Second, this vignette study is unusual in that it measured *actual* job attitudes of subjects, and asked them to respond as if they were in their current jobs. Hence, the study might have come close to simulating an actual situation that employees might experience on their jobs. Nonetheless, the study should be replicated in a field setting.

A second limitation of the study is that it asked subjects to rate only one scenario. It was necessary to limit ratings to one scenario and one shock type to avoid problems with independence of observations and to limit the overall length of the questionnaire. The findings of Lee and his colleagues (1996; 1998) suggest that individuals may respond differently to organization-level, job-level, and personal shocks. Since the scenario used in the current study was designed to be an organization-level shock, it is important to determine if the findings of the current study can be extended to job-level and personal shocks.

A third limitation of the study is that it used a convenience sample. Computer user groups may not be representative of all individuals in a particular occupation. The types of individuals who join professional societies may be different from those who choose not to join; hence the inferences drawn from the sample to the general population may not be accurate. On the other hand, drawing the sample from across a variety of computer user groups avoids the systematic bias inherent in single-organization studies.

Consequently, the results of the current study may be more generalizable to a high-tech population compared to a sample consisting of employees in a single organization.

A final limitation of the current study is that affective reactions to the scenario were not measured. The contradictory results for the expectations and controllability dimension may be a result of this limitation. For example, researchers have suggested that the interruption of an expectation (a surprise) stimulates an *emotional* response (Weick, 1995). In fact, researchers on emotion have typically included "surprise" as an element in emotion classification schemes (Weiss & Cropanzano, 1996). Evaluating a hypothetical scenario may not have aroused a real emotional response, hence the expectations dimension may not have adequately influenced subjects' cognitive adjustment and subsequent thoughts of quitting. Similarly, perceptions of low control may induce anger emotions, which also were not captured in the current study. The measure for cognitive adjustment may need to include not only image violations and identity violations, but affective responses as well.

CHAPTER 6: DISCUSSION, IMPLICATIONS AND CONCLUSION

The primary aim of this dissertation was to explore the shock construct in the unfolding model of turnover. The purpose of the first study was to examine the types and dimensions of shocks that prompted initial thoughts of quitting, as well as the antecedents and consequences of these shocks. Qualitative interviews were conducted with high-tech professionals who had recently left (or were considering leaving) their jobs. After coding and analyzing the qualitative interviews, I created a model of shocks (see Figure 3) grounded in sensemaking theory (Weick, 1995).

The sensemaking model suggests that a shock is best defined as a three-step *process*: A shock occurs when an (1) event leads to a (2) cognitive adjustment of the employee's employment situation and results in (3) subsequent thoughts of quitting. According to the model, individuals are hypothesized to scan the environment for relevant information, provide meaning to key events, and generate subsequent cognitive reactions. The model hypothesizes that dimensions of events (desirability, expectedness, controllability) influence an individual's interpretation of the event (i.e., cognitive adjustment) which in turn causes subsequent thoughts of quitting. Individual attitudes (job satisfaction and organization commitment) and contextual influences (in this case, organization turnover) were also hypothesized to influence thoughts of quitting following a cognitive adjustment.

The objective of the second study was to test the sensemaking model of shocks. These hypotheses were tested using an experimental vignette design, in which subjects responded to a hypothetical shock scenario (a merger). The results revealed modest

support for the sensemaking model: Cognitive adjustment mediated the relationship between desirability and the interaction between desirability and expectations on thoughts of quitting. In addition, the interaction between organization turnover and cognitive adjustment significantly predicted thoughts of quitting. The following discussion details the specific results of study 2 (the vignette study) and compares the findings with the results of study 1 (the qualitative interviews).

Following the discussion of the primary findings of this research, theoretical contributions and implications for the unfolding model of turnover are proposed. Next, I suggest avenues for future research. Finally, I review the implications of these studies for managers and human resources practitioners.

Event Dimensions

Desirability. The results of Study 1 showed that participants overwhelmingly described organization and job-related event that prompted thoughts of quitting as negative. The results of Study 2 supported these findings; they showed that a negative organization event led to a cognitive adjustment, and subsequent thoughts of quitting. These findings are consistent with previous research, which has demonstrated that negative events are more salient and have a stronger impact on psychological and behavioral outcomes than positive events (Taylor, 1991; Thoits, 1983). The role of cognitive adjustment as a mediator between the desirability of an event and thoughts of quitting is also supported by the findings of Gundry and Rousseau (1994). These authors

found that the influence of critical incidents impact newcomer beliefs about cultural norms through their effect on the framing (positive or negative) of the message newcomers derive from these events.

Expectations. The results of Study 1 revealed that most interview participants reported that the negative event that prompted initial thoughts of quitting was unexpected. This result was not supported in Study 2: Contrary to prediction, there were no main effects for expectations on cognitive adjustment and subsequent thoughts of quitting. While a main effect was not found, there was a significant interaction between expectations and desirability on thoughts of quitting. As predicted, cognitive adjustment partially mediated the effects of the desirability by expectations interaction on thoughts of quitting. Contrary to predictions, there was also a *direct* effect of the desirability by expectations interaction on thoughts of quitting. The interaction revealed that events that are negative and expected resulted in higher thoughts of quitting than events that are negative and unexpected.

The form of this interaction diverges from predictions in this study and the existing literature on expectations and sensemaking (Louis, 1980; Robinson & Rousseau, 1994; Wanous et al., 1992;). Based on this literature, we would anticipate that *unexpected* negative events (i.e., bad surprises) would stimulate thoughts of quitting more readily than *expected* negative events. The findings of the qualitative interview study, however, may lend some insight into these findings. The results showed that 3 of the 15 subjects in

the qualitative interview study reported that the event that prompted thoughts of quitting was expected and negative. Subsequent analysis of these three cases determined that their cognitive adjustment *confirmed* their previous expectations. In other words, they had come to expect negative events to occur - such as not getting support from their manager or not gaining approval for a requested work schedule.

These results suggest that in some cases, events which are negative and expected may be more salient, and more likely to lead to a cognitive adjustment and subsequent thoughts of quitting, than events which are negative and unexpected. Indeed, previous research on the unfolding model of turnover has demonstrated that shocks may be expected or unexpected. Since the current studies do not allow us to ascertain why this interaction effect occurs, future research is needed on the situational and individual factors that predict the nature of the expected by desirability interaction.

Controllability. Based on the results of the first study and the extant literature, it was predicted that cognitive adjustment would mediate the relationship between the controllability of an event and thoughts of quitting. I predicted that when an event was perceived as uncontrollable, it would lead to a negative cognitive adjustment and subsequent thoughts of quitting. The results for the control dimension are interesting, although not in the direction that I expected.

The results showed a marginally significant effect for the impact of control on cognitive adjustment. As predicted, subjects in the low control condition reported lower

cognitive adjustments than subjects in the low control condition. The effects of control on cognitive adjustment, however, did not translate into decreased thoughts of quitting, as I expected. Instead, subjects who were in the high control condition were significantly more likely to report thoughts of quitting than those in the low control condition. The influence of high control to thoughts of quitting was a direct effect - it was not mediated through cognitive adjustment.

These results diverge from previous research on the effects of controllability, which has found a relationship between low controllability and withdrawal behaviors (Abramson et. al, 1978; Langer & Rodin, 1976; Parker, 1993). A possible explanation for these findings is that the subjects in the high control condition perceived that they had more alternatives to respond to the event, and that one of these alternatives was to consider quitting their organization. While withdrawal is frequently viewed as a negative response, it is important to remember that quitting may also be a functional coping response for an individual (Dauten, 1980). A second possible explanation is that the results of study 2 are an artifact of the methodology employed (hypothetical merger vignette) and may not be generalizable beyond the present sample. A third possible explanation concerns the small sample size of Study 1; additional qualitative interviews might shed some light on the effects of controllability on cognitive adjustment and thoughts of quitting.

Cognitive Adjustment

One of the key findings of the qualitative interviews was that individuals experienced a cognitive adjustment in response to a jarring event. The cognitive adjustment typically involved at least one of two components: a revised view of the individual's belief that the organization views him or her as valuable (identity violation), or a revised view of the individual's perception of his or her long term potential with the organization (image violation). Thus, the cognitive adjustment caused individuals to construe reality in a new way, and initiated thought of quitting as a potential response to such an event.

The results of the experimental vignette study lend strong support to the role of cognitive adjustment in response to an event as a significant predictor of thoughts of quitting. As predicted, cognitive adjustment mediated the relationship between the desirability of an event and thoughts of quitting. In addition, cognitive adjustment partially mediated the interaction between event desirability and the expectation of an event and thoughts of quitting. In total, cognitive adjustment in response to the event accounted for 33% of the variance in thoughts of quitting.

Contrary to prediction, the results revealed direct effects of controllability and the desirability by expectedness interaction on thoughts of quitting. One possible explanation for this result is that the cognitive adjustment scale used in the study was deficient. Since the items were developed from the comments of interview participants who experienced

negative and organization or job-level shocks, it may not include the full range of possible types of cognitive adjustment. It's important to explore how cognitive adjustments operate with positive and non-organization type shocks (such as job offers). While the measure developed in the current study exhibited high internal consistency further development of the cognitive adjustment construct and its measurement may be warranted.

Another possible explanation for the direct effects of event dimensions on thoughts of quitting is that spontaneous thoughts of quitting may occur in reaction to an event, without the experience of a cognitive adjustment. Anecdotal evidence suggests that individuals may frequently have thoughts of quitting, but these thoughts do not reflect a serious intent to evaluate one's situation (e.g., compare images for fit) or seek alternative employment. These cases may reflect instances where an employee experiences an event that temporarily causes her to consider quitting, such as a bad traffic jam on the commute home from work, but does not fundamentally alter her view of their relationship with the organization (e.g., result in a cognitive adjustment). Future research is needed on whether thoughts of quitting which occur without a cognitive adjustment actually stimulate further turnover deliberations.

Attitudes

Based on the findings of the qualitative study, I predicted that the interaction between job satisfaction and cognitive adjustment would influence thoughts of quitting,

and that the interaction between organization commitment and cognitive adjustment would influence thoughts of quitting. These predictions were not supported – the interaction terms of cognitive adjustment with job attitudes and thoughts of quitting were non-significant.

There are several plausible explanations for the lack of findings. One possibility is that the measures used for job satisfaction and organization commitment did not sufficiently capture the dimensionality of these constructs. For example, the OCQ (Porter et al., 1974) was used to measure organization commitment. While this measure captures the affective dimension of commitment, it does not assess the continuance (rewards and costs of membership in an organization) or normative (moral responsibility to the organization) dimension of organization commitment (Allen & Meyer, 1993). In addition, the Michigan Organizational Assessment Questionnaire is a brief measure of satisfaction; it does not capture the various facets of job satisfaction found in other instruments (Spector, 1997). Thus, deficiency in measurement might account for the lack of support for the attitude by cognitive adjustment interaction.

Another potential explanation for the lack of findings is that propensity to commitment was not measured. Propensity to commitment refers to the predisposition of individuals to form organization commitment (Lee et al., 1992). The analysis of the qualitative interviews, as well as open-ended comments included on the survey, suggest

that commitment propensity across professionals in high-tech may be low. The following comments are illustrative:

In general, my current attitude toward my company is the result of what I think is a complete breakdown in the relationship between employee and the company – caused by the corporation's management. 10 years ago I would (and did) work unpaid overtime. Today I wouldn't work one extra minute unless I was paid.

My responses are more negative than they would have been in the past. Up until approx. 7 years ago I was extremely pleased with my career and my employers. Since then, I have been downsized, outsourced and treated like garbage. As a result, I am very cautious about emotionally investing myself in any company.

These comments suggest that although employees may report high levels of job satisfaction and organization commitment, these measures may not reflect their intention to commit to the organization long-term. If commitment propensity is low, prior levels of job satisfaction or organization commitment may be less likely to influence responses to a jarring event.

A final potential explanation for the lack of findings is that the cognitive adjustment in *reaction* to an event negates any potential interaction effect stemming from *prior* job attitudes. This explanation is consistent with Affective Events Theory (Weiss & Cropanzano, 1996), which posits that job attitudes are not stable over time but depend on affective reactions to proximal events. Once the cognitive adjustment occurs, attitudes towards one job are likely to be altered as a result. Combining prior job attitudes with the cognitive adjustment that occurs as a result of an event may not be the most appropriate way to explore the joint effects of these variables on thoughts of quitting. The

sensemaking model of shocks may need to be revised to capture the influence of *prior* job attitudes as well as *changes* in job attitudes on the event interpretation process.

Organization Turnover

The analysis of the qualitative interviews suggested that the level of organization turnover (perceptions about the extent to which others are leaving in the organization) will influence thoughts of quitting. The results of the vignette study provide support for this hypothesis: there was a significant interaction between organization turnover and cognitive adjustment on thoughts of quitting. When individuals experienced a negative cognitive adjustment in reaction to an event, the level of organization turnover had no influence on thoughts of quitting. However, when subjects experienced a positive cognitive adjustment, those who perceived high levels of organization turnover were more likely to report thoughts of quitting.

While I anticipated that the interaction effect would be stronger for negative cognitive adjustments (i.e., that the combined effects of a negative organization adjustment with organization turnover would produce thoughts of quitting), the results are nonetheless interesting. These findings suggest that even under circumstances where individuals experience a positive cognitive adjustment in reaction to an event, the perception of others leaving their organization will influence their own thoughts of quitting. These results are consistent with both Social Information Processing Theory

(Salancik & Pfeffer, 1978) and sensemaking theory (Weick, 1995), in which the social environment plays a key role in influencing individual attitudes and behavior.

The fact that these results were obtained using a hypothetical scenario suggests that the influence of other's leaving the organization may be even stronger in actual organization situations. The perception of other's leaving the organization may influence not only initial thoughts of quitting, but actual decisions to quit as well. The results of the qualitative interviews suggested that once a shock occurred, individuals interpreted future events in light of their new perspective. Many subjects noted that when they saw others leaving the organization, it confirmed their new negative view of their organization.

IMPLICATIONS FOR THE UNFOLDING MODEL OF TURNOVER

The results of the two studies conducted for this dissertation provide support for previous findings on the unfolding model of turnover and lend some new insights into the role of the shock construct. This section discusses the findings of these studies in terms of their implications for the unfolding model of turnover.

The Importance of Event Dimensions

Previous research on the unfolding model has shown that personal and positive shocks are more likely to be associated with decision path 1 quit decisions, whereas negative and organization shocks are more likely to be associated with decision path 3 quit decisions (Lee et al., 1996; 1998). The strong effect for the desirability dimension in

the merger scenario (an organization-based event) in Study 2 is consistent with these findings.

Can positive organization or job events be interpreted as shocks? While theoretically possible, the results of the current study and previous unfolding model of turnover research suggest that positive organization or job-related events are unlikely to trigger thoughts of quitting. In addition, Gundry and Rousseau (1994) found that negative events are more predominant than positive events after the first year of hire. These findings support Weick's (1995) contention that the conditions for positive affect are not abundant in most organizations. Taken together, these findings suggest that positive shocks, while possible within an employee's organization, are more likely to occur outside the context of the organization.

Some reviewers have found fault with the shock construct because of Lee and Mitchell's (1994) contention that shocks can be either expected or unexpected (Lee, personal communication). The results of the qualitative interviews and the vignette study, however, support their contention: The qualitative interviews found that shocks were more likely to be negative and unexpected, whereas the vignette study found that shocks were more likely to be negative and expected. Future research is needed to determine if the expectedness of an event can predict an individual's decision paths.

The perception of the controllability of an event has not been previously explored in research on the unfolding model of turnover. The results of the qualitative interview

study found a strong evidence that shocks are more likely to be uncontrollable, whereas the results of the vignette study were inconclusive. Supplementary analyses tentatively suggest that the direction of cognitive adjustment (whether positive or negative) is important to consider when exploring the affects of controllability on thoughts of quitting. Given the contradictory results of the current studies, it is important for future research on the unfolding model to consider the effects of the controllability of an event on subsequent interpretations of that event as a shock.

Image Violations as a Dimension of Cognitive Adjustment

The cognitive adjustment construct is theorized to include both image violations and identity violations. While a factor analysis showed these items as loading on one factor, this may be due to same source method variance, resulting in high intercorrelations between all items. In addition, image violations were measured in a different way than in previous research (see Lee et al., 1998). Future researchers may want to explore alternate methods of measuring cognitive adjustment to determine whether there are one or more factors that make up this construct.

Another issue to examine is the generalizability of the sensemaking model of shocks to decision path 1. Previous research has supported the unfolding model's supposition that image violations are not a necessary component of decision path 1. On the other hand, the sensemaking model of shocks proposes that a cognitive adjustment *must* occur in order for an event to prompt thoughts of quitting. Of course, this model was

developed based on a limited sample, and may not be applicable to decision path 1. Also, it's possible that the cognitive adjustment that occurs in decision path 1 may be more focused on "identity" issues (e.g., adopting a new role as a parent) than image violations. Future research is needed to determine if the sensemaking model of shocks is appropriate for all of the 'shock' decision paths (1, 2, and 3), or whether the interpretation of events differs across decision paths.

A second issue concerns the causal positioning of image violations in the unfolding model of turnover. The unfolding model incorporates both the event itself and the interpretation of that event into the shock construct. Since image violation is theorized to occur *after* the shock, logic dictates that cognitive adjustment and image violations must either be distinct processes, or occur more than once in the turnover deliberation process. It's possible that image *violations* (as a component of cognitive adjustment) mediate the objective event and thoughts of quitting, and then image *evaluations* take place later in the decision-making process. Interview subjects reported both cognitive adjustments (including image violations) in their description of why they considered an event a shock, and later discussed a process of evaluating images. Further research is needed to more clearly specify the role of these constructs in the unfolding model of turnover.

Attitudes and Turnover

While the predictions for the role attitudes in the sensemaking model of shocks were not supported, the results obtained support Lee and Mitchell's (1994) contention that job satisfaction and organization commitment play a much smaller role in the turnover deliberation process than suggested by traditional turnover models. Further understanding of the influence of attitudes may be obtained by incorporating time into the measurement of attitudes, as suggested by Weiss and Cropanzano (1996). Conducting longitudinal studies, which would include both the measurement of events and attitudes over time, will further our understanding of the interplay between events and attitudes in the turnover process.

Organization Turnover and Decision Paths

Examining the influence of organization turnover may help predict which decision path is likely to occur in response to a shock. When organizational shocks occur (e.g., mergers, stock decline, reorganizations), a *group* of employees who experience the same event are likely to consider quitting their organization. Individuals are more likely to follow suit and leave as part of a cohort effect - in other words, they gain support from others within the organization going through the same process. This may explain why the nurses in the Lee et al. (1996) study were more likely to employ decision path 2 for organizational shocks (collective image violation and support from peers in the leaving

process) and decision path 3 for job shocks (less social support prompts individuals to use additional coping strategies such as job search and evaluation).

The significant results for organization turnover lend support to Lee and Mitchell's (1994) assertion that contextual variables may have a direct effect on turnover deliberations. Including measures organization turnover, as well as other social and contextual variables, may provide useful in future studies on shocks and the unfolding model of turnover.

FUTURE RESEARCH DIRECTIONS

In the discussion of the results presented above, I suggested additional research needed in order to replicate and understand the findings of the current studies. In this section, I will suggest additional avenues for future research which will serve to enhance and extend our understanding of shocks and their role in the turnover process.

The Role of Affect. In its current conceptualization, the unfolding model of turnover focuses primarily on cognitive processing (e.g., scripts and images) following a shock. The work of Weiss and Cropanzano (1996), suggests that it is also important to consider the *affective* responses to events. Affective Events Theory (Weiss & Cropanzano, 1996) proposes that the emotional responses to events have a direct influence on attitudes and behaviors. Indeed, participants in the qualitative interviews described not only their *cognitive* reactions to shocks, but their affective reactions as well. For example, they described many feelings in reaction to the shock, including anger,

betrayal, and emotional distress. It may be that it is the emotional response to the event that stimulates the cognitive appraisal process, including a search for a matching script and image comparisons. It's important for future researchers to measure these emotional responses, and determine the extent to which emotional responses influence an individual's cognitive adjustment and subsequent turnover deliberations.

Holding Pattern and Turning Point. The results of the qualitative interviews revealed that following a shock event, individuals typically evaluate future events in light of their new perspective (i.e., cognitive adjustment). They seek evidence to confirm their new perspective while they are evaluating the decision to stay or leave their organization – what I termed a “holding pattern”. Eventually, they reach a “turning point”; which is a final defining event in which they decide to leave. While the findings of a holding pattern and turning point represent a new contribution to the turnover literature, they are consistent with the findings of sociological studies of the role exit process (Dauten, 1980; Ebaugh, 1988). It is important for future researchers to explore the effects of the holding pattern and turning point and incorporate these new constructs into the unfolding model of turnover. For example, the interview analysis revealed that the holding pattern and turning point process might be more prevalent in decision path 3 than in decision path 1 or 2.

Affective Events Theory (1996) may also lend insight into the holding pattern and turning point process. The strong emotional reaction to a shock may initiate an “emotion

episode” (Frijda, 1993), in which a single event of emotional significance triggers series of subevents that also take on emotional significance. During an emotion episode, an individual is in a state of continuous emotional engagement, in which they have a heightened level of arousal and attention. Weiss and Cropanzano (1996) point out that during an emotion episode, small events may take on increased significance - which may explain why the turning points reported by subjects were often relatively minor events.

Event dimensions. The current study focused on appraising an event based on its desirability, expectedness, and controllability. While these dimensions have strong empirical support in the literature (Thoits, 1983), they may not capture the complete picture in terms of the appraisal and interpretations of shocks. The stream of research on sensemaking and stress appraisal suggests that additional appraisal attributes may also be important, including degree of intensity, novelty, loss, threat, opportunity or challenge (Kiesler & Sproull, 1982). Exploring these additional dimensions of events in relation to their interpretation as shocks will provide increased awareness of the causal influences on cognitive adjustments and subsequent thoughts of quitting.

Louis and Sutton (1991) propose a framework for “switching cognitive gears” that might be particularly useful in our understanding of event appraisal and subsequent cognitive adjustments. Based on a review of the literature, these authors suggest that there are three conditions for switching from automatic to controlled processing: 1) when a situation is unusual or novel, 2) when there is a discrepancy, such as an unexpected

failure or a significant difference between expectations and reality, and 3) when there is a deliberate initiative for an increased level of conscious attention to a situation, as when people are asked to think or explicitly questioned about a situation. Many of the shocks reported in previous unfolding model of turnover research, as well as in the qualitative interview study, represented situations that were novel (e.g., a peer leaving the organization) or that required an increased level of conscious attention to a situation (such as receiving an outside job offer or a performance appraisal). Discrepancies are similar to the “expected” dimension explored in the current research. Using the framework proposed by Louis and Sutton (1991) may help us further understand how and why cognitive adjustments take place.

Contextual Variables. The results concerning the influence of organization turnover on thoughts of quitting suggest that contextual and social variables may play an important role in the turnover process. One contextual variable that has not been explored in previous turnover research is the rate of organizational change. Many subjects in the qualitative interviews noted that their organizations were experiencing rapid growth and change. The rapid growth created negative working conditions, such as increased bureaucracy, confusion and disorganization, and less interesting work. Future researchers may wish to explore the role of organization change, as well as other social and contextual variables, in the turnover process.

IMPLICATIONS FOR PRACTICE

The findings of the two studies reported in this dissertation suggest several implications for managers and human resource practitioners. While high-tech employers have expressed increasing concern about turnover in their organizations (Mandell, 1997), the strategies typically employed for retaining employees may not address the *specific* issues that prompt individuals to consider leaving. Retention tactics typically include increasing compensation, providing relevant training, and improving selection and recruitment practices. While these strategies may provide an improved organization climate overall, they fail to provide the interventions needed on how to handle specific events that prompt thoughts of quitting. In addition, they push the responsibility of employee retention onto human resources, rather than focusing on the steps management needs to take in order to curb employee turnover.

The qualitative interview study confirmed previous research findings on the unfolding model of turnover which suggests that a shock initiates the turnover deliberation process approximately 75% of the time. Once a shock occurs, individuals seek evidence confirming their new view (usually negative) of the organization, until they reach the point in which they make a final decision (the turning point). These findings suggest that managers need to improve their skills in two areas: shock prevention and change management. In other words, they need to prevent events that might be interpreted

as shocks from occurring, and learn how to better manage the transition periods that occur after major events.

The analysis of shock types in the qualitative interviews suggested that the most common type of shock events involved a conflict with one's supervisor. While the sample size of the interview study is small (n=15), the findings of Gundry and Rousseau's (1994) lend some support to these findings. These authors found that the most frequently occurring critical incident after the first year of employment was supervisor-subordinate conflict. Subjects in the qualitative interview study frequently reported that this event made them feel less valued or respected by their managers (suggesting an identity violation). Whether managers are delivering performance feedback, announcing a new initiative, or directing a project, they must reassure employees that they are a valued and important member of the team. Managers may need training in communication and coaching skills to learn how to better interact with their employees.

Finally, the results of the current study suggest that human resource practitioners may need to redesign their exit survey instruments to more explicitly measure shocks. Exit surveys typically assess general attitudes or factors that contribute to an individual's decision to leave, but they do not require employees to pinpoint the exact event that stimulated the turnover deliberation process. By measuring specific events, human resource practitioners will have a more accurate picture of the causes of employee turnover. In this way, they can suggest preventive measures, such as providing manager

training or organization development interventions. Also, if an organization-level event causes turnover for one employee, chances are that other employees were “shocked” by this event as well. H.R. practitioners, in partnership with management, may be able to intervene with affected employees – before more employees reach their final turning point and quit.

CONCLUSION

In summary, the two studies conducted for this dissertation make several contributions to our understanding of the turnover process. While the unfolding model of turnover provides a promising new avenue in turnover research (Hom & Griffeth, 1995), the shock construct represents “uncharted waters” in our theoretical understanding of the turnover process (Lee & Mitchell, 1994). The sensemaking model of shocks developed from the qualitative interviews provides a conceptual framework to understand how events are appraised and interpreted as shocks. The experimental vignette design provided a prospective (vs. retrospective) study on shocks, allowing us to draw causal inferences about the influence of shocks on the turnover process. The results of study 2 revealed partial support for the model, suggesting a need for further inquiry and refinement of the model.

To this authors’ knowledge, the qualitative interviews conducted for this dissertation represent one of the first inductive studies of the question: “How do people leave their organizations?” Previous research studies have primarily focused on the

deductive test of “armchair” turnover theories. As a result, these theories may have overlooked important features of the turnover process uncovered in the current research, such as the holding pattern, turning point, and the influence of other organization turnover on an individual’s quitting decision. Similar findings about the role-exit process were discovered through qualitative research conducted in the sociological arena (Dauten, 1980; Ebaugh, 1988). Taken together, these studies suggest that additional inductive qualitative studies on the turnover process may lead to more useful discoveries about why and how individuals leave their organizations.

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APPENDIX A - INTERVIEW PROTOCOL

Initial Questions

- Are you still currently employed? (If not, when did you leave?).
- How long were you there?
- What position were you in (probe for understanding)?
- Now tell me a little bit about your experiences at XX - what led up to you leaving?

Additional Demographic Data

- Sex
- Your position at company
- Tenure at firm
- How long in high tech industry
- Age
- Size of firm
- Where did you hear of the study?
- Stayer/Leaver

Main Questions

1. Tell me a little bit about your situation at X. What led up to you leaving?
2. Was there a specific event that led up to you leaving?
3. Tell me about this event.
4. What did this event represent/symbolize for you?
5. Did you feel like you had control/power/influence over the event?
6. Did the event surprise you? [probe for psychological contract breaks here]?
7. On a scale of 1 to 5 , which 1 being very positive and 5 being very negative, how would you rate your reaction to this event?
8. Probe for events that led up to shock event...What distinguished these events from the one that made you think about leaving?
9. Probe for events that occurred subsequent to the shock. What happened next. Was there a point where you made a definite decision to leave? Tell me about this event (if there was an event)

10. For current stayers: Is there anything the organization could do at this point that would make you stay? And for leavers: Is there anything your company could have done that would have changed your mind about leaving?
11. Probe for *image violations*: Did you feel that your career goals could be met if you stay(ed) at XX? What about your personal goals? Were your values consistent with those of your organization's?
12. Probe for *job search* behavior: Did you do any job search before you left? If so, what? At what point in time? Did you have an offer in hand before you left?
13. Probe for evidence of a *script*: Did this situation remind you of any situation you faced in the past, perhaps at a previous company? If so, how did it influence your decision in this situation?
14. Were other people at your company leaving or considering leaving? To what extent did this influence your decision to leave?
15. To what extent did your compensation/stock options influence your decision to leave/stay?

End

That's about all the questions that I have for you. Do you have anything you would like to add? Any questions for me?

APPENDIX B - CODING TEMPLATE

1. Demographic Data:

- 1.1. Stayer or leaver
- 1.2. Company
- 1.3. Company size
- 1.4. Position
- 1.5. Tenure
- 1.6. Years in high tech industry
- 1.7. Gender
- 1.8. Age
- 1.9. Recruitment source

2. Shock Antecedents

- 2.1. Job satisfaction
 - 2.1.1. role stress
 - 2.1.2. compensation
 - 2.1.3. leader-member exchange/dissatisfaction with executive management
 - 2.1.4. met expectations
- 2.2. Job commitment
 - 2.2.1. procedural justice
 - 2.2.2. expected utility of internal roles
 - 2.2.3. extraorganizational loyalties
 - 2.2.4. person-organization fit
 - 2.2.5. commitment propensity
 - 2.2.6. company growth and change

3. Shock

- 3.1. Description of shock
- 3.2. Shock type
 - 3.2.1. organizational
 - 3.2.2. job Related
- 3.3. Cognitive adjustment
- 3.4. Shock characteristics:
 - 3.4.1. desirability
 - 3.4.2. expectedness
 - 3.4.3. controllability

4. Shock Consequences

- 4.1. Holding pattern
- 4.2. Image violations
- 4.3. Job search behavior
- 4.4. Firm turnover
- 4.5. Turning point

APPENDIX C - EVENT SCENARIOS

Negative/Unexpected/No Control

In the last few weeks, you have been aware that your manager has been participating on a task force – it's been very secretive and you are not sure what they are discussing.

This morning, the top executive of your company sent out a memo announcing that your company would be merging with another firm. You were very surprised at this announcement - you did not even realize that a merger was being considered.

You think that your opportunities for promotion may be limited as a result of the merger.

Negative/Unexpected/Control

You participated on a company-wide task force asked to give input into a potential merger with another company. Despite this, you do not really think that the merger would happen.

This morning the top executive of your company sent out a memo announcing that your company would be merging with another firm. S/he will be using most of the recommendations of the task force to facilitate implementation of the merger

You were very surprised at this announcement - you did not anticipate that a merger would occur.

You think that your opportunities for promotion may be limited as a result of the merger.

Negative/Expected/Control

You participated on a company-wide task force asked to give input into a potential merger with another company. You strongly suspected that the merger would happen soon.

As you had anticipated, this morning the top executive of your company sent out a memo announcing that your company would be merging with another firm. S/he will be using most of the recommendations of the task force to facilitate implementation of the merger.

You think that your opportunities for promotion may be limited as a result of the merger.

Negative/Expected/No Control

In the last few weeks, you have been aware that your manager has been participating on a task force – it's been very secretive and you are not sure what they are discussing. However, you strongly suspected that a merger might happen soon.

As you anticipated, this morning, the top executive of your company sent out a memo announcing that your company would be merging with another firm.

You think that your opportunities for promotion may be limited as a result of the merger.

Positive/Expected/Control

You participated on a company-wide task force asked to give input into a potential merger with another company. You strongly suspected that the merger would happen soon.

As you anticipated, this morning the top executive of your company sent out a memo announcing that your company would be merging with another firm. S/he will be using most of the recommendations of the task force to facilitate implementation of the merger.

You think that you will have increased opportunities for promotion as a result of the merger.

Positive/Unexpected/No Control

In the last few weeks, you have been aware that your manager has been participating on a task force – it's been very secretive and you are not sure what they are discussing.

This morning, the top executive of your company sent out a memo announcing that your company would be merging with another firm. You were very surprised at this announcement - you did not even realize that a merger was being considered.

You think that you will have increased opportunities for promotion as a result of the merger.

Positive/Unexpected/Control

You participated on a company-wide task force asked to give input into a potential merger with another firm. Despite this, you do not really think that the merger would happen

This morning, the top executive of your company sent out a memo announcing that your company would be merging with another firm. S/he will be using most of the recommendations of the task force to facilitate implementation of the merger.

You were very surprised at this announcement - you did not anticipate that a merger would occur.

You think that you will have increased opportunities for promotion as a result of the merger.

Positive/Expected/No Control

In the last few weeks, you have been aware that your manager has been participating on a task force – it's been very secretive and you are not sure what they are discussing. However, you strongly suspected that a merger might happen soon.

As you anticipated, this morning, the top executive of your company sent out a memo announcing that your company would be merging with another firm.

You think that you will have increased opportunities for promotion as a result of the merger.

APPENDIX D - MEASURES

Scales	Internal Reliability (α)
Michigan Organizational Assessment Questionnaire	.89
1. All in all, I am satisfied with my job.	
2. In general, I don't like my job.*	
3. In general, I like working at my company.	
Organization Commitment Questionnaire	.89
1. I am willing to put in a great deal of effort beyond what is normally expected in order to help my company be successful.	
2. I talk up my company to my friends as a great company to work for.	
3. I would accept almost any type of job assignment in order to keep working for my company.	
4. I find that my values and my company's values are similar.	
5. I am proud to tell others that I am part of my company.	
6. My company really inspires the very best in me in the way of job performance.	
7. I am extremely glad that I chose my company to work for over others I was considering at the time I joined.	
8. I really care about the fate of my company.	
9. For me, my company is the best of all possible companies for which to work.	
Organization Turnover	.86
1. Many of the people I know at work have left the organization within the last year.	
2. My company has been experiencing a lot of turnover.	

Withdrawal Cognitions	.84
1. I have experienced an event in the last 12 months that has prompted me to consider quitting my job.	
2. Do you intend to leave your company in the next 12 months?	
3. How likely is it that you will leave your company in the next 12 months?	
4. If you have received a job offer in the past year, to what extent did you consider accepting it?	
5. If you received a job offer today, to what extent would you consider accepting it?	
Job Alternatives	.92
1. What is the probability that you can find an acceptable alternative to your job?	
2. If you search for an alternative job within a year, what are the chances you can find an acceptable job?	
Cognitive Adjustment	.94
1. I would feel more or less certain that I should be at my current job.	
2. I would feel more or less committed to my organization.	
3. I would feel more or less important than I thought.	
4. I would feel more or less positive about my job.	
5. I would feel more or less respected than I used to.	
6. I would feel more or less secure in my job than before.	
7. I would feel more or less valued than I thought.	
8. I would feel more or less certain that I need to make a change to my current work situation.*	
9. I would feel more or less like I am a good fit with my organization's culture.	
10. I would feel more or less certain about my current career direction.	
11. I would feel more or less certain about the career potential of my job at this company.	
Thoughts of Quitting	.93
1. (I would) look for a new job.	
2. (I would) consider quitting my current job.	
3. (I would) think about quitting my job.	

* Reverse coded.

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EDUCATION

- Ph.D.** **University of Washington School of Business Administration (1998)**
Human Resources and Organizational Behavior; 3.7 GPA.
Reading Committee: Marilyn Gist (chair), Terence Mitchell, Cecil H. Bell
- B.A.** **Syracuse University (1988)**
Interdisciplinary honors program in Organization and Management;
3.9 GPA.

WORK EXPERIENCE

Management & Organization Development, Consultant (1989-1991; 1996 - 1998)
As a self-employed consultant, I provided a variety of services, including:

- ***Management and employee training:*** Training strategy and planning, curriculum design, facilitation, evaluation
- ***Organization development:*** Needs assessment, strategic planning retreats, team-building, meeting planning and facilitation, employee surveys
- ***Executive coaching and 360° feedback***
- ***Human resources:*** HR planning and strategy, job analysis, staffing systems, performance management, compensation

Representative Client List

The Boeing Company
Applied Inference
City of Lake Forest Park
Mason Tillman Associates
The Chicago Tribune

Wizards of the Coast
Morningstar
HBS International
Ingalls Shipbuilding Company
Milliman & Robertson

Microsoft Corporation (1992-1996)

Management Development Consultant, Executive and Management Development.
 Managed all management and team development for Product Support Services (PSS) division (210 managers) and the Win95/NT Group (500 managers). Created, marketed, and implemented strategic plan for development across the PSS division. Managed budget (190K). Facilitated courses and managed vendor delivery of programs. Coordinated Leadership Development Retreat for all PSS managers, which resulted in improved communication of product roll-outs and increased employee involvement in business planning process. Conducted individual 360° assessments with senior management. Worked closely with senior management team to improve team functioning. Participated in the design, development and roll-out of succession planning program.

HR Development Specialist, Leadership Programs Group.
 Managed first annual corporate-wide employee survey. Developed communication and marketing plan. Persuaded key executives to implement new survey. Applied skills in research design to ensure appropriate item wording and scales. Managed team of vendors in data entry, statistical analysis, and data interpretation. Developed employee survey reports. Trained managers and HR staff to interpret and effectively use survey results.

Associate Trainer, Management and Employee Development Center.
 Delivered interpersonal and professional skills courses to managers and employees. Updated course curriculum and training materials. Facilitated team-building and strategic planning retreats.

PROFESSIONAL TRAINING PROGRAMS AND CERTIFICATIONS

Vendor Programs

Managing Personal Growth
 Situational Leadership
 Profiler (360°)
 Criterion Referenced Instruction
 Search Conference

Helping Others Succeed
 Benchmarks (360°)
 Career Architect (360°)
 The Customer
 Selling Your Ideas

Microsoft Programs

Managing Microsoft People
 Effective Interviewing Skills
 Doing Business at Microsoft
 Scaling Up for Middle Managers

Conducting Effective Meetings
 Performance Management
 Effective Consulting Workshop

S.R. Crandall & Associates Programs

Hiring for Success
 Performance Management Tool Kit

Constructive Conversation

TEACHING EXPERIENCE

University of Washington (1988-1991, 1996-present)
Teaching Assistant, Department of Management and Organization.

TAs at the University of Washington are fully responsible for the curriculum development and teaching of classes.

Human Resources Management (HRMOB 301). Core undergraduate course covering legal issues, measurement, recruiting and selection, performance appraisal compensation, and training (Taught 2 times).

Employee Staffing (HRMOB 410). Undergraduate elective course which covers job analysis, EEO law, measurement, recruiting, selection procedures, selection decision-making (Taught once).

Organizational Behavior (HRMOB 400). Core undergraduate course which covers personality, motivation, leadership, groups, power and influence, communication, and organizational culture (Taught 5 times).

Leadership (HRMOB 450). Undergraduate elective course which includes leadership theory, coaching and development of employees, change management, and leadership development (Taught 2 times).

Organization Development (HRMOB 475). Undergraduate elective course which includes the history of organizational development, organizational needs assessment, organizational interventions, the consultant-client relationship, management development and training (Teaching Spring, 1998).

PUBLICATIONS

Huber, Vandra L. & Crandall, Susan R. (1994). *Job measurement: A social-cognitive decision perspective* in Gerald Ferris (ed.) *Research in Personnel and Human Resources Management*. Greenwich, CT: JAI Press.

Mitchell, T.R., George-Falvy, J. & Crandall, S.R. (1993). *Business students' justifications of exceptionally high salaries: Is it okay to make \$2 million a year?* *Group and Organization Management*, 18: 500-521.

Huber, V.L., Crandall, S., & Northcraft, G.B. (1991). Effects of gender-linked job titles and job upgrade requests on job evaluation and pay allocation decisions. Proceedings of Southern Management Association, Orlando, FL. November.

Crandall, Susan (1990). *Performance appraisal as a counseling and development tool* in Schuler and Huber, *Personnel and Human Resource Management*, Fourth edition. St. Paul: West Publishing Company.

Latham, Gary P. & Crandall, Susan R. (1990). *Organization and social factors* in John E. Morrison (ed.) *Training for Performance: Principles of Applied Human Learning*. Chichester, UK: John Wiley & Sons.

TECHNICAL REPORTS

Moore, Elizabeth & Crandall, Susan R. (1997). *Working for a Whole Community*. Lake Forest Park Human Services Needs Assessment.

Crandall, Susan R. (1993). *Microsoft Employee Survey*. Microsoft Corporation.

PRESENTATIONS

Daniels, Denise, & Crandall, Susan R. *A human resources in-basket task to assess student understanding and application*. Organizational Behavior Teaching Conference, LaVerne, California, 1998.

McKenna, Douglas, Crandall, Susan R., & McHenry, Jeffrey. *Management development at Microsoft* presented at the tenth annual conference for the Society of Industrial and Organizational Psychologists in Orlando, Florida, May 1995.

Crandall, Susan R. *The role of the internal consultant* presented at the first annual Consortium of Doctoral Students in Organizational Studies in Seattle, Washington, September 1994.

Huber, Vandra L., Crandall, Susan R., & Northcraft, G.B. *A rose by any other name is not as sweet: Effects of job titles and upgrade requests on job evaluation and wage decisions*. Presented at the Southern Academy of Management Conference in Orlando, Florida, September 1990.

COMMUNITY SERVICE

Youth Tutoring Program, Tutor (1997)

Served as tutor for program which encourages economically disadvantaged students to improve basic skills.

Washington Works, Advocate (1995-1996)

Served as advocate for welfare recipient making transition from welfare to work. Served on advocate advisory board and participated in needs assessment and planning of advocate program.

Meridian Neighborhood Group, Board Member (1996)

With other neighbors, created start-up neighborhood community group. Contributed to monthly newsletter. Coordinated holiday gift drive for local school.

Catholic Community Services, Tutor of English as a second-language (1991)

Taught English to a Vietnamese refugee family.

AWARDS AND RECOGNITION

Phi Beta Kappa

Microsoft Human Resources Achievement Award (1993)

Recipient of Robert & Bonnie Slettedahl Endowed Fellowship

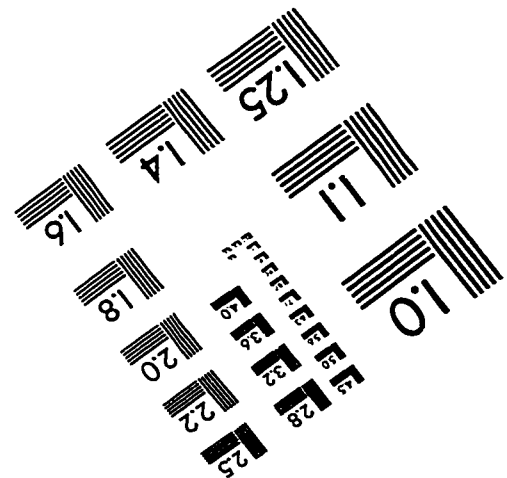
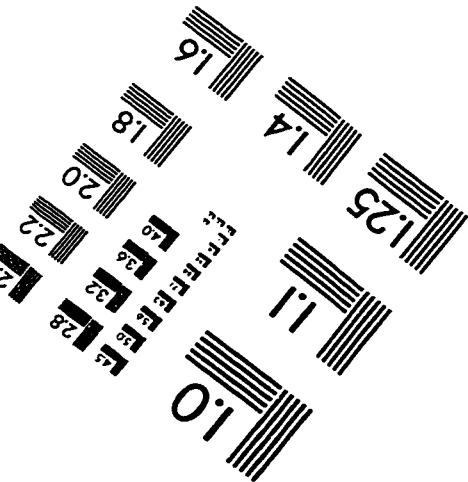
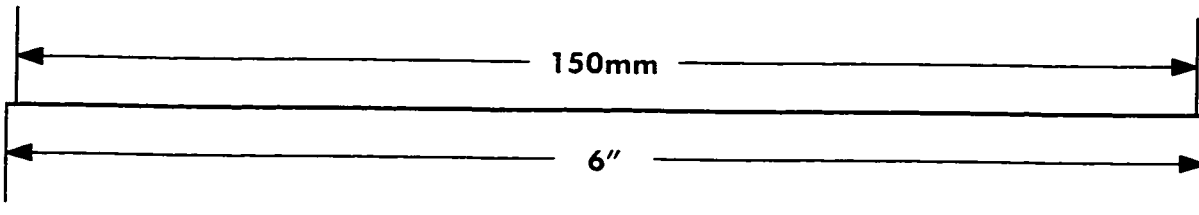
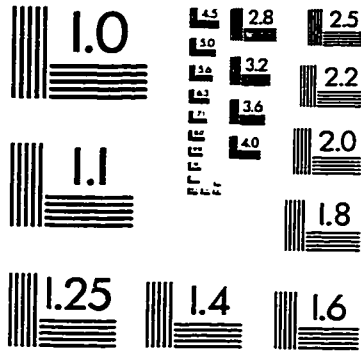
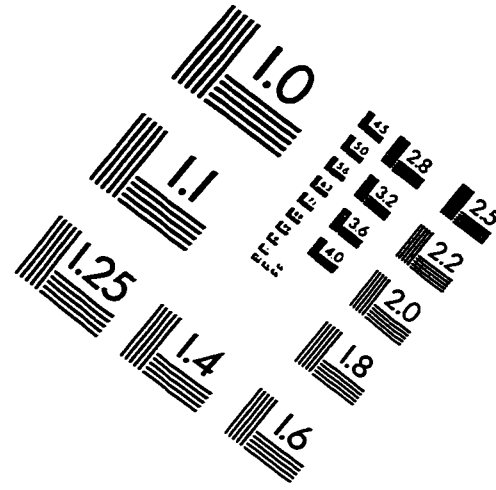
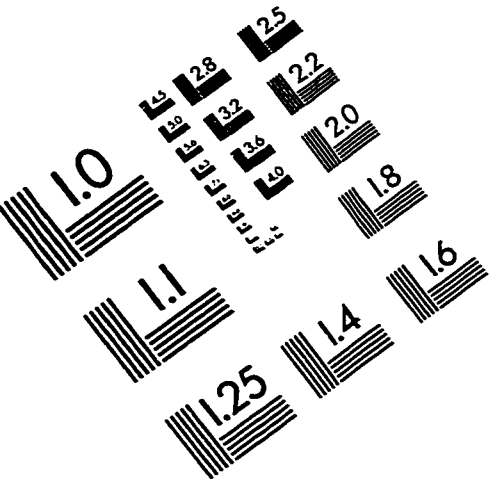
Recipient of Evert McCabe Endowed Fellowship

PROFESSIONAL AFFILIATIONS

Member, Academy of Management

Member, Puget Sound Society of Industrial/Organizational Psychologists

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