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ANTECEDENTS OF WILLINGNESS TO RELOCATE  
GEOGRAPHICALLY FOR EMPLOYMENT: AN  
INVESTIGATION OF PERSONALITY FACTORS AND  
ATTITUDES

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**ANTECEDENTS OF WILLINGNESS TO RELOCATE  
GEOGRAPHICALLY FOR EMPLOYMENT: AN INVESTIGATION OF  
PERSONALITY FACTORS AND ATTITUDES**

By

**Ryan J. Petty**

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## **ABSTRACT**

# **ANTECEDENTS OF WILLINGNESS TO RELOCATE GEOGRAPHICALLY FOR EMPLOYMENT: AN INVESTIGATION OF PERSONALITY FACTORS AND ATTITUDES**

By

Ryan J. Petty

The study investigates the impact of both personality and attitudes on willingness to relocate geographically. Using a Theory of Planned Behavior (Ajzen, 1991) framework, the study examined the relationship of three of the Big Five personality traits (and one facet) on willingness to relocate. Data were collected from 937 professional employees of a US-based Fortune 1000 mining/manufacturing firm. Using hierarchical regression, the results the study suggest that Conscientiousness, Openness to Experience, and Excitement-Seeking were all significantly positively related to an employees' willingness to relocate, while Neuroticism was significantly negatively related. Both personal as well as referent attitudes (subjective norms) were also found to be positively related to willingness to relocate. Implications for the use of personality traits as early predictors of willingness to relocate, which is important for succession planning and workforce flexibility programs, are discussed.

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## **I. Introduction**

What factors affect whether an individual is willing to relocate for an employment opportunity or refuses to? How can firms begin to predict and manage the geographic mobility of their employees in order to maintain the labor force flexibility needed to compete in today's ultra-competitive business landscape? The answers to these questions are becoming increasingly important in recent times, as employee relocation demand and costs continue to grow. Surveys by the Employee Relocation Council (now known as the Worldwide ERC) estimate that from 2002 to 2008, the average number of employees relocated by organizations increased by 26% (2008 Transfer Volume & Cost Survey, Worldwide ERC). Additionally, the average cost of relocating an employee has also risen over that same period roughly 17%--from \$65,550 to \$76,600 for a home-owning current employee (ibid). With both rising demand and costs for relocating employees, successful planning and management of domestic relocations has become an increasingly important organizational skill.

Countervailing the increasing demand by firms for geographically mobile employees, some research concludes that employees are increasingly resistant to relocation. The most recent survey by the Worldwide ERC (2007) finds that 70% of the employers polled reported employee resistance to relocation, up from 60% the previous year. The trend of increasing employee resistance to relocation has important implications for both individual employees and firms. For individual employees, a refusal to relocate may affect their career trajectory within the firm, taking them off of the so-called "fast track". Furthermore, a refusal to relocate

may strain relationships with superiors who are aware of the refusal to relocate and perceive an unwillingness to sacrifice for the firm. For firms, increasing resistance to relocation diminishes flexibility, employee development, etc., and may even lead to higher instances of voluntary turnover from the firm if employees refuse relocation opportunities and perceive that their future career opportunities are diminished because of this.

Given the serious consequences of resistance to relocation for both firms and individuals, an investigation as to the factors that antecede willingness/resistance to relocation is important<sup>1</sup>. Identifying these antecedents can help firms select and develop individuals who are more willing to relocate, especially for careers where one or more relocations are considered part of the development process. This will allow firms to better manage their workforce flexibility needs while also reducing the number of costly mistakes (e.g. turnover) arising from poor relocation decisions.

In addition to the practical need to expand our understanding of factors affecting an individual's willingness to relocate, there have also been calls for further academic research (Stroh, 2000). In the most comprehensive review of the relocation literature conducted, Stroh (2000) concludes that "researchers need to

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<sup>1</sup> As evidence of the relation between willingness to relocate and actual relocation behavior, two studies conclude a significant relationship. First, using regression methods, Brett & Reilly (1988) find a significant positive relationship between willingness and the actual relocation decision. Second, Prehar (2001) finds evidence that those who have been asked about relocation intentions hold many of the same attitudes as those who are currently engaging in relocation decisions. In a qualitative piece, she assessed the specific causes of positive and negative attitudes toward relocation (i.e. financial, family, community factors, etc) for graduates of a large MBA program. She found that pattern of both positive and negative attitudes was largely identical for both those that were currently making real relocation decisions versus those that were asked about hypothetical relocation scenarios (intentions to relocate).

further investigate many critical questions” (pg. 303), and that until we do so, “relocations may remain an area that is fraught with anxiety, unnecessary stress, and constant upheaval” (pg. 303).

One question which has not yet been addressed by empirical research is the impact of personality on willingness to relocate. Prior research has consistently shown that personality is predictive of a wide variety of behaviors, including work-related. Given this, it is possible that relatively stable and accessible personality characteristics might be important predictors of relocation willingness. Of further importance is proposing and formally testing a unifying theoretical framework for relocation research to proceed from. To date, most studies on the antecedents of willingness to relocate are theoretically sparse, referencing past empirical studies as foundations for extension, but developing little in the way of theory that unifies disparate lines of research. This point is perhaps best illustrated by a quote from Landau, Shamir, & Arthur (1992), who note that, “research on relocation is still scarce, and a search of the motivation, stress, careers, and change literatures found no integrative theory to encompass all relative issues” (pg. 668).

To remedy these issues, the current study will examine the appropriateness of the Theory of Planned Behavior as a unifying theoretical framework, using attitudes as the bases of prediction of future behavior. Additionally, the Big Five personality model will be used to test whether personality is a useful predictor of willingness to relocate, and ultimately relocation behavior.

## **II. The Theory of Planned Behavior**

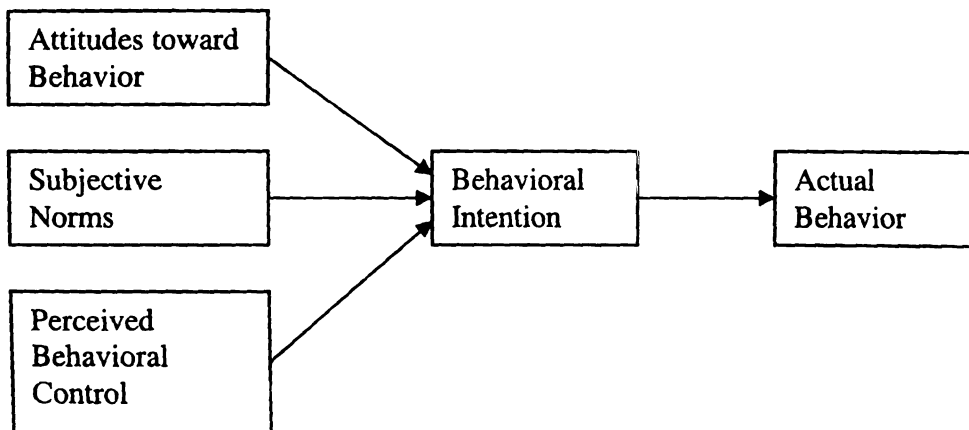
The Theory of Planned Behavior (henceforth abbreviated as TPB; Ajzen, 1991) is a theory that attempts to explain human behavior from a cognitive-attitudinal basis, by linking people's attitudes toward behaviors to behavioral intentions and ultimately behaviors. The theory is distally born out of rational choice behavioral decision-making models (in the sense that human behavior according to the model is rather rational in nature), but more proximally born from Ajzen's earlier work on the Theory of Reasoned Action (Ajzen & Fishbein, 1975). The Theory of Reasoned Action was improved upon and extended into the TPB due to contradictory findings that arose when individuals did not possess the behavioral control to enact behaviors that they desired—thus the TBP accounts for this by adding behavioral control to the model.

The TPB has been applied in multiple fields of study in a variety of settings with successful prediction of behaviors from attitudes. Empirical reviews of these various applications include meta-analyses done on TPB in the field of health care (Godin & Kok, 1996), exercise (Hausenblas, Carron, & Mack, 1997), as well as a general cross-topic meta-analysis done by Armitage & Conner (2001)—finding that the TPB explained between 20-30% of variance in ultimate behaviors. In addition to these fields, other studies have applied TPB in explaining participation in leisure activities (Ajzen & Davis, 1991) as well as educational attainment (Davis, Ajzen, Saunders, & Williams, 2004)—demonstrating its versatility in predicting behavioral intentions and behavior from attitudes.

### The Basic TPB Model

The TPB asserts first, that behavioral intentions are the immediate antecedents of actual physical behavior, and thus knowing an individual's intentions (in combination with the control/means to carry the intentions out) allows you to predict their behavior fairly accurately. Second, an individual's behavioral intentions are shaped by three factors: 1) their attitudes toward the actual behavior, 2) the perceived social pressure to engage/not engage in the behavior (the "normative beliefs"), and 3) the individual's perceived control over the ability to perform the actual behavior. Diagrammatically, the model appears as thus:

**Figure 1—Basic TPB Model (Copyright Icek Ajzen, 2006)**



### Attitudes Toward a Behavior

An individual's attitude toward a behavior is a product of the strength their value judgment about the behavior (positive/negative) and their belief about its expectancy (probability) of occurring (Ajzen, 1991). For example, if an

individual perceives great potential benefit from pursuing a graduate degree to boost future income, and also believes the likelihood of realizing that benefit is high (a graduate degree will in fact boost future income), then they will be motivated to engage in the behavior.

Individuals will differ both on their value judgments and expectancies for a given behavior. These differences arise for a variety of reasons, some based on nature (i.e. intelligence, personality, inborn drives) and others based on nurture (i.e. past experience, social learning). We can, however, directly assess both the individual's value judgments as well as expectancies to ascertain their overall attitudes toward the behavior as well as *why* they hold these attitudes.

### Subjective Norms

An individual's subjective norm concerning the behavior is characterized by the product of their perceived normative beliefs and their motivation to comply with these normative beliefs (Ajzen, 1991). An individual may have several "referents" (individuals or groups) that they believe approve/disapprove of a behavior. For each referent, the individual makes a subjective judgment about how strongly the referent approves/disapproves the behavior (known as the "strength of the normative belief"), and makes a second, separate judgment about how motivated they are to comply with each referent's opinion. Continuing the example of pursuing a graduate degree, if an individual desires to pursue the degree but they perceive strong disapproval from referent B (spouse, co-workers,

etc.) and referent B is very important to them (thus a high motivation to comply), they will be less likely to engage in the behavior.

Subjective norms again will differ by individual by behavior, depending on a variety of factors. Some behaviors will engage different referents—one's spouse will certainly care about whether the individual pursues a graduate degree (due to the financial impact, time commitment, etc.), but one's friends may not care strongly. Additionally, some individuals will feel more/less motivated to comply with referents' opinions than others, depending on strength of the relationship with that referent, their individual personality, and individual values as well.

### Perceived Behavioral Control

An individual's perceived behavioral control is characterized as the product of the power of a controlling (limiting) factor and its probability of actually occurring (Ajzen, 1991). There might be several factors outside of the control of the individual that limit one's ability to engage in a behavior, and each will limit one's ability to different degrees. Continuing with the example of pursuing a graduate degree, having children may impair but not completely prevent one from pursuing a graduate degree, but not having money for graduate tuition will completely prevent you from pursuing the degree.

Similarly, each event will have a varying likelihood of occurring. Some limiting events may be rather likely to occur—i.e. having difficulty juggling time demands while pursuing the graduate degree, while others are less likely to



occur—i.e. having a serious illness that hospitalizes you and prevents you from pursuing the degree.

### **Previous Literature on Attitudes and Willingness to Relocate**

Applying the basic TPB framework to willingness to relocate is a fairly simple process: geographic relocation becomes the ultimate behavior of interest, and the precursor to relocation (behavioral intention in the TPB model) becomes a willingness to relocate. The generic attitudes, norms, and perceived control found in the basic model are replaced with attitudes, norms, and perceived control specific to geographic relocation.

There are a few studies that have alluded to the use of attitudinal theories such as the TPB as an appropriate framework for investigating willingness to relocate, however none of them have formally tested the framework empirically. One such study was done by Brett & Reilly (1988), who proposed an adapted version of Ajzen & Fishbein's (1975) Theory of Reasoned Action as a model for willingness to relocate and ultimately the decision to relocate. They incorporated demographic and career variables, personal attitudes toward work and relocation, and spousal attitudes toward relocation as predictors of willingness to relocate and ultimately the decision to relocate. Using a sample of corporate workers and their families that had previously been relocated, they found that the number of children at home, functional area, job involvement, and personal attitudes toward relocation were significant predictors of willingness to relocate.

However, Brett & Reilly (1988) mention the Theory of Reasoned Action only very briefly in their article, and seem to follow the structure of the model somewhat loosely. They do not inform us how personal attitudes are measured, and the only subjective norm they measure is spouse's attitude toward moving, ignoring other possible referents such as children, parents, friends, and supervisors.

A second study conducted by Eby & Russell (2000) used Ajzen's (1991) Theory of Planned Behavior as a framework for their investigation of antecedents of willingness to relocate. They incorporate demographic factors, employee attitudes, and spousal attitudes as predictors of WTR. Using a sample of corporate employees working in multiple industries, they used hierarchical regression methods to test hypotheses about attitudes relating to willingness to relocate. They found that personal relocation beliefs were significantly related to willingness to relocate, but that "normative beliefs" were not. In addition, organizational commitment and desire for career progress were found to be significantly related to willingness to relocate.

The Eby & Russell study used a very loosely adapted version of the methods recommended by Ajzen (1991). Their measure of personal relocation beliefs was comprised of items that measured cognitive beliefs about positive outcomes of relocation, not pure attitudes, which tend to have affective components<sup>2</sup>. As such, doubt is cast as to whether they are truly measuring attitudes or simply cognitive beliefs which reflect a more logical cost/benefit

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<sup>2</sup> Attitudinal beliefs are comprised of both affective and cognitive components (Trafimow & Sheeran, 1998)—thus any exclusively cognitive belief measure cannot accurately said to assess a global attitude towards something, as the affective component of attitudes is not being measured.

approach to decision making. Additionally, their measure of subjective norms specifically mentions “organizational pressure”—meaning they identify the organization the individual works for as the salient referent. Again, this ignores other potentially important referents such as family and friends. Finally, they do not include any measure of perceived behavioral control, an integral piece of the theory, in their application of the TPB.

Finally, Prehar (2001) proposes the Theory of Reasoned Action as an appropriate framework in a study of predictors of relocation intentions and actual relocation behavior. The study was qualitative in nature, consisting of interviews with MBA alumni from three different universities who either were facing a relocation decision or who might face such a decision in the near future. Given the qualitative nature of the study the Theory of Reasoned Action was not empirically tested, but the qualitative results demonstrate that positive net attitudes toward relocation (i.e. perceiving greater benefits than costs) resulted in greater willingness to relocate and actual relocation. Further, having more social referents resulted lower relocation intentions and a lower rate of actual relocation. Though not empirically rigorous, the Prehar (2001) study results do provide a measure of support for the empirical testing of an attitudinal framework, such as the TPB, as a valid model for understanding relocation intentions and decisions.

### **III. Personality Traits and the Big Five Model**

Before I turn attention to integrating personality into the TPB and generating hypotheses as to how personality will affect an individual's willingness to relocate, I first discuss the personality theory, including structure and dominant traits, as well as describe how personality has been applied in industry. The study uses the Big Five personality model as the means of assessing personality. The Big Five model was chosen due to its comprehensiveness as well as its status as being the dominant personality model in operation today.

#### ***The Development of the Big Five Personality Factors***

The Big Five personality factors (also known as the Five Factor Model or FFM) were not formalized into a coherent and dominant framework until the late-1980's (Digman, 1990)—though the roots of the FFM trace back decades further. Some of the earliest academic research on personality dates back to the 1930's with the work of McDougal (1932—in Digman, 1990), with work continuing in the 1940's through 1960's by such seminal psychologists as Allport, Cattell, and Eysenck (see John, Angleitner, and Ostendorf, 1988 for a comprehensive review). These research efforts adopted the trait perspective of personality—that personality is a stable set of characteristics inherent in an individual, that manifest as behavioral patterns or tendencies across situations.

These early efforts at identifying a unified model of personality failed to coalesce for several reasons. First, researchers could not come to consensus on

the number of personality factors. Some researchers proposed that there were five basic factors, while some proposed more factors, including Cattell's recommendation of 16 (John et al, 1988). Second, the "trait" perspective of personality came under fire in the 1960's and 70's from personality theorists in the "situational" camp (e.g. Mischel and colleagues). These theorists conducted research that demonstrated that personality was not stable across contexts, but rather depended on the situation.

The FFM did not begin to coalesce again until the 1980's when the previous trait perspective research was revisited and reassessed, and new research was conducted under by Digman, Goldberg, Wiggins, and others. When both previously and newly collected data were analyzed, aided by computational advances, repeated factor analyses pointed strongly to five broad sets of personality characteristics. At this point the personality structure had coalesced around the FFM, but personality was not being broadly applied yet, in part due to a multitude of scarcely-validated inventories (John & Srivastava, 1995).

This situation changed with the development of a highly validated FFM-based personality inventory by Costa & McCrae in the early 1990's. Their work in developing the commercially-available NEO-PI (and eventually NEO-PI-R—Costa & McCrae, 1992) allowed for the wide use of personality in academic research and eventually industry. Hereafter, the NEO-PI became the dominant commercially-available personality assessment tool in both academic research and industry applications, though many other highly-validated commercial personality

inventories exist and are frequently used (e.g. Hogan Personality Inventory, California Personality Inventory, etc.).

### **The Use of Personality in Research and Industry**

Since the coalescing of the FFM and the development of highly-validated commercial inventories, personality has been used extensively in both academic research on work/organizations and in industry applications. With regard to industry applications, personality tests are typically used to make either pre- (i.e. screening, selection) or post-hire (i.e. promotion, development) employment decisions. While the exact percentage of companies who use personality testing as part of their selection methodology is unknown, multiple industry surveys estimate that upwards of 30% of large corporations use personality in their initial selection of candidates (Rothstein & Goffin, 2006). In post-hire settings, personality is used to make decisions regarding employee development and promotion. Personality tests are used to determine which employees have the correct mix of abilities and characteristics to succeed at higher levels in firms, including managerial and executive potential. While updated statistics on the use of personality testing for employee development are scarce, according to a 1999 American Management Association survey 31% of employers engaged in post-hire testing (vs. 39% in pre-hire contexts; AMA, 1999), supporting the conclusion that personality testing in post-hire contexts is also common industry practice.

Personality tests are typically not used in isolation, but in combination with other screening and selection methods to provide incremental validity in

predicting performance. Personality has been demonstrated to have incremental validity above and beyond both structured interviews and cognitive ability tests (see Ones, Dilchert, Viswesvaran, & Judge, 2007), which are two of the most popular selection methods<sup>3</sup>. The personality trait with the most consistent overall validity in predicting job performance is Conscientiousness, with validity hovering around .20 depending on the context (Ones et al, 2007). The trait of Extraversion is considered the next most valid predictor of general performance with validity estimates around .06-.12, again depending largely on context (i.e. Extraversion has greater validity for jobs whose performance involves greater interaction with others; Ones et al, 2007). The other personality traits show lower validities with performance in general (with wide variation depending on context), but have been shown to predict other important work-related constructs (see below).

In sum, the use of personality testing in industry has been arguably widely adopted. It has shown the greatest validity and frequency of use in pre- and post-hire selection decisions, with Conscientiousness and Extraversion showing the most validity of the Big Five traits.

With regard to research on work and organizations, personality variables have been used to predict behaviors of interest to managerial scholars across a wide spectrum of topics including: Performance—Barrick & Mount (1991),

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<sup>3</sup> While the existence of incremental validity is not questioned, some have questioned the utility of personality in selection due to the magnitude of that incremental validity, which research has shown to be modest (see Morgeson, Campion, Dipboye, Hollenbeck, Murphy, & Schmitt, 2007 for a discussion).

Barrick, Mount, & Judge (2001), Hertz & Donovan (2000), Tett, Jackson, & Rothstein (1991); Contextual Performance—Borman, Penner, Allen, & Motowidlo (2001), Organ & Ryan (1995); Leadership—Bono & Judge (2004), Judge, Bono, Ilies, & Gerhart (2004); Turnover—Zimmerman (2008); Absenteeism—Ones, Viswesvaran, Schmidt (2003); Job Satisfaction—Judge, Heller, and Mount (2002); Counterproductive work behaviors—Berry, Ones, & Sackett (2007); and Entrepreneurial behavior—Zhao & Seibert (2006). Evidence of the voluminous application of personality to research in the workplace is demonstrated by the fact that the studies cited above all represent meta-analyses of numerous empirical studies done on their respective topics. All of the above cited research demonstrates ample evidence that personality characteristics have predictive validity for work-related behaviors.

Given the extensive use of the Big Five in both academic research and industrial settings, the appropriateness of investigating personality in the applied work context is self-evident. Given the spectrum of behaviors in the workplace that research has concluded personality is useful in predicting, it is also appropriate to investigate the impact of personality on the relocation decision. Furthermore, personality variables can be integrated into the TBP framework, which is consistent with the first stated goal of this study.

### **The “Big Five” Personality Traits**

The “Big Five” traits as they have come to be known are broad personality traits—each of which subsumes several, more specific personality traits (John &



Srivastava, 1995)—that reflect the behavioral *tendencies* of individuals across various situations. These big five are Openness to Experience, Conscientiousness, Neuroticism, Extraversion, and Agreeableness:

### Openness to Experience

Openness to experience is a complex trait which subsumes many different characteristics—it is perhaps as Digman (1990) notes more of a “domain of trait characteristics that are more or less related” than a singular unitary trait. The domain is marked by characteristics such as curiosity, imagination, intellect, sophistication, and wide interests (Goldberg, 1990). Individuals who are highly open tend to be cultured and worldly individuals whom enjoy a wide variety of experiences and the pursuit of knowledge and experiences. They also tend to be somewhat independent and less traditional in their values than others, as noted by other researchers who have variously labeled this domain alternatively as Independence (Lorr, 1986) and Achievement via Independence (Gough, 1987). Despite the variety of labels for this dimension of personality (others include Intellect and Culture), the popularity of Costa & McCrae’s NEO-PI measure has led most to settle on Openness to Experience as the dominant label. The NEO-PI subscales (which when taken together form the whole domain) of Openness are: Ideas, Fantasy, Aesthetics, Actions, Feelings, and Values.

## Conscientiousness

Conscientiousness is also a broad trait, yet one that is largely agreed upon. Alternatively proposed labels for the dimension include Will to Achieve (Digman, 1988; Fiske, 1949) Work (Peabody & Goldberg, 1989) and Prudence (Hogan, 1986), yet the characteristics of conscientious individuals are agreed upon: disciplined, organized, responsible, achievement-oriented, and hard-working (Goldberg, 1990). From these terms, it appears as if the trait encapsulates two main categories of characteristics: those that relate to volition, and those that relate to discipline/dependability. Individuals whom score highly on Conscientiousness tend to be strong-willed and persistent when it comes to achievement, disciplined and ambitious when it comes to goal-seeking, and very organized, careful, and deliberate when given a task to complete. These individuals also tend to be very responsible and dutiful in their values. The NEO-PI subscales of Conscientiousness are: Competence, Order, Dutifulness, Achievement-striving, Self-Disciplined, and Deliberate.

## Neuroticism

The trait of Neuroticism is a well-defined and largely agreed upon personality domain. Like the other Big Five dimensions, there are other proposed labels for the trait (e.g. Emotional Control [Fiske, 1949], Negative Emotionality [Tellegen, 1985], Adjustment [Hogan, 1986])—but most researchers seem to agree that the trait is marked by a tendency to experience negative emotions as well as a relative lack of emotional discipline. The trait of Neuroticism is

associated with being anxious, depressed, worried, insecure, and highly emotional (Goldberg, 1990). Individuals whom are highly Neurotic tend to be very self-conscious and vulnerable, and tend to lack self-esteem. These individuals also tend to be impulsive and somewhat emotionally unstable, and are easily upset by relatively mild events in life. The NEO-PI subscales of Neuroticism are: Anxiety, Angry Hostility, Depression, Self-Consciousness, Impulsiveness, and Vulnerability.

### Extraversion

Extraversion is another well-defined and largely agreed upon trait by personality researchers—though Hogan splits the domain into two different traits in his own personality inventory (Hogan, 1986): Ambition and Sociability. Despite this, the domain itself is well-established—it is almost always the factor with the largest eigenvalue in factor analytic studies of personality structure (Digman, 1990). The trait of Extraversion is associated with being sociable, aggressive, high-energy, and talkative (Goldberg, 1990). Individuals scoring high on Extraversion tend to be ambitious with regard to personal goals and proactive and energetic in achieving them. These individuals also tend to be very outgoing and affectionate in nature, seek out fun, and enjoy interacting and maintaining relationships with others. NEO-PI subscales of Extraversion are: Gregariousness, Assertiveness, Activity, Excitement-seeking, Positive Emotions, and Warmth.

## Agreeableness

Agreeableness is the final Big Five domain, and is also a generally agreed-upon trait. Other labels for the domain have been suggested—Conformity (Fiske, 1949) and Friendly Compliance (Digman & Takemoto-Chock, 1981) are examples—but most researchers interpret the domain as Agreeableness (Digman, 1990). The trait of Agreeableness is associated with being courteous, conforming, tolerant, flexible, and cooperative (Goldberg, 1990). Individuals whom score highly on the Agreeableness scale tend to be very friendly towards others and cooperative with other individuals' desires. They also tend to be very trusting and forgiving of others, as well as open-minded to and tolerant of differences. The NEO-PI subscales of Agreeableness are: Trust, Straightforwardness, Altruism, Compliance, Modesty, and Tender-mindedness.

## *Previous Literature on Personality and Willingness to Relocate*

A search of the literature reveals that few studies have incorporated personality in the investigation of possible antecedents of WTR. Moreover, most of these studies either incorporate only one personality variable, and as such do not comprehensively investigate personality, or incorporate variables that are not formally recognized personality traits but rather are variables related to personality.

Markham, Macken, Bonjen, & Corder (1983) used self-esteem as a predictor of willingness to relocate in a study that investigated gender differences in willingness to relocate. Using data from white-collar federal employees, they

found that self-esteem was positively related ( $\beta = .13, p < .00$ ) to willingness to relocate (though found to be unrelated to gender). While self-esteem is not its own personality trait in the Big Five, it is considered a personality trait according to contemporary psychological theory and is moderately correlated with two Big Five personality traits: positively with Extraversion and negatively with Neuroticism (Furr, 2005; Judge & Ilies, 2002).

Another study by Mignonac (2008) incorporated two personality characteristics in his investigation of older/late career workers' willingness to relocate both domestically and internationally: openness to experience and self-efficacy. Using data from a sample of French private-sector workers and a hierarchical regression analytic methodology, he found that openness to experience was positively related to willingness to relocate domestically ( $\beta = .19, p < .001$ ), while self-esteem was not found to be significant. While self-esteem was not found to be significant in the regression results used to test hypotheses, it should be noted that it was significantly correlated ( $.12, p < .01$ ) with willingness to relocate domestically, suggesting that multi-collinearity issues may be operating.

Dette & Dalbert (2005) have also incorporated personality-like variables in their research—although not Big Five or “proper” personality variables. Their study looks at German adolescents and their willingness to be geographically mobile following graduation from the German equivalent of a US high school. The study does not operationalize personality formally, rather using a personal individualist-collectivist orientation that appears to be related to personal

independence-dependence to others. Using standard regression methods, they find that “horizontal individualism” is positively related to willingness to relocate ( $\beta = .22, p < .001$ )—that is, people are more willing to relocate when they feel independent from others (“individual”) but also not in competition with them (“horizontal” orientation).

Cotton & Majchrzak (1990) also looked at the effect of personality on willingness to relocate. Using a sample of 286 production workers in a large manufacturing facility, they examined the influence of “flexibility” and Type A personality on intentions to relocate. The flexibility construct as described in the study encompasses adaptability to new situations and “willingness to try new things”, and thus appears to be closely related to Openness to Experience as conceived in the Big Five model. The Type A personality construct is not described in the study, but general Type A characteristics include achievement-striving, aggressiveness, impatience, and strong commitment to task (Edwards, Baglioni, & Cooper, 1990)—characteristics that should correlated with Big Five traits such as Extraversion and Neuroticism. Using a discriminant analysis methodology, the authors find that “flexibility” was related to willingness to relocate (standardized canonical coefficient = .35, Wilk’s Lambda = .694), but not Type A personality.

One study related to use of personality and relocation was Caligiuri (2000), who investigated personality determinants of expatriate desire to terminate their overseas assignments early. Using a sample of 143 US Internet Technology company employees on time-limited overseas assignments, Caligiuri

found that Extraversion ( $\beta = -.20, p < .01$ ) and Agreeableness ( $\beta = -.19, p < .01$ ) were negatively related to desire to terminate early, while Neuroticism was positively related (although only in correlational analyses;  $r = .22, p < .01$ ).

Despite the lack of research formally and comprehensively incorporating personality variables as antecedents of WTR, there are strong reasons to hypothesize that personality traits are related to both willingness to relocate and thus the ultimate relocation decision. An individual's personality is the set of inherent personal characteristics that affect their perceptions, cognitions, motivations, and ultimately behaviors in a given situation. Thus, generally speaking, the relocation decision should be affected by an individual's perception of the circumstances of the relocation, their conscious thoughts about the relocation, their unconscious motivations regarding relocation and its consequences, and finally the decision-making process which results in the ultimate behavior.

Thus a second goal of this study is to examine the effect of personality variables on WTR. Specifically, the influence of personality on WTR even after controlling for demographic and other work-related predictors will be explored. A spectrum of personality variables will be included as potential antecedents of WTR, including Big Five variables.

#### **IV. Using Personality and Attitudes to Explain Willingness to Relocate**

With a discussion of the Theory of Planned Behavior and the Big Five personality model, we can turn attention to hypothesizing how personality and attitudinal components will relate to willingness to relocate.

##### **Personality Predictors of Willingness to Relocate**

Pilot interviews suggest that the possible outcomes of relocation seem to fall into two categories: career-enhancing outcomes and family/social adjustments; further, both of these categories inherently include change. As such, personality characteristics that affect an individual's perceptions of these outcomes and their expectancies are theoretically relevant.

##### **Conscientiousness**

Conscientious individuals are likely to perceive the outcomes of relocation positively for several reasons. First, given the achievement-striving nature of the personality trait, Conscientious individuals will view relocation as a means toward achievement. Prior research has demonstrated that relocation is a means of advancing one's career (Ng, Eby, Sorensen, Feldman, 2005), which will satisfy the ambitious (achievement-striving) nature of Conscientious individuals. Second, the career success aided by relocation will appeal to the Conscientious individual's sense of duty and dependability (Goldberg, 1990)—they will be in a better position to provide for themselves and their families given the increased financial resources provided by career success. Finally, Conscientious individuals



are likely to believe that they will be successful in the relocation due to their sense of discipline and self-efficacy (Judge & Ilies, 2002). They will believe that they are competent enough to handle the challenges of relocation, as well as disciplined enough to persevere through any difficulties (both work-related and non-work) that they may encounter during the relocation process.

### Neuroticism

Neurotic individuals are likely to perceive the outcomes of relocation as being negative for several reasons. First, the neurotic individual will be fearful of taking a risk such as relocation. Prior research has confirmed that neurotic individuals are generally risk-averse (Lauriola & Levin, 2001) due to higher levels of anxiety and vulnerability—a pattern which should also apply to relocation given the possible negative consequences (e.g. difficulty adjusting to new job and location, isolation from family & friends). Second, neurotic individuals are less likely to believe that they will be successful in relocating due to their tendency to suffer from low self-efficacy (Costa & McCrae, 1995; Judge & Ilies, 2002). Finally, neuroticism is associated with general pessimism about future events (Marshall, Wortman, Kusulas, Hervig, & Vickers, 1992)—a pattern for which we have no reason to suspect would be different with regard to relocation.

### Openness to Experience

Openness should be positively related to willingness to relocate for several reasons. First, high-Openness individuals strongly value new experiences and the learning that comes from them, which relocation will provide via exposure to new people, places, and activities. Prior research has confirmed that high-Openness individuals desire a change from routine (Costa & McCrae, 1990), further motivating the individual to relocate. Second, the positive attitude toward change brought by relocation will not be constrained by dependence on existing social support systems, as the Openness trait is marked by autonomy/independence from family and friends (Costa & McCrae, 1990). Finally, prior research has concluded that the trait of Openness is positively related to risk taking (Lauriola and Levin, 2001) when gains are possible—as is the case with relocation.

### Extraversion (Excitement-Seeking)

The personality domain of Extraversion may be related to willingness to relocate. There are reasons to hypothesize that it would be positively related, such as the fact Extraversion is closely associated with ambition<sup>4</sup> and optimism about future events (Marshall et al, 1992). However, there are also reasons to believe that Extraversion may be negatively related to willingness to relocate. For example, extraverted individuals are more likely to have larger and closer knit social support systems (i.e. more friends and closer interpersonal relationships), and may not desire to sacrifice them for work opportunities. Given these

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<sup>4</sup>So much so that in Hogan's (1986) own personality inventory (HPI), the personality trait of Extraversion is split into two traits, one of which is Ambition.

countervailing reasons, I'll instead focus on one facet of Extraversion rather than the entire domain. The Excitement-Seeking facet of Extraversion is marked by a willingness to take calculated risks and pursue new and unique experiences. Those high on the Excitement-Seeking scale should have a positive view of relocation, given the new experiences and excitement that geographic relocation embodies.

### Agreeableness

Agreeableness is not predicted to be related directly to willingness to relocate. Agreeable individuals tend to be conforming, cooperative, and courteous, often complying with the wishes of others. This suggests that highly agreeable individuals would respect the wishes of others around them (i.e. spouse, family, friends) when choosing whether to relocate. As such, their willingness to relocate is likely contingent upon the wishes of others. Given this, no hypothesis is made regarding the direction of the relationship between Agreeableness and WTR, and none will be tested.

### *Attitudinal Predictors of Willingness to Relocate*

The Theory of Planned Behavior model specifically states that attitudes regarding a behavior will directly influence the intention or willingness to engage in that behavior (Ajzen, 1991)—positive attitudes regarding the behavior will increase the likelihood/willingness of engaging in that behavior, and negative attitudes will decrease it. These circumstances should therefore hold true when

being applied to willingness to relocate—more positive attitudes toward relocation and its outcomes should result in a greater willingness to actually relocate for another employment opportunity.

The TPB also specifically states that an individual's subjective norms about a behavior will influence their willingness to engage in the behavior—that in general, if one perceives that important referents (e.g. family, friends, co-workers, etc) family, friends, co-workers, etc) hold positive attitudes regarding the behavior, that the individual themselves is more apt to engage in it. If an individual's referents hold the behavior in positive regard, then there are no social barriers to engaging in the behavior, and in fact there may be social *pressures* to engage in it despite the individual's desires. These circumstances should again hold true with regard to relocation, in that employees whose important referents have favorable attitudes regarding their relocation will be more willing to relocate for an employment opportunity.

Finally, the TPB also argues that an individual is more likely to intend to engage in a behavior if they feel that they have control over their engagement in that behavior—that is, they will necessarily be less likely to engage in the behavior if they feel there are factors that prevent them from engaging in the behavior despite their wishes to do so. This should again hold true with regard to willingness to relocate, where individual employees are less willing to relocate if they perceive that there are factors (e.g. family, financial, structural) that hinder or prevent them from relocating.

**Figure 2: Summary of Hypotheses:**

<b>Theory</b>	<b>Relationship w/ WTR</b>
<b>Big Five</b>	
Conscientiousness	Positive
Openness	Positive
Excitement Seeking	Positive
Neuroticism	Negative
<b>Planned Behavior</b>	
Relocation Attitude	Positive
Subjective Norms	Positive
PBC	Positive

**The Relationship between Personality and Attitudes**

It is necessary here to comment on the likelihood of the relationship between personality and attitudes, and how that relates to the current study. There are reasons to believe that personality and attitudes toward relocation are related to one another—specifically that personality has a causal impact on attitudes to some degree. A causal model relating personality, attitudes toward relocation, and willingness to relocate suggests a complex multi-stage relationship. This, in turn, is made more complex by the need to control for demographic, career, and work-related characteristics which may affect both willingness to relocate and attitudes toward relocation. Demographic, career, and work-related characteristics have been incorporated into prior empirical work on willingness to relocate; however, these factors have not been incorporated into the TPB causal model and the causal channels through which they operate in the context of TPB is not obvious.

One approach to incorporating these factors into the TPB model would be to specify causal relationships—for example deciding whether factors such as

gender, race and number of children had no effect on variables other than willingness to relocate and estimating the resulting behavioral (structural) model. Absent prior evidence on how such factors fit into a structural model, the model is likely to be mis-specified, with consequences for coefficient estimates and estimates of statistical significance.

An alternative approach which maintains the theoretical foundation of the TPB, and is statistically more robust, is to estimate a reduced form model. A reduced form model is derived from the behavioral model, but substitutions are made to obtain a single equation model. This is estimated with an appropriate general estimator. The coefficients on the variables measure the total effect, direct and indirect, of each variable. The structural form of the model can readily be derived from the reduced form if identification conditions are met. Reduced form models are statistically more robust than behavioral models as their estimates are not sensitive to misspecification of causal relations among explanatory variables.

This point may be illustrated with a model in which WTR is a final outcome, which is influenced by H, N, K and Z. H is also determined by N and K as well as by Q. This model then takes the form of a three equation system:

$$WTR = \alpha_0 + \alpha_1 H + \alpha_2 N + \alpha_3 K + \alpha_4 Z + \varepsilon_{WTR}$$

$$H = \beta_0 + \beta_1 N + \beta_2 K + \beta_3 Q + \varepsilon_H$$

$$WTR = \alpha_0 + \alpha_1 \beta_0 + [(\alpha_2 + \alpha_1 \beta_1)N] + [(\alpha_3 + \alpha_1 \beta_2)K] + \alpha_1 \beta_3 Q + \alpha_4 Z + \alpha_1 \varepsilon_H + \varepsilon_{WTR}$$

Where the last equation is the reduced form equation obtained by substituting H from the second equation into the WTR equation. The coefficients on N, K, Q and Z are the total effects of these factors. In this instance, the behavioral model can be recovered by estimation of the reduced model for WTR and H and calculation of the behavioral coefficients. However, even if identification is not possible, or the exact specification of the structural models is not well understood, measures of the total effect can be obtained from the reduced form model.

Given that the full structural model to be used in this research is not known or obvious, I take a more exploratory approach and use a reduced form model to estimate the relationship between personality, attitudes and WTR. I thus seek to address whether both personality and attitudes relate to willingness to relocate, thus providing a foundation for future research to explore how personality and attitudes related to willingness to relocate (causal structure), which I regard as interesting and compelling topic of research.

## V. METHODS

### *The Company*

The data were collected from current employees in a Fortune 1000 company. The company is the largest producer of construction aggregates and other construction materials in the United States. Its operations consist of large mines where various types of stone/rock are quarried and then manufactured into ready-to-use construction materials, largely used in domestic infrastructure development. Its main customers are large commercial construction contractors who use its products in the development of public infrastructure (roads, bridges, and airports), large commercial/residential buildings, and other large public works projects.

The company is large in scale, with roughly 11,000 employees nationwide. The structure of the company consists of a corporate headquarters based in the southeast US, and nine divisions each headquartered in a different geographic area. The company has divisions and operations in every region of the US with the exception of the Pacific Northwest, Northeast, and Great Plains states. The divisional structure has developed largely due to acquisitions by the parent company, resulting in divisions that operate somewhat independently from another, although coordinated via the corporate headquarters.

The employee pool consists of both operations and professional staff: operations staff mainly works at production facilities, while professional staff mainly works at division and corporate headquarters. The majority of operations positions are blue-collar occupations such as operating engineers, truck drivers,



and maintenance, but engineers, safety experts, and multiple layers of management also work at operations facilities. The division and corporate headquarters are comprised mainly of professional employees, as would be expected in any large corporate organization (i.e. sales, finance, HR, etc). The company is primarily non-union, the exception being the operations of their Midwest and west coast operations.

The company is in a strong market position, being the largest construction aggregate producer in the United States. The company has been growing steadily, mainly through acquisitions of smaller US construction aggregate producers. Their main domestic competitors are smaller local operations whose advantage is purely geographical—i.e. proximity to the construction project. The company does face potential pressure from larger overseas operations who might try to penetrate the US market.

The company has been strong with regard to financial performance. It has been steadily growing for decades by acquiring smaller operations in the US. Its business is fairly stable due to a large percentage of revenue coming from government spending on infrastructure; however given this it is somewhat cyclical with the US economy. The recent economic recession in the US has resulted in declining revenues for the company, but the company is financially stable due to conservative financial management. The financial performance of the company is expected to rebound with the US economy.

### *Survey Development*

Prior to developing the final survey, pilot interviews were conducted with company employees. The pilot interviews were designed to assess what factors were important to individuals when facing a relocation decision—which I hoped might yield new factors not previously investigated empirically. Further, results from these pilot interviews would form the basis of measures of specific (vs. global) relocation attitudes and subjective norms in the Theory of Planned Behavior model (see Ajzen, 1991 for a discussion of specific vs. global measures of attitudes).

The interviews were conducted either via telephone or face-to-face, depending on the location of the participant. The participants were selected to provide a diverse pool of respondents: both genders, a range of ages, a range of professions, a range of family situations, etc. Participants were also selected to provide diversity in relocation experience: some had previously relocated, and some had not, but might face such a decision in the future.

Eighteen employees were invited to participate, but due to scheduling constraints, thirteen (13) interviews were eventually conducted over a one-month period. The interviews lasted roughly 45 minutes, and followed a semi-structured format. Participants with previous relocation experience were asked to reflect on their previous relocation(s), and those who had not previously relocated were asked about a hypothetical relocation scenario. Participants were asked what factors/influences weighed on the decision, and were instructed to think of work-related factors, non-work factors, and personal factors. They were allowed to

give open-ended responses about what factors were important to them in making the decision. During the interviews, I would sometimes ask them to expand on answers or direct follow-up questions based on previous responses.

The responses from the pilot interviews were read to determine if there might be other important factors affecting willingness to relocate that previous research or the present study were ignoring. I looked for common patterns of responses in each of the categories of questions, as well as factors that were novel as antecedents of willingness to relocate. Much of the factors that previous research had identified were important showed up repeatedly and nothing that was both unique and important was uncovered, but the responses provided me with a richer understanding of the factors that are involved in a relocation decision, as well as interesting quotes to use when publishing research on the topic.

The original survey instrument was then developed. The survey instrument contained items that addressed demographics, career information, relocation information, personality, personal and normative attitudes, and willingness to relocate. This survey was presented to my dissertation committee, who encouraged modifications—mainly shortening the survey to make it more manageable for respondents. Additionally, the original survey instrument contained a one-item measure for willingness to relocate, and I was encouraged to develop a multi-item scale for measuring willingness to relocate.

After making the recommended modifications, the final survey instrument consisted of 108 items: 18 demographic items, 5 relocation/travel items, 6 career-related items, 50 personality items, 14 attitudinal/normative/perceived control

items, and 6 items assessing willingness to relocate. In addition, there was an open-ended response blank that allowed individuals to make any additional comments on factors affecting their willingness to relocate.

The final survey was piloted on 15 of my friends/family, who checked for time required to complete it, spelling/editing errors, confusing wording, mistakes in the on-line format, etc. Feedback was solicited and minor changes were made based on the feedback. The average time for completion was roughly 20 minutes. The revised version of the final survey was also examined by my dissertation committee chair, who approved its design and content.

The survey was executed via an on-line interface for respondents. I designed the survey using the Qualtrics, Inc. software, which allows for easy survey construction with many different question types and formats. The completed survey was then launched and hosted on the Qualtrics website ([www.qualtrics.com](http://www.qualtrics.com)), where respondent data was collected and stored in a secure database. Upon completion of the data collection, the data was exported directly into an SPSS spreadsheet for cleaning and analysis.

### *Procedure*

Entrance into the company was obtained via an acquaintance from graduate school who works in the company's Midwest division. My contact set up a meeting with the Director of Human Resources for the division, to whom I proposed to the project to. The Director was interested in the supporting the project, which was then communicated to the company's corporate headquarters.

I proposed the project to the Director of Organizational Development, who agreed to support it company-wide. A member of the corporate OD staff was then designated as my contact to assist me in the execution of the project.

I had previously identified the target sample for this project to be professional employees, as they are considered the set of employees most likely to have either relocated previously or to face a relocation decision in the future. The desired parameters of the sample were communicated to my contact in corporate OD, who helped me identify those employees in the company. Once eligible employees were identified, an email list of these employees was obtained from company HR records.

Professional employees were then approached via two separate emails about participating in a research project. The first email was generated from the company's HR Directors, informing the employees that I had approached the company about collecting my dissertation data there, that the company was supporting the project by granting me access to their employees, and that I would be contacting them in the near future (see Appendix B). The second email came directly from me, describing the nature of the project and its independence from company involvement, and inviting them to participate (see Appendix C). If they chose to participate, there was an embedded link to the survey website where they could directly access and complete it. As incentive to participate, employees were informed that there would be a drawing for two \$100 gift certificates to the retail outlet of their choosing.

### *Sample*

Data were collected from all ten divisions of the company. A total of 1676 survey invitations were sent to the eligible employees, of which 959 responses were received (57% response rate). The average time to complete the survey was 20-25 minutes. Data were then examined for integrity, and cases were dropped where large numbers of items or entire scales were skipped, or in cases where the respondent completed the survey too quickly (e.g. under 10 minutes) to have completed the survey validly. These cleaning procedures resulted in the elimination of 22 cases, for a total final sample size of  $n = 937$ .

In cases where there were a small number of items that were not responded to, the cases were kept and missing values were imputed for non-demographic variables only. STATA's imputation function was used to generate the missing values using a regression algorithm feature to calculate imputed values from other existing variable values (see Appendix F for further discussion of the imputation procedure).

Sample characteristics were as follows. Gender: 86% male/ 14% female; Racial composition: 93% Caucasian/ 2% African American/ 3% Latino/ 1% Asian; Marital status: 87% married or living as/ 13% currently not married or living as; Education: 68% college graduates/ 20% have some college or vocational schooling/ 12% no college or vocational education. The mean age of the sample was 46.3 years, and the mean number of children per family is 3.

**TABLE 1—Descriptive Statistics**

Variable	Scale/Coding	Mean	Std. Deviation
Gender	0= female, 1= male	0.14	0.35
Age	Number corresponds to age in years	46.35	9.48
Racial minority/maj.	0= minority, 1= majority	0.07	0.25
Marital Status	0= not married, 1= married	0.87	0.34
# children (inc. step)		3.01	1.23
Elder Care	0= elder care, 1= no elder care	0.81	0.39
Education	0= No HS degree, 1= HS grad, 2= some college, 3= Associate's degree or trade school, 4= Bachelor's degree, 5= Graduate or Prof. degree	4.34	1.33
Org. Tenure		14.54	10.02
% Household Inc.	1 to 20 (0= 0%, 20= 100%)	15.19	3.91
Neuroticism	1 to 5 Likert, 1= strongly disagree, 5= strongly agree	2.35	0.46
Excitement Seeking	1 to 5 Likert, 1= strongly disagree, 5= strongly agree	3.74	0.60
Openness	1 to 5 Likert, 1= strongly disagree, 5= strongly agree	3.48	0.43
Conscientiousness	1 to 5 Likert, 1= strongly disagree, 5= strongly agree	4.08	0.38
Last Relo	1 to 6, 1= less than 1 year ago, 6= 15+ years ago	4.10	1.66
Relo Rating	1 to 7 Likert, 1= very easy, 7= very difficult	3.20	1.40
Career Goals	1 to 7 Likert, 1= very far away, 7= achieved	4.27	1.39
Promotion Readiness	1 to 5 Likert, 1= not at all ready, 5= very ready	3.87	0.87
Relocation Attitudes	1 to 7 Likert, 1= very positive, 7= very negative	4.74	0.99
Subjective Norms	1 to 7 Likert, 1= very likely, 7= very unlikely	3.91	1.30

*Measures*

Demographic Variables

Respondents provided information on their gender, age, race, marital status, number of children, if they had parental or other elderly care responsibilities, level of education, and percentage of household income that their job accounted for. These items were modeled on demographic items found on large population surveys such as the US Census. The items were chosen due to their status as commonly measured demographic factors and/or due to their inclusion in previous investigations of willingness to relocate.

### Work-Related Variables

Organizational tenure was assessed by asking “how long have you been working for your current employer?”, which was answered in number of years. Career goal achievement was assessed by asking respondents “How close do you feel to achieving your career goals?” The response scale was 1 to 7, with 1= *very far away* to 7= *I’ve achieved them*. Promotion readiness was assessed by asking respondents “How ready do you believe you are to be able to successfully handle a promotion from your current position?” The response scale was 1 to 5, with 1= *not at all ready* to 5= *very ready*. Again, these variables were chosen due to being identified as relevant predictors of willingness to relocate in prior research on the topic.

### Relocation Variables

Three relocation-related variables were also collected via single-item measures. Years since the last relocation was obtained by asking respondents “how long ago was your last relocation”. The number of previous relocations was assessed by asking respondents “How many times in your life have you previously relocated for either you or your (current or former) spouse/partner's job?”. Response options ranged from 0 to 5+ times. The difficulty of prior relocation was assessed by asking the respondents “how would you rate your previous relocation experiences?”. The response scale was 1 to 7 with 1= *very easy* to 7= *very difficult*. These variables were again chosen as they have been previously identified as relevant in predicting willingness to relocate.



## Personality Variables

Personality variables were measured by scales constructed from the International Personality Item Pool (IPIP) (Goldberg- <http://ipip.ori.org/>). The IPIP is an online pool of items that measure self-report individual personality, mirroring the Big Five dimensions. Researchers can choose pre-validated scales, or compose scales of a desired length by selecting any number of positively- and negatively-keyed items from an existing pool and combining them to form scales. Due to length limitations and specific needs of the project, I chose to construct my own scales for each of the personality constructs.

For each of the items, respondents are presented with a declarative statement and asked to respond with the extent they believe the statement accurately or inaccurately describes them—yielding a Likert response format on a five-point scale. The responses to the items that compose each scale are then averaged, and a final scale score is computed.

Neuroticism was measured with 10 items. A mix of both positively and negatively keyed items was used to construct the scale. The scale response format was *1 = very inaccurate* to *5 = very accurate*. The mean and standard deviation of the scale was 2.35 and .46, respectively. The reliability for the scale was  $\alpha = .80$ .

Conscientiousness was also measured with 10 items both positively and negatively keyed. The response format was the same as above. The mean and standard deviation of the scale was 4.07 and .38, respectively. The reliability for the scale was  $\alpha = .71$ .

Openness to Experience was measured with 7 items both positively and negatively keyed. The response format was the same 1 to 5 scale as above. The mean and standard deviation of the scale was 3.48 and .43, respectively. The reliability for the scale was  $\alpha = .53$ .

Excitement-seeking (facet) was measured with a two items, one positively and one negatively keyed (the Extraversion facet was not measured in this study for the previously mentioned reasons). The response format the same 1 to 5 scale as above. The mean and standard deviation of the scale was 3.74 and .60, respectively. The reliability for the scale was  $\alpha = .57$ .<sup>5</sup>

### Attitudinal Variables

The attitudinal measures were constructed according to the guidelines suggested by Ajzen (1991)<sup>6</sup>. Ajzen's (1991) instructions for measurement of the TPB variables allows for measurement of each variable at either a global level or a more specific level, depending on the needs and desires of the research project. Measurement at the global level allows a researcher to investigate if/how general attitudes are related to the prediction of specific behavior with a relatively small number of items—however the causes of these attitudes are not able to be investigated. Measurement at the specific level allows a more fine-grained analysis of the causes of general attitudes, but requires a relatively large number

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<sup>5</sup> If we use the Spearman-Brown prophecy formula to calculate the reliability of the scale if it were doubled in length (to 4 items), the resulting scale reliability would be  $\alpha = .72$ , a more acceptable value.

<sup>6</sup> The only departure from the Ajzen (1991) guidelines was increasing the number of items assessing global subjective norms and perceived behavioral control to 3 (versus using single-item measures) in order to improve reliability and validity of the measures.

of items to investigate these root causes. For this project, the attitudinal variables were measured solely on a global basis, mainly due to survey length limitations.

The global attitude toward relocation was measured by asking participants “Relocating geographically for a promotion is...”, followed by a eight semantic differential anchors. These anchors include: *rewarding-punishing, useful-useless, bad-good, harmful-beneficial, wise-foolish, unpleasant-pleasant, desirable-undesirable, risky-exciting*. These anchors corresponded numerically to a 1 to 7 Likert scale, and were arithmetically averaged to produce a final, global attitude towards relocation evaluation. Reliability for this scale was  $\alpha = .92$ .

The global subjective norm was measured by three items: “*Most people who are important to me think I should relocate if offered a promotion*”, “*Most people who are important to me would question my decision if I declined to relocate for a promotion*”, and “*Most people who are important to me expect me to relocate if offered a better job*”. Responses were on a 1 to 7 Likert scale, with anchors being *unlikely-likely*. The arithmetic average of the three items comprised the final measure of global subjective norm. Reliability for this scale was  $\alpha = .64$ .

Global perceived behavioral control was also measured by three items: “*I feel that I would have the ability to relocate if offered a suitable opportunity by my company*”, “*There are external factors in my life that would prevent me from relocating even if offered a suitable opportunity*”, and “*If offered a relocation opportunity I was interested in, I would be able to accept it*”. The same 1 to 7 *unlikely-likely* Likert scale was used here. Reliability for this scale was  $\alpha = .85$ .

## Willingness to Relocate

WTR was assessed by a 6-item scale created uniquely for this project, with some items adapted from the Eby and Russell (2000) measure of WTR. I decided to create my own scale for two reasons. First, there is no well-validated multi-item measure of WTR. Many previous studies have used single-item measures (c.f. Brett & Reilly, 1988; Noe & Barber, 1993; Ostroff & Clark, 2001) which arguably yield questionable validity. Other studies using multi-item measures were created for specific applications of WTR such as willingness to relocate for a certain type of position (demotion, lateral role, or promotion; Noe, Steffy, & Barber, 1988) or to a specific type of locale (urban, suburban, rural; Noe & Barber, 1993), which make them less generally applicable. For the purposes of this project, the ideal WTR scale would be multi-item as well as generally applicable, and so it was necessary to develop my own.

Second, there has been criticism of some applications of the TPB model to specific behaviors, mainly revolving around the use of behavioral intention versus expectation. Based on meta-analytic findings, Hausenblas, Carron, & Mack (1997) specifically argue that behavioral *expectations* are better indicators of behavior than behavioral *intentions*. They conclude that when applying the TPB, researchers should use a measure of behavioral expectation. Given that this issue does not at present seem to be fully resolved, I chose to develop a scale that addressed the concern of Hausenblas et al (1997) about the use of intention (willingness) vs. expectation (likelihood) as applied to willingness to relocate. The scale I developed for this project contains items that measure both intention

and expectation, which allows us to examine whether there are meaningful differences between the constructs, or whether they can be used in conjunction with each other or independently.

The result is a 6-item WTR measure that contains items addressing both willingness to relocate and likelihood of doing so. A sample willingness item is “*I would be willing to relocate if offered a suitable opportunity*”. A sample likelihood item is “*If I had to make a relocation decision today, I would likely choose to relocate*” (for a full list of items, please consult Appendix G). The response format is *1 = strongly agree* to *7 = strongly disagree*. The alpha reliability for this scale is  $\alpha = .96$ .

### *Analysis*

Analytic methods primarily consist of hierarchical regression analyses using the SPSS 16.0 program. This analysis represents a reduced-form analysis of the model proposed in Figure 2. I have not formally tested the structural model, but the hierarchical regression analysis does allow me to directly test the relationship of personality variables to willingness to relocate, as well as the relationship of attitudinal variables to willingness to relocate.

For the hierarchical regression analysis, independent variables were entered into the regression equation in blocks, according to the recommendations of Cohen, Cohen, West, & Aiken (2003): variables with causal priority (those variables that have causal influence on later variables) are entered in earlier blocks than other variables so that any shared variance between independent

variables in different blocks is accounted for by the earlier block of variables. As such, demographic variables comprise the first block, personality variables the second, career- and job-related variables the third, and attitudinal variables the fourth and final block. Together, the four blocks of variables comprised what is hereafter termed the “base regression model”.

To then examine the relative impact of each block of variables on variance explained, each block of variables is “trimmed” from the base model, and a reduction in model fit is assessed by means of formal F-tests as well as calculating the reduction in R-squared. This method is a conservative method of calculating the relative impact of each block of variables as it negates any order-of-entry issues that are associated with typical hierarchical regression procedures.

One final note on the analysis: a two-stage hierarchical regression analysis was employed due to expected co-linearity issues between the attitudinal variables and the demographic, personality, and career/relocation variables. The first stage of the analysis regressed the individual attitudinal variables against the other predictors in the “base” model. The residuals from this regression were then saved as variables in the data set, and were used as proxies for the attitudinal variables. What this achieved is parsing out all of the shared variance, and thus co-linearity, between the attitudinal variables and all the other independent variables. What remains in the residuals of the attitudinal variables is all the unique variance that the attitudinal variables provide in explaining willingness to relocate, after all the shared variance has been parsed out. The second stage of the regression then incorporates these residual attitudinal variables as fourth-block

independent variables in the hierarchical regression, and is ultimately reflected in Table 3.

## VI. RESULTS

### Factor Analyses

Given that the Willingness to Relocate variable was adapted from other scales and the Theory of Planned Behavior variables were developed specific to geographic relocation for this project (though according to precise instructions from Ajzen), disciplinary convention stipulates that factor analyses are necessary to provide validity evidence of the new variables. To this end, I conducted two separate confirmatory factor analyses (CFA) to confirm the factor structure of the aforementioned variables. The CFAs were conducted in accordance with the recommendations outlined by Klein (2005—see chapter 7).

*Willingness to Relocate*--as previously mentioned, the WTR scale was created with the concerns of Hausenblas et al. (1997) in mind—namely whether there are critical differences between the willingness and likelihood of engaging in a behavior. As such, items reflecting both willingness and likelihood of relocating were created for the scale. To initially examine whether there was much difference between willingness and likelihood of relocation, I created two different scales and tested the correlation between them to determine the amount of overlap. The correlation between the two sub-scales was .93, and the correlation between the two sub-scales and the combined scale was .98 for both. Given this information, I hypothesized that the scale could function unitarily.

To test this hypothesis, I conducted a CFA using the LISREL 8.8 statistical software package. I tested a model with all six items loading onto a single factor (i.e. a one-factor model). Model fit statistics confirm that a one-



factor model fits the data acceptably:  $\chi^2 = 124.88$  ( $p = 0.0$ ), RMSEA = .12, CFI = .99. One concern here is that the RMSEA value falls outside of the range of acceptable fit which is generally considered to be less than .10 (Klein, 2005). However, the correlation evidence presented above, in combination with the favorability of the other fit indices and the recommendation by Klein that multiple measures of fit be used in assessing models, provides sufficient evidence to conclude that a one-factor structure of WTR is acceptable for use.

*Theory of Planned Behavior*—as previously mentioned, three variables were constructed according to instructions by Ajzen to assess the TPB framework: attitudes toward relocation, subjective norms, and perceived behavioral control. Given this structure, I conducted a CFA testing the fit of a three-factor model with the items loading on their hypothesized factors. Model fit statistics confirm that a three-factor model as constructed fits the data reasonably well:  $\chi^2 = 634.30$  ( $p = 0.0$ ), RMSEA = .09, CFI = .97. The fit of this model was assessed versus the fit of a 2-factor model where the items for both relocation attitudes and subjective norms loaded onto the same factor (to test whether these are separate factors or if norms about relocation cannot be distinguished from personal relocation attitudes). The model fit statistics are worse than the 3-factor model:  $\chi^2 = 1027.07$  ( $p = 0.0$ ), RMSEA = .12, CFI = .96. Given these model fit statistics, it was concluded that the three-factor structure was superior to the 2-factor structure, and therefore appropriate for use in regression analyses.

### **Regression Analyses**

Table 1 contains the descriptive statistics as well as the coding for the variables, while Table 2 contains the correlation matrix for the variables. With regard to personality variables, Neuroticism was found to be negatively correlated with WTR ( $\rho < .01$ ), while Openness to Experience, Excitement-seeking, and Conscientiousness were all found to be positively correlated ( $\rho < .01$ ). Turning our attention to Theory of Planned Behavior variables, we find that all three variables are strongly correlated with WTR: Relocation Attitudes (.64), Subjective Norms (.50), and Perceived Behavioral Control (.85), all significant at the  $\rho < .01$  level.

**Table 2—Correlation Matrix**

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1. Gender	1																			
2. Age	-0.089	1																		
3. Racial Minority	-.146	.01	1																	
4. Marital Status	.057	-.024	.021	1																
5. No. of Children	-.166	.255	.237	.019	1															
6. Elder Care	-.011	-.229	-.008	-.054	.013	1														
7. Education	.147	-.160	-.034	.034	-.155	.108	1													
8. % Total Inc.	-.222	.081	-.259	-.031	.080	.032	-.046	1												
9. Neurot.	.149	-.109	-.081	-.024	-.129	-.024	-.038	-.018	1											
10. Excite Seek.	-.175	-.141	-.004	-.081	.02	.021	-.019	.054	-.275	1										
11. Openness	.027	.061	-.013	.083	.063	-.055	.090	-.011	-.325	.307	1									
12. Conscien.	.026	-.055	.011	.014	-.025	.042	.082	.056	-.379	.257	.239	1								
13. Org. Tenure	-.074	.483	.011	-.042	.132	-.147	-.303	.114	.027	-.125	-.071	-.05	1							
14. Last Relo	.029	.438	.013	.005	.167	-.109	-.016	-.049	-.016	-.113	-.01	-.02	.336	1						
15. Relo Rate	.051	-.025	-.067	-.01	-.015	-.009	-.019	.012	.174	-.054	-.05	-.06	-.021	-.065	1					
15. Car. Goal Close.	.062	.453	.049	-.032	.110	-.112	-.052	-.003	-.06	-.116	-.05	.03	.304	.161	-.033	1				
17. Promotion Recd.	.059	.452	.048	-.032	.111	-.113	-.05	-.004	-.081	-.113	-.05	.031	.303	.160	-.034	1.00	1			
18. ReloAtt (Residual)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
19. SubNorm (Residual)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.439	1	
20. WTR	-.167	-.147	-.006	.037	.05	.101	.029	.105	-.206	.274	.208	.159	-.215	-.251	-.101	-.260	-.259	.494	.362	1

\* Correlations above .07 are significant at the 0.05 level (2-tailed).

\*\* Correlations above .085 are significant at the 0.01 level (2-tailed).

Table 3 contains the results of the hierarchical regression analyses. The base model which included demographic, personality, career/relocation, and attitudinal variables explained 51.9% of the variance in willingness to relocate ( $R^2 = .519$ )<sup>7</sup>. To test the significance of each block of variables, as well as measure the unique variance explained associated with each block, I removed each block of variables from the base model and ran f-tests to compare the nested model against the base model.

As can be seen in Table 3, the demographic control variables in the first block accounted for 3.2% of the unique variance in WTR ( $R^2 = .032$ ). Trimming this block from the base model resulted in worse fit [ $F(8, 606) = 5.07, \rho < .001$ ]. The only variables remaining significant in the first block are gender ( $\beta = -.112, \rho < .001$ ) and number of children ( $\beta = .065, \rho < .05$ ). The results indicate that females are less willing to relocate than men, which is consistent with prior empirical findings, and that the more children an individual has, the more willing they are to relocate. This last result has been found before (Brett & Reilly, 1988; Ostroff & Clark, 2001; Turban et al, 1992) in prior research, although there have been mixed findings (Stroh, 1999).

The second block contains the results for the personality variables, one of the central thrusts of this dissertation. The personality variables together account for an extra 3.7% of the variance in WTR ( $R^2 = .037$ ). Trimming the personality variables from the model resulted in a worse fit [ $F(4, 606) = 11.70, \rho < .001$ ].

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<sup>7</sup> I also ran the geographic division the employee worked in as control variables to see if there were any divisional differences in willingness to relocate. Using indicator variables for the geographic divisions and the corporate HQ as the “base case”, the regression results yielded no significant divisional effects. Correlational analyses of each of the divisions and willingness to relocate also yielded no significant relationships.

More interestingly, we find that Openness to Experience ( $\beta = .065, \rho < .05$ ), Excitement-seeking ( $\beta = .109, \rho < .001$ ), and Conscientiousness ( $\beta = .081, \rho < .02$ ) are all positively related to willingness to relocate, as hypothesized.

Neuroticism was not significantly related to willingness to relocate.

The third block examines the influence of several career and relocation-related variables that have been investigated in prior empirical studies. The inclusion of this block of variables again yields a significant increase in explanatory power of 10.9% ( $\Delta R^2 = .109$ ). Trimming this block of variables from the model again results in worse fit [ $F(5, 606) = 27.45, \rho < .001$ ].

Organizational tenure is negatively related to willingness to relocate ( $\beta = -.094, \rho < .01$ ), such that individuals with a longer organizational tenure are less willing to relocate. Closeness to career goal achievement was negatively related to willingness to relocate ( $\beta = -.187, \rho < .001$ ), concluding that those who are closer to achieving their career goals are less willing to relocate. Promotion readiness was positively related to willingness to relocate ( $\beta = .156, \rho < .001$ ), such that individuals' who believe they are ready to handle a promotion are more willing to relocate. With regard to the impact of prior relocations on willingness to relocate, we find that time since last relocation is negatively related to willingness to relocate ( $\beta = -.221, \rho < .001$ ), such that individuals' are less willing to relocate the longer it has been since previous relocations. We also find that the rating of the previous relocation is negatively related to willingness to relocate ( $\beta = -.107, \rho < .001$ ), such that the more difficult the last relocation was, the less willing the individual was to relocate presently.

The fourth block contains the two of the three attitudinal variables<sup>8</sup> comprising the Theory of Planned Behavior. The variables were first run in the model in their original form, but this was modified due to predicted (and confirmed) co-linearity with personality and other variables impacting the regression results. As such, the two attitudinal variables were regressed against the base regression model (the first three blocks) in order to parse the shared variance (co-linearity). The residuals of these two models were then saved as variables and included as independent variables in the fourth and final block of the hierarchical regression. The result is that any of the shared variance (co-linearity) between the attitudinal variables and the other independent variables in the model is parsed out, avoiding the co-linearity issues of the attitudinal variables with other variables.

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<sup>8</sup> Given the extremely strong correlation between Perceived Behavioral Control and WTR, it was decided that the Perceived Behavioral Control variable is not appropriate for analysis. This may be due to misinterpretation of the survey items assessing Perceived Behavioral Control: these survey items were attempting to assess to whether there are external factors present in an individual's life that would prevent them from relocating if offered an opportunity (i.e. care of elderly parent, child custody issues, other legal issues, etc). It is possible that the items were misinterpreted by respondents and are not operating functionally different enough from the willingness to relocate items to be considered separate variables, thus leading to an artificially high correlation. I am thus using the most conservative approach and excluding this variable from the analysis to eliminate any possible bias caused by an extreme overlap between a predictor and criterion variable. Further, an investigation of perceived behavioral control is not central to this research project, so eliminating the variable from the analysis does not crucially alter the aims of the project.

**Table 3—Hierarchical Regression Results**

<b>Variable Blocks</b>	<b>St. Coeff.</b>	<b>t-stat</b>	<b>Sig.</b>
<b>Demographic Variables</b>			
Gender (0= male, 1= female)	-0.112	3.64	0.001
Age	0.074	1.84	
Marital Status (0= not married/living as, 1=yes)	-0.044	1.42	
Race (0= majority, 1= minority)	0.043	1.51	
No. Children	0.065	2.06	0.05
Eld. Care (0= yes, 1= no)	0.028	0.97	
Education (higher = more educ.)	-0.055	1.78	
% house inc. (higher = greater %)	0.034	1.1	
<b>R-sq</b>	<b>0.062</b>	5.07	0.001
<b>Personality Variables</b>			
Neuroticism	-0.040	1.2	
ExSeek	0.109	3.43	0.001
Openness	0.065	2.03	0.05
Conscient.	0.081	2.49	0.02
<b>R-sq</b>	<b>0.138</b>		
<b>ΔR-sq.</b>	0.077	13.64	0.001
<b>Work-Related Variables</b>			
Org. Tenure (higher = longer)	-0.094	2.76	0.01
Last Relo (higher = longer ago)	-0.221	6.75	0.001
Relo Rate (higher = more difficult)	-0.107	3.73	0.001
Career Goals (higher = closer to achieve)	-0.187	5.58	0.001
Promo. Read. (higher = more ready)	0.156	4.87	0.001
<b>R-sq</b>	<b>0.249</b>		
<b>ΔR-sq.</b>	0.11	17.82	0.001
<b>TPB Variables</b>			
Relo. Attitude residuals	0.416	13.24	0.001
Norms residuals	0.180	5.75	0.001
<b>R-sq</b>	<b>0.519</b>		
<b>ΔR-sq.</b>	0.27	170.18	0.001

As seen in Table 3, the inclusion of the attitudinal variables yielded significant explanatory power—an increase of 27.0% ( $R^2 = .270$ ). Trimming these variables from the base model resulted in worse overall fit [ $F(2, 606) = 170.61, p < .001$ ]. Personal relocation attitudes were significantly related to

willingness to relocate ( $\beta = .416, \rho < .001$ ), such that those with more positive personal attitudes toward relocation were associated with a greater willingness to relocate. Similarly, subjective norms (the attitudes of important others toward relocation) were significantly related to willingness to relocate ( $\beta = .180, \rho < .001$ ), such that if others who are important to you hold positive attitudes toward relocation, you will be more willing to relocate.

**Figure 3: Summary of Results**

<b>Theory</b>	<b>Relationship w/ WTR</b>	<b>Result</b>
<b>Big Five</b>		
Conscientiousness	Positive	Supported
Openness	Positive	Supported
Excitement Seeking	Positive	Supported
Neuroticism	Negative	Partially Supported*
<b>Planned Behavior</b>		
Relocation Attitude	Positive	Supported
Subjective Norms	Positive	Supported
PBC	Positive	Not Tested

*\*Note: I claim partial support here as the correlation between Neuroticism and WTR is significant (and in the predicted direction). However, the regression relationship between the two variables is non-significant.*



## **VII. DISCUSSION**

The hierarchical results presented in Table 3 largely confirm the hypotheses regarding the relationship of personality variables and willingness to relocate. After controlling for the demographic factors included in the first block, Openness to Experience ( $\rho < .05$ ), Excitement-seeking ( $\rho < .001$ ), and Conscientiousness ( $\rho < .02$ ) were all found to be positively related to willingness to relocate. Despite being significantly correlated, Neuroticism was found not to be significantly related in the subsequent regression analysis. Comparing the standardized coefficients of the personality variables against the demographic variables, we find that the coefficients for the personality variables (.065, .109, .081, respectively) are greater than the coefficients for the demographic variables (the only exception being the standardized coefficient for gender [-.112]), and are thus more powerful predictors of willingness to relocate. Additionally, the amount of variance explained by the four personality traits was greater than the variance explained for the block of demographic characteristics (7.7 % to 6.2%).

Further, personality characteristics may also prove more practically useful relative to demographic factors, at least with regard to succession and developmental planning. Many companies already assess personality characteristics when assessing candidates during their selection processes or for developmental purposes. Though demographic data is easier to collect and more widely available, many demographic characteristics (e.g. gender, age, marital status) are subject to Title VII discrimination limitations, and thus may not be used when making decisions about succession and developmental planning. This

last fact stands in contrast to personality variables, which have been shown to have little adverse impact in employment decisions, especially with regard to race (Foldes, Dueher, & Ones, 2008).

Turning attention to the Theory of Planned Behavior (TPB), the results in Table 3 support the hypothesis that the theory is an appropriate theoretical framework from which to understand willingness to relocate. The results demonstrate that both the personal attitudes of the individual toward relocation, as well as the attitudes of important referents to the individual, strongly influence willingness to relocate. Examining the standardized coefficients, we see that the coefficient for personal attitudes toward relocation (.417) is the largest of all the variables in the model, making it the strongest predictor. The coefficient for others attitudes towards relocation (.180) is again amongst the highest, surpassed only by those for time since last relocation and career goal distance. Further, their addition as a block to the base model yields an additional 27% in explanatory power, even after parsing out shared variance with other independent variables.

The pattern of results is also logically consistent: the personal attitudes of the individual are more strongly related to willingness to relocate than the attitudes of others (subjective norms)—evidenced by a standardized regression coefficient for personal attitudes which is roughly 2.5 times larger than for others' attitudes (variables were measured on the same 7-point scale). Personal attitudes dominate an individual's willingness to relocate, but the opinion of others does have a significant influence.

These results are consistent with prior findings using the Theory of Planned Behavior as an explanatory framework for behavioral intentions and ultimately behaviors—attitudes have been consistently found to be very strong predictors of both (Hausenblas et al, 1997), accounting for substantial amounts of explanatory variance. We can clearly conclude that attitudes toward relocation are strong predictors of willingness to relocate, and thus that the Theory of Planned Behavior is an appropriate theoretical framework from which to understand willingness to relocate.

Finally, the career-related variables were also strong predictors of willingness to relocate. The standardized coefficients for time from last relocation (-.221), rating of last relocation (-.107), career goal distance (-.187), and promotion readiness (.156) were all as great as or greater than the personality coefficients and demographic coefficients. This indicates that despite significant relationships between relatively stable demographic and personality characteristics, career and relocation factors are stronger predictors of willingness to relocate.

The fact that career and relocation variables are strong predictors of willingness to relocate results in an interesting paradox: these variables may be exceedingly useful in predicting willingness to relocate given that they are easily accessible, and somewhat commonly measured/tracked. However, these are variables that are subject to change based on circumstances—unlike the relatively stable demographic and personality characteristics—and can only be measured during the course of one's career. These features make these variables less useful

in long-term planning such as the kind necessary for succession planning purposes.

The significance of the relocation variables is interesting, as they suggest that companies who manage relocation effectively (i.e. assisting employees in relocating and adjusting to the relocation, relocating employees in a more compressed time period) will have employees who are more willing to engage in future relocations. This is common sense, but provides empirical evidence for what is thought anecdotally to be true.

### **Theoretical Implications**

The primary implication of this research is that the Theory of Planned Behavior is an appropriate theoretical framework from which to understand willingness to relocate. Global attitudes (personal, perceived norms) appear to have substantial explanatory power in explaining willingness to relocate, and thus the measurement of attitudes is a fruitful means of explaining and predicting willingness to relocate. This is an important implication given that past research has proceeded unorganized across multiple disciplines (e.g. psychology, sociology) and multiple foci (including demographic, work-related, and non-work factors), yielding a pattern of mixed results and few reliable conclusions. Future research now has an organizing framework from which to proceed, and a methodological blueprint provided by Ajzen to test hypotheses with.

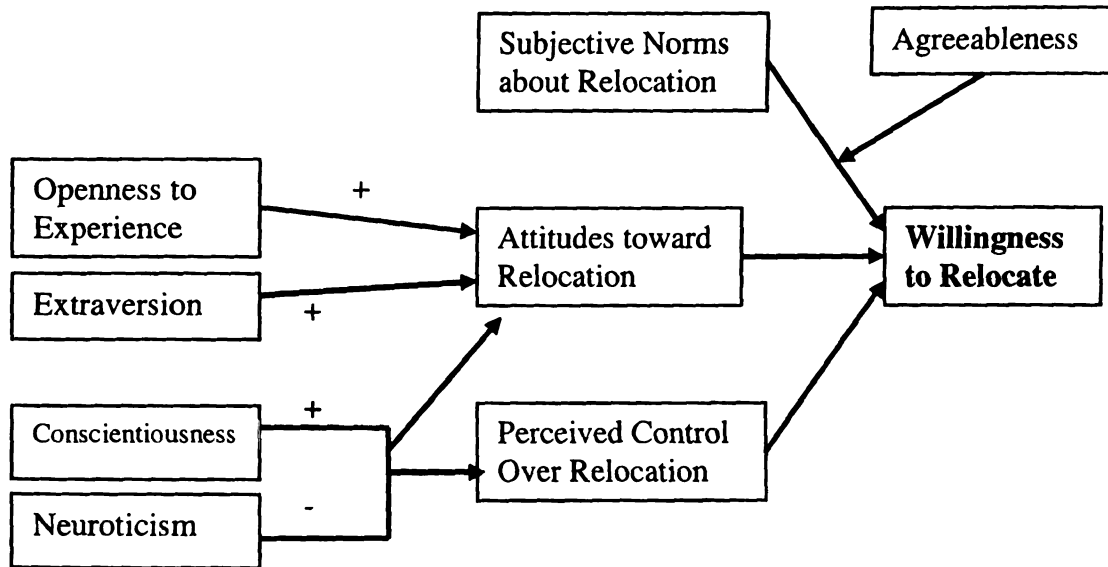
More specifically, future research can proceed by investigating possible predictors of each of the components of the TPB model—personal attitudes,

perceived norms, and perceived control over relocation. It is likely that the different model components are predicted by different factors. For example, personal attitudes might be predicted by a combination of inherent personal characteristics (i.e. demographic, cognitive ability, personality), work-related factors (career commitment, perceived future opportunities, LMX, etc.), and non-work (community embeddedness and satisfaction) factors. In contrast, perceived norms might be affected by a combination of other factors including family factors (spouse's attitudes, number/age of children, proximity to relatives, etc.) and cultural beliefs (centrality of work, paternal responsibility, etc.). With an organizing framework such as the TPB, future research in this area can proceed more efficiently and strategically along these lines.

One such area of research suggested by the results is examining how personality is related to attitudes and how that relationship can be used to predict willingness to relocate. As previously discussed, we have theoretical reasons to believe that personality might predict attitudes to some degree. This relationship is confirmed by the fact that there are significant correlations between some of the personality variables and attitudinal variables, and that their relationship resulted in collinearity issues that had to be addressed by partialing out shared variance using a 2-stage regression. Thus the empirical evidence suggests that there is in fact a relationship, but the precise structure of that relationship is unknown. Given what we know about personality and attitudes, I suggest that a model such as the following is at least plausible for modeling the causal structure of personality, attitudes, and WTR. It is logical that personality should predict

attitudes and perceived control over relocation. What is less clear and subject to more speculation is the exact nature of the relationships—for example whether the attitudes fully or partially mediate the Personality-WTR relationship, whether Agreeableness does in fact moderate the Subjective Norms-WTR relationship, etc. Further research can be conducted to formally test these proposed relationships and determine the correct causal structure.

**Figure 4—Hypothetical Structural Model of Personality, Attitudes, & WTR**



A second benefit of concluding that the TPB is an appropriate organizing framework for this research is that it might help organize the research for others outside of the psychological community as well. The organizational/managerial psychology community tends to focus on individual and organizational characteristics that affect personal attitudes (e.g. work on what affects job satisfaction, organizational commitment, etc.)—and this pattern seems to have

held with regard to prior work on WTR. The sociological community, in contrast, tends to focus on social- and group-related issues, and may have more insight into what factors may affect perceived norms regarding relocation. There might also be economic bases from which to view the issue of WTR from, which economists may be best equipped to handle. The point here is that with an organized framework, each discipline might be able to carve out their own niche which they are best equipped to handle, thus pushing the understanding of factors affecting WTR further.

A second set of theoretical implications derive from the results on personality, showing that personality traits do predict WTR. One such implication has already been discussed above—namely the relation of personality to attitudes and ultimately to WTR.

A final implication comes from the fact that personality traits are relatively stable factors that can be used to predict WTR. This raises the issue of what other relatively stable individual factors might also be useful in predicting WTR. For example, would an individual difference such as cognitive ability be useful in predicting WTR? In addition to cognitive ability, there might be other personality characteristics not included in the Big Five that might be relevant predictors, such as the Proactive personality trait proposed by some researchers. I think there are arguments to be made on both sides, but research into the question might provide interesting insight.

### **Practical Implications**

One practical implication of the finding that inherent personality characteristics do play a role in explaining willingness to relocate suggests that it may be possible to use personality as a means of predicting which employees would be more likely to relocate, which would help in succession planning efforts by identifying early which employees might be more willing to relocate in rotational programs used to develop future leaders. This implication is still just a possibility given the relatively small amount of explanatory power that personality accounted for in the present research, but as previously suggested measuring personality at the facet level may yield stronger relationships and thus greater predictive ability. Moreover, the strength of association between some of the personality characteristics and WTR are akin to those between personality traits and job performance, and personality has been commonly used in selection for years. This is an important implication because directly asking employees “are you willing to relocate” is likely subject to a great degree of social desirability bias—employees may say yes even if they are rather unwilling to relocate for fear that they will be taken off of the “fast track” of career mobility. Thus personality, in combination with other demographic predictors, shows promise in being able to indirectly assess an individual’s willingness to relocate.

A second practical implication from the TPB findings is that factors other than personal attitudes play in role in explaining WTR—evidenced by the significant relationship between perceived norms and WTR. Buttressing this finding is past research which has found spousal factors such as career



circumstances and community preferences affect WTR. These findings are important in that an organization that desires an employee to relocate might have to manage not just the individual but also his or her family as well. Sponsoring programs that familiarize the individual and his or her family with the new location and ease their fears about relocation might help make them less resistant to relocating, perhaps even for multiple relocations.

A third practical implication stemming from the TPB results is that companies may want to begin measuring attitudes toward relocation, both general and specific. The measurement of general attitudes toward relocation will enable them to decipher the degree of willingness to relocate amongst their employees, and also to see if there are trends over time, by division, by profession, etc. The measurement of specific attitudes toward relocation—i.e. what specific aspects of relocation make people more/less willing to relocate—will likely enable companies to manage attitudes effectively. Companies would be able to hone in on how important economic, career development, location-specific, and family-specific considerations are to the employee potentially facing a relocation opportunity, and manage their relocation programs more effectively.

### **Limitations of the Current Study**

One limitation is that the data were all collected from the same source at the same time. This creates the possibility that the results may be influenced by common method variance, thus inflating relationships between variables. However, the primary explanatory variables of interest in this study, personality,

personal attitudes, and subjective norms, are inherently personal variables that are difficult to assess from different sources than the individuals themselves. As such, it is arguably most appropriate to measure these variables from the same source. Further, the potential problem of common method bias is somewhat mitigated by previous research showing a significant relationship between willingness to relocate and actual relocation. Brett & Reilly (1988) conducted a longitudinal study where willingness to relocate was used to predict actual relocation decisions five years later. They found a .32 correlation between willingness to relocate and actual relocation after this period ( $p < .01$ ), indicating that even after five years, one's initial willingness to relocate is still highly predictive of actual relocation behavior. While this finding mitigates the common method issue to a degree, collecting similar data at different times is feasible and appropriate, and future research should attempt to remedy this limitation by acquiring data at different time points and from multiple sources if possible.

A second limitation concerns the unreliability of the measures for Excitement-seeking and Openness to Experience. Both of these variables had somewhat low alpha reliabilities (.53 and .57, respectively), which casts some doubt as to their validity as measures given the increase in error variance associated with unreliability. It would thus be desirable for future research to remedy this limitation by using more reliable measures.

However, the unreliability of these measures does not automatically mean that are invalid. Both the scales were constructed with items taken from the IPIP, which has been previously validated, so at a minimum the individual items

themselves are face-valid. Additionally, and perhaps more importantly, unreliability of measures makes it *more* difficult to detect relationship between variables (provided there is no systematic bias in the measures, unreliability results in increased levels of error variance, which skews the ratio of true to error variance)—thus one could take the view that the results were found despite the unreliability, not because of it. Finally, the lack of reliability of each scale is not completely unexpected. Excitement-seeking was measured with a two-item scale, and if the Spearman-Brown Prophecy Formula is applied, doubling the scale to four items would result in an alpha reliability of .72. With regard to Openness to Experience, measures of this personality domain often have lower reliabilities given its multi-faceted nature (see Block, 1995, and Digman, 1990 for a discussion of factor structure), so a lower reliability here is not surprising.

Future research may also wish to measure personality at the facet level as opposed to the domain level. As previously mentioned, the breadth of the domain-level personality measures used in this study might limit the explanatory power of those variables in relation to a specific behavioral intention (willingness to relocate). Facet-level measures may be more appropriate for detecting relationships between personality characteristics and specific behavioral intentions due to their fidelity<sup>9</sup>. In fact, this study provides a small degree of evidence in support of this point—Excitement-Seeking is a facet-level measure of

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<sup>9</sup> It has been argued by Panounen and colleagues (Panounen & Ashton, 2001; Panounen, 1998) that personality, when attempting to predict specific behaviors, is best operationalized at the facet level. The fidelity of the facet-level measures yields stronger relationships than at the domain-level, where the personality measures are sufficiently broad to encompass non-relevant information that weakens the correlation with the specific behavior.

personality, and showed the strongest relationship with willingness to relocate in comparison to the other personality variables. The fact that it was more strongly related might be due to the relationship between the underlying construct and willingness to relocate, but might also be due to the characteristics of the metric itself.

Future research may want to further investigate the cause of attitudes toward relocation as well as subjective norms. As previously mentioned, both personal attitudes and subjective norms were measured globally and not specifically. Measuring both variables at the specific level would inform us about the root causes of these attitudes—for personal attitudes toward relocation, it would inform what these attitudes are being driven by (e.g. financial, social, family, career reasons); for subjective norms, it would inform who the most important referents are (spouse, children, parents, friends, supervisor, etc.) in influencing attitudes. Investigating the underlying causes of attitudes would enable us to be able to better predict relocation attitudes without having to directly ask individuals about their attitudes toward relocation—a question that is likely to suffer from social desirability bias.

Finally, future research may wish to investigate the stability of WTR itself. Most of the prior research on WTR, and the present study itself, implicitly assumes that WTR is rather stable attitude. However, I am aware of no research that has empirically investigated this assumption, and it should be tested. It is likely that WTR might vary over time—the question is how much? Perhaps WTR is mainly driven by stable personal characteristics, and thus doesn't vary much

over the course of an adult's life. However it might be also be mainly driven by situational factors such as work and non-work experiences, family factors, and/or changing economic circumstances, and in that case likely to vary to the extent that these situational factors do.

## **Appendix A: Informed Consent Script**

You are being asked to participate in a research project. Researchers are required to provide a consent form to inform you about the study, to convey that participation is voluntary, to explain risks and benefits of participation, and to empower you to make an informed decision. You should feel free to ask the researcher any questions you may have.

### **Study Title: Employees Willingness to Relocate**

Investigator:

Ryan Petty, Phd Candidate

School of Labor and Industrial Relations, Michigan State University

### **PURPOSE OF RESEARCH:**

You are being asked to participate in a study of factors that affect an employee's willingness to relocate geographically for a job. This is a study being conducted by a Ryan Petty, a university researcher from Michigan State University (MSU). Vulcan Materials Company was approached by the researcher and was asked for access to some of its employees as participants, and does not have an active role in this project other than granting access to some of its employees as participants.

You have been selected as a potential participant in this study. As such, your opinions are valuable to the researcher in testing hypotheses about what factors affect an employee's willingness to relocate geographically.

Your participation in this survey will take about 30-35 minutes total. If at any time you wish to skip certain questions or discontinue your participation in the survey, you are free to do so. For your participation in this project, you will be entered into a random lottery where 2 participants will receive a **\$100 gift certificate** to a large retail store of their choice. The lottery will be conducted within 45 days after data collection is completed, and winners will be notified within 2 weeks of the lottery.

### **WHAT YOU WILL DO**

You will be asked a series of questions about yourself, your personality, and your attitudes that may be relevant in explaining willingness to relocate. Please check the appropriate box on-screen to record your answers, and proceed to the next question when complete. Please be as honest as possible in your responses, as honest answers are the best answers—remember, there are no right or wrong answers to these questions.

Your responses will be combined with the responses from the other participants, and the data will then be analyzed to look for trends and test hypotheses. Conclusions from the research will be reported out to Vulcan Materials Co., but only in aggregate form. Any information shared will be anonymous so that no individual participant information can be identified.

### **POTENTIAL RISKS AND BENEFITS**

There are little to no foreseeable risks to participating in this study, as the information being sought is not of a sensitive nature and therefore any negative outcomes are

extremely unlikely. You will also not directly benefit from participation in this study; however your participation in this study may contribute to the increased understanding of employee relocation decisions, which may benefit society in general.

#### **PRIVACY AND CONFIDENTIALITY:**

The data gathered from this research project will be kept confidential, by means of the following measures. First, the only people to have access to this data are the researcher involved in this project, Ryan Petty, and the MSU Institutional Review Board (IRB), who has oversight to ensure that university research is conducted ethically. No other persons will have access to any individual results from the present project, nor will be able to tell who has elected to participate/not participate in the study. Second, the survey is being conducted via a secure web-site with built-in security measures, so your responses are protected. Third, your responses to the survey questions will not be able to be traced back to you, as your name will be removed from the data set (“de-identified”) where your responses are stored. In sum, the information about you will be kept confidential to the maximum extent allowable by law.

Only the aggregated (**NOT** individual) results of this study will be shared with Vulcan Materials Company and/or published or presented at professional meetings—the identities of all research participants will remain anonymous.

#### **YOUR RIGHTS TO PARTICIPATE, SAY NO, OR WITHDRAW**

Your participation in this research project is completely voluntary. You have the right to decline to answer any questions you do not wish to answer, and also to terminate your participation in this project at any time. Choosing not to participate or terminating your participation will not have any impact on your employment nor have any negative implications for you in any way. You will be informed of any significant findings that develop during the course of the study that may influence your willingness to continue to participate in the research.

#### **CONTACT INFORMATION FOR QUESTIONS AND CONCERNS**

If you have any concerns or questions about this research study, such as scientific issues, how to do any part of it, or if you believe you have been harmed because of the research, please contact:

Dr. Dale Belman  
[drdale@msu.edu](mailto:drdale@msu.edu)  
Office: 517-353-3905  
407 S. Kedzie Hall, Michigan State University  
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Ryan Petty  
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517-862-2251  
409 S. Kedzie, MSU  
East Lansing, MI 48824

If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University’s Human Research Protection Program at 517-355-2180, Fax 517-432-4503, or e-mail [irb@msu.edu](mailto:irb@msu.edu) or regular mail at 202 Olds Hall, MSU, East Lansing, MI 48824.

## **Appendix B: Company Email Notification**

As you know, XXXX frequently gives back by helping schools, communities and/or students. Ryan Petty is a doctoral student at Michigan State and is currently working on his dissertation, for which he is researching the factors and circumstances that determine whether or not employees are willing to relocate within a company.

In early 2008, our Human Resources Council agreed to participate in his project by providing a source of data for Ryan's academic study. In the coming weeks, you may receive an email from Ryan. He will be emailing an electronic survey to a random sample of XXXX employees. Your participation is voluntary, and the survey will be completely confidential. The confidential data collected from the survey will only be seen and analyzed by Ryan for his academic needs, though the aggregate results from the study will help us understand factors that are important to employees when making relocation decisions. For your participation in the survey, you will be entered into a **lottery for a \$100 gift certificate.**

Thank you in advance for your participation.



### **Appendix C: Personal Email to Employees**

Good afternoon. My name is Ryan Petty, and I am a PhD candidate at Michigan State University. I'm contacting you today in hopes that you will help me out by participating in a survey that will allow me to complete my dissertation, which focuses on employee attitudes about relocation.

As you have been previously informed, XXXX has agreed to allow me to survey some of its employees in order to obtain my data. It is important for you to know several things about this project. First, your participation is voluntary. You are under no obligation to participate, although I would personally **greatly** appreciate it if you would. Second, your responses are completely confidential, and any individual information will NOT be shared with Vulcan management or employees.

If you are willing to complete the survey, please click on the link below and you will be directed to a secure website where you can fill it out on-line. The survey should take about 15-20 minutes, and for your time you will be entered into a **lottery for a \$100 gift certificate.**

I thank you sincerely for your participation.

### **Appendix D: Reminder Email to Employees**

Good afternoon. I just wanted to quickly follow up and remind you that if you still wanted to participate in my dissertation survey, that you could still take it by clicking on the link provided below. The survey will be active for another 1 ½ weeks, at which point I will officially close it on Friday, July 24<sup>th</sup>. In appreciation for your time, if you complete it you'll be entered into a drawing for a \$100 gift certificate. Once again, your participation is completely voluntary and the individual results will be kept confidential.

Additionally, if you have previously started the survey but could not complete it for any reason, you should still be able to go back and pick up where you left off, provided you continue on the same computer as before.

Thanks again for your consideration in this matter. All the best,

Ryan

### **Appendix E: Email to Drawing Winners**

I wanted to inform you that you have been selected as one of two winners of the \$100 gift certificate drawing for participating in my dissertation survey. I randomly assigned numbers to all who participated, and then had the Director of my graduate school choose two random numbers between 1 and 1000. Your randomly assigned number was chosen, so you are a winner.

Per the requirements of my university's Code of Ethical Research, **I cannot and will not** notify anyone else of your winning, as that would indicate that you have participated in the research project, which would then be a violation of confidentiality that was promised prior to your participation. I will be sending out a thank you email to all those that participated, and in that email I will state only that I have drawn the two winners and they have been notified.

As stated in prior emails and the consent form in the survey, the prize is a \$100 gift certificate to a retailer of your choice. You can choose whatever retailer you like, and I will do my best to arrange the purchase of a gift certificate/card from that retailer. If I cannot, due to geographical or other limitations, obtain a gift certificate, then I will likely send you a check for \$100 (I just need to make sure that this isn't a violation of the Code of Ethical Research- but I do not believe it is).

Please send me the name of the retailer that you would like the gift certificate from, and an address (home or work is fine) where I can send it. Thank you again for your participation, and congratulations!

Ryan

## **Appendix F: Data Imputation Procedure**

The data imputation procedure was guided by the principle that data imputation is only appropriate in cases where there are small numbers of missing data that appear to be missing at random. This represents a very conservative approach to data imputation that is not likely to change the results significantly when analyzing imputed versus raw data.

For this project, in cases where there were small numbers of variables (i.e. less than six) with missing data, the missing data for those variables were imputed. As mentioned in the body of this dissertation, cases with large numbers of missing data were dropped from the analysis—thus the difference in obtained cases ( $n= 959$ ) versus usable cases ( $n= 937$ )—due to the likelihood that larger numbers of missing data are not missing at random.

With the remaining cases that were deemed eligible for imputation, data were only imputed in cases where the missing data appeared to be missing at random versus situations where the data appeared to be deliberately missing. This determination was made by examining the pattern of missing data. Cases in which several items in a scale were skipped or where several topically-related items were skipped, were deemed to have data that was deliberately missing, and thus the data was not imputed. Cases for which only one item in a scale was skipped or data were sporadically missing with no identifiable pattern were deemed to be randomly missing, and were imputed.

Finally, data were only imputed for personality and attitudinal variables (including willingness to relocate). Demographic variables, variables addressing previous relocation and travel, and career-related variables with missing values were not imputed due to the higher probability that they were skipped on purpose, not at random.

The data imputation was done using the STATA software program. The STATA program has a standard imputation feature that imputes missing data by means of multiple regression: an individual missing value is determined by running a regression with up to 30 predictors chosen by the user. In the cases of missing data for this project, I used a combination of demographic and personality

items as predictors. In theory, the most powerful predictors of missing personality and attitudinal items should be related personality and attitudinal variables from the same scale (i.e. the best predictor of an individual Neuroticism item are the other Neuroticism items in the scale). Additionally, demographic items were chosen as predictors given that some demographic items are weakly predictive of personality (i.e. men tend to be less neurotic, people with more children tend to be more extraverted), and adding predictors to a model never reduces the explanatory power of a regression model, which is the goal with imputation.

The breakdown of imputed items for each variable is as follows:

**Table 4—Imputation Metrics for Variables**

	<b>Total # of Items Imputed</b>	<b>Avg. # per item</b>
<b>Personality Variables</b>		
Neuroticism	27	2.25
Excitement Seeking	15	5.00
Openness	33	2.75
Agreeableness	36	3.27
Conscientiousness	30	2.50
<b>TPB Variables</b>		
Relocation Attitudes	33	4.13
Subjective Norms	7	2.33
Perceived Behavioral Control	8	2.67
<b>WTR Variable</b>		
Willingness to Relocate	22	3.67

From the table, we can see that the number of values imputed per item roughly .5% or less (less than 5 out of 937 cases), an exceedingly small percentage. As such, it is highly unlikely that the imputation of missing values changed the data or results in a meaningful way.

## Appendix G: Survey Items

### Demographic Items

Q1. What is your name?  
\_\_\_\_\_

Q2A. What is your age?  
\_\_\_\_\_ years

Q2B. What is your gender?

0= male, 1= female

Q2C. What is your race?

0= Caucasian,, 1= African-American, 2= Hispanic/Latino, 3= Asian-American/Pacific Islander, 4= Native American, 5= Other: \_\_\_\_\_

Q3. What is your relationship status?

0= single, 1= widowed, 2= divorced, 3= separated, 4= married or living with someone

Q4A. How many children do you have (including any stepchildren)?

\_\_\_\_\_ children

Q4B. How many children still live at home (including any stepchildren and partial-custody children)?

\_\_\_\_\_ children at home

Q4C. What are the ages of your children still living at home ?

Child #1\_\_\_\_\_, Child #2\_\_\_\_\_, Child #3\_\_\_\_\_, Child #4\_\_\_\_\_, etc.

Q5. Do you have **significant** responsibilities for caring for an elderly parent or another adult family member?

0= no, 1= yes

Q6. What is your educational attainment?

0= didn't graduate HS, 1= HS graduate, 2= some college or vocational school, 3= Associate's degree, 4=Bachelor's degree, 5= graduate degree

Q7. How long have you been working for your **current** employer?

\_\_\_\_\_ years, \_\_\_\_\_ months

Q8. How long have you been in your current **position** (job)?

\_\_\_\_\_ years, \_\_\_\_\_ months

Q9. What is your current profession?

Sales, Operations, Engineering, Human Resources, Finance/Accounting, Computer/Internet Technology, Marketing, Legal, Other \_\_\_\_\_

Q10. What geographic division do you work in?

\_\_\_\_\_ Division

Q11A. If applicable, is your spouse/partner currently employed?

0= no, 1= part-time, 2= full-time

Q11B. What percentage of your total household income does **your** job provide (estimate)? (if applicable)

\_\_\_\_\_ %

Q12. If they are currently employed, how important is your spouse's/partner's job to them?

1= very unimportant, 7= very important

### **Relocation/Traveling Experience Items**

**Q13A.** How many times in your life have you previously relocated geographically for your or your (current or former) spouse/partner's job?

\_\_\_\_\_ *times*

**Q13B.** If applicable, how long ago was your last relocation?

\_\_\_\_\_ *years*, \_\_\_\_\_ *months*

**Q13C.** If applicable, how would you rate your previous relocation experience(s)?

*1= very negative, 7= very positive*

**Q14.** To what extent have you travelled (both business and personal) during your life, including childhood?

*1= very little, 7= a great deal*

**Q15.** How much do you enjoy travelling to new places (both within US and abroad)?

*1= very little, 7= very much*

### **Career Goal/Distance Items**

**Q16.** How many more years do you **think** (estimate) that you will work before you retire from your **primary** career?

\_\_\_\_\_ *years*

**Q17.** How close are you to achieving your career goals?

*1= very far away, 7= already achieved them*

**Q18.** How many other jobs do you think you'll need to hold to reach the position that you'd like to obtain within your **current organization**?

*1= I've achieved my goals, 5= five or more positions*

**Q19.** Given your age and current career stage, to what extent do you perceive that you have the opportunity to progress in your career?

*1= very little opportunity, 7= a great deal of opportunity*

**Q20.** To what extent do you perceive opportunities for career advancement in your **current location**?

*1= very little, 7= very much*

**Q21.** How ready do you believe you are to be able to **successfully** handle a promotion?

*1= very unable, 7= very able*

### **Personality Items-- Neuroticism**

1. I worry about things
2. I adapt easily to new situations
3. I fear for the worst
4. I get upset easily
5. I rarely get irritated
6. I often feel blue
7. I feel comfortable with myself

8. I am comfortable in unfamiliar situations
9. I don't know why I do some of the things I do
10. I become overwhelmed by events
11. I remain calm under pressure
12. I know how to cope

**Personality Items—Extraversion (Excitement-Seeking Facet)**

1. I love action
2. I am willing to try anything once
3. I seek adventure

**Personality Items—Openness to Experience**

1. I love to daydream
2. I seldom get lost in thought
3. I believe in the importance of art
4. I do not like poetry
5. I experience my emotions intensely
6. I experience very few emotional highs and lows
7. I prefer variety to routine
8. I prefer to stick with things I know
9. I like to visit new places
10. I enjoy thinking about things
11. I avoid having philosophical discussions
12. I believe that there is no **absolute** right or wrong

**Personality Items—Agreeableness**

1. I trust what people say
2. I am wary of others
3. I believe that others have good intentions
4. I stick to the rules
5. I anticipate the needs of others
6. I have a sharp tongue
7. I am easy to satisfy
8. I love a good fight
9. I have a high opinion of myself
10. I believe in an eye for an eye
11. I value cooperation over competition
12. I believe that people should fend for themselves

**Personality Items—Conscientiousness**

1. I excel in what I do
2. I have little to contribute
3. I know how to get things done
4. I love order and regularity
5. I try to follow the rules
6. I work hard



7. I am not highly motivated to succeed
8. I set high standards for myself and others
9. I am always prepared
10. I find it difficult to get down to work
11. I get chores done right away
12. I like to act on a whim

Instructions to participants for personality items:

*“Please use the rating scale below to describe how accurately each statement applies to you. Describe yourself as you generally are now, not how you wish to be in the future. Describe yourself as you honestly see yourself, in relation to others you know of the same gender and roughly the same age. So you feel free to be as honest as possible, your answers will be kept confidential.”*

Response scale:

1= very inaccurate, 2= inaccurate, 3= neither accurate nor inaccurate, 4= accurate, 5= very accurate

*\*Note: scale anchors and instructions to participants are per Goldberg’s instructions on the IPIP website.*

**TPB Items—Attitude Towards Behavior**

Participants were then given the following instruction:

The next set of questions involve geographic relocation. The relocation scenario you are being asked about for the following questions involves a hypothetical job offer that includes a geographic relocation—i.e. moving to a new community that is at least 100 miles away from your current community. The job offer comes from the same company that you currently work for, but in another location/office. The job offered to you represents a small promotion (i.e. “the next step up”) in your current career path.

Please answer the following questions with this hypothetical scenario in mind.

The following items assess the individual’s global attitude toward relocation:

1. Relocating geographically for a promotion is...
  - *rewarding-unrewarding*
  - *useful-useless*
  - *bad-good*
  - *harmful-beneficial*
  - *wise-foolish*
  - *unpleasant-pleasant*
  - *desirable-undesirable*
  - *risky-prudent*

Response scale ranges from 1 to 7, 1= very \_\_\_\_ (i.e. rewarding) to 7= very \_\_\_\_ (i.e. punishing).

### **TPB Items—Subjective Norm Assessment**

The following questions assess the individual's global subjective norms regarding relocation:

1. Most people who are important to me think I should relocate if offered a promotion
2. Most people who are important to me would question my decision if I declined to relocate for a promotion
3. I would feel pressure from others (i.e. family, friends, company) to relocate if offered a relocation opportunity

Responses will be on a 1 to 7 scale, 1= *very unlikely* to 7= *very likely*.

### **TPB Items—Perceived Behavioral Control**

The following items assess the individual's global perceived behavioral control regarding relocation:

1. I feel that I would I have the ability to relocate, if offered a relocation opportunity by my company
2. There are external factors in my life that would prevent me from relocating even if offered a suitable opportunity.
3. If offered a relocation opportunity I was interested in, I would be able to accept it.

The response format is a 1 to 7, 1= *disagree strongly* to 7= *agree strongly*

### **Willingness to Relocate Items**

1. If I had to make a relocation decision today, I would likely choose to relocate
2. I would welcome an opportunity to relocate
3. It is unlikely that I would relocate, even if offered a suitable opportunity
4. I would be willing to relocate if a suitable job opportunity was offered
5. I would be reluctant to relocate if offered another job opportunity
6. If offered a relocation opportunity, I would probably turn it down

The response format is a 1 to 7 scale ranging from 1= *strongly disagree* to 7= *strongly agree*.

### **Open-Ended Item**

Are there any other reasons/factors that you feel would make you more or less willing to relocate geographically for a job? If so, please feel free to explain below in your own words:

**TOTAL # OF ITEMS: 99**

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