Shocks and Satisfaction Predicting Turnover in a Laboratory Setting

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Abstract

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Shocks and Satisfaction Predicting Turnover in a Laboratory Setting

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The current study incorporates previous turnover theory, which focuses on the attitudinal variable of job satisfaction as a predictor of turnover, and the shocks construct presented by Lee and Mitchell (1994)’s unfolding model of voluntary turnover. Shocks are theorized to be distinguishable events that lead individuals to re-evaluate their current condition within their organization. It was hypothesized that shocks and satisfaction would interact to predict turnover. This was the first study to experimentally test tenets of the unfolding model, as well as, being one of only few studies to investigate turnover in a laboratory setting. A sample of 242 undergraduate students engaged in an anagram task in which job satisfaction and shocks were manipulated. Results revealed support for some hypotheses. Specifically, results demonstrate that shocks are a significant predictor of turnover accounting for a large amount of variance. However, a non-significant interaction between shocks and satisfaction was revealed.
To my family, for your love and guidance

To my husband, for your continuous support and commitment.
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**Introduction**

Voluntary employee turnover has been an area of concern for Industrial/Organizational (I/O) psychologists since the 1970’s (Price, 1977). Turnover is a complex and crucial phenomenon for organizations and as a result, thousands of studies have been conducted on the topic (Muchinsky & Morrow, 1980). Despite all of the effort allocated to the study of turnover, it is still a struggle for researchers to successfully predict the construct (Griffeth, Hom & Gaertner, 2000). It is often assumed that attitudinal variables such as job satisfaction and organizational commitment are antecedents of turnover behavior. Such predictions are based on the notion that those who negatively evaluate their job (i.e., are experiencing some sort of dissatisfaction or low commitment) will be more likely to leave the organization than those who do not have such negative evaluations (e.g., Hom & Griffeth, 1995; Hom, Katerberg, & Hulin, 1979; March & Simon, 1958; Mobley, 1977; Porter, Steers, Mowday & Boulian, 1974). The logic behind these hypotheses is sound; however, statistical support is much more difficult to establish (this will be elaborated on later in the paper). As a result, much effort has been placed on the development of turnover theory and investigating alternative antecedents of turnover behavior.

A relatively new construct, called a “shock to the system” was introduced to the turnover literature by Lee and Mitchell’s (1994) unfolding model of voluntary turnover. The unfolding model proposes that a shock is a sufficiently jarring event that leads an individual to deliberate about their current position within the organization and to potentially quit their job (Lee & Mitchell, 1994). The current study is set to examine the
combined effect of job dissatisfaction and shock in the prediction of turnover. Specifically, it is hypothesized that someone who is already experiencing a negative condition, in this case dissatisfaction, and who also experiences a shock will be more likely to turnover than someone who is dissatisfied but does not experience a shocking event. To elaborate, the shock provides the impetus that forces the dissatisfied individual to acknowledge and think about their current dissatisfaction. Engaging in this type of evaluation will result in the individual being more likely to leave than someone who was not forced into such deliberation. Previous research using exit interviews has estimated that shocks are involved in about sixty percent of turnover incidents (Holtom, Mitchell, Lee, & Inderrieden, 2005). Thus, incorporating this construct as a moderator to the job satisfaction-turnover relationship is expected to improve the prediction of the turnover construct resulting in more variance explained.

The primary goal of the current paper is to test whether or not shocks are a potential explanation for the poor relationships found between attitudinal variables and turnover. I plan to examine this by being one of few to investigate turnover in a laboratory setting. In addition to being one of the only studies to investigate turnover behavior in the lab, this study is also the first to experimentally manipulate the shocks construct. Prior studies have relied almost exclusively on exit interviews, thereby asking individuals after turnover to recall their reasons for leaving the organization (e.g., Donnelly & Quirin, 2006; Holt, Rehg, Lin & Miller, 2007; Holtom et al., 2005; Lee, Michell, Wise, and Fireman, 1996; Morrell, Loan-Clarke, Arnold, & Wilkinson, 2008; Niederman, Sumner, & Maertz, 2007). There are numerous problems surrounding this
methodology that will be elaborated on later in the paper. Finally, this study will be one of few to experimentally manipulate the job satisfaction construct.

Using rigorous, experimental methods to investigate the constructs involved in the turnover process will contribute greatly to the turnover literature. Currently, most turnover studies rely primarily on survey methodology and the majority of studies examining the shock construct do so via retrospective reports. Conducting an experiment provides control over the environment and allows for manipulation of the variables of interest. Being able to manipulate the study variables allows for the determination of which factors have the greatest impact on turnover behavior. Conducting the study in a controlled environment limits the amount of outside influences that could interfere with the relationships between the variables of interest. Thus, an experiment provides the most clean and rigorous test of the hypotheses.

Before beginning a detailed discussion of the present study, deeper elaboration of the constructs examined is warranted. In the following paragraphs I will explain the importance of job satisfaction in the study of turnover, as well as, describe the unfolding model of voluntary turnover from which the shocks construct originated.
Job Satisfaction and Turnover

Turnover theory has evolved greatly over the years in some ways, but less in others. There have been a number of new constructs introduced as predictors of turnover (e.g., shocks) but some of the core turnover antecedents have remained steady over time. One such core antecedent is job satisfaction.

Dating back to 1922, Brissenden and Frankel (1922) conducted a study investigating the impact of satisfaction on turnover. The researchers simply categorized individuals who quit their jobs according to the reason given. Their results revealed that dissatisfaction was the reason reported for leaving in 8.3% of their sample. Although the main purpose of this study was not to investigate the relationship between satisfaction and turnover, it may have provided information that paved the way for future researchers to examine the topic. We can see that satisfaction was playing a role in the turnover literature long before any formal theories were developed.

Although satisfaction was present in studies conducted in the 1920’s, it did not become a major player in the turnover literature until the 1950’s. It was originally hypothesized that attitudes would impact performance (including withdrawal and turnover behavior; Hill & Trist, 1955; Merrihue & Katzell, 1955). Later, specific predictions were made regarding the relationship between job satisfaction and turnover and it was hypothesized that the same work factors that were responsible for an individual liking their job should be the same factors that influence the individual’s desire to remain in their job (Vroom, 1964). Several studies around this time found support for this notion, specifically, that there was indeed a negative relationship between job
satisfaction and turnover (Herzberg, Mausnes, Peterson, & Capwell, 1957; Hulin, 1966; Weitz & Nuckols, 1953; Vroom, 1964). This provided the basic building block for the progression of turnover theory and the majority of models and theories of turnover thereafter include satisfaction as a critical construct.

There have been a handful of reviews and meta-analyses outlining the findings pertaining to the relationship between satisfaction and turnover. The most recent of which was provided by Griffeth et al., 2000. This meta-analysis of 67 samples (n = 24,566) assessing the relationship between overall job satisfaction and turnover revealed a sample size weighted average correlation coefficient of only -.22 when controlling for measurement error, sampling error, and variations in turnover base-rates across studies (Griffeth, et al., 2000). Additionally, satisfaction often fails to account for more than five percent of the variance in turnover (Abelson, 1987; Griffeth et al., 2000; Hom, Griffeth, & Sellaro, 1984).

The vast majority of these studies used survey methodology to measure satisfaction. That is, a measure of satisfaction was administered to employees and at a later date, their employment status was investigated to see whether or not the employee had left the organization. Even studies conducted in the lab often assess satisfaction via survey measures.

There have been at least two papers published that manipulated job satisfaction in an experiment. One of which was a study conducted by Caldwell and O’Reilly III in 1982. This study was concerned with how job satisfaction influences the perceptions of task characteristics. In this study, which was a lab-based study, 77 MBA students were
assigned to either a satisfied or dissatisfied condition. Satisfaction was manipulated using a role-play strategy. Specifically, individuals in the satisfied condition were instructed to imagine that they held a retail-store manager job that was described and that they were satisfied with the job. Alternatively, the individuals in the dissatisfied condition were instructed to imagine that they were dissatisfied with the same job. After being given these instructions and after reviewing the job description, the participants completed measures of task perceptions (i.e., the skill variety, task identity, autonomy, and feedback dimensions of the Job Characteristics Index) and satisfaction with the imagined job (using a measure developed by Brayfield & Rothe, 1951). The results revealed that the individuals in the satisfied role group not only reported higher levels of satisfaction, but described the job as having significantly more variety, autonomy, identity and feedback than their dissatisfied role counterparts (Caldwell & O’Reilly III, 1982).

The second paper manipulating satisfaction was conducted by Rusbult, Farrell, Rogers and Mainous III (1988). This paper was concerned with four typical responses to dissatisfaction – exit, voice, loyalty and neglect. Study 1 of this paper included 64 male and 64 female undergraduate students in a laboratory based design. Each individual was provided an essay to read that described a hypothetical situation in which the protagonist was faced with declining work conditions. The participants were told that their hypothetical supervisor had started to provide inconsistent instructions that the employee felt were inappropriate and unhelpful.

Job satisfaction was manipulated by providing variations of the employee’s job description. Participants were told that they worked for either a mediocre or a good
company, that provided either decent or a high salary, and that the work was either moderately enjoyable or really enjoyable. Participants were asked to imagine the situation that they were assigned and then had to complete a questionnaire containing a manipulation check and 4-5 items to assess each of the four dissatisfaction responses: exit, voice, loyalty and neglect. The manipulation check for satisfaction was successful with those in the high satisfaction condition reporting higher satisfaction with their job than those in the low satisfaction condition. Results of this study revealed that individuals in the high satisfaction condition reported significantly stronger tendencies toward voice and loyalty and significantly weaker tendencies toward exit and neglect than individuals in the low satisfaction condition.

Study 2 of this paper was a field study with a sample of employees from a large communications utility company. Participants were mailed questionnaires containing measures of satisfaction and the four criteria from Study 1. Results of the study demonstrated that higher job satisfaction was associated with higher loyalty and lower exit and neglect.

The third study presented in the Rusbult, et al., (1988) paper was another lab-based study using 40 male and 40 female undergraduate students. The study involved a newspaper newsroom simulation. The experimenter described various work tasks and the pay associated with each task and then assigned tasks to the subjects. The subjects were informed that after three work sessions they would have the option to switch to a different work task. Subjects were also told that their supervisor was observing them in the next room behind a one way mirror. Subjects were provided with training materials
and were given 10 minutes to read them and to prepare for “work”. They were then given work materials and after five minutes the materials were collected by the supervisor. The supervisor then returned with written evaluations of each subject’s work during the first work session and provided them with materials for their second work session. This same procedure was followed for three work sessions.

Satisfaction in this experiment was manipulated by varying the pay for the assigned task. Specifically, in the high satisfaction condition the expected pay was $4.30 and for the low satisfaction condition the expected pay was $2.85. The manipulation was successful as indicated by the manipulation check in which those in the high satisfaction condition reported significantly higher satisfaction with their assigned task than those in the low satisfaction condition. Results of this study were consistent with those from the previous two studies. In particular, high job satisfaction promoted voice and loyalty and inhibited exit.

Even though some of the studies described here use an experimental manipulation of job satisfaction, they are not directly assessing the relationship between satisfaction and actual turnover behavior. In the Caldwell and O’Reilly paper, turnover is not assessed at all, and the Rusbult et al. paper only measured exit via surveys. Thus, the results of these studies do not allow us to make conclusions regarding the relationship between satisfaction and the choice to actually leave an organization or a job.

This is where the current study can contribute to the current literature. Specifically, the current study is attempting to manipulate the work environment of the participants which is hypothesized to result in either high or low levels of satisfaction
with the experiment that will influence whether or not the participant thinks about quitting or actually quits the experiment. However, the current study is not simply testing whether high or low levels of job satisfaction lead to turnover or thoughts of turnover, but also proposes that satisfaction will interact with shocks to enhance the prediction of turnover. At this point, it is necessary to provide deeper insight into the shocks construct.
The Unfolding Model of Voluntary Turnover

The unfolding model of voluntary turnover that was originally proposed by Lee and Mitchell (1994) is a theoretical departure from the many turnover theories that preceded it. The reason being, it does not predict turnover from attitudinal variables such as satisfaction and commitment alone, but rather, the unfolding model introduced a new construct to the turnover literature known as a “shock to the system”.

The unfolding model utilizes constructs from Beach’s (1990) image theory, which is a generic decision-making model, to understand the decision of employees to quit their job. Image theory involves assumptions about the decision process, which include that (a) “evaluation is seldom extensive”, (b) “choice occurs relatively rarely”, (c) “behavior is largely preprogrammed,” (d) “decision makers possess a variety of different strategies for making choices, many of which have quite different aims than the maximization of expected utility”, and (e) the field has “abandoned its single minded allegiance to the economic view of decision making.” Research provides support for these statements (e.g., Klein & Calderwood, 1993; Oden, 1987).

“Screening” according to Beach is the most important mechanism for understanding decisions. Screening is a quick process that an individual engages in when presented with new information and determines whether or not this information or changes in behavior become options in the decision making process. Specifically, the new information is “screened” to determine whether or not it is consistent with previously established images that the individual holds for themselves. Beach (1990) argues that individuals typically hold three different images for themselves; the value
image, the trajectory image, and the strategic image. The value image involves the individual’s general life values, standards, and principles that define them as a person. The trajectory image encompasses the goals that individuals hold for themselves that ultimately direct their behavior. Finally, the strategic image is the actual behavioral tactics and strategies that an individual implements to attain their goals. Screening occurs when individuals compare incoming information against these three images. Beach termed this comparison the compatibility test. If an option survives the screening process it is compared to the status quo and in most cases, the status quo wins. Beach argues that it is rare for individuals to deviate from the status quo and change their behavior.

Some additional important pieces of information from image theory are firstly, that individuals have different sets of images for various aspects of their life. For example, individuals have a different set of images for their work, friends, family, etc. Secondly, images vary in terms of how strongly they are held, how clear they are, and how easily they can be communicated. Thirdly, individuals use images in a sequential manner during the screening process. Specifically, the information or option presented is compared to the relevant domain (in this case work), then comparisons with the other images, value, trajectory, and strategic, are made. Finally, in some cases individuals may change an image rather than accepting or rejecting the new information/options. An example here would be if an individual changes their goal or tactics for achieving that goal in order to accommodate new information. However, it is believed that individuals are more likely to reject new information as opposed to changing their images.
Lee and Mitchell (1994) argue for the relevance of these components of image theory in the process of coming to a turnover decision. They suggest that information and/or events can cause conflict between various life domains. An example they provide is that a promotion may fit with images in relation to one’s job, but may be in conflict with the images that one holds for their family. Research has demonstrated that such conflicts result in a slower and more deliberative decision making process (Brown, Mitchell, & Beach, 1987). Additionally, people may be more likely to change weakly held images as opposed to strongly held images, certain images may be easier to change than others, and having ambiguous images can result in a more lengthy and difficult screening process (Mitchell & Beach, 1990). Therefore, the amount of cognitive effort that occurs during the screening process can vary from very little to very much.

Lee and Mitchell (1994) outline their use of image theory’s concepts for understanding employee turnover on page 60 “First, some sort of event, which we call a shock to the system, causes the person to pause and think about the meaning or implication of the event in relation to his or her job. Secondly, this process may (or may not) lead to the idea that leaving the job is an alternative to consider. If leaving becomes an alternative, there may (or may not) be other job alternatives to consider.” These different possibilities create decision paths, which are general ways that employees may come to the turnover decision.

The core concept that must be explicated in order to understand the unfolding model is a shock to the system. A shock formally defined is “a very distinguishable event that jars employees toward deliberate judgments about their job and, perhaps, to
voluntarily quit their job” (Lee & Mitchell, 1994, p.60, italics in original). A shock is an event that produces information or has some sort of meaning relevant to an individual’s job. A shock is so significant or jarring that it must be interpreted and integrated into the individual’s images and beliefs and therefore, cannot be ignored. Lee and Mitchell argue that not all events are shocks and that an event is only deemed a shock if it results in job related deliberations that involve the prospect of leaving the job.

When studying the shocks construct, it is important to be familiar with more than just the definition. For example, shocks can take a variety of forms. Regardless, the shock shakes the employee out of their current state or challenges the status quo in regard to the way the individual thinks about their job. The shock is attention getting, but the affect of the shock can be positive, neutral, or negative. Also, shocks can be job-related (e.g., missing a promotion) or non-job related (i.e., winning the lottery) as well as expected (e.g., receiving an annual bonus) or unexpected (e.g., the announcement of an organization wide layoff; Lee & Mitchell, 1994). The way that a shock is interpreted is completely reliant on the individual’s perception of the event. That is, a single event may be interpreted differently for different individuals (Lee & Mitchell, 1994). For example, a pregnancy may be a highly anticipated or expected event for one individual but completely unexpected for another. A shock, such as a pregnancy, may also differ in terms of valence in that it may be perceived as an absolutely positive experience for one individual yet utterly negative for another. Lee and Mitchell (1994) state that from their perspective different types of shocks likely occur with varying frequency, have varying effects on the decision path that is followed and on the decision that is ultimately made.
The unfolding model significantly contributes to the turnover literature in a number of ways. First, we can see that it is not a one path fits all approach to turnover, but rather forces researchers to think about turnover from a number of different perspectives. Secondly, it acknowledges that not all decisions are made in a rational manner. Most importantly, the unfolding model introduces a new, unexplored construct to the turnover literature. The introduction of shocks allows for various external, unexpected, or random events to influence the turnover process.

It is already established that many studies have difficulty explaining significant amounts of variance in the turnover construct; perhaps shocks have the ability to add an influential contribution that can strengthen the findings of previous research. However, there are some limitations in the current shocks-turnover literature. Perhaps the most impactful is the methodology used to assess the shocks construct. The primary methods used to study shocks (i.e., retrospectively) do not enable researchers to assess any estimates of variance in the traditional regression sense. Therefore, we are unable to determine the impact that shocks have on turnover behavior. Despite these limitations in the current literature, it is still valuable to outline the findings of the studies that have examined the shocks concept, as well as the methods used to do so.

**Tests of the Unfolding Model**

As mentioned, there have been a number of studies conducted to test the tenets of the unfolding model, but are primarily focused on the shocks construct (e.g., Kammeyer-Muller, Wanberg, Glomb, & Ahlburgh, 2005; Lee, Gerhart, Weller, & Trevor, 2008; Morrell, Loan-Clarke, Arnold, & Wilkinson, 2004a; Morrell Loan-Clarke, Arnold, &
Wilkinson, 2004b). However, none of these shocks studies have used experimental methods and none have yet conducted a study in a laboratory setting. In the following sections a summary of research and findings will be discussed. To begin, the focus will be on the most commonly used method to assess shocks, the use of retrospective reports.

**Retrospective Reports.** First, let me begin by saying that this is where the vast majority of shock studies lie. There have been less than a handful of studies using predictive designs to investigate the shocks construct (outlined in the following section), compared to the numerous studies using retrospective methods. This section of the paper will describe some of the most influential of these retrospective based studies. Another important point to make is that the majority of the retrospective studies are not aimed at predicting turnover per se, but rather focused on finding support for the various decision paths outlined in the unfolding model. Since the goal of the current study is not to test the unfolding model paths, the focus will lie more heavily on the methodology than the results.

Lee and colleagues (1996) were the first to empirically test the unfolding model using a multiple case study design. They obtained information pertaining to the various components of the unfolding model (i.e., shocks, image violations, satisfaction, and alternatives) by surveying and conducting interviews with 44 nurses who had recently quit their jobs. First, letters describing the research and inviting the individual to participate in the study were mailed to each departing nurse. Next, interviews were arranged with each leaver. All interviewees then responded to a follow-up questionnaire that was mailed immediately after the interview took place. This questionnaire contained
items similar to questions asked during the interview, but were evaluated using a five-point Likert type scale. The authors received a total of 27 usable questionnaires that had complete information. After reviewing interview materials, the authors responded to 10 items that matched questions from the survey that was given to the nurses.

Two authors independently categorized each interviewee’s response to each question asked during the interview, typically using a binary yes or no categorization. The authors’ judgments were then compared to one another and after some discussion, consensus was reached. A third judge then completed the same process and final interview scores were derived. The three scorers had high initial agreement and 100 percent final agreement for the interview questions indicating high inter-rater reliability. Correlations were computed between the interview questions and the matched survey responses. Eight of ten were statistically significant and in the correct direction ranging from .21 to .69 which provides evidence for convergent validity.

Additionally, the nurses’ responses to the survey items assessing the various components of the unfolding model were correlated with summary path judgments made by the authors based on information provided during the interview sessions. Results revealed a pattern of statically significant correlations that are consistent (although imperfect) with the unfolding model’s theorized decision paths.

Overall, Lee (1996) found that 33 of the 44 nurses (75%) followed one of the paths outlined in the unfolding model when deciding to quit their job. Clearly, the authors failed to classify all of the nurses into unfolding model paths. They believed this to be due to ambiguities surrounding components of the model.
Lee, Mitchell, Holton, McDaniell, & Hill (1999) revised the unfolding model to clarify some initial ambiguities (the components that were modified are not directly relevant to the current study, but for a review please see Lee et al., 1999). They then empirically tested the revised version of the unfolding model, this time with a sample of accountants. They followed the same methods used by Lee et al. (1996) by administering surveys containing questions regarding the various unfolding model components and matching these with responses from interviews. By following the more specific version of the unfolding model, the researchers were able to classify a greater proportion of individuals into paths than in the 1996 study. Overall, they were able to classify 212 of 229 participants (92.5%) into one of the unfolding model decision paths, which is a significant improvement over the 62.5% with the initial model.

Many other studies have been conducted using similar, if not identical, methods as outlined by Lee and colleagues as a way to classify leavers into the unfolding model paths (e.g., Donnelly & Quirin, 2006; Holt et al., 2007; Holton et al., 2005; Morrell, Loan-Clarke et al., 2008; Niederman et al., 2007). In a more recent study, Kulik, Treuren and Bordia (2012) also used exit interviews of leavers to categorize individuals into unfolding model paths. However, they did not follow the exact framework as provided by Lee et al. (1996). Rather, they conducted a content analysis of the exit interview transcripts by having coders read the texts and search for passages that were representative of the components of the unfolding model. Two authors independently used these passages to match the leaver with the most appropriate decision path and
demonstrated good agreement between raters. They managed to classify all 228 former employees into the decision paths outlined by the unfolding model.

Overall, using exit interviews of leavers, studies show that shocks are involved in approximately 58-68% of turnover incidents (Holt et al., 2007; Holtom & Inderrieden, 2006; Holtom, Mitchell, Lee, & Eberly, 2008; Holtom et al., 2005; Kulik, et al., 2012). These results indicate that shocks seem to be playing an influential role in the turnover process. However, when relying on retrospective reports there are a variety of issues with which to be concerned. First, individuals may overestimate the impact that the shock actually had in their decision to leave the organization due to post decisional rationalization. Post decisional rationalization occurs when individuals attempt to generate information post-hoc to explain why they enacted a certain behavior (Lee et al., 1996; Westaby, 2005). In this case, individuals may reveal that the shock was the driving force behind their decision to quit, but at the time it may have only been one of many contributing factors. For example, when asking an individual to report what unfolded prior to them leaving the organization, it is highly likely that the individual experienced some sort of event, even if this event did not meet the criteria to be considered a shock. This inaccurate recall would result in overestimation of the influence of shocks in turnover decisions.

A second issue surrounding the use of retrospective reports to examine the role of shocks in the turnover process is image enhancement (Golden, 1992; Huber & Power, 1985). Image enhancement may arise when an individual is concerned with making their turnover decision appear justified or logical. For example, they may claim that something
justifiable, such as a shock, led them to their turnover decision when in actuality it may have been due to something they cannot explain, something that is embarrassing, or simply low levels of satisfaction. Lying can occur during exit interviews for many reasons. In fact, the costs of lying in an exit interview are minimal compared to the costs of telling the truth. That is, telling the truth can be risky if the information reported can negatively influence individuals who still remain in the organization (Griffeth & Hom, 2001). Also, because the information provided in exit interviews is personal, it often cannot be verified (Griffeth & Hom, 2001), which makes lying easy.

Some additional limitations of using retrospective reports include oversimplification, which occurs when an individual leaves out part of the reason for their turnover decision or omits relevant information, faulty post-hoc attributions that may arise when an individual is attempting to justify their decision after the fact, and simply forgetting some or all of the information that led to their turnover decision (Golden, 1992; Huber & Power, 1985; Lee et al., 1996; Miller, Cardinal, & Glick, 1997; Westaby, 2005). All of these errors can lead to inaccurate recall of the shocking event and the decision making process in general.

An additional issue from a researcher’s standpoint involves employees changing their reasons for quitting over time (Griffeth & Hom, 2001). For example, Zarandona and Camuso (1985) found that the reasons that employees gave for quitting during exit interviews differed from their reasons given on surveys mailed 18 months later. This suggests that the information provided in exit interviews may be inaccurate and
untrustworthy, which becomes problematic for studies comparing exit interview responses to surveys given at a later time point.

Finally, the methods currently used to test the unfolding model do not allow for the model to be falsified. In other words, nearly any quitting behavior can be classified into one of the paths outlined in the unfolding model. For example, Lee and colleagues (1999) revised their model and found that only 7.4% of leavers did not belong to any of the paths and the rest (92.6%) of leavers can be categorized into one of the paths (Hom, 2011). Moreover, the amount of variance explained by the unfolding model remains unknown because of the retrospective methodology used by unfolding model researchers. In other words, the unfolding model is heavily reliant on the shocks construct; however information regarding shocks is collected after the actual act of quitting, which is problematic as outlined above. To elaborate, the degree that shocks can explain variance in turnover beyond that accounted for by other antecedents is incomputable because when studying shocks after quitting, there is no way to equate the percentage of people who report that a shock was involved in their thought of quitting or staying to the statistical computation of variance explained by the shock construct. As a result, researchers are unaware of the actual influence that shocks have in the process of turnover.

**Predictive Studies.** There have been a handful of studies investigating shocks with a predictive design. The first predictive study was conducted by Kammeyer-Mueller and colleagues (Kammeyer-Mueller et al., 2005). The sample for this study consisted of 932 new hires of manufacturing, food distribution, health care, and education organizations. Of the 932, 606 participants responded to all survey rounds and 228
participants only contributed to the first round of surveys. Of the sample, 98 individuals voluntarily turned over. The first round of surveys was provided to individuals within their first month of employment. The subsequent rounds of surveys were distributed every four months over the course of twenty months, for a possible five surveys. Each survey contained questions pertaining to contextual factors such as perceptions of alternative employment options, work attitudes, critical events and organizational withdrawal.

To measure critical events, the authors first asked participants to indicate “if they had experienced any significant personal (e.g., marriage, divorce, birth of a child, death or serious illness of a close family member, or a spouse or partner finding a new job), work-related (e.g., promotion or transfer, completion of a major project, a change in supervisor or coworkers, or involvement in a negative experience such as harassment or fights with coworkers), or professional events (e.g., job offers from someone other than one’s employer; calls from headhunters; or the completion of a degree, licensing, or certification program) in the last four months” (p. 649; italics in original) during each wave of the study. They then asked participants to evaluate each event as either making them more likely (continuation event), neither more nor less likely (neutral event), or less likely (discontinuation event) to continue working for the organization. Responses were scored to indicate the number of each type of event each participant reported during each wave of the study. These events and their descriptions were obtained before the individual turned over.
Hire and turnover date information was obtained from the organizations with tenure (i.e., days employed) as the key measure of duration of employment. As previously stated, 98 individuals had voluntarily quit during the study period. The duration of employment for these individuals ranged from 99 days to 754 days with an average of 513.4 days.

Survival regression was used to predict employment duration. Time-constant and time-varying survival models were compared. In the time-constant model each person contributed only one response for each predictor. In other words, this model uses only Time 1 predictor values obtained from the 228 individuals who only responded to the first survey. The time-varying model included all of the survey predictor variables across time from the 606 individuals who provided responses to all survey rounds. Additionally, HLM was used to examine patterns of change for each variable over time. The HLM model allows for the comparison of the level and slope of work attitudes for those who stay versus those who leave.

Results of the survival analyses revealed that only the work attitude variable of organizational commitment was significantly negatively related to turnover in the time-constant survival model (i.e., satisfaction was not significant), while no attitudinal variables were significant in the time-varying model. Additionally, the researchers found that in both time-constant and time-varying models a one standard deviation increase in discontinuation events increased the turnover hazard by 20% to 28%, but neither neutral nor continuation events were related to turnover hazard.
Results of the HLM analyses revealed that leavers had significantly lower organizational commitment, work satisfaction and promotion satisfaction than did stayers at the time of organizational entry. However, there were no significant differences between leavers and stayers in terms of pay, supervision, or coworker satisfaction for either intercepts or slopes. Not surprisingly, leavers’ levels of work withdrawal increased overtime whereas stayers’ work withdrawal remained constant.

Results of additional post-hoc analyses demonstrated that 26.5% of the leavers experienced discontinuation events in the survey round immediately before their turnover. This provides an estimate of the proportion of event-driven turnover in this sample. Of the individuals who reported experiencing discontinuation events before turnover, seven of those individuals indicated that negative work events (e.g., Interpersonal conflicts with coworkers or supervisors) preceded their turnover decision, six individuals indicated that positive extra-organizational events (e.g., call from a headhunter) preceded turnover, eight individuals indicated that life events (e.g., pregnancy) preceded turnover, and five individuals indicated that a mixture of positive personal and extra-organizational events preceded turnover.

Consistent with unfolding model research (Lee et al., 1996), which proposes that individuals who experience shocks follow different paths to turnover than those who do not, Kammeyer-Muller and colleagues found that individuals who experienced critical events the round before leaving were actually more committed, more satisfied and put less effort toward job search behavior than those who did not report a critical event.
The Kammeyer-Mueller et al. (2005) study demonstrates that when using shocks as *predictors* of turnover, they are playing a role in about 26% of turnover incidents, lending support that shocks are an important player in the turnover process. However, this study also seems to demonstrate that previous studies using retrospective reports may have in fact found inflated evidence for the shocks-turnover relationship. Also, it is important to note, that although the information surrounding these events was collected prior to turnover, the reports are still retrospective in that the event had already occurred.

The second predictive study involving shocks was conducted by Tharenou and Caulfield (2010) with a sample of Australian self-initiated expatriates. Instead of assessing turnover in regards to leaving an organization, the researchers were interested in the role that shocks would play in repatriation (i.e., returning to the home country). Tharenou and Caulfield (2010) assessed shocks, host country satisfaction and intention to repatriate at Time 1 and then assessed job search and repatriation one year later. They measured shocks by averaging the response to two yes/no items. These items were “There has been a particularly identifiable event that started me thinking about repatriating” and “There have been multiple events that have contributed to me thinking about repatriating”. Additionally, the authors averaged participants’ ratings to eleven specific events that were believed to cause thoughts about repatriating. They used this information to create scores for home and host country shocks and for negative and positive shocks. They found that the two item shocks variable was more related to experiencing home country shocks than host country shocks, as well as, more related to experiencing negative shocks than positive shocks.
Correlations demonstrated that shocks, host country satisfaction, and intention to repatriate at Time 1 were significantly related to repatriation at Time 2 (r = .50, p < .01; r = -.28, p < .01; r = .69, p < .01, respectively). As part of a larger path analysis, the authors revealed that their repatriation shocks measure was directly and significantly related to host-country satisfaction, intention to repatriate, job search, and repatriation. In addition to the direct effects, intention to repatriate served as a partial mediator to the shocks-job search link. Therefore, shocks indirectly increased job search by increasing intention to repatriate. However, since information pertaining to intentions was collected at Time 1, this undermines the predictive nature of this finding. Also, as noted in previous studies, while the turnover, or in this case repatriation, information was collected at a later date, the information pertaining to shocks was retrospective in that participants had to recall events that had already occurred.

Another more recent predictive shocks study conducted by Seibert, Kraimer, Holtom, and Pierotti (2012) was not interested in turnover, but in continuing education. That is, they assessed the role that shocks play on an individual’s decision to pursue graduate school after completing a bachelor’s degree. The shock scale for this study was developed by first asking students to list “any past events you have experienced that impacted career decisions you have made about the direction of your career. These may have been positive or negative events that you have experienced in your past work history” (p. 13). The responses were then content analyzed and piloted to ultimately create four scale items. The survey that was actually administered to the sample contained these four items accompanied by the instruction “if you have experienced the
event, indicate the amount of impact the event had on your career path or your career
decision making” (p.14). The responses ranged from 0 (*have not experienced the event*)
to 4 (*had large impact*). The results of the study reveal that positive career shocks (e.g.,
visible job success and quick raise or promotion) are positively related to intention to
pursue graduate school, although negative career shocks (e.g., mentoring departure and
organizational change) were not. Again, although the dependent variable information
was collected after the report of shock information, the shock information itself was
collected retrospectively.

In the most recent predictive study, Tenbrink and Griffeth (2013) examined the
same interaction that the current paper is interested in testing using a sample of 1,142
registered nurses. Specifically, they wanted to determine whether or not shocks were
moderators to the satisfaction-turnover and organizational commitment-turnover links.
The basic premise behind this study is that shocks are a potentially jarring force that leads
individuals to evaluate their current condition within their organizations (Lee & Mitchell,
1994). If the individual is experiencing a negative condition (i.e., dissatisfaction or low
commitment), this evaluation (prompted by the shock) will lead to a more negative view
of the job than someone who has not experienced such an event and was not forced into
such deliberation. Ultimately, it was hypothesized that individuals who are dissatisfied
and have low commitment and experience an event will be more likely to intend to leave
and to actually leave the organization than employees who did not experience an event
(Tenbrink & Griffeth, 2013).
This study assessed shocks using the turnover events shocks scale (TESS) created by Griffeth, Hom, Allen, Morse and Weinhardt (2008) and then collected turnover information twelve months later. The scale was comprised of workplace events that were developed by focus groups of working professionals who were asked to list events that prompted them to think about leaving their current employer. These focus groups compiled 55 events that they reported would initiate thoughts of quitting. From here, the authors conducted four studies for scale development and validation of the TESS. Using four different samples, Griffeth and colleagues (2008) found that the TESS measure explained 23% of the variance in quit intentions, as well as, accounting for unique variance in actual turnover. Additionally, the researchers demonstrated that events are empirically distinct from job satisfaction and organizational commitment, and that all shocks significantly predicted turnover when controlling for tenure, job attitudes, and perceived alternatives. Overall, the TESS was found to be a valid measure of workplace events that can be used in predictive research designs to validate turnover theories such as the unfolding model.

The final scale developed by Griffeth et al., and administered to participants in the Tenbrink and Griffeth (2013) study was comprised of 40 items that asked respondents to indicate how frequently they experienced each event in the last six months. Responses ranged from 0 (did not occur in the last six months) to 4 (very often). Results of the Tenbrink and Griffeth (2013) study revealed a weak correlation between job satisfaction and turnover ($r = -.06, p < .05$), and a non significant relationship between shocks and turnover ($r = .05, p > .05$). However, shocks and satisfaction were significantly related to
turnover intention \((r = .42, p < .01\) and \(r = -.44, p < .01\), respectively\) and shocks and job satisfaction were significantly, negatively related to one another \((r = -.76, p < .01)\). Additionally, shocks served as a marginally significant moderator to the job satisfaction-turnover relationship. Although the interaction was not strong the results are still informative. Specifically, those with lower levels of satisfaction were slightly more likely to leave their organization when experiencing frequently occurring, negative, job-related events than those who reported low satisfaction but did not experience frequently occurring, negative, job-related events.

One potential explanation for the weak findings reported in the Tenbrink and Griffeth (2013) study could be attributed to the low base rate of turnover. Specifically, only 5.3% of the sample voluntarily left the organization during the study period. Additionally, this sample reported relatively high job satisfaction levels and had low scores on the TESS measure indicating that this particular group of nurses were satisfied with their jobs and did not experience many negative events, and perhaps as a result, did not leave their organization. Overall, these findings are slightly informative, but suffer from the same faults as the previously mentioned studies.

Although the predictive methods used in the aforementioned studies are an improvement to the retrospective reports previously described, they may still be prone to similar errors when recalling information from the past. Therefore, even more rigorous methods need to be implemented to assess the impact that shocks might play in the turnover process. The goal of the study described here is to do exactly that.
It is not common practice to experimentally examine turnover as evidenced by the handful of studies that have done so (e.g., Miceli, 1985; Dilla, 1987). Additionally, the most recent of these studies was conducted by Buckley, Mobbs, Mendoza, Novicevic, Carraher, and Beu in 2002. There has been an experimental dry spell in the turnover literature for over ten years! This is a weakness for the turnover literature. It seems as if researchers have moved away from using experimental methods and have narrowed the focus to survey methodology for studying voluntary turnover. Additionally, of the studies that have used experimental methods, the focus has been primarily on realistic job previews (RJPs), with slightly less emphasis on job redesign, which are only a couple of many possible turnover predictors.

Observational turnover research allows us to make claims that various predictors (e.g., satisfaction) covary with employees quitting their jobs due to their design (Spector, 2012). Specifically, predictors are assessed on one occasion and turnover data is collected at a later time (Spector, 2012). However, the issue of causality is where experimental studies are superior due to the control over the variables of interest through manipulation and random assignment (Cook & Campbell, 1976; Shadish, Cook, & Campbell, 2002). Experimental studies, especially laboratory based studies, provide the most amount of control to the researcher (Spector, 2012), which allows the researcher to make the causal inference that the independent variable caused the observed changes in the dependent variable (Shaughnessy, Zechmeister & Zechmeister, 2009). If testing causality is the goal of researchers, then experimental laboratory methods are the most desirable. Having such
internal validity provides stronger support for causal statements and conclusions above what can be stated for observational or survey research (Shadish et al., 2002).

To be balanced it is important to note limitations of experimental research as well. First, experimental studies conducted in the laboratory typically lack ecological validity when compared to field studies (Spector, 2012). That is, the laboratory setting may not accurately reflect what individuals are experiencing in real jobs or organizations. Furthermore, individuals in a laboratory study may not be representative of the broader employee population, especially when using students as participants. Therefore, there are advantages and disadvantages of both experimental and non-experimental designs to consider when deciding on the appropriate choice to answer the research question of interest. However, when causality is a primary goal, experimental laboratory studies are likely superior. This was the design chosen to evaluate the hypotheses presented in the current study.
The Current Study

As previously mentioned, the study proposed in this paper contributes to the turnover literature in a number of ways. First, it is one of the only laboratory-based turnover studies and more generally, one of the only experimental turnover studies not focused on RJP's or job redesign. Secondly, it will be the first study to experimentally examine the influence that shocks have in the turnover process; no study to date has experimentally investigated the shocks construct. Third, it is testing an interactive role for shocks in the turnover process. Specifically, the current study will be investigating shocks as a moderator to the satisfaction-turnover relationship. This role for shocks was tested in the Tenbrink and Griffeth (2013) study but significant results were not found. The current study improved upon the Tenbrink and Griffeth (2013) study by using more rigorous methods. Investigating the interaction between shocks and satisfaction in the prediction of turnover appears to follow from the unfolding model. To elaborate, the unfolding model proposes that a shock is a sufficiently jarring event that leads an individual to deliberate about their current position within the organization (Lee & Mitchell, 1994). Additionally, the unfolding model proposes that an evaluation of current satisfaction levels may take place after experiencing a shock (Lee & Mitchell, 1994). The current study combined these two notions by hypothesizing that shocks and job satisfaction interact to predict turnover. Specifically, I predicted that the relationship between job satisfaction and turnover is stronger (i.e., more negative) when a shock is present. The current study tested this notion by creating two different satisfaction conditions; satisfied and dissatisfied, as well as two different shock conditions; shock and no shock. Crossing
these two factors resulted in four conditions: dissatisfied and no shock, dissatisfied and shock, satisfied and no shock, satisfied and shock.

First, I predicted a main effect for satisfaction on turnover. Specifically, that participants in the two dissatisfaction conditions would have a greater propensity to quit than participants in either satisfaction condition. In other words, satisfaction is directly and negatively related to turnover (i.e., turnover results simply from low levels of satisfaction).

*Hypothesis 1: Satisfaction will be negatively related to turnover.*

Second, I hypothesized that individuals in the shock conditions would have a greater propensity to leave than individuals in the no shock conditions. In other words, I proposed a main effect for shocks. A shock is an event that induces thoughts of quitting, therefore, it would be expected that individuals who experience a shocking event would be more likely to leave than individuals who do not experience a shock because the prompt for thoughts of quitting would be absent.

*Hypothesis 2: The experience of a shock will be positively related to turnover.*

Third, I hypothesized that individuals in the dissatisfied and shock condition will have a higher propensity to leave than any other group. Because shocks are events that lead individuals to consider their current condition within an organization it was expected that individuals who are already experiencing a negative condition (i.e., dissatisfaction) and who also experience a shock will be more likely to quit than someone who experiences either one alone. In other words, there is an interaction between shocks and
satisfaction in the prediction of turnover. Shocks were not expected to decrease
satisfaction in this study.

*Hypothesis 3: Shocks will moderate the relationship between satisfaction and
turnover, such that this relationship will become more negative when a shock is
present.*
Method

Design and Participants

A 2x2 factorial design was used for this study. The two factors were satisfaction and shock. Satisfaction had two levels: satisfaction and dissatisfaction, and shock also had two levels: shock and no shock.

Participants for this study consisted of 245 undergraduate students from a large Midwestern university. Average age of the participants was 20 years old, 62% percent were freshmen, 67% were male and 84% were Caucasian. Subjects were awarded course credit in exchange for their participation in the experiment.

Task

A previously developed computer program was used in this study (see Vancouver, Gullekson, Morse, & Warren, 2014). The program presented participants with an anagram-like task in which participants were asked to find anagrams that could be derived from root words provided to them (e.g., home). Participants were informed of criteria that determine whether or not provided anagrams are valid. Valid anagrams must have been at least three letters long, could not be contractions, could not be proper nouns, could not contain abbreviations, and could not use letters more than once. These rules were always available to the participants (see Figure 1). Valid anagrams found by participants were listed in the “Found Words” column. The participants were told that they should strive to find 50% of the possible valid anagrams in each root word. Root words varied in difficulty based on the ease with which anagrams could be found, which
is primarily a result of the length of the word. Root words varied in length from four to eight letters.

Figure 1. Screen shot of anagram-like task (with permission from Vancouver et al., 2014).

This task was chosen because it mimics a work situation in which the participant is working for the researcher. This is similar to a real job in which a supervisor may assign a task to an employee to complete in a specified amount of time.
Manipulations

**Satisfaction.** To test the hypotheses of the current study, it was required that two levels of satisfaction be established: a satisfied condition and a dissatisfied condition.

The manipulation that distinguished the two satisfaction conditions from one another involved the presence of either pleasant or unpleasant music. Specifically, in the satisfied condition the participants listened to pleasant renaissance music through headphones while participating in the experiment. In the dissatisfied condition, participants listened to unpleasant heavy metal music through headphones while participating in the experiment. This manipulation was meant to influence the work environment, which in turn, would influence satisfaction with the experiment in general.

Specifically, studies have found that environmental work factors such as occupational noise exposure are negatively associated with job satisfaction (Melamed, Fried, & Froom, 2001; Melamed, Luz, & Green, 1992; Verbeek, van Dijk, & des Vries, 1986). Renaissance and heavy metal music stimuli were chosen because prior research has demonstrated that renaissance music, specifically the *Miserere* from the composer Allegri, is evaluated as being pleasant and heavy metal music, specifically songs from the band Marduk, is evaluated as being unpleasant by participants in a prior study (Nater, Abbruzzese, Krebs & Ehlert, 2006). These same pieces of music were used in the current study to induce the satisfied and dissatisfied conditions.

**Shock.** Just as there were two conditions of satisfaction, there were two conditions of shock: no shock and shock. The shock provided in the shock condition occurred at the 20 minute mark of the experiment. The shock involved a confederate
entering the laboratory space and posing as a researcher conducting an experiment in a
different lab. The confederate spoke with the current researcher in the presence of the
participant. The confederate explained that they were a researcher in need of a participant
for their own study and asked if the participant can leave the current experiment to
participate in the new experiment. The current researcher explained that although they
did have enough data from the participant, more data would have been better, but
ultimately left the decision up to the participant. The confederate gave a positive
description of the alternative study and then the participant was asked to make a decision.
The participant was provided with the option to either leave the current experiment for
the alternative experiment or to remain in the current experiment. They were informed
that they would receive the same amount of course credit regardless of their decision.
Choosing to participate in the alternative experiment was similar to choosing an
alternative job. Thus, this shock represents a decision that one may need to make in a
real-world setting – the shock of an unsolicited job offer. The current study used this
straight forward shock because it fits the definition of a shock very well. That is, a shock
is an event that leads individuals to think about quitting their job (Lee & Mitchell, 1994).
This condition did that by asking participants to consider either remaining in their current
situation or quitting their current task to work on an alternative task. In the no shock
condition, no such interaction occurred. A copy of the researcher and confederate script
that was used for the shock condition can be found in Appendix A.
Measures

Before beginning the experiment, the participants were asked to respond to a series of questions. Some of which asked about demographic information (i.e., gender, race, age, year in school) whereas others asked about general affect and music preferences. This information was collected prior to beginning the experiment, so that participation in the experiment would not influence the responses to these measures. Additionally, we wanted to obtain information pertaining to music preferences to determine whether participants had either strong or weak preferences for the types of music used in the experiment. These measures were used for comparison purposes between the four different conditions to ensure that all groups were equal in regard to these variables. It was important to establish that there were no significant differences on these variables between groups that could influence the results.

**Positive and negative affect.** Positive and negative affect were measured using Watson, Clark and Tellegen’s (1988) Positive and Negative Affect Schedule (PANAS). This measure includes two separate scales that consist of a number of words that describe different feelings and emotions for each type of affect (e.g., distressed, interested, hostile, determined). Individuals were instructed to read each item and indicate to what extent they generally feel this way, that is, how they feel on the average to get an idea of their baseline positive/negative affect. Response options to each item ranged from 1 (*very slightly to not at all*) to 5 (*extremely*). Reliability analyses for each scale were computed. Results revealed a coefficient alpha of .91 for positive affect and .89 for negative affect.
Music preferences. A music preference questionnaire was created in a similar manner as Hansen and Hansen’s (1991) Music Preference Scale. Specifically, this scale presented various music genres (e.g., heavy metal, country, renaissance) and asked participants to indicate their basic preferences using a five point scale. Response options for this scale ranged from 1 (dislike) to 5 (like very much).

Upon completion of the experiment individuals were asked to complete a survey containing items measuring their satisfaction with the experiment, researcher, the music presented, and the thoughts of quitting the experiment. Measuring the participants’ satisfaction with the experiment, researcher and satisfaction with the musical stimuli provided information about whether the manipulation was effective and which specific components were most influential. I assumed that it is relatively uncommon for participants to turnover during experiments and as a result, measuring thoughts of quitting provided information regarding whether or not the participants’ had considered quitting the experiment. Additionally, the thoughts of quitting measure assessed a key process thought to emerge from a shock. Specifically, if individuals in the shock condition scored high on thoughts of quitting, this lends support for Lee and Mitchell’s theory that shocks are distinguishable events that lead individuals to think about quitting their job. Existing scales were used and modified to make the items relevant for the experiment rather than a job.

Satisfaction with experiment. Satisfaction with the experiment was measured using a modified, 5- item, version of Brayfield and Rothe’s (1951) job satisfaction measure. Responses were evaluated using a 5-point Likert-type scale. Responses to the
items ranged from 1 (strongly disagree) to 5 (strongly agree). Example items are “I feel fairly satisfied with the experiment” and “The experiment felt like it would never end” (reverse coded). Reliability analysis revealed a coefficient alpha of .82 indicating acceptable reliability, which had also been confirmed with prior research (Judge, Erez, Bono, & Thoresen, 2003).

**Satisfaction with researcher.** Satisfaction with the researcher was measured using two items taken and modified from Spector’s (1985) job satisfaction survey (JSS). Responses were evaluated on a 6 point likert scale with responses ranging from 1 (disagree very much) to 6 (agree very much). The items from the scale are “I liked the researcher” and “I thought the researcher was unfair toward me” (reverse coded). In Blau (1999) the coefficient alpha for the JSS scale was .89, however, the current study revealed coefficient alpha of .46.

**Music Satisfaction.** Satisfaction with the musical stimuli was evaluated using Nater, Krebs and Ehlert’s (2005) Music Evaluation Questionnaire (MEQ). Responses for this scale are evaluated on a 5-point Likert scale with responses ranging from 1 (not at all) to 5 (very much). An example item from the scale is “Please indicate how much you liked the music?” Reliability analyses revealed a coefficient alpha of .82 for this scale.

**Thoughts of quitting.** Thoughts of quitting were measured using two items taken (and modified) from Hom et al.’s (1984) scale. The first item is “I thought about quitting the experiment”. Responses for this item range from 1 (strongly disagree) to 5 (strongly agree). The other item is “How often did you think about quitting the experiment?” Responses for this item range from 1 (never) to 5 (always). Prior research revealed a
The main dependent variable of interest in the current study was whether or not the participant quit the experiment. Participants who chose to stay were coded as 0 indicating that they were a stayer. If the participant chose to leave, they were coded as 1 indicating that they were a leaver. Individuals in the shock conditions were provided a choice after receiving the shock to either quit the current experiment and participate in the alternative experiment or remain in the current experiment. This is meant to represent the choice that an employee would make to quit their job for alternative employment. If the participant chose to stay in the current experiment, they were asked to continue working on the task until time expired.

Procedure

This experiment took place at a computer station in the laboratory. Participants were asked to read and sign an informed consent form (see Appendix B). After the consent form was signed and collected, participants were directed to the computer station where they worked on the anagram task. All stations were private in that there were no other individuals in the rooms at the time that the participants were participating in the experiment. Additionally, all blinds were pulled so that participants could not see into any other room than the one that they were currently in.

At this point, the participants began their interaction with the computer program. The program provided all instructions and the preliminary questions regarding standard
demographic information, positive and negative affect, and initial music preferences. The participants completed one practice round to ensure that they were familiar with how the task operated. Once the practice round was completed the participants began the actual trials with each root word and the appropriate background music (dependent on condition) began. The participants engaged in these trials for a total of 30 minutes. At the 20 minute mark participants in the shock condition were exposed to the shock. In other words, the confederate entered the room and presented the dilemma. Because the participants were wearing headphones and listening to music, the confederate was instructed to tap them on the shoulder if the participant did not notice them enter the room. The participant then had to choose whether or not they wished to continue working on the current task or if they wanted to leave the experiment to work on the alternative task. To assess turnover before any shock or in the no shock condition, the participants were always able to click the “I quit” button, which was visible at the top of their screen to leave the experiment at any time. If the participant chose to remain in the current experiment they were asked to continue working on the task for an additional five minutes. After this five minutes elapsed they were told that the experiment was complete and were asked to complete the satisfaction with experiment, satisfaction with researcher, satisfaction with music and thoughts of quitting measures that were presented via a computer survey located at a computer stationed at the table where they initially signed their consent form. After completion of the measures the participants were debriefed and free to leave.
If the participant decided to choose the alternative experiment, they were asked to complete the measures before they left via the computer survey. After completing the measures the participants were debriefed and free to leave.

If the participant was in a no shock condition, they simply kept working on the anagrams until time elapsed or until they quit the experiment. They were then asked to complete the same measures using the same method as those in the shock conditions. After completing the measures they were also debriefed and free to leave.
Results

Means, standard deviations, correlations and reliabilities for all measures are reported in Table 1. All measures presented in this table have acceptable reliability levels aside from the satisfaction with the researcher measure, which has a coefficient alpha below the typically accepted value of .70. Although, this measure is not a primary variable of interest of the current paper results presented involving this measure should be interpreted with caution. Additionally, frequencies of participants in the satisfaction condition, shock condition, and the proportion of individuals that turned over are presented in Table 2. MANOVA results comparing the four conditions for various test variables are presented in Table 3.
Table 1
*Means, Standard Deviations, Correlations and Reliability of Study Variables (n = 245)*

<table>
<thead>
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<th></th>
<th>M</th>
<th>SD</th>
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<th>2</th>
<th>3</th>
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<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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<tbody>
<tr>
<td>1. Positive Affect</td>
<td>3.40</td>
<td>.76</td>
<td>.91</td>
<td>.22**</td>
<td>-.04</td>
<td>.02</td>
<td>.05</td>
<td>.12</td>
<td>.06</td>
<td>-.01</td>
<td>.02</td>
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<tr>
<td>2. Negative Affect</td>
<td>1.84</td>
<td>.68</td>
<td>.89</td>
<td>-.13</td>
<td>-.05</td>
<td>-.11</td>
<td>.14*</td>
<td>.07</td>
<td>.06</td>
<td>.08</td>
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<td>3. Music Satisfaction</td>
<td>2.00</td>
<td>1.13</td>
<td>.83</td>
<td>.51**</td>
<td>.04</td>
<td>-.39**</td>
<td>-.05</td>
<td>-.43**</td>
<td>-.04</td>
<td></td>
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<tr>
<td>4. Satisfaction with Experiment</td>
<td>2.88</td>
<td>.82</td>
<td>.82</td>
<td>.15*</td>
<td>-.65**</td>
<td>.15*</td>
<td>-.20**</td>
<td>.04</td>
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<td></td>
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<tr>
<td>5. Satisfaction with Researcher</td>
<td>5.46</td>
<td>.67</td>
<td>.45</td>
<td>-.11</td>
<td>.11</td>
<td>-.06</td>
<td>.00</td>
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<tr>
<td>6. Thoughts of Quitting</td>
<td>2.54</td>
<td>1.27</td>
<td>.90</td>
<td>-.02</td>
<td>.12</td>
<td>.14*</td>
<td></td>
<td></td>
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<tr>
<td>7. Shock Condition†</td>
<td>1.47</td>
<td>.50</td>
<td></td>
<td></td>
<td>-.02</td>
<td>.69**</td>
<td></td>
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<tr>
<td>8. Satisfaction Condition†</td>
<td>1.55</td>
<td>.50</td>
<td></td>
<td></td>
<td>-</td>
<td>.02</td>
<td></td>
<td></td>
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<tr>
<td>9. Turnover†</td>
<td>.54</td>
<td>.50</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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</tbody>
</table>

** p< 0.01.
* p< 0.05.

Alphas appear on the diagonal.

†Note: Shock condition is coded so that 0 = no shock and 1 = shock and satisfaction condition is coded so that 0 = satisfied and 1 = dissatisfied and turnover is coded so that 0= did not turnover and 1= turned over.
Table 2
Frequency of Music, Shock, and Turnover (n = 245)

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music- Pleasant</td>
<td>110</td>
<td>44.9</td>
<td>44.9</td>
</tr>
<tr>
<td>Music- Unpleasant</td>
<td>135</td>
<td>55.1</td>
<td>100</td>
</tr>
<tr>
<td>No Shock</td>
<td>129</td>
<td>52.7</td>
<td>52.7</td>
</tr>
<tr>
<td>Shock</td>
<td>116</td>
<td>47.3</td>
<td>100</td>
</tr>
<tr>
<td>Stayed</td>
<td>112</td>
<td>45.7</td>
<td>45.7</td>
</tr>
<tr>
<td>Turned Over†</td>
<td>130</td>
<td>53.1</td>
<td>98.8</td>
</tr>
</tbody>
</table>

† Note: Turnover information was not collected for three individuals (1.2%)
Table 3
*MANOVA Results by Condition (n = 245)*

<table>
<thead>
<tr>
<th>Experimental Condition</th>
<th>MANOVA Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive Affect</strong></td>
<td></td>
</tr>
<tr>
<td>No Shock/Satisfied (n=57)</td>
<td>3.28 (.67)</td>
</tr>
<tr>
<td>No Shock/Dissatisfied (n=69)</td>
<td>3.45 (.65)</td>
</tr>
<tr>
<td>Shock/Satisfied (n=52)</td>
<td>3.54 (.74)</td>
</tr>
<tr>
<td>Shock/Dissatisfied (n=63)</td>
<td>3.38 (.91)</td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>1.21</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>.31</td>
</tr>
<tr>
<td><strong>d</strong></td>
<td>.02</td>
</tr>
<tr>
<td><strong>Negative Affect</strong></td>
<td></td>
</tr>
<tr>
<td>No Shock/Satisfied (n=57)</td>
<td>1.71 (.60)</td>
</tr>
<tr>
<td>No Shock/Dissatisfied (n=69)</td>
<td>1.88 (.69)</td>
</tr>
<tr>
<td>Shock/Satisfied (n=52)</td>
<td>1.88 (.69)</td>
</tr>
<tr>
<td>Shock/Dissatisfied (n=63)</td>
<td>1.90 (.81)</td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>.91</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>.44</td>
</tr>
<tr>
<td><strong>d</strong></td>
<td>.01</td>
</tr>
<tr>
<td><strong>Initial Music Preference - Heavy Metal</strong></td>
<td></td>
</tr>
<tr>
<td>No Shock/Satisfied (n=57)</td>
<td>2.32 (1.33)</td>
</tr>
<tr>
<td>No Shock/Dissatisfied (n=69)</td>
<td>2.20 (1.41)</td>
</tr>
<tr>
<td>Shock/Satisfied (n=52)</td>
<td>2.12 (1.46)</td>
</tr>
<tr>
<td>Shock/Dissatisfied (n=63)</td>
<td>1.91 (1.01)</td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>1.08</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>.36</td>
</tr>
<tr>
<td><strong>d</strong></td>
<td>.01</td>
</tr>
<tr>
<td><strong>Initial Music Preference - Renaissance</strong></td>
<td></td>
</tr>
<tr>
<td>No Shock/Satisfied (n=57)</td>
<td>1.98 (.92)</td>
</tr>
<tr>
<td>No Shock/Dissatisfied (n=69)</td>
<td>1.93 (1.02)</td>
</tr>
<tr>
<td>Shock/Satisfied (n=52)</td>
<td>1.85 (.94)</td>
</tr>
<tr>
<td>Shock/Dissatisfied (n=63)</td>
<td>1.81 (.93)</td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>.40</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>.75</td>
</tr>
<tr>
<td><strong>d</strong></td>
<td>.01</td>
</tr>
<tr>
<td><strong>Satisfaction with Experiment</strong></td>
<td></td>
</tr>
<tr>
<td>No Shock/Satisfied (n=57)</td>
<td>2.89 (.69)</td>
</tr>
<tr>
<td>No Shock/Dissatisfied (n=69)</td>
<td>2.66 (.85)</td>
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<tr>
<td>Shock/Satisfied (n=52)</td>
<td>3.24 (.78)</td>
</tr>
<tr>
<td>Shock/Dissatisfied (n=63)</td>
<td>2.81 (.84)</td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>5.39**</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>.00</td>
</tr>
<tr>
<td><strong>d</strong></td>
<td>.06</td>
</tr>
<tr>
<td><strong>Satisfaction with Researcher</strong></td>
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</tr>
<tr>
<td>No Shock/Satisfied (n=57)</td>
<td>5.38 (.62)</td>
</tr>
<tr>
<td>No Shock/Dissatisfied (n=69)</td>
<td>5.38 (.72)</td>
</tr>
<tr>
<td>Shock/Satisfied (n=52)</td>
<td>5.64 (.45)</td>
</tr>
<tr>
<td>Shock/Dissatisfied (n=63)</td>
<td>5.45 (.79)</td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>1.90</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>.13</td>
</tr>
<tr>
<td><strong>d</strong></td>
<td>.02</td>
</tr>
<tr>
<td><strong>Satisfaction with Music</strong></td>
<td></td>
</tr>
<tr>
<td>No Shock/Satisfied (n=57)</td>
<td>2.58 (1.29)</td>
</tr>
<tr>
<td>No Shock/Dissatisfied (n=69)</td>
<td>1.67 (1.00)</td>
</tr>
<tr>
<td>Shock/Satisfied (n=52)</td>
<td>2.55 (1.14)</td>
</tr>
<tr>
<td>Shock/Dissatisfied (n=63)</td>
<td>1.47 (.68)</td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>18.34**</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>.00</td>
</tr>
<tr>
<td><strong>d</strong></td>
<td>.19</td>
</tr>
<tr>
<td><strong>Thoughts of quitting</strong></td>
<td></td>
</tr>
<tr>
<td>No Shock/Satisfied (n=57)</td>
<td>2.40 (1.35)</td>
</tr>
<tr>
<td>No Shock/Dissatisfied (n=69)</td>
<td>2.69 (1.27)</td>
</tr>
<tr>
<td>Shock/Satisfied (n=52)</td>
<td>2.34 (1.08)</td>
</tr>
<tr>
<td>Shock/Dissatisfied (n=63)</td>
<td>2.64 (1.32)</td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>1.12</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>.34</td>
</tr>
<tr>
<td><strong>d</strong></td>
<td>.01</td>
</tr>
<tr>
<td><strong>Turnover (frequency)</strong></td>
<td></td>
</tr>
<tr>
<td>No Shock/Satisfied (n=57)</td>
<td>.21 (.41)</td>
</tr>
<tr>
<td>No Shock/Dissatisfied (n=69)</td>
<td>.20 (.41)</td>
</tr>
<tr>
<td>Shock/Satisfied (n=52)</td>
<td>.87 (.34)</td>
</tr>
<tr>
<td>Shock/Dissatisfied (n=63)</td>
<td>.92 (.27)</td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>72.34**</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>.00</td>
</tr>
<tr>
<td><strong>d</strong></td>
<td>.48</td>
</tr>
</tbody>
</table>
First, to determine whether or not the satisfaction manipulation was successful, a t-test was conducted examining the mean differences for the two satisfaction conditions in terms of satisfaction with the experiment. Results reveal that those in the satisfied conditions reported significantly higher levels of satisfaction than those in the dissatisfied conditions, $t(243) = 3.21, p < .01$. These results support using the two types of music to manipulate satisfaction and suggest that the satisfaction manipulation was successful.

To ensure that these results were not simply due to previously held music preferences, an examination of initial music preferences was conducted. That is, individuals were asked prior to engaging in the experiment to rate their preference for various types of music. A MANOVA analysis was conducted comparing the four different conditions in regard to their initial preference for heavy metal and renaissance music. Results revealed non-significant results. That is, there were no differences between the four conditions in terms of their initial preference for renaissance and heavy metal music. Although initial music preferences were not significantly different across groups, it is interesting that overall, individuals reported a significantly higher initial preference for heavy metal music compared to renaissance music $t(242) = 2.77, p < .01$ in a related sample t-test. This is an interesting finding in that individuals reported preferring heavy metal to renaissance music initially, but heavy metal music was associated with lower levels of satisfaction. These results support the notion that initial music preference did not interfere with the manipulation.

In addition to ensuring that initial music preferences were equal across conditions, it was also important to determine that all groups had equal levels of positive and
negative affect. The reason being that those with higher levels of negative affect may be more likely to have reported lower levels of satisfaction and vice versa. However, we can see from Table 3 that there were no significant differences across the four conditions on these variables. Thus, this issue is not a concern in the current experiment.

From Table 3, it is clear that only the variables of satisfaction with the experiment, satisfaction with the music, and turnover have significant differences across conditions. The difference in music is expected due to the manipulation used and differences in satisfaction and turnover were also predicted. However, these results will be discussed in more depth in the following sections.

**Hypothesis Tests**

Hypothesis 1 predicted that satisfaction would be negatively related to turnover and was tested by computing a bivariate correlation between the two variables. Results revealed a non-significant correlation between the satisfaction condition and turnover, \( r(240) = .02, p > .05 \). Additionally, the correlation between satisfaction with the experiment and turnover was also non-significant, \( r(240) = .04, p > .05 \). Thus, Hypothesis 1 was not supported.

Hypothesis 2 predicted that the experience of a shock would be positively related to turnover. This hypothesis was also tested by computing a correlation between the two variables. Results revealed a significant, positive relationship between shock and turnover, \( r(240) = .69, p < .01 \) indicating that individuals who experienced the shock were more likely to turnover than individuals who did not experience the shock. These results support Hypothesis 2.
Hypothesis 3 proposed an interaction between shocks and satisfaction in the prediction of turnover, such that the relationship between satisfaction and turnover would become more strongly negative when a shock was present. This hypothesis was tested with an MANOVA analysis comparing the four conditions on turnover. As we can see from Table 3 there was at least one significant difference between the various conditions in regard to the proportion of individuals that turned over. Post hoc analyses were then computed to determine where the differences lie using the Bonferroni procedure to control for family wise Type 1 error. Results of the post-hoc analyses revealed that the no shock/satisfied condition had a significantly lower proportion of individuals that turned over compared to the shock/satisfied (mean difference = -.65, p < .01) and shock/dissatisfied conditions (mean difference = -.71, p < .01). Additionally, the no shock/dissatisfied condition also had a significantly lower proportion of individuals that turned over compared to the shock/satisfied (mean difference = -.66, p < .01) and shock/dissatisfied conditions (mean difference = -.72, p < .01). In other words, the only significant differences found were between the no shock and shock conditions. A visual depiction of these results is presented in Figure 2. While it is clear that the interaction between shock and satisfaction is not significant, and that Hypothesis 3 was not supported, the pattern of results is in the direction proposed. That is, those in the shock conditions were more likely to turn over than those in the no shock conditions and those in the shock/dissatisfied condition were most likely to turn over.
Since the interaction between the satisfaction and shock conditions was non-significant I tested the same interaction using measured satisfaction in place of the satisfaction condition with a logistic regression analysis using turnover as the binary outcome variable. The predictor variables of measured satisfaction and shock were entered in the first block, and the interaction term shock X satisfaction was entered in the second block. The results of this analysis can be found in Table 4.

Jointly, the variables entered in the first block (satisfaction and shock) were significant predictors of turnover as seen in Table 4. However, Block 2 containing the interaction between satisfaction and shock did not account for additional variance above and beyond what was accounted for in Block 1. Therefore, the interaction between
satisfaction and shock was again non-significant. A plot of the interaction can be found in Figure 3.

Table 4
Summary of Hierarchical Logistic Regression Analysis for Predicting Turnover (n = 245)

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B^a$</th>
<th>$\chi^2_{Wald}$</th>
<th>OR</th>
<th>$\Delta \chi^2_{LR}$</th>
<th>$\Delta R^2_{Nagelkerke}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>-.32</td>
<td>1.93</td>
<td>.73</td>
<td></td>
<td>.56</td>
</tr>
<tr>
<td>Shock $^b$</td>
<td>3.63</td>
<td>84.09**</td>
<td>37.59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Block 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shock x Satisfaction</td>
<td>.98</td>
<td>4.13*</td>
<td>2.66</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$^a$ Estimated regression coefficients at entry.
$^b$ Shock was coded with No Shock as the reference level.
* $p < .05$.
** $p < .01$.

Figure 3. Shocks moderate the satisfaction-turnover relationship.
It is clear from the results presented in Table 4 that the interaction between shock and satisfaction is not a significant predictor of turnover behavior. However, we can gather some interesting information by examining the nature of the interaction. Specifically, when examining Figure 3, it is clear that the relationship between satisfaction and turnover is negative for those who did not experience the shock, but positive for those who did experience the shock. These results are elaborated upon in the discussion section.
Discussion

Overall the results obtained from this study are interesting and informative. Although not all findings were in support of the predictions, they provide useful information and shed light on the factors at play during a turnover decision. First, results revealed that those in the dissatisfied condition were more likely to think about quitting than those in the satisfied condition. This is not surprising because being in the dissatisfied condition was associated with lower satisfaction with the experiment when compared to the satisfied condition $r(243) = -.20, p < .01$ and that satisfaction is negatively related to thoughts of quitting $r(243) = -.65, p < .01$. Therefore, it makes sense that those in the dissatisfied condition would have more thoughts of quitting than those in the satisfied condition. However, an interesting finding is that neither satisfaction condition, nor satisfaction with the experiment was related to actual turnover. Yet thoughts of quitting was positively related to turnover $r(240) = .14, p < .05$. It is conceivable that those factors related to thoughts of quitting would also be related to turnover. We know from prior research that satisfaction is often only weakly related to actual turnover behavior, thus the results presented here are not all that surprising as they suggest a similar pattern.

However, one surprising result is that shock condition was not related to reported thoughts of quitting. This is surprising because theoretically, shocks are events that jar employees to deliberate about their job and to possibly quit their job. Additionally, one must think about quitting before doing so in at least some regard. Therefore, I expected to find a stronger relationship between shock condition and thoughts of quitting than was
found here. Perhaps it is the case that because individuals needed to decide immediately after the shock whether or not they wanted to quit the experiment, they did not necessarily remember putting much thought into this decision and then when they were asked to report the extent to which they thought about quitting, they underestimated the amount of mental deliberation they engaged in to arrive at their decision. Ultimately, everyone in the shock condition would have had to think about quitting because they were specifically asked to decide whether or not they wanted to quit. Perhaps this justification is reflected in the very strong relationship between shock and turnover. That is, those in the shock condition have a greater propensity to turnover (90.4%) than those in the no shock condition (19.4%). The unfolding model predicts that shocks are a driver of turnover through thoughts of quitting, but in this case the thoughts of quitting component may be absent due to the necessity of a quick turnover decision. However, the strong results demonstrated with turnover are impactful in that shock is clearly impacting turnover decisions in which some mental deliberation must have taken place.

Another interesting result is that experiencing the shock was associated with higher levels of satisfaction than not experiencing the shock $r(243) = .15, p < .05$. Although Lee and Mitchell (1994) propose that shocks can take a variety of forms and do not specify the relationship that shocks have with satisfaction, this result was still surprising. However, this finding is likely the result of individuals being happy to have been given the option to quit the experiment and thus, their satisfaction was inflated. The experiment itself must have been rather unpleasant, perhaps due to the nature of the task, regardless of condition as the average satisfaction level of participants is relatively low.
(M = 2.88 on a five point scale). Therefore, when individuals in the shock condition were given the opportunity to leave this unpleasant experience, they were happy to have a reason/excuse to remove themselves from the experiment. In other words, they were happy that they were able to leave and generalized this feeling to being satisfied with the experiment as a whole compared to their no shock counterparts who were not given such an opportunity and had to endure the unpleasant situation for the full amount of time. This result likely explains the nature of the interaction found in Figure 3 and will be elaborated on later.

As previously mentioned, Hypothesis 2 was supported. There was in fact a strong, significant relationship between shock condition and turnover with those in the shock condition being much more likely to turnover than those in the no shock condition. Indeed, shocks are playing a large role in the turnover decision of participants. These results support predictions made by the unfolding model paths. Specifically, one path of the Unfolding Model predicts that the presence of a shock alone (regardless of satisfaction levels and available alternatives) can lead to an automatic type of turnover decision. This path would be consistent with the weak relationship found between shock and thoughts of quitting, but the strong relationship between shock and actual turnover. Moreover, Lee and Mitchell (1994) argue that the majority instances of turnover are shock driven rather than resulting simply from low levels of satisfaction. It is clear from the results presented here that shocks are certainly leading to turnover decisions. That is, of the individuals who quit the experiment, 81% were in the shock condition. Also, the pseudo R\(^2\) value from the logistic regression in which shock was the only predictor is .58.
In other words, shock seems to be accounting for about 58% of variance in turnover in this study. This is a very large amount of variance explained and shows that shocks are accounting for almost all of the variance explained for turnover in this study. Although this may be an inflated finding (due to the nature of the shock, which will be discussed later), it still provides information that was computable by past research and demonstrates that shocks are likely accounting for unique variance in turnover.

Also previously discussed, Hypothesis 1 was not supported because a significant relationship between satisfaction and turnover was not established. I (consistent with prior research; e.g., March & Simon, 1958; Mobley, 1977) theorized that individuals who were not satisfied (i.e., their current situation) would be more likely to quit than those who were satisfied, however, this was not the case. This is likely related to some of the points that were already touched on. Specifically, satisfaction with the experiment was relatively low, regardless of condition. When there is limited variance in a construct it is often difficult to establish relationships with other variables. This is one potential explanation for the null findings regarding satisfaction and turnover. However, prior research often has difficulties establishing relationships between satisfaction and turnover, which likely do not all suffer from minimal variance in the construct. The explanation proposed by the current study (i.e., Hypothesis 3) is that there is an interaction occurring between satisfaction and shock in the prediction of turnover. That is, the relationship between satisfaction and turnover is dependent on another variable, in this case, a shock. Results revealed that the interaction proposed by Hypothesis 3 was not supported, but the pattern of results was consistent with the prediction. That is, those in
the shock conditions were much more likely than those in the no shock conditions to
turnover. Additionally, those in the shock/dissatisfied condition were the most likely to
quit the experiment.

In the test of this same interaction using measured satisfaction, again a non-
significant result was revealed. However, when looking at Figure 3 the nature of this
interaction s provides some interesting information. First, the relationship between
satisfaction and turnover is negative for individuals who did not experience a shock. This
result is consistent with prior studies that have found such relationships (e.g., Griffeth, et
al., 2000). In other words, when there is not a shock present the typically expected
relationship between satisfaction and turnover holds. However, where things start to get
interesting is for individuals who do experience the shock. In this case the relationship
between satisfaction and turnover is actually positive. Again, I believe this is due to the
fact that the shock of the unsolicited alternative provided them an avenue to escape the
unpleasant situation they were experiencing and when looking back on the experience as
whole, individuals reported greater liking of the experiment than they would have
reported had they not been given an opportunity to leave. Perhaps this occurs in actual
work situations as well. To elaborate, if individuals leave an organization due to a shock
they may reflect back on their previous employment situation and underestimate how
negative it was because they were given an opportunity to escape it.

Limitations

One potential limitation is the shock used in the current study. The majority of
individuals in the shock condition quit the experiment (90.4%), which is surprising as it is
typically not expected that participants would quit an experiment. There is a clear ceiling effect for turnover, which could be a potential explanation for the non-significant interactions that were revealed. Perhaps the shock used created a situation in which it was too easy for the participant to choose to leave. In other words, there may be an ease of movement issue. It is important to note that shocks take a variety of forms and the shock presented in this study is only one of many that could be used.

Another limitation of this study is that it was conducted in the lab using a student sample. Students are not representative of the typical employee population and as such, their motivation and reasoning are likely very different than a true employee. For example, the 30 minute experiment conducted here is likely not equivalent to a 40 hour work week that is typical of an employee. Therefore, generalizing the results of this study to the workforce in general should be done with caution. However, meta-analyses have shown a high degree of convergence in effects across research settings (e.g., lab vs. field) and externally valid laboratory research in I/O psychology (Mitchell, 2012). Therefore, the results found in the lab and in the field may not differ as much as we would expect. Regardless, more work needs to be done and more results obtained to make firm conclusions.

**Future Research**

I believe the findings presented here are impactful and contribute to the understanding of turnover behavior and to the turnover literature. However, future research must be conducted to allow for substantial conclusions to be made. This paradigm has a lot of potential for future studies. For example, Lee and Mitchell (1994)
noted that shocks take many forms. Therefore, studies could be done using different types of shocks (i.e., positive, negative, expected, unexpected, work related, not work related) to investigate which are most likely to lead to turnover decisions and how those decisions are reached. Conducting studies using various shock manipulations could reveal different results than were presented here.

**Practical Implications**

One important finding that practitioners can take away from this study is that devoting resources to improving satisfaction levels of employees may not be the answer to reducing turnover within the organization. Perhaps less focus should be placed on the satisfaction of employees, and more focus placed on dealing with events that may lead to turnover. This may seem a difficult task to accomplish, but a starting place would be trying to minimize the occurrence of shocks that are under the organizations control. For example, trying to work out disagreements or disputes between employees before they lead to something greater. Or creating a more open environment in which communication is a primary focus, to try to minimize unexpected events that could result in individuals wanting to turnover. This study shows that the shocks concept might be much more important than perhaps even Lee and Mitchell thought and as such, practitioners should be paying attention to them if their goal is to reduce turnover.

**Conclusion**

Overall, the results of this study are informative, promising and provide support for the unfolding model. First and foremost, shocks are clearly influential in the turnover process and this study demonstrated that shocks are something worth paying attention to.
Specifically, a strong relationship between shock and turnover was found and shock accounted for a large amount of variance in turnover, which is a primary prediction of the unfolding model (i.e., that much of turnover is shock-driven). Additionally, this study was focused on using rigorous methods to test its hypotheses by conducting an experimental study in the lab. This alone is a big step for the turnover literature because it is currently lacking such experimental designs. This study also provided the first experimental investigation of the shock construct as well as using a predictive design to assess shocks. These results contributed to the shocks literature by demonstrating that shocks do, in fact, play a role in an individual’s decision to turnover and that they are important for organizations to be aware of. There is still a great deal of work that needs to be conducted before any strong conclusions can be made, but it has to start somewhere and this study provided that starting point.
References


Appendix A: Shock Script

Experimenter (speaking to participant): “I am sorry to interrupt you. This is {name}, he/she is a researcher conducting a different study and is in need of a participant.”

Confederate: “Yeah, I really need a participant. My study is very short and actually pretty fun. It will only take 10 minutes and you will still receive the full amount of credit for finishing the remaining time in my experiment.”

Instructions to the individual playing the role of experimenter:

- **Note:** if the participant asks for more information about the alternative study just say that you cannot give them any other information at this point.

Experimenter: “I do have enough data from you, although more would be better. I will leave the decision up to you. Do you want to stay in this experiment? Or go to {name}’s experiment?”

The individuals choice is then recorded.
Appendix B: Consent Form

Ohio University Consent Form

Title of Research: Does Music Influence Performance on a Word Processing Task?

Researchers: Allison N Tenbrink

You are being asked to participate in research. For you to be able to decide whether you want to participate in this project, you should understand what the project is about, as well as the possible risks and benefits in order to make an informed decision. This process is known as informed consent. This form describes the purpose, procedures, possible benefits, and risks. It also explains how your personal information will be used and protected. Once you have read this form and your questions about the study are answered, you will be asked to sign it. This will allow your participation in this study. You should receive a copy of this document to take with you.

Explanation of Study

This study is being done because we are interested in how successful students are at completing a word-processing task while listening to music.

If you agree to participate, you will be asked to engage in an anagram task while listening to music.

You should not participate in this study if English is a secondary language or you are under 18 years old.

Your participation in the study will last approximately 30 mintues.

Risks and Discomforts

No risks or discomforts are anticipated

Benefits

You may not benefit, personally by participating in this study.

Confidentiality and Records

Your study information will be kept confidential by not asking for any identifying information.

Additionally, while every effort will be made to keep your study-related information confidential, there may be circumstances where this information must be shared with:
* Federal agencies, for example the Office of Human Research Protections, whose responsibility is to protect human subjects in research;
* Representatives of Ohio University (OU), including the Institutional Review Board, a committee that oversees the research at OU.

**Contact Information**
If you have any questions regarding this study, please contact [Allison Tenbrink at at177306@ohio.edu]

If you have any questions regarding your rights as a research participant, please contact Jo Ellen Sherow, Director of Research Compliance, Ohio University, (740)593-0664.

By signing below, you are agreeing that:
- you have read this consent form (or it has been read to you) and have been given the opportunity to ask questions and have them answered
- you have been informed of potential risks and they have been explained to your satisfaction.
- you understand Ohio University has no funds set aside for any injuries you might receive as a result of participating in this study
- you are 18 years of age or older
- your participation in this research is completely voluntary
- you may leave the study at any time. If you decide to stop participating in the study, there will be no penalty to you and you will not lose any benefits to which you are otherwise entitled.

Signature __________________________________________ Date ____________

Printed Name __________________________________________

Version Date: finsert

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