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Effects of Job Type and Culture on Relationships Between Job Characteristics and Worker Outcomes: A Multilevel Analysis

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EFFECTS OF JOB TYPE AND CULTURE ON RELATIONSHIPS BETWEEN JOB CHARACTERISTICS AND WORKER OUTCOMES: A MULTILEVEL ANALYSIS

by

Justina Mary Oliveira

A dissertation submitted to the Graduate Faculty in Industrial and Organizational Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

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Abstract

EFFECTS OF JOB TYPE AND CULTURE ON RELATIONSHIPS BETWEEN JOB CHARACTERISTICS AND WORKER OUTCOMES: A MULTILEVEL ANALYSIS

by

Justina Mary Oliveira

Dissertation Advisor: Dr. Charles Scherbaum

There has been a great deal of research regarding how job characteristics affect workers’ perceptions, yet there are very few studies examining how job type (white-, pink-, or blue-collar) and culture impact these relationships. Through the use of data from over 11,000 employees in 24 countries, this project remedies the lack of multilevel study designs to determine how job type and culture each play independent roles in relationships between job characteristics (autonomy, task significance, and skill variety) and the worker outcomes of job satisfaction, organizational commitment, turnover intentions, and perceptions of the job as stressful and exhausting, as well as how they interact. Job type moderated these relationships, such that white- and pink-collar jobs had stronger relationships between skill variety and satisfaction as well as between task significance and perceptions of the job as stressful than did blue-collar jobs. Opposite to predictions, blue-collar jobs had stronger relationships between autonomy and organizational commitment, skill variety and turnover intentions, as well as between task significance and organizational commitment. Additionally, culture moderated job characteristic-worker outcome relationships, such that for institutional collectivism, power distance, and uncertainty avoidance (both practices and values aspects of the dimensions), many of these relationships were weaker for cultures higher compared to those lower on these dimensions as expected. However, findings regarding culture as a moderator were complicated
by the fact that some job characteristic-worker outcome relationships were stronger for cultures higher on these dimensions, which is contrary to the study’s predictions. Lastly, at times, job type did have a stronger effect in certain cultures more than others, indicating the importance of examining job type and culture in conjunction within work design research. This implies it may not be appropriate for multinational companies to utilize a single job design strategy and moving forward, work design theories should incorporate contextual macro-level variables such as job type and culture in order to be able to more thoroughly explain and accurately predict job characteristic-worker outcome relationships.

*Keywords: Job characteristics model, work design, job type, culture, multilevel modeling*
To God and my husband Lucas, who have both guided and supported me throughout this journey.

“Rejoice in hope, be patient in tribulation, be constant in prayer.” Romans 12:12
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Chapter 1

Introduction

There has been a great deal of research examining how characteristics of jobs impact employee performance and perceptions of those jobs (e.g., Birnbaum, Farh, & Wong, 1986; Dude, 2012; Hackman & Lawler, 1971; Hosie, Jayashree, Tchantchane, & Lee, 2013; Huang & Van de Vliert, 2003; Karasek, 1979; Lambert, Cluse-Tolar, Pasupuleti, Prior, & Allen, 2012; Turner & Lawrence, 1965; Warr, 2008). Much of this research has viewed these questions through the lens of the job characteristics model (JCM; Oldham & Hackman, 1980; Oldham, Hackman, & Pearce, 1976). Since its introduction nearly 40 years ago, this model has become the dominant theory of work design (DeVaro, Li, & Brookshire, 2007; Morgeson & Humphrey, 2006; Parker, 2014; Suman & Srivastava, 2009). This model states jobs which involve higher autonomy for the worker, significance of the job, identification with the job, feedback opportunities, and variety of responsibilities on the job lead to employees’ with higher levels of job satisfaction, intent to stay in the job, and commitment to the organization. These characteristics motivate employees through providing meaning and a sense of personal responsibility for their work (Hackman & Oldham, 1975). Numerous reviews and meta-analyses attest to the importance of these job characteristics for the aforementioned worker outcomes (e.g., Brown & Peterson, 1993; Loher, Noe, Moeller, & Fitzgerald, 1985; Mathieu & Zajac, 1990; Porter & Steers, 1973). Thus, the importance of job characteristics is supported by extensive evidence.

Despite the substantial literature on this model, there are potential limits to the generalizability of the tenets of the JCM that have not been thoroughly examined. For example, most research on the JCM has been conducted in the United States and the degree to which the
findings and tenets generalize to other countries and cultures has largely been assumed. More recently, several researchers have alluded to cultural differences in the relationships depicted by the JCM (e.g., Elanain, 2009; Huang & Van de Vliert, 2003), but have not tested this possibility. Clearly, culture has a strong influence on people’s perceptions in general (Hofstede, 1980; 1984; 2010; House, Hanges, Javidan, Dorfman, & Gupta, 2004; House et al., 1999) and may in fact impact workers’ perceptions of their jobs (Erez, 2010). If the findings and tenets of the JCM are to generalize to cultures beyond that of the United States, research is needed that examines culture’s role in the relationships between job characteristics and employee outcomes.

In addition to questions about the limits of the generalizability of JCM tenets across cultures, questions are being raised about its generalizability across job types (Morgeson, Dierdorff, & Hmurovic, 2010). Interestingly, the evidence to date suggests that not all jobs seem to consistently retain the JCM’s predicted relationships with worker perceptions and outcomes (e.g., Birnbaum et al., 1986; Mathieu & Hamel, 1989). A growing number of studies seem to point to job type (e.g., blue-, pink-, or white-collar) as a potential influence on the likelihood of whether a given job characteristic can emerge (Morgeson et al., 2010). For example, job satisfaction has been found to vary across job types (Birnbaum et al., 1986; Weaver, 1980) as has job stress (Lambert & Paoline, 2008). Yet within the existing JCM related literature, there is a lack in consideration of job type as a moderator for job characteristic-worker outcome relationships. In the Journal of Organizational Behavior’s special issue for job design, Grant, Fried, Parker, and Frese (2010) urge further research within job characteristics and job design in general, due to the changing nature of work regarding the increase in a knowledge-based industry, as well as immense increases in globalization and cross-national operations. Therefore, this dissertation answers the recent call for the further pursuit of research in this arena.
Not only is it believed that both culture and job type can have an independent moderating effect on the job characteristic-worker outcome relationships posited in the JCM, but also there is the potential interplay between job type and culture in moderating the job characteristic-worker outcome relationships. For example, this dissertation examines if job characteristics from the JCM may be more likely to emerge in white- and pink-collar jobs than blue-collar jobs only in certain cultures. No research to date has explored the potential joint effects of culture and job type in moderating job characteristic-worker outcome relationships.

The current study provides four major contributions for research regarding job characteristics. First, this study involves a test of the cross-cultural generalizability of the job characteristics model. This research will examine the generalizability of this model with a wide range of different countries and cultures. Second, the present study aims to test the generalizability of the JCM across job types by including dozens of white-, pink-, and blue-collar jobs across numerous industries and organizations. Third, this study examines the interaction between culture and job type on perceptions of job characteristics and the relationship between job characteristics and outcomes. Lastly, an additional contribution of this research is that it goes beyond studying only the typical outcomes of the JCM (job satisfaction, organizational commitment, and turnover intentions) to also consider the JCM’s effect on employee well-being, by including the outcomes of perceptions of the job as stressful and exhausting. The need for further research in this domain is evidenced by the fact that in 2014, the Annual Review of Psychology had an entire review dedicated to job and work design for the first time (Parker, 2014). In this review, Parker (2014) determined work design can be an effective tool for stabilizing and improving employee health and well-being.
To examine these questions, this study uses data from over 11,000 employees across twenty-four countries in an archival dataset that includes a diverse set of industries and jobs to test the study’s hypotheses about how the three levels of variables (individuals’ perceptions of their jobs, job type, and culture) influence and interact with one another. Specifically, the job characteristics of autonomy, task significance, and skill variety were included in this study but task identity and feedback (which are the other two job characteristics in the JCM) were not, which will be explained later. Over twenty years ago, Mathieu and Zajac (1990) explained the importance of cross-level designs and suggested further research to focus on samples from many different types of organizations as the present study does. Tomislav (2011) continues to advocate for multilevel or cross-level research in this domain as well and this study heeds this advice as multilevel modeling was used which aids in ameliorating the gap in this area of research which neglects to account for all three levels of salient factors in a given study.

Chapter 2 will explain the existing literature regarding the relationships expected by the JCM. A thorough review of this prior research is provided in order to point out the extent of the work that has been done in this area of research in general, indicating there is much existing support regarding the JCM, though macro-level moderators such as job type and culture have yet to be examined. Replication hypotheses of these level 1 relationships are provided, as there must be significant relationships at this initial level if multilevel analyses are warranted. Chapter 3 describes the existing literature as well as the gaps in current research regarding job type as a potential moderator for job characteristic-worker outcome relationships and Chapter 4 provides a depiction of the existing support for culture as a moderator of these relationships. Furthermore, Chapter 5 demonstrates the importance of testing for 3 level relationships, suggesting job type may moderate job characteristic-worker outcome relationships in some cultures but not others.
Following these literature review chapters, Chapter 6 describes the current study’s method, followed by Chapter 7 which explains the results of this study in detail. Lastly, a discussion of the implications of the findings, the limitations of the study, and steps for future research are described in Chapter 8.
Chapter 2

Job Characteristics Model

Origins and Description

The job characteristics model (JCM) or job characteristics theory (JCT) (Hackman & Oldham, 1975; Hackman & Oldham, 1976; Oldham & Hackman, 1980; Oldham, Hackman, & Pearce, 1976) is perhaps the most studied theory within work design research to date. Often the goal of this research is to examine which characteristics of a job are linked to attractive worker outcomes such as higher satisfaction, performance, organizational commitment, and intent to stay within the company, with the end goal often being an attempt to redesign work to further enhance the likelihood of obtaining these positive outcomes.

The JCM is based on work by Hackman and Lawler (1971) in which they explored employees’ reactions to various job characteristics. Their interest grew out of findings from the 1950s and 1960s which demonstrated routinized non-challenging jobs tend to lead to negative outcomes such as lower job satisfaction and higher turnover. In fact, Turner and Lawrence (1965) made an initial attempt at a conceptual framework for understanding the relationships between characteristics of jobs and these outcomes as a means of remedying them, though their measure failed to generalize beyond factory workers in small towns.

Moving the study of job characteristics forward, Hackman and Lawler (1971) constructed their initial framework around the expectancy theory of motivation (Vroom, 1964) and stated jobs must 1) create a sense of personal responsibility for a majority of their work, 2) provide intrinsically meaningful outcomes or experiences, and 3) provide feedback about employees’ effectiveness in order to be most beneficial both to the employee in terms of creating higher job satisfaction as well as beneficial to their company through increased productivity. Their findings supported their expectations that when jobs are high on the three core dimensions stated above,
employees had higher motivation, performance, attendance, and satisfaction. Additionally, when jobs incorporated these dimensions, employees also felt pressure to be personally responsible and reported having higher levels of *intrinsic* motivation as expected (as opposed to extrinsic motivation based on pay, benefits, etc.). Though Hackman and Lawler’s (1971) original model included the specific job characteristics of dealing with others and friendship opportunities, they did not find these to consistently relate to any of the measured employee outcomes and thus these are not included in the present version of the JCM.

Thus, past empirical research findings eventually lead to the JCM created by Hackman and Oldham (1976) as it is now known (see Figure 2.1). The model specifies five core job dimensions or characteristics of enriched work: skill variety, task identity, task significance, autonomy, and feedback. Hackman and Oldham (1976) suggested the manner in which the five job characteristics are related suggests for their combination as a motivating potential score (MPS) which is shown in Equation 2.1. This equation demonstrates Hackman and Oldham’s (1976) belief that the potential for a job to promote internal work motivation involves the job being high on at least one (ideally high on more than one) of the job characteristics of skill variety, task identity, or task significance as well as high on both autonomy and feedback. They also suggested that a score close to zero on one of the first three characteristics or a very low score on either autonomy or feedback would result in a lack of motivating potential for the job as currently designed.

\[
\text{MPS} = \left( \frac{\text{Skill Variety} + \text{Task Identity} + \text{Task Significance}}{3} \right) \times \text{Autonomy} \times \text{Feedback} \quad \text{Eq. 2.1}
\]
Job Characteristics, Job Type, and Culture  

**Figure 2.1.** The job characteristics model of work motivation.

**Core Job Dimensions/Characteristics of the JCM**

The job characteristics included in the JCM are the most studied within the realm of work design research. As such, they have quite widely accepted operationalizations differentiating each from the others. Each of the five job characteristics described by the JCM will be explained in turn, though only task significance, autonomy, and skill variety are included in this study. First, task identity is the level to which a given job involves accomplishing the creation of a
‘whole’ as opposed to solely individual aspects. Jobs with high task identity require the employee to finish a job from start to completion in order for the entire process and outcome to be very clear to her or him that they played a role throughout. According to Turner and Lawrence (1965), this beginning-to-end process is very clear and obvious to employees for jobs with high levels of task identity because they can see the change or effect they are personally making. According to Hackman and Lawler (1971), task identity allows for employees to feel a strong sense of meaning in their work in an intrinsic manner (beyond pay and benefits they receive from the company).

The second job characteristic brought forth by Hackman and Oldham (1976) is task significance, which entails how much a job sufficiently impacts others either in the organization (supervisors, subordinates, co-workers) or beyond the organization, including customers or even society as a whole. This characteristic allows for a deeper sense of meaning in one’s work in that it elucidates a fairly clear link to how the employee affects others. Through this, task significance provides perceptions that their job has importance.

Third, skill variety is the amount of various activities required of an employee to accomplish their tasks effectively in a given job. This indicates engaging multiple skills to do these activities as well (Oldham et al., 1976). The larger the assortment of procedures, operations, and behaviors (or activities) needed to perform the job, the higher the level of skill variety in the job (Dubinsky & Skinner, 1984). Hackman and Lawler (1971) explain the caveat that only variety which challenges employees will result in the feeling that their work is meaningful. Thus, variety simply for variety’s sake will not have the intended positive effect on worker outcomes as the variety of skills required in a job should have some added purpose to being effective within it.
The fourth job characteristic posited by the JCM is autonomy, which has likely been the most studied job characteristic (Morgeson & Humphrey, 2006). Autonomy is the degree of independence a job affords an employee regarding the processes used, how the work is conducted, and how they schedule their work. Autonomy and skill variety have been shown to be highly related (e.g., Hackman & Lawler, 1971 found $r = .67$), though they have been found to be separate characteristics. It seems that often jobs which have high levels of skill variety also tend to be high on autonomy, as jobs which require autonomy tend to require multiple skills of the employee. As evidence for example, Dodd and Ganster’s (1996) results show that for tasks with high variety, higher autonomy led to increased job satisfaction but for those low in variety, higher autonomy had a very little effect as jobs low in variety do not require autonomy to the same extent as those high in variety. Hackman and Lawler (1971) suggest it is autonomy out of the five job characteristics that most allows for employees to feel responsible for their work. They explain that high autonomy allows employees to feel they ‘own’ the outcomes of their work, while low autonomy may create the tendency to attribute both failures and successes to others such as the good (or bad) work of their coworkers or supervisors. It is important to note that jobs which have a high level of autonomy do not necessarily indicate the employee in that job will always have control over the effectiveness or outcomes of their work (Hackman & Lawler, 1971), as many of the actual outcomes (e.g., sales numbers) are affected by environmental factors (e.g., economy, market norms).

Lastly, job-based feedback is a characteristic involving the extent to which the job provides clear information regarding the employee’s performance, whether the feedback is immediate from the job itself or from other people such as coworkers, customers, or a supervisor. According to Dubinsky and Skinner (1984), the higher the amount of information given
regarding one’s effectiveness on the job regardless of source, the more feedback is perceived by the employee. In a Swedish sample of human service organizations, Pousette, Jacobsson, Thylefors, and Hwang (2003) found that positive feedback minimized role ambiguity, while negative feedback increased it. Thus they bring forth the importance of clarifying the nature and direction of the feedback that is given in order to understand its link to important work outcomes. The discussion of providing feedback in general does not differentiate between the varying effects due to the valence of the feedback on work perceptions. Feedback seems to interact with autonomy in that high autonomy jobs benefit from feedback while those low on autonomy are minimally affected by it as feedback seems to be less necessary for jobs in which employees cannot change the manner in which they do their work (Dodd & Ganster, 1996).

Critical Psychological States within the JCM

Furthermore, the JCM indicates that enriched jobs lead to the aforementioned positive outcomes (satisfaction, higher performance, motivation, and intent to stay) by motivating employees through the three states that Hackman and Oldham (1976) deemed critical psychological states (CPS): experienced meaningfulness of their work, experienced responsibility for the outcomes of their work, and the knowledge of the actual results of their work activities. Originally, the JCM suggested these three states were the causal core mechanisms of the model as they were hypothesized to mediate the relationships between job characteristics and worker outcomes (Hackman & Oldham, 1976). Hackman and Lawler (1971) stated an employee feels positive affect if she or he experiences the three critical states and that this serves as a reinforcement and thus as a motive to try to perform well on the job. They found that internal motivation was highest when all three of the critical psychological states are existent (Hackman & Oldham, 1976).
Experienced meaningfulness of one’s work is the extent to which an employee deems their job as typically meaningful, valuable, or important. Hackman and Oldham (1976) stated the three job characteristics of skill variety, task identity, and task significance additively make up psychological meaningfulness. Furthermore, experienced responsibility is the extent to which an employee feels personally liable for the results of his or her work and the job characteristic of autonomy was expected to initiate this psychological state, though even Hackman and Oldham (1976) found that the other job characteristics predict experienced responsibility as well, not just autonomy. More importantly, they found that autonomy did not have the expected link to the outcomes as proposed by the model. Third, knowledge of the actual results of one’s work is the extent to which an employee both knows and comprehends their performance on the job on a fairly consistent basis, which originally was predicted to depend upon the feedback given on the job.

However, only a minimal number of studies on the JCM actually measure the critical psychological states, resulting in the tendency within the literature to test a two-stage (job characteristic-outcome relationships) as opposed to the original three-stage model (job characteristic-outcome relationships as mediated through the CPS). Behson, Eddy, and Lorenzet (2000) conducted the only meta-analysis of all the studies at the time which included these three states and found that out of the hundreds of JCM studies, only 13 studies included the CPS and out of those, only nine directly tested Hackman and Oldham’s (1976) mediation component (one of these being Hackman and Oldham’s own work; 1975). Behson et al. (2000) found evidence that the two-stage model had greater model fit according to their Goodness-of-Fit Index (GFI), Comparative-Fit Index (CFI), and chi-square indices, though the authors argued that theoretically, the three-stage model still is conceptually superior as several of the two-stage
model paths were contrary to the theory. Nevertheless, the empirical support for a two-stage model is stronger at this point than for a three-stage model.

Although Renn and Vandenberg (1995) found that the CPS did play the mediation role predicted by Hackman and Oldham (1976), they found evidence for partial instead of full mediation between the job characteristics and outcomes. Also contrary to the original predictions of the model, they did not find that all three states were needed to lead to the highest levels of internal work motivation. They did however find that the CPS explained significantly more variance for outcomes than the job characteristics alone. In line with this, Johns, Xie, and Fang (1992) also state that the CPS are rarely explicitly studied in the context of the JCM, yet they found the JCM’s expected mediation and argued that it is important to measure them. Though the CPS are still deemed important, the majority of JCM-related research continues not to test the mediation but imply its existence, however. This is not done to suggest a diminished role of the CPS, but does tend to be the state of the field at this point in time. Consistent with this practice, this study will only examine the two-stage model.

**Critiques of the Original Job Characteristics Model**

While the relationships between the job characteristics and worker outcomes of the JCM have had strong support overall, there are several aspects of the original model that have not. Hackman and Lawler (1971) originally suggested a moderator variable of growth need strength (GNS) within the model, which suggests people with a high need for personal growth will benefit more (react more positively) to jobs with high MPSs than those with a low need for personal development. Later, Hackman and Oldham (1976) proposed an additional moderator to the model stating that high levels of the five job characteristics from the JCM may not benefit workers with knowledge or skills that are inappropriate for the demands of their job, as enriched
jobs may stretch these employees beyond their capabilities and comfort levels. However, Hackman and Oldham (1976) still suggested these employees will react positively to enriched work, but would do so to a smaller extent than those with the appropriate level of knowledge and skill in a given job. Though these two moderators were included within the original framework for the JCM and Spector (1985) found some support for GNS as a moderator of job characteristic-job satisfaction, motivation, and performance relationships, both GNS and level of job-related knowledge and skills were largely dismissed by a meta-analysis of JCM-related studies by Fried and Ferris (1987). Specifically, Fried and Ferris (1987) did not find evidence for GNS as a moderator of job characteristic relationships with job satisfaction, work motivation, or absenteeism though they did find support for GNS as a moderator for the job characteristic-performance relationship, which is not an outcome included in the present study.

As mentioned earlier, there tends to be high positive correlations among the five job characteristics in the JCM which are not likely based on an instrument-related problem but instead, when a job is designed to be high on one dimension, such as autonomy, it also tends to be high on the other characteristics such as skill variety, for example (Birnbaum et al., 1986). Therefore, Birnbaum et al. (1986) concluded that though it may be reasonable conceptually to differentiate the five job characteristics in the JCM, it may not be practical in an applied sense and therefore, some researchers have chosen to use the MPS as opposed to only separate characteristics.

However, Hinton and Biderman (1995) and Fried and Ferris (1987) found that the three-way multiplicative formulation of the MPS is not appropriate and instead that a linear formulation or additive index best fits the relationships described by the JCM. Thus, taking separate characteristics from the JCM into account as opposed to using the MPS is an
appropriate avenue in which to study job characteristics in order to understand the differential effects on worker outcomes or differing patterns of relationships across variables for each characteristic. In this manner, it is essential to study the effects of separate job characteristics when moving research forward in understanding the role of culture and job type on each job characteristic-worker outcome relationship. Studying these processes with individual job characteristics will surely uncover more information to progress research in this area than considering them as an aggregate. Additionally, numerous studies include several job characteristics from the JCM as opposed to all five (e.g., DeVaro et al., 2007; Dodd & Ganster, 1996), as the present study does. Specifically, this study includes autonomy, skill variety, and task significance, as mentioned earlier.

**JCM as an Inspiration for Further Study**

Though the original job characteristics model (Hackman & Oldham, 1975; Oldham & Hackman, 1980; Oldham, Hackman, & Pearce, 1976) as a whole may not have full support (e.g., meta-analyses do not find support for GNS as a moderator for outcomes other than performance and suggest a linear or additive relationship among job characteristics as opposed to the original multiplicative equation), the model serves as an inspiration for the further study of job characteristics. The original model (Hackman & Oldham, 1976) suggests the five aforementioned core job characteristics have a positive effect on various salient worker outcomes and listed high internal work motivation, high job satisfaction, high performance, and low absenteeism and turnover as outcomes of the JCM. The present study focuses on job satisfaction, organizational commitment, turnover intentions, and perceptions of the job as both stressful and exhausting as outcomes of three specific job characteristics of the JCM; autonomy, skill variety, and task significance. Conceptually, autonomy, skill variety, and task significance may be
different than the other job characteristics from the JCM in that inherently they are more immediate to one’s tasks in regards to when they experience them, while task identity and feedback are often not experienced in the moment while doing a given task, and are instead presented at a later time. These latter two are also future-focused regarding understanding one’s job from start to finish (the completed whole) and becoming aware of ways to improve their work or performance, for task identity and feedback respectively. Autonomy, skill variety, and task significance are arguably less future-focused in nature, though task significance may also be linked to how one’s job impacts others (either immediately or later). Task significance, skill variety, and autonomy are the most studied and meta-analyses have found these three job characteristics to have the most robust relationships with job satisfaction, OC, and turnover intentions (e.g., Brown & Peterson, 1993; Humphrey, Nahrgang, & Morgeson, 2007). Task identity has been found to have the weakest relationship with worker outcomes out of the five job characteristics from the JCM (Brown & Peterson, 1993; Humphrey et al., 2007). Furthermore, autonomy, skill variety, and task significance are those most likely to interact with job type and culture, while task identity and feedback levels are less likely to vary across jobs and cultures. For example, feedback can come from the task itself, coworkers, managers, or clients/customers and thus most job types include some form of feedback. Additionally, though the manner in which feedback is provided may differ depending upon a given culture (due to communication-related cultural norms), feedback is likely to exist in jobs across cultures in some form because there are numerous potential sources as mentioned above. Replication of the JCM relationships is essential with a larger and more diverse sample of employees, which the Work Orientation III dataset provides. Research regarding each of the outcome variables measured in the present study will be discussed in turn.
Worker Outcomes

The worker outcomes included in this study are job satisfaction, organizational commitment, turnover intentions, and perceptions of the job as stressful and exhausting. Below, a brief conceptual definition will be provided for each of these outcomes but the theoretical explanations of the relationships between job characteristics and each worker outcome will be discussed later in this chapter.

**Job satisfaction.** The five job characteristics proposed by the JCM (Hackman & Oldham, 1975; Oldham & Hackman, 1980; Oldham et al., 1976) have been found to have positive effects on job satisfaction (e.g., Brown & Peterson, 1993; Duke & Sneed, 1989; James & Tetrick, 1986; Katsikea, Theodosiou, Perdikis, & Kehagias, 2011; Lambert et al., 2012; Loher et al., 1985). Job satisfaction is “an internal state that is expressed by affectively and/or cognitively evaluating an experienced job with some degree of favor or disfavor” (Brief, 1998, pp. 86), and as such is largely considered an attitude in the present literature.

**Organizational commitment (OC).** Organizational commitment has been defined in numerous ways (Allen & Meyer, 1990; Solinger, van Olffen, and Roe, 2008). Most recently, Klein, Molloy, and Brinsfield (2012) argued for viewing commitment as a specific kind of bond as opposed to an attitude, as they stated commitment does not align with the field’s current perspective for attitudes being overall evaluations denoting the favorability of a target, which is the definition of attitudes provided by Judge and Kammeyer-Mueller (2012) in their *Annual Review of Psychology* chapter. Klein et al. (2012) define commitment as “a volitional psychological bond reflecting dedication to and responsibility for a particular target” (pp. 137). As a bond cannot be considered commitment without the existence of choice, at some point, though not necessarily publicly or rationally, there is a decision of whether or not to commit,
requiring the volitional aspect of the definition. Commitment is also based upon an employee’s perception of their job or situation; thus self-reports better capture this construct over those considered more objective in nature (e.g., supervisor’s evaluation of a subordinate’s commitment). Perhaps due to practical applicability, much research still focuses on organizational commitment as opposed to commitment in general.

**Turnover intentions.** Turnover intention is the purposeful, willful, and intentional readiness to leave an organization (Chan et al., 2013; Tett & Meyer, 1993). Turnover intention has been found to be a predictor of actual turnover (e.g., Thatcher et al., 2003), so much so that it is often used as a proxy for turnover. For example, a meta-analysis of turnover studies by Hom and Griffeth (1995) found a relationship of $\rho = .35$ between intentions to quit and actual turnover, while another meta-analysis by Griffeth, Hom, and Gaertner (2000) found $\rho = .38$ for the intentions to quit-turnover relationship across 71 studies when controlling for measurement error in the predictor and sampling error. More recently, in their meta-analysis of turnover, Podsakoff, LePine, and LePine (2007) found a significant direct path with a standardized parameter effect of .24 between turnover intentions and turnover. Though not all turnover intentions lead to actual turnover, Chan, Wang, and Huang (2013) denote the importance of this construct in that even if employees intend to leave but choose not to due to limited alternative job options for example, those that hold turnover intentions are still likely to negatively affect the organization in some manner through other withdrawal behaviors (e.g., voluntary absenteeism or patterns of lateness). Thus, understanding the antecedents of turnover intentions is important for organizations.

**Well-being: Perceptions of the job as stressful and exhausting.** In the last several decades, research regarding employee stress and health has grown immensely (e.g., Armon,
Melamed, & Shirom, 2012; Häusser, Mojzisch, Niesel, & Schultz-Hardt, 2010; Hofmann & Tetrick, 2003; Lambert & Paoline, 2008; Luchman & González-Morales, 2013; Parkes, Mendham, & von Rabenau, 1994; Ter Doest & De Jonge, 2006) and although well-being is the main focus of several other theories related to work design (i.e., Demand-Control-Support model; Karasek, 1979; Karasek & Theorell, 1990; Karasek, Triantis, & Chaudry, 1982 and the Job Demands-Resources Model of burnout; Demerouti, Bakker, Nauchreiner, & Schaufeli, 2001), research on the JCM has largely neglected focusing on well-being as a worker outcome which is surprising given its importance. According to Donovan (1987), “an individual’s perceptions of stressful conditions and not the objective conditions themselves are linked with negative health outcomes” (pp. 262) and therefore perceptions of the job as stressful and not stress per say will be used as a worker outcome of well-being in this study. Emotional exhaustion is the main dimension out of the three dimensions (others being depersonalization and reduced personal accomplishment) that contribute to burnout (Maslach & Jackson, 1981). Also, emotional exhaustion is considered to be an experience of work overload (Schaufeli & Greenglass, 2001) and the perceptions of the job as exhausting as opposed to exhaustion itself will be examined in this study.

**Job Characteristic-Worker Outcome Relationships**

Each job characteristic (autonomy, skill variety, and task significance) will be explained as well as its relationship with each of this study’s worker outcomes (job satisfaction, OC, turnover intentions, and perceptions of the job as both stressful and exhausting). Relevant supporting literature will be discussed in order to provide support for the hypothesized relationships between job characteristics and worker outcomes.
Job Autonomy and Worker Outcomes

Autonomy leads to beneficial worker outcomes due to instilling a sense of experienced responsibility for the outcomes in one’s work which as mentioned earlier is the extent to which an employee feels personally liable for the results of his or her work (Hackman & Oldham, 1975; 1976). There is much research showing support for relationships between autonomy and worker outcomes as will be discussed below for each worker outcome in turn.

**Autonomy and job satisfaction.** There have been several meta-analyses of job satisfaction as an outcome of the JCM depicting consistent positive relationships between the model’s five components of job characteristics and employee satisfaction (Brown & Peterson, 1993; Fried & Ferris, 1987; Humphrey et al., 2007; Loher et al., 1985; Spector, 1985). For example, through their meta-analysis of 28 studies, Loher et al. (1985) found a moderate relationship between autonomy and satisfaction with a corrected correlation coefficient of .46, which is the strongest relationship with job satisfaction out of the five job characteristics from the JCM. Concurring with these findings, in their meta-analysis of 259 studies, Humphrey et al. (2007) found a mean corrected correlation of .41 between the five JCM job characteristics together and job satisfaction overall.

Past research studying the relationship between job characteristics and job satisfaction within independent study designs have found consistent evidence for the positive effect of job characteristics on job satisfaction as have the aforementioned meta-analyses, though they often involve samples from fairly specific populations. Yet taken together, the immense amount of research in this domain is supportive of the JCM’s description of the autonomy-job satisfaction relationship. Regarding several specific studies, Duke and Sneed (1989) found the job characteristic of autonomy to be positively linked to job satisfaction for both supervisors and subordinates within foodservice positions of a U.S. American university. Furthermore, with a
sample of expatriate sales workers in Saudi Arabia, Bhuian and Menguc (2002) found higher perceived levels of autonomy were linked to higher job satisfaction. In fact, they found both direct and interactive effects of autonomy and OC on job satisfaction. Additionally, out of the five job characteristics within the JCM, Thatcher et al. (2003) found autonomy, task significance, and skill variety to all positively impact job satisfaction. In line with these past findings, Lambert et al. (2012) found that autonomy positively impacts job satisfaction of U.S. American social work employees, while Katsikea et al. (2011) found higher degrees of autonomy positively impact the job satisfaction of sales managers, which in turn positively affects OC. Most recently, Hosie et al. (2013) found autonomy alone accounted for over 21% of the variance in job satisfaction. Therefore, there is strong existing support for the positive relationship between autonomy and job satisfaction.

Consistent with previous research, it is hypothesized that the job characteristic of autonomy positively relates to job satisfaction. Thus, the following hypothesis is predicted.

**H1a)** Employees who report their jobs to be higher on autonomy will have higher job satisfaction than those with jobs lower on autonomy.

**Autonomy and organizational commitment (OC).** According to Welsch and LaVan (1981), OC is a crucial measure for understanding employees’ bonds to their organization. A meta-analysis by Mathieu and Zajac (1990) found that concurring with the JCM, jobs with higher levels of complexity or those which are more enriched following the five job characteristics of the model do in fact lead to higher levels of OC. More specifically, they found that autonomy was a key antecedent of OC. For many employees, it is attractive to have control over their work, have a degree of independence in the way they do their work, and have the ability to work within their own timeframe (have a degree of control over their schedule).
Employees are committed to a company because it provides them with the means through which to satisfy salient needs, which is unrelated to employees’ personal characteristics (Angle & Perry, 1983) and autonomy is one such salient need for many people according to Deci and Ryan’s work (e.g., 1985). Employees have also been found to be committed to their organization because they deem it to be the right behavior when they are content in the job (Wiener & Vardi, 1980), which also potentially results from satisfying an important need for some individuals, such as autonomy. This supports Hackman and Oldham’s model (1975; 1976; 1980) explaining the organization’s role in creating an environment or at least creating characteristics within jobs that allow for meaning to be attached to employees’ jobs through an autonomy-OC relationship.

Multiple individual studies have indicated the positive link between the job characteristic of autonomy and OC (e.g., Dude, 2012; Steers, 1977; Thatcher et al., 2003) including studies finding these relationships through longitudinal investigations (e.g., Griffin, 1991). For example, in his study of bank employees, Griffin stated OC improved significantly more in work redesign conditions (enrichment through increasing JCM’s job characteristics including both autonomy and skill variety) than control conditions with no redesign at 6 months, 24 months, and 48 months, showing support for the JCM’s positive impact on OC in general. In addition, Dude (2012) studied the antecedents of school principals’ OC and found autonomy to be a significant predictor of their organizational commitment levels, such that higher job autonomy was linked to higher OC. Liu (2008) also found the job characteristic of autonomy to be significantly positively related to OC as well, while Thatcher et al.’s study (2003) suggests OC mediates the relationship between autonomy and turnover intentions, as it also does for the other four job characteristics of the JCM. Overall, existing studies demonstrate support for a positive relationship between autonomy and OC.
Consistent with previous research, it is hypothesized that the job characteristic of autonomy positively relates to OC.

\textit{H1b}) Employees who report their jobs to be higher on autonomy will have higher organizational commitment than those with jobs lower on autonomy.

\textbf{Autonomy and turnover intentions.} Higher levels of control in how or when one’s work is done may lead to lower turnover intentions because according to the JCM, autonomy leads to experienced responsibility for outcomes of work (Hackman & Oldham, 1976) and this sense of responsibility and ownership over an employee’s work ameliorates search behaviors for other jobs. If one is motivated by, attracted to, or feels a strong need for autonomy in his or her work, it is logical that the fulfillment of a sense of independence and control in one’s job (higher level of autonomy) results in lesser intentions to leave the company, as there would be no need to pursue a different organization to have higher levels of this job characteristic. Research has supported this assertion in several meta-analyses (e.g., Brown & Peterson, 1993; Loher et al., 1985). Additionally, an early review by Porter and Steers (1973) including twelve years of research regarding turnover and other work withdrawal behaviors found that although turnover is influenced by a multitude of factors including organizational pay and promotion policies, more localized variables such as supervisor and coworker relationships, person-related variables such as age and other demographics, job characteristics, or the nature of the job requirements as the authors explain them, play important roles in affecting employees’ intentions to stay within their organization. More specifically, they found role clarity, job autonomy, and job feedback to be negatively related to turnover.

More recent individual studies showing these relationships exist as well. For example, with a Swiss sample of workers, Grebner et al. (2003) found autonomy or job control to predict
quit intentions. In addition, Kim and Stoner (2008) found job autonomy to have a direct negative impact on turnover intentions, indicating higher autonomy leads to lower turnover intentions. Furthermore, two studies found autonomy to be positively related to employees’ intentions to stay within their company; one with a Singaporean sample of quantity surveyors (Hee & Ling, 2011) and one with a sample of U.S. American employees from a higher education institution (Li & Bagger, 2012). In addition, Slattery, Selvarajan, Anderson, and Sardessai (2010) found the five job characteristics of the JCM to be negatively related to turnover intentions of temporary employees. Regarding the previously discussed outcome variables of OC and job satisfaction, Slattery et al. (2010) also reported positive relationships between the JCM’s job characteristics and both of these worker outcomes. Additionally, a large study utilizing a Taiwanese sample of both subordinates (n=1,149) and managers (n=144) reported significantly negative relationships between the five job characteristics (including autonomy) and turnover intentions as expected (Chan et al., 2013). Therefore, in general, existing research supports a negative relationship between autonomy and turnover intentions.

Consistent with previous research, it is hypothesized that the job characteristic of autonomy negatively relates to turnover intentions.

**H1c)** Employees who report their jobs to be higher on autonomy will have lower turnover intentions than those with jobs lower on autonomy.

**Autonomy and well-being: Perception of the job as stressful and exhausting.** As mentioned earlier, several theories other than the JCM have focused more on well-being outcomes in the past. For example, research on the Demand-Control-Support (DCS) model (Karasek, 1979; Karasek & Theorell, 1990) and the Job Demands-Resources models (JD-R) (Demerouti et al., 2001) has alluded to the positive effects of autonomy on well-being,
explaining that the benefits of autonomy are due to its function as a job resource for employees, suggesting autonomy can buffer or ameliorate potential perceptions of stress or exhaustion, though these researchers often use the term decision latitude or job control in place of autonomy for the DCS and the JD-R models respectively. More specifically, the JD-R model explains that autonomy is one type of resource that aids in minimizing the negative effects of job demands on workers and if employees perceive limited resources in general, they will self-protect to avoid further exhaustion and feelings of stress by eventually endorsing withdrawal behaviors due to feelings of burnout. Therefore there is initial evidence suggesting autonomy’s buffering effect on negative well-being related outcomes related to perceptions of exhaustion and stress, yet, as an extension of the commonly used JCM, it is important to further examine how job characteristics from this model specifically may impact well-being outcomes. There are initial indications that this further research may be fruitful.

For example, Mathieu and Hamel (1989) found a significant positive relationship between MPS (the combined scores of the five job characteristics from the JCM given in an equation format mentioned earlier in this chapter) and mental health, indicating higher levels of job characteristics including autonomy, lead to better mental health. As this study was based on an experimental research design, this evidence is quite compelling. In addition, through the use of a cross-lagged study with two measurement times separated by one year, De Jonge et al. (2001) found that job characteristics affected psychological well-being in a sample of Dutch employees. More specifically, results indicated when jobs included characteristics of higher autonomy, higher social support, and lower job demands, this led to higher job satisfaction and lower levels of emotional exhaustion for employees. In a replication study of De Jonge et al.’s (2001) work with another sample (healthcare workers), Ter Doest and De Jonge (2006) tested
three different models to obtain further validation for their previous findings. The models they included in this second study were that of job characteristics impacting well-being, well-being influencing perceptions of job characteristics, and a reciprocal impact of job characteristics and well-being. Following the findings of their prior study, this design which included a two-year time lag resulted in additional support for job characteristics having an effect on well-being (as opposed to a reciprocal or bidirectional relationship between job characteristics and well-being outcomes), with autonomy being one of the predictive job characteristics. Therefore the present dissertation will also focus on a directional perspective of a model where job characteristics are conceptualized as impacting worker outcomes. Furthermore, Lambert and Paoline’s study (2008) implementing a sample of correctional employees also showed a negative relationship between the job characteristics of input into decision making (related to autonomy) and skill variety with job stress as well as between job stress and job satisfaction. This finding is in line with Lambert, Hogan, Cheeseman-Dial, Jian, and Khondaker’s (2012) study with prison staff in which they reported a negative relationship between autonomy and emotional exhaustion. Recently, a study by Daniels, Beesley, Wimalasiri, and Cheyne (2013) found that an aspect of job autonomy they termed “changing aspects of work activities to solve problems” (CHA-SP), resulted in better well-being, such that very high levels of CHA-SP were linked to lower levels of negative affect and fatigue. Overall, existing studies provide support for a negative relationship between autonomy and perceptions of the job as stressful and exhausting due to autonomy’s ability to buffer or mitigate stressors, thus leading to lower perceptions of one’s job as stressful or exhausting. The sense of control that autonomy can provide seems to potentially be useful in counteracting stressors in one’s work because with higher levels of autonomy, an employee can make decisions and adjustments in one’s work to best fit their needs for reducing stress and
exhaustion which could minimize how much they perceive their work to be stressful or exhausting.

Consistent with previous research, it is hypothesized that the job characteristic of autonomy negatively relates to perceptions of the job as stressful and exhausting. Thus, the following hypotheses are predicted.

**H1d)** Employees who report their jobs to be higher on autonomy will have lower levels of reported perceptions of the job as stressful than those with jobs lower on autonomy.

**H1e)** Employees who report their jobs to be higher on autonomy will have lower levels of reported perceptions of the job as exhausting than those with jobs lower on autonomy.

**Skill Variety and Worker Outcomes**

Skill variety leads to beneficial worker outcomes because it provides meaningfulness in one’s work as is the case for task significance as well (Hackman & Oldham, 1976). For skill variety specifically, the inclusion of multiple skills within a person’s daily work is also deemed as more interesting and less monotonous, therefore minimizing negative worker outcomes (e.g., turnover intentions). The specific existing studies showing the relationship between skill variety and worker outcomes will be discussed for each outcome variable in turn.

**Skill variety and job satisfaction.** As mentioned earlier, past research has explained that the beneficial impact of skill variety on job satisfaction is due to a sense of meaning derived from one’s work by utilizing various skills in the job which also makes the job more interesting and less monotonous. In support of this position, Loher et al.’s (1985) meta-analysis found a moderate positive relationship between the job characteristic of skill variety and job satisfaction with a corrected correlation coefficient of .41. Later, Duke and Sneed (1989) also found skill variety to be positively linked to job satisfaction for both supervisors and subordinates within U.S. American foodservice positions. Furthermore, Morrison and Savery (1996), Grebner et al.
(2003), Reid et al. (2008), and Bos, Donders, Schouteten, and van der Gulden (2013) all found a positive link between skill variety and job satisfaction; in a sample of blue-collar workers in an Australian manufacturing plant, Swiss call center agents, U.S. American IT workers, and Dutch university employees, respectively. Van den Berg and Feij (2003) also found that both skill variety and autonomy were positively related to job satisfaction across varying jobs. In line with these findings, Lambert et al. (2012) reported that in addition to the previously mentioned finding regarding autonomy, skill variety also positively impacted job satisfaction of social work employees, while Katsikea et al. (2011) found a higher degree of job variety positively impacts the job satisfaction of sales managers, which in turn also positively affects organizational commitment. In addition, Lambert and Paoline (2008) found skill variety to be positively related to job satisfaction with correctional officers. Most recently, Hosie et al. (2013) found that the combined job characteristics of feedback, skill variety, and task identity accounted for 15% of the variability within job satisfaction, thus acknowledging skill variety’s role in predicting job satisfaction. Thus, existing research demonstrates a positive relationship between skill variety and job satisfaction.

Following previous research, it is hypothesized that the job characteristic of skill variety positively relates to job satisfaction. Thus, the following hypothesis is predicted.

**H2a)** Employees who report their jobs to be higher on skill variety will have higher job satisfaction than those with jobs lower on skill variety.

**Skill variety and OC.** Though there are fewer studies existing that specifically test the relationship between skill variety and OC than those examining the relationships between skill variety and job satisfaction, there are several studies that provide initial evidence of this relationship. First, Mathieu and Zajac’s meta-analysis (1990) reported job scope (skill variety)
and challenge were key antecedents of OC in addition to their aforementioned finding that autonomy was an important predictor as well. Regarding specific studies after this meta-analysis, in a sample of bank tellers Griffin (1991) found skill variety to be a significant indicator of OC as did Grebner et al. (2003) with call center employees. In addition, Hogan et al. (2009) found this relationship with a sample of prison staff, as did Lambert and Paoline (2008) with a similar sample. Furthermore, Liu (2008) also reported skill variety to be significantly positively related to OC. Therefore, there is support for a positive relationship between skill variety and OC.

Following previous research, it is hypothesized that the job characteristic of skill variety positively relates to OC. Thus, the following hypothesis is predicted.

**H2b)** *Employees who report their jobs to be higher on skill variety will have higher organizational commitment than those with jobs lower on skill variety.*

**Skill variety and turnover intentions.** If skill variety induces a greater sense of meaning in one’s work and creates a less routinized work structure, employees are expected to have lower turnover intentions when their jobs have higher levels of skill variety compared to lower levels of this job characteristic because if an employee feels their work is meaningful, they may be less inclined to search for another job that fulfills this need. As noted earlier, several meta-analyses support the JCM-predicted relationships between job characteristics and worker outcomes, including the specific relationship of skill variety and turnover intentions (e.g., Brown & Peterson, 1993; Loher et al., 1985). Regarding specific individual studies since these meta-analyses, Morrison and Savery (1996) found workers who were being multi-skilled (level of skill variety of their jobs was being increased) were less likely to leave the organization than those who were not being multi-skilled. In addition, a longitudinal study of Dutch employees by Taris (1999) found higher levels of job variety as well as higher levels of autonomy to be linked to
lower actual turnover (they did not measure turnover intentions). More recently, Zaniboni, Truxillo, and Fraccaroli (2013) found greater skill variety led to lower turnover intentions for older workers, though this relationship was not as strong for younger workers. Yet, this study indicates that for at least some workers, skill variety can impact turnover intentions levels. This work supports a negative relationship between skill variety and turnover intentions.

Following previous research, it is hypothesized that the job characteristic of skill variety negatively relates to turnover intentions. Thus, the following hypothesis is predicted.

**H2c)** *Employees who report their jobs to be higher on skill variety will have lower turnover intentions than those with jobs lower on skill variety.*

**Skill variety and well-being: Perceptions of the job as stressful and exhausting.** Though for some workers such as IT specialists, continual improvements and skills training may be a source of perceived stress and exhaustion because of the competition and expectations they face in a job environment based on rapid advancements (Tsai, Compeau, & Haggerty, 2007), many workers in general may find increased skill variety within their job to lead to lower perceptions of stress and exhaustion overall because the variety involved may create more interesting work or less routinized job functions which could be less tiresome or lead to less perceptions of the job as stressful due to minimizing large amounts of repetition, and there are initial findings to support this. For example, the aforementioned longitudinal study by Taris (1999) showed both higher levels of variety and autonomy were related to higher levels of mental well-being. Furthermore, Van Ruysseveldt, Verboon, and Smulders (2011) reported job variety and autonomy were linked to more learning opportunities which in turn partially mediated the relationships between these job characteristics and emotional exhaustion within their sample of Dutch employees. Through another longitudinal study, with a sample of Finnish
workers, Hakanen, Bakker, and Jokisaari (2011) found that skill variety was negatively related to burnout (of which perceptions of stress and exhaustion are a part) as measured 13 years later. This relationship existed even after controlling for pre-existing sources of stress and thus this finding is quite compelling. A study by Griffin, Hogan, and Lambert (2013) involving prison staff also shows support for skill variety’s effect on exhaustion as they found both skill variety and autonomy were negatively related to emotional exhaustion, such that employees reported less exhaustion when their jobs were high on variety or high on autonomy. In an additional longitudinal study with a sample of psychiatrists from New Zealand, Kumar, Sinha, and Dutu (2012) found lower skill variety was linked to high emotional exhaustion three years later. Though this is a very specific job, this study along with the aforementioned studies involving other samples provide initial evidence of the beneficial effects of higher skill variety being linked to lower exhaustion and stress levels.

Following previous research, it is hypothesized that the job characteristic of skill variety negatively relates to perceptions of the job as stressful and exhausting. Thus, the following hypotheses are predicted.

**H2d)** Employees who report their jobs to be higher on skill variety will have lower levels of reported perceptions of the job as stressful than those with jobs lower on skill variety.

**H2e)** Employees who report their jobs to be higher on skill variety will have lower levels of reported perceptions of the job as exhausting than those with jobs lower on skill variety.

**Task Significance and Worker Outcomes**

Task significance leads to beneficial worker outcomes because it provides meaning in a person’s work, as does skill variety (Hackman & Oldham, 1976). As task significance involves
the extent to which a job impacts others (either in the organization or beyond the organization), this characteristic allows for a deeper sense of meaning in one’s work because it clarifies a link to how the employee affects other people and in turn, this job characteristic provides the perception that one’s job has importance. The specific existing studies showing the relationship between task significance and worker outcomes will be discussed for each outcome variable in turn.

Task significance and job satisfaction. Higher levels of task significance is likely to be linked to higher job satisfaction for many workers because the sense of meaning this job characteristic provides can in turn create satisfaction with one’s work due to creating a clear connection between one’s job and how it impacts others. In line with this, there are several meta-analyses that provide support for the task significance-job satisfaction relationship. First, Loher et al. (1985) reported that task significance had a corrected correlation coefficient of .38 with job satisfaction. In addition, Brown and Peterson’s (1993) and Fried and Ferris’ (1987) meta-analyses also found a significant relationship between task significance and job satisfaction. Also, as mentioned earlier, Hackman and Oldham’s early work showed support for this relationship as well (e.g., Hackman & Oldham, 1976; Oldham et al., 1976). Therefore, there is existing research to support a positive relationship between task significance and job satisfaction.

Consistent with previous research, it is hypothesized that the job characteristic of task significance positively relates to job satisfaction. Thus, the following hypothesis is predicted.

H3a) Employees who report their jobs to be higher on task significance will have higher job satisfaction than those with jobs lower on task significance.

Task significance and OC. Again, there are few existing studies demonstrating the relationship between task significance and OC, yet some preliminary findings are available. If a
job entails higher significance or meaning in regards to how one’s job impacts others, employees may be more committed to an organization that encourages this or provides this opportunity to positively impact other individuals or the broader society because employees feel they are making a difference through their job. In support of this, Griffin (1991) examined task significance and found it was significantly positively related to OC over four time points. However, this study did not separately test task significance from all other job characteristics in the JCM to see its independent relationship to OC as this dissertation will do. Furthermore, Thatcher et al. (2003) found task significance to be positively related to OC ($r = .30$) and significantly predicted OC (path estimate = .17, $p < .05$) with their sample of U.S. American IT workers. Thus, research exists that support a positive relationship between task significance and OC, though future work is warranted due to the limited number of studies testing this explicit link.

Consistent with previous research, it is hypothesized that the job characteristic of task significance positively relates to OC. Thus, the following hypothesis is predicted.

$H3b$) Employees who report their jobs to be higher on task significance will have higher organizational commitment than those with jobs lower on task significance.

**Task significance and turnover intentions.** Providing meaning through higher levels of task significance could be linked to higher employee retention rates and lower turnover intentions because this need or sense of purpose is fulfilled in these jobs so employees may not feel the need to look elsewhere to do so. In addition to Hackman and Oldham’s original findings (1976) and meta-analyses that show support for the task significance-turnover intentions relationship (e.g., Brown & Peterson, 1993; Fried & Ferris, 1987; Loher et al., 1985), two more recent individual studies discussed earlier in this dissertation also found task significance to be
positively related to employees’ intentions to stay within their company as well as their aforementioned findings on autonomy; one with a Singaporean sample (Hee & Ling, 2011) and one with a U.S. American sample (Li & Bagger, 2012). Therefore, there is some existing evidence of a negative relationship between task significance and turnover intentions.

Consistent with previous research, it is hypothesized that the job characteristic of task significance negatively relates to turnover intentions. Thus, the following hypothesis is predicted.

\[ H3c \] Employees who report their jobs to be higher on task significance will have lower turnover intentions than those with jobs lower on task significance.

**Task significance and well-being: Perceptions of the job as stressful and exhausting.**

Potentially, higher meaning attributed to one’s job through high levels of task significance could ameliorate or negate perceptions that one’s job is stressful or exhausting. Employees could be energized and some of their stress perceptions may be buffered by a clear link of how their job positively impacts others. The only current study including the examination of task significance and well-being was a study by Liu et al. (2014) with a sample of psychiatric clinical staff workers in China. They found job characteristics as measured by the Job Diagnostic Survey (JDS; Hackman & Oldham, 1975) indicated all job characteristics in the survey including task significance were positively related to higher subjective well-being and these relationships were mediated by work engagement. However, they did not report on individual job characteristics’ relationships with well-being, so it cannot be known what the distinct relationships are between autonomy, skill variety, and task significance with well-being. Though the specific relationships between task significance and well-being outcomes (perceptions of job as stressful and exhausting) have not been studied prior to this dissertation with the exception of the study mentioned above, the findings regarding the relationships between job autonomy and well-being
as well as between skill variety and well-being suggest the possible existence of these relationships as the job characteristic of task significance motivates employees through providing them with a sense of importance and meaning in their work according to Hackman and Oldham (1975). Therefore, if relationships have been found between autonomy and well-being variables as well as between skill variety and well-being variables, it is logical to expect this to be present for task significance as well due to their similar motivating mechanisms. This dissertation examines this link explicitly and thus allows for a potential extension of the understanding of job characteristics’ impact on other outcome variables such as those related to well-being.

Consistent with previous research, it is hypothesized that the job characteristic of task significance negatively relates to perceptions of the job as stressful and exhausting. Thus, the following hypotheses are predicted.

**H3d)** Employees who report their jobs to be higher on task significance will have lower levels of reported perceptions of the job as stressful than those with jobs lower on task significance.

**H3e)** Employees who report their jobs to be higher on task significance will have lower levels of reported perceptions of the job as exhausting than those with jobs lower on task significance.

It is important to note that although objective characteristics lead to the perceptions of one’s job which in turn affect workers’ attitudes and behavior, it is argued that it is the perception of job characteristics, not the objective nature of them that most affects how employees respond to their jobs (Hackman & Lawler, 1971), especially for the aforementioned beneficial worker outcomes. Thus, assumptions about the proposed relationships among job characteristics and worker outcomes do not need to be assumed based on objective job
characteristics, but instead Hackman and Oldham’s (e.g., 1976) original intent of this model was that they should be understood and measured via employee perceptions, as the present study does. In line with this, for example, James and Tetrick (1986) argue that the effect of satisfaction occurs only after the cognitive component of creating perceptions of one’s job, which concurs with the JCM’s proponents that explain perceptions are based on characteristics of the jobs themselves. In fact, job characteristics directly indicate the person’s environment at work and therefore they have a strong impact on employees’ perceptions (Erez, 2010). Furthermore, employee perceptions of their job strongly concur with that of their supervisors and by researchers (e.g., Hackman & Lawler, 1971) so objective ratings are not more valuable nor more essential within this context compared to self-reported ratings, as what matters most is how employees themselves view their job.

Research supports the idea that job characteristics have greater effects on worker outcomes than do other variables as it is job characteristics and not organizational characteristics (such as organizational culture, etc.) that more immediately impact worker outcomes (Mathieu & Hamel, 1989). Job characteristics are arguably within the control of the organization when designing or redesigning jobs/roles which is certainly good news for companies in that they can play a role in positively impacting worker outcomes for their employees via job characteristics. Furthermore, Glisson and Durick (1988) found that although no employee characteristics (e.g., personality, education, age, gender) predicted job satisfaction, the job characteristics of role ambiguity and skill variety did have a significant impact. Further evidence concurs with Glisson and Durick’s (1988) finding that job characteristics are more predictive in impacting worker outcomes than demographic ones as well. More specifically, several studies found a much higher predictive power for job characteristics’ effects on job stress, OC, and job satisfaction than
demographic or personal characteristics such as gender, age, personality, education, etc. (Hogan et al., 2009; Lambert & Paoline, 2008; Thomas, Buboltz, & Winkelspecht, 2004). Thus the importance of job characteristics is derived from findings that not only are they characteristics that are at least partly within the control of the organization (as compared to demographic characteristics which are not at all) but they also have a greater influence than personal variables on these salient outcomes as well as a larger effect than organizational factors such as organizational climate or organizational culture, supporting the importance of further study within this domain.

**Additional Need for Job Characteristics Research**

As can be determined by the research cited above and the multiple reviews and meta-analyses which attest to the importance of the job characteristics of autonomy, skill variety, and task significance for the salient aforementioned worker outcomes (e.g., Brown & Peterson, 1993; Fried & Ferris, 1987; Humphrey et al., 2007; Loher et al., 1985; Mathieu & Zajac, 1990; Porter & Steers, 1973), the importance of job characteristics is supported by extensive evidence, yet there are potential limits to the generalizability of the tenets of JCM that have not been thoroughly studied. In fact, Oldham and Hackman (2010) themselves more recently discussed how the context of work is changing and that their model must be assessed and used in novel ways in order to understand if past assumptions are still accurate or not, though they affirm the issues have not yet changed regarding the importance of minimizing turnover and increasing employees’ satisfaction and commitment. Additionally, Chua and Iyengar (2006) state that the JCM generally calls for increasing autonomy and variety on the job among other job characteristics, but it is likely that culture is a boundary condition for these two characteristics in particular, though only minimal work has been done regarding this as will be discussed in
Chapter 4. As further evidence for the necessity of continuing job design research, in 2010 the *Journal of Organizational Behavior* dedicated an entire special issue to encourage and spark renewed interest in this important area of study. This journal issue’s introduction article by Grant et al. (2010) also urges future research within job characteristics and job design in general as per the changing nature of work regarding the increase in a knowledge-based industry, as well as immense increases in globalization and cross-national operations. Additionally, the *Annual Review of Psychology* had an entire review dedicated to job and work design for the first time in 2014, where Parker (2014) encourages further research in this domain as she determined work design can be an effective tool for enhancing learning and development as well as stabilizing and improving employee health and well-being. This dissertation follows this call to continue job design research, specifically with a focus on job type and culture as moderators of the job characteristics-worker outcome relationships. This study intends to move work design research forward in explicitly examining these contextual variables which can create a deeper understanding of how job characteristics may be perceived differently across employees (blue-, pink-, or white-collar; employees in different cultures) and thus may have varying effects on worker outcomes.
Chapter 3

Effect of Job Type on Job Characteristic-Worker Outcome Relationships

Interestingly, not all jobs seem to consistently retain the JCM’s predicted relationships with work perceptions and outcomes (e.g., Birnbaum et al., 1986; Liu, 2008; Mathieu & Hamel, 1989; Parkes & Von Rabenau, 1993). Clearly, job requirements vary to a large extent across occupations (Dunnette, 1999). In fact Johns (2006) indicated “knowing someone’s occupation often permits reasonable inferences about his or her task, social, and physical environment at work, which in turn, can be used to predict behavior and attitudes” (pp. 393). Also, different occupations have varying reinforcement avenues or opportunities (Dierdorff & Morgeson, 2013). Some studies of job characteristics (both those using the JCM as well as those utilizing the DCS model) have alluded to the impact of job type on relationships between job characteristics and worker outcomes (e.g., Liu, 2008; Suman & Srivastava, 2012), while others simply explain descriptive differences of job characteristics across jobs, such as Kawakami et al.’s study (2004) that indicated “higher-class” (white-collar) workers have greater autonomy and control in their work, as do managers (e.g., Campbell & Campbell, 2003) which is a specific white-collar job. Furthermore, while some studies such as that by Parkes et al. (1994) have controlled for job type instead of explicitly studying its effects, even these authors acknowledge that the outcomes of job characteristics such as well-being and health as described by the DCS model may be affected differentially across jobs. Karasek and Theorell (1990) also indicate this likely effect of job type, though they did not specifically study these effects or attempt to understand how they may vary in meaningful ways. Some jobs are more structured (e.g., machine operators) and others include more varied responsibilities and require the employee to deal with a wide array of issues or problems (e.g., managers), resulting in the potential for jobs to vary on job characteristics such as autonomy, skill variety, or task significance.
Recent research points to the importance of the occupational context (e.g., Dierdorff & Ellington, 2008; Dierdorff & Morgeson, 2013; Johns, 2010; Tomislav, 2011) and its influence on employees’ perceptions of their work (Dierdorff & Morgeson, 2007; Dierdorff, Rubin, & Morgeson, 2009; Morgeson, Dierdorff, & Hmurovic, 2010). For example, Dierdorff et al. (2009) found that context (including task context) is predictive of role/job requirements. Furthermore, Morgeson et al. (2010) explain how occupational context can “influence the relationships between work design features and various outcomes” (pp. 351), yet they argue occupational context has been understudied in regards to the effects of job characteristics despite its importance. Therefore, different types of jobs involve varying responsibilities and requirements and thus occupational context/job type seems to influence whether a given job characteristic can even emerge. Morgeson and Humphrey (2006) as well as Dierdorff and Morgeson (2007) explain varying occupational contexts (i.e., jobs) involve different job features or tasks and thus perhaps meaningful differences are likely to occur on job characteristics across jobs because employees differ in their expectations of the features and tasks. For example, some jobs simply do not require much autonomy, and therefore in these cases increasing autonomy levels may not affect workers’ perceptions of their job because if workers in certain jobs simply do not expect high levels of autonomy, even if they find themselves in a job that does have high levels of this job characteristic, it may have little impact on worker outcomes. However, for employees who expect high levels of autonomy because their jobs typically include it, this can beneficially impact their worker outcomes but could certainly be quite detrimental to these outcomes if they do not receive high levels of this job characteristic.

An occupation is a set of job roles across organizations that have common work requirements such as tasks, responsibilities, goals, or methods of achieving these responsibilities,
as well as sharing employee requirements such as knowledge, skills, abilities, etc. (Morgeson et al., 2010). A common past differentiation among types of jobs is the dichotomous distinction between those that are white-collar and those considered blue-collar. Blue-collar work typically involves manual work that is paid on an hourly basis and some blue-collar workers especially in the skilled trades, are represented by a union, while white-collar jobs are usually salary-based in regards to pay (as opposed to paid hourly) and are typically well-educated in terms of formal schooling (Suttle, 2013). White-collar work also often involves highly skilled work and thus these workers are often considered professionals. Several examples of blue-collar job categories are craft and related trades workers, plant and machine operators and assemblers, as well as construction and manufacturing workers, while the categories of managers, healthcare practitioners, and other professionals such as technicians and associate professionals are deemed white-collar job categories (Root & Sebastian, 1981).

As the service industry is the largest industry in the U.S. American economy (Bureau of Labor Statistics, 2012; see Figure 3.1) as is the case in many other countries (Lee & Wolpin, 2006; Ostrom et al., 2010), job type categorization must be broadened from the past conceptualization of only white- and blue-collar jobs. Pink-collar jobs (i.e., service workers, clerks, shop and market sales workers) are currently a distinct and important job type to consider in regards to perceptions and experiences of work. Ostrom et al. (2010) explain that many of the countries with foremost economies in the world include service as their dominant industry as most of these countries have at least 70% of their gross domestic product (GDP) based on services, which is not projected to change anytime soon. They further note that even many countries whose economies have in the past been mostly based on manufacturing, such as China
for example (whose GDP is now about 40% from services), now have a rapidly growing service industry.

Though there is less existing research regarding service jobs and the JCM than for white- and blue-collar jobs, there is evidence that autonomy is a salient job characteristic in that it accounts for a significant amount of variance in customer service behavior (Rogelberg, Barnes-Farrell, & Creamer, 1999) and is positively linked to a company being customer-oriented in general (Coelho & Augusto, 2008), which is putting the customer first without failing to implement views of other stakeholders (i.e., employees, supervisors, owners) in order to be a profitable company over time and maintain long-term customer satisfaction (Franke & Park, 2006). Coelho and Augusto (2008) also found autonomy to be positively related to task identity and task variety in service-related companies. More recently, Kuo and Ho (2010) found the five job characteristics from the JCM to have a positive impact on service quality. Therefore, job characteristics including those examined in the present study (skill variety, task significance, and autonomy) have been found to be positively linked to company performance indicators (e.g., customer orientation and service quality), yet relationships between these job characteristics and worker outcomes have been rarely studied for service (pink-collar) jobs. One recent study that did use a sample of service workers in the context of job characteristic-job satisfaction relationships found autonomy, task significance, and skill variety were significantly positively linked to job satisfaction (Ford & Wooldridge, 2012). Additionally, they found industry growth-job satisfaction relationships were mediated by the aforementioned job characteristics, such that employees in industries with high growth rates (such as the service industry) reported more autonomy, task significance, and skill variety (more learning opportunities as well) than workers
in industries with deteriorating growth rates, which in turn predicted employees’ satisfaction with their jobs.

In the chart shown in Figure 3.1, white-collar, blue-collar, and pink-collar jobs are shown based on U.S. American data derived from the Bureau of Labor Statistics (2012) for all major occupational categories within each job type. Though the Bureau of Labor Statistics’ projections (2013) for 2022 suggest some white-collar jobs such as healthcare support workers as well as healthcare practitioners and technical occupations as the fastest growing major occupational categories in the United States, with expected increases of 28.1% and 21.5% respectively, blue-collar work, especially construction and extraction workers (increase of 21.4%) and pink-collar work, notably personal care and service occupations (increase of 20.9%) involve rapidly growing occupational categories as well. Though these projections are specific to the United States, this indicates that the amount of jobs in each job type (white-, blue-, and pink-collar) is likely to continue growing and therefore all three are currently important to consider for further research. The three job types of white-, pink-, and blue-collar are shown separately in Figure 3.1 and are each independently defined but it should be noted, that due to the similar nature of white- and pink-collar jobs being less repetitive and structured in general compared to blue-collar work, white- and pink-collar jobs are expected to have similar job characteristic-worker outcome relationships and are thus grouped together for hypotheses and analyses (compared to blue-collar jobs).
Figure 3.1. Percentage of the U.S.A.’s workforce in each job type.

Note: All data from major occupation categories from the Bureau of Labor Statistics (2012) are included. Table 3.1 below lists all major occupational categories in each job type.

Table 3.1

Major Occupational Categories Included in Bureau of Labor Statistics

<table>
<thead>
<tr>
<th>Job Type</th>
<th>Major Occupation Categories Included</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pink-collar</td>
<td>Food Preparation and Serving, Personal Care and Service, Protective Service, Sales and Related Occupations, Office and Administrative Support</td>
</tr>
<tr>
<td>Blue-collar</td>
<td>Building and Grounds Cleaning, Maintenance, Farming, Fishing, and Forestry, Construction and Extraction, Installation, Maintenance, Repair, Production, Transportation, Material Moving</td>
</tr>
</tbody>
</table>
Descriptive Differences Based on Job Type

In regards to job characteristic preferences, some past research has found significant differences based on job type in the form of descriptive or mean differences. For example, even as Hackman and Oldham (1975; 1976) were developing the JCM, Weaver (1975) found that in general, white-collar workers had higher preferences for their work being important and giving a sense of accomplishment (i.e., task significance) than blue-collar workers. Blue-collar workers ranked more extrinsic characteristics of their work higher, such as having a high income and job security as compared to white-collar workers. This initial research provided direction, but did not lead to much purposeful research regarding job type as a moderator of the JCM’s characteristics with worker outcomes.

In line with Weaver’s (1975) early work, other studies started to find the level of pertinence for certain job characteristics varies across jobs. Wiener and Vardi’s (1980) study included two samples (staff professionals and insurance salespeople) and found support that relationships between OC and four worker outcomes (job satisfaction, attachment to the organization, work effort, and performance) were stronger for the professionals than the salespeople. They believed this was a result of professionals’ high levels of commitment as based on the fact that their values are often closely tied to that of their organization. Within a sample of male Mexican-American workers, Berger (1986) found those in white-collar jobs reported six general job characteristics to have significantly higher importance levels than did those in blue-collar jobs; provides challenge, interesting (related to skill variety), provides prestige, opportunity for advancement, scheduling flexibility (an aspect of autonomy), and free of safety/health hazards. Furthermore, white-collar workers reported that to them the two most important aspects of their job were that it provides challenge and that it is interesting, while blue-collar workers stated these two were the least important to them with fair treatment and a
satisfactory income being the most important instead. Overall, Berger (1986) found white-collar workers viewed intrinsic characteristics as more imperative than extrinsic job characteristics, while blue-collar workers stated intrinsic and extrinsic job characteristics as nearly equal in relevance which has also been found in a similar study by Stepina (1985) with American and Canadian workers.

Additionally, Grebner et al. (2003) found call agents reported significantly less autonomy and skill variety than employees in other jobs with 2-4 years of vocational education (chefs, bank tellers, sales assistants, nurses, and electronic technicians). Furthermore, Kawakami et al. (2004) found managers and other professionals to have significantly higher levels of job control than nonprofessionals, while Morgeson and Humphrey (2006) also found professional jobs (white-collar) to have higher skill variety, autonomy, and complexity than nonprofessional (blue-collar) jobs. In addition, they found the relationships between job characteristics and worker outcomes were mostly in the same direction for all employees regardless of job type, though these relationships were stronger for professional jobs than those which were nonprofessional, again providing some indication of a moderation effect of job type on these relationships which was more directly examined in this dissertation.

At this point, it would be useful to continue a systematic study of these patterns related to autonomy, skill variety, and task significance in relation to worker outcomes by building upon the research done thus far in these arenas. A major contribution of this dissertation is that it tests for job type’s moderation of the strength of job characteristic-worker outcome relationships, as opposed to many past studies that have focused on mean differences across job types. There is a theoretical rationale and some preliminary research suggesting job type may play a moderating role in the relationships between job characteristics and the outcome variables of job satisfaction,
OC, turnover intentions, and well-being (perception of the job as stressful and exhausting). Relevant theory and research for each of these outcome variables will be discussed in turn.

**Job Type Moderating Autonomy-Worker Outcome Relationships**

As employees across varying job types are likely to expect differing amounts of autonomy, it is likely that job type will moderate autonomy-worker outcome relationships because those who obtain high levels of autonomy in their job and did not expect to (blue-collar workers) are not likely to be as impacted by the existence of this job characteristic as employees in white- and pink-collar jobs who have clear expectations that they will have control and independence in how their work is organized and done. For example, Fisher (1985) explains that differing control levels play a large role in stress levels, such that blue-collar workers tend to have much less control over their work than other jobs in general, have less ability to avoid or ameliorate unpleasant working conditions, and have less of a chance to change conditions of the work tasks themselves. If employees in certain jobs expect to have more control or autonomy than those in other jobs, the typical relationships described by the JCM regarding job autonomy would exist but only for jobs in which there is the possibility for employees to be autonomous (which are less structured). Employees in other jobs in which the typical tasks, schedules, and actions are largely structured and inflexible would not plan on having high levels of autonomy. Essentially, the relationships between autonomy and worker outcomes would be weaker for blue-collar (labor or manufacturing) jobs (consistently lower autonomy levels) due to their typical structured nature which results in lowered expectations for autonomy, whereas white- or pink-collar jobs may be more likely to have autonomy in general and therefore these workers anticipate their jobs to have high levels of this job characteristic. In turn, the relationships
between autonomy and worker outcomes would be stronger for these jobs (white- and pink-collar jobs) because of their fit with the tasks and expectations of the job.

**Job type and autonomy-job satisfaction relationship.** In line with the explanation above, white- and pink-collar jobs are expected to have stronger autonomy-job satisfaction relationships than blue-collar jobs because autonomy may be more conducive to the former two job types resulting in higher expectations for autonomy for these workers than those in blue-collar jobs. Prior to investigating how job type may impact specific relationships between characteristics of the job and job satisfaction, Harris and Locke (1974) found a descriptive difference on job satisfaction between blue- and white-collar employees. They found blue-collar workers tend to gain satisfaction from their jobs by obtaining “hygienes” (mostly money) while white-collar workers were satisfied from “motivator” situations (e.g., achievement). Although more recent research demonstrates the potential moderator of job type between job characteristics and worker outcomes as will be discussed later, several other past studies which did not intend to find nor purposely focus on job type as a predictor still show some subtle effects. For example, Duke and Sneed (1989) used a sample of foodservice employees to study the relationships between job characteristics and job satisfaction. While not the original thrust of the research, they included both managers and subordinates and looked at whether there were main effects of job level in the same industry. Though they found the expected relationships between the commonly used job characteristics of autonomy, task identity, feedback, variety, as well as the two additional job characteristics (i.e., friendship opportunities and dealing with others) derived from Hackman and Lawler’s original work (1971), they did not find evidence for differences on job satisfaction among the dichotomous categorization of roles (managerial vs. non-managerial) except for the characteristic of dealing with others, for which managerial
employees scored significantly higher than non-managerial employees likely because it is part of a manager’s actual job to deal with others, while this may not be the case for all other roles in the food industry. However, as the present study examines job type (including hundreds of job titles of white-, pink-, and blue-collar job types), the limited job titles and industry included in Duke and Sneed’s (1989) work (i.e., only jobs within the foodservice industry) may be too limited to capture true differences across jobs. Certainly there should be more differentiation as well as a measurement of the other proposed employee outcomes of the JCM (e.g., OC, perception of the job as stressful, perceptions of the job as exhausting, and turnover intentions) beyond job satisfaction alone. Granted, job type was not the focus of Duke and Sneed’s study (1989), but it should be noted that at minimum, they recognized the possibility of the effect of differing job roles/job positions and explored this avenue in an initial manner.

There is some clearer evidence for job satisfaction varying on job type however. For example, Weaver’s work (1980) shows the general tendency for white-collar workers to have higher job satisfaction than blue-collar workers, Stepina (1985) concurs with the finding that there is a consistent robust positive relationship between position level and job satisfaction, and Liu (2008) also found higher reported job satisfaction for higher executives and major professionals than administrative, sales, clerical workers, machine operators, minor professionals, technicians, or semiskilled workers. Additionally, Kawada and Otsuka (2011) found that compared to clerical workers, blue-collar unskilled manual workers reported significantly higher levels of job dissatisfaction. Furthermore, Herman and Sneed (1990) found that supervisors perceived their jobs to have higher levels of autonomy, skill variety, and feedback than non-supervisory positions within their sample that included foodservice staff from 26 hospitals. In this study, all employees were in the same industry and working within the same
type of company (hospitals), yet the authors found differences in work perceptions based on job type, suggesting variation on satisfaction across workers cannot be mostly or in large part due to inherent differences across organizations or industries. They also found supervisors to have higher job satisfaction compared to nonsupervisory employees.

Furthermore, Stepina’s study (1985) found jobs high on the five job characteristics from the JCM were positively related to job satisfaction as well as motivation in a sample including numerous and varied job types. Thus, the jobs with higher autonomy were related to beneficial worker outcomes as JCM research has consistently found, but Stepina argued for more attention to be paid to the role of position characteristics (i.e., job types) in relationships. In a study incorporating a sample including 57 jobs from 37 organizations in Hong Kong, Birnbaum et al. (1986) found significant differences across jobs for ratings of the job characteristics of skill variety, autonomy, task significance, and task identity, but not for feedback. More importantly, the authors reported job satisfaction had significantly differential findings across jobs as well, supporting the importance of including job type as a factor in understanding job characteristics’ effects on employee perceptions of their work. However, the authors examined this in a general exploratory manner, as testing for the effect of job type was not the focus of their study but was found nonetheless. Therefore, unfortunately they do not actually report on any more specific patterns of job type’s effect other than stating simply that there were significant differences across jobs on satisfaction. In addition, several studies by Snibbe and Markus (2005) indicated employees with high school degrees and working in blue-collar jobs responded to autonomy being taken away from them differently in experimental tasks than college graduates, suggesting though some level of choice and autonomy would likely be appreciated by both groups, the college graduates sought after and responded more positively to autonomy when it was given and
responded more negatively when autonomy was taken away than did the other group. The findings suggest education and job type may impact the level of autonomy one is used to and in turn how it is perceived.

Based on the prior research discussed above, it is hypothesized that job type moderates the relationship between the job characteristic of autonomy and the worker outcome of job satisfaction. Though past research used the terms ‘white-collar’ and ‘blue-collar,’ note that currently the terms ‘professional jobs’ and ‘physical labor and manufacturing jobs,’ are often also used, respectively. However, in order to align with the terminology of the cited literature, hypotheses for this study utilize the terms white- and blue-collar (in addition to pink-collar to denote service jobs). The same relationships are expected for white- and pink-collar jobs due to their similar tendencies to be less structured and to include a higher variation of responsibilities, which in turn creates higher expectations for autonomy in these jobs than for blue-collar workers.

**H4a**  *There will be a stronger positive relationship between autonomy and job satisfaction for white- and pink-collar jobs than for blue-collar jobs.*

**Job type and autonomy-OC relationship.** As was argued for autonomy-job satisfaction relationships above, the lower expectations for high levels of autonomy in blue-collar jobs is predicted to lead to weaker relationships with OC for these jobs compared to white- or pink-collar jobs in that inherently the highly structured nature of work typical of blue-collar jobs would prevent the anticipation for autonomy’s occurrence for blue-collar workers, and in turn would minimize the likelihood of autonomy’s impact on OC in these jobs. Before research was explicitly done regarding the JCM and the effects of job type, Ritzer and Trist (1969) hypothesized (though they did not test this hypothesis) a stronger link between *antecedents of
OC and OC for nonprofessionals compared to professionals because professionals may have stronger occupational commitment as opposed to organizational commitment. Their commitment may lie with their occupation instead of their particular current organization because this is where their values and interests lie, which are beyond that of just the organization in which they currently work. Though this direction was not supported fully by later work because research now suggests job characteristic antecedent-OC relationships are stronger for white-collar workers instead, Ritzer and Trist (1969) did bring the concept of an effect of job type to awareness. More recently, Suman and Srivastava (2010) conducted a study with an Indian sample and specifically focused on antecedents of OC across two different types of jobs; technical and nontechnical (administrative). They found job characteristics, organizational structure, and tenure in the organization to be strong predictors of OC for nontechnical workers, while tenure in the organization was not a significant predictor of OC for employees holding technical jobs, though job characteristics and organizational structure were. This indicates that personal factors may affect OC for nontechnical workers more than those in technical jobs, yet further research is needed because this study did not include the job characteristics of skill variety or task significance. Suman and Srivastava (2010) suggest the reason for job type’s moderating effect on autonomy-OC relationships may be due to the potential impact job characteristics can have on OC or other worker outcomes. More specifically, job characteristics could more commonly be antecedents of OC for white- and pink-collar jobs due to their expectations for autonomy in these types of work, while personal characteristics may play a larger role in OC levels for blue-collar workers. Additionally, the potential constraint of the structured nature of blue-collar jobs may simply limit the extent to which blue-collar workers presume autonomy will exist in their jobs which may result in this job characteristic having less
of a beneficial impact on OC levels for these workers than for white- and pink-collar workers even if it is offered in their current job.

After Ritzer and Trist’s (1969) early insights about job type, Cohen’s meta-analysis (1992) focused particularly on examining the possibility that the relationships between OC and its antecedents vary across occupations and found the relationships between personal antecedents (i.e., tenure, gender, motivation, marital status, and education) and OC were stronger for blue-collar and nonprofessional white-collar workers compared to employees in professional white-collar jobs, while the job characteristic of autonomy affected OC more strongly for white-collar professionals than the other two groups. This is important in that as a meta-analysis, it is showing quite strong support that job characteristics (at least autonomy) may play a larger role in determining outcomes of white-collar employee perceptions of their jobs than blue-collar workers. In line with this finding, within a sample of blue-collar workers, administrators, and faculty (white-collar workers) all within the same organization, Chelte and Tausky (1986) found the personal characteristic of education to have an effect on blue-collar workers’ OC in addition to the job characteristic of interesting work (i.e., skill variety), such that higher levels of education were associated with lower OC for blue-collar workers, while education was not related to OC for white-collar workers and in fact the only factor associated to their OC was interesting work. Herman and Sneed (1990) found that 35% of the variance in job satisfaction could be explained by OC for nonsupervisory employees, though 29% of the variance was explained for supervisory employees with the same variable. However, the job characteristics-job satisfaction and job characteristics-organizational commitment relationships were significant for both job types, though as mentioned above, stronger relationships existed for supervisors regarding every JCM job characteristic except task identity (which is not a job characteristic
included in the present study). Even around this time, Cohen (1992) argued for the importance of further research into the moderating effects of antecedent-OC relationships and encouraged researchers to conduct more studies with blue-collar employee samples as well as studies including both blue- and white-collar jobs as Chelte and Tausky (1986) had done. Unfortunately, this call has gone largely unanswered and this dissertation attempts to remedy this gap in the research while also including jobs from the growing service industry (pink-collar jobs).

After Cohen’s meta-analysis (1992), several studies have more explicitly taken job type into consideration. Morrison and Savery (1996) found trades workers (i.e., blue-collar workers) to have lower OC as well as lower satisfaction compared to other workers such as those holding technical staff and supervisor positions. In a later study, Suman and Srivastava (2012) broke job type down further into three levels within an Indian steel plant; executives, supervisors, and workers (rank/file blue-collar workers). They found the personal variable of locus of control to be the only significant predictor of OC for the blue-collar group while organizational structure and job characteristics were the most significant predictors of OC for the supervisor and executive groups, further indicating the potential that job characteristics more strongly impact white- than blue-collar workers, though again, they did not include skill variety or task significance but did include job autonomy. There is limited research on pink-collar jobs in regards to job characteristic-OC relationships, but due to their nature (typically more varied interactions than blue-collar jobs and therefore pink-collar workers expect more autonomy than blue-collar workers), similar outcomes are expected as for white-collar jobs.

Based on the prior research discussed above, it is hypothesized that job type moderates the relationship between the job characteristic of autonomy and the worker outcome of OC.
**H4b)** *There will be a stronger positive relationship between autonomy and organizational commitment for white- and pink-collar jobs than for blue-collar jobs.*

**Job type and autonomy-turnover intentions relationship.** There is minimal research regarding job type’s moderating effect on job characteristic-turnover intentions relationships and most that has been done alludes to the impact of job type without directly or thoroughly testing job characteristics in this manner (e.g., Chelte & Tausky, 1986). However, job type is expected to affect the impact of autonomy on turnover intentions based on the rationale that the typical JCM relationships may be weaker for blue-collar jobs than white- or pink-collar jobs due to the suppressed expectations for autonomy in blue-collar work that is typically highly structured (e.g., Cox, 1985). Campbell and Campbell (2003) found perceptions of their work (job characteristics), opportunity for advancement, and feelings of stress and overload to significantly predict turnover intentions among male managers, while organizational support and job characteristics were the only significant predictors for male non-managers. Though Campbell and Campbell’s study (2003) involved an examination of job characteristics to some extent by utilizing six items from Hackman and Oldham’s (1975) scale relating to perceptions of the meaningfulness, excitement level of the job, and importance of one’s work, they did not test for the job characteristics separately and thus conclusions cannot be drawn regarding if these hold varying predictive power for turnover intentions between different job types. They also did not explicitly examine autonomy and thus further research is needed in regards to specifically focusing on the potential of job type in moderating relationships between autonomy, task significance, and skill variety with the outcome of turnover intentions.
Based on the prior research discussed above, it is hypothesized that job type moderates the relationship between the job characteristic of autonomy and the worker outcome of turnover intentions.

_Hypothesis 4c_ (H4c) There will be a stronger negative relationship between autonomy and turnover intentions for white- and pink-collar jobs than for blue-collar jobs.

**Job type and autonomy-well-being relationships.** Research on employee health outcomes in general is starting to grow, largely due to studies utilizing the Demand-Control-Support (Karasek, 1979; Karasek & Theorell, 1990) and Job Demands-Resources models (Demerouti et al., 2001), yet studies including job characteristics from the JCM in relation to health outcomes are minimal. Rarer yet, is a focus on how various jobs may differentially impact relationships between job characteristics and health outcomes. The lower expectation regarding autonomy in blue-collar work as mentioned earlier would also be expected to lead to the existence of weaker relationships between autonomy and well-being worker outcomes because within these jobs, autonomy is not likely anticipated by employees which in turn may result in less of a beneficial impact on well-being compared to its impact within white- and pink-collar jobs. Initial evidence does exist for the moderating effect of job type on various health-related variables, yet further research is imperative within this domain.

There seems to be minimal research in regards to blue-collar workers and well-being outcomes including perceptions of stress (Donald & Siu, 2001). However, recent research related to pink-collar jobs (service jobs) includes a study of prison staff which found supervisors to have lower levels of job stress than other positions in a prison (Lambert & Paoline, 2008), indicating the lower ranking positions had more negative perceptions of stress in their jobs. In line with this finding, Parkes and Von Rabenau (1993) also found that higher job levels were linked to lower
prevalence levels of health problems, indicating better well-being for more professional pink- and white-collar workers than blue-collar workers. This study included a sample of psychiatric healthcare workers (care assistants with no formal qualifications in healthcare vs. five positions with formal education and training in healthcare; enrolled nurses, qualified nurses, senior nurses, professional non-medical group which was mainly social workers and psychologists, and medically-qualified staff which were residents). More specifically, they found senior level nurses to have the most discretion (termed discretion from the DCS model but is synonymous with autonomy from the JCM), while care assistants had the lowest discretion scores. More importantly, employees in all job types with formal education and training in healthcare reported a lower prevalence of somatic health symptoms than care assistants. The researchers stated that the variance accounted for across various job types was “independent of that associated with perceived demand” (Parkes & Von Rabenau, 1993, pp. 251). Thus, the greater responsibilities or demands involved in higher level positions were not the source for the varying levels of health issues. Therefore, there is initial support suggesting the moderating role of job type for the autonomy-job satisfaction relationship.

Based on the prior research discussed above, it is hypothesized that job type moderates the relationships between the job characteristic of autonomy and the worker outcomes of perception of the job as stressful and exhausting.

**H4d)** There will be a stronger negative relationship between autonomy and perceptions of the job as stressful for white- and pink-collar jobs than for blue-collar jobs.

**H4e)** There will be a stronger negative relationship between autonomy and perceptions of the job as exhausting for white- and pink-collar jobs than for blue-collar jobs.
Job Type Moderating Skill Variety-Worker Outcome Relationships

As mentioned earlier, Morgeson et al. (2010) explain how job type can moderate relationships between job characteristics and various outcomes and this includes the job characteristic of skill variety. For example, Hakanen et al. (2011) found employees with higher levels of education reported higher levels of skill variety in their jobs. They explained that those with higher formal degrees in education have jobs that involve the possibility of using a wider range of skills but those with less education have jobs with more repetitive tasks and limited skill variety. Liu’s (2008) dissertation involving Taiwanese expatriate workers in China found employees in jobs categorized as higher executives and major professionals reported higher levels of skill variety and autonomy than minor professionals, administrative personnel, sales or clerical employees, technicians, machine operators, or semiskilled workers. Liu also found higher reported job satisfaction as well as OC for higher executives and major professionals than administrative, sales, clerical workers, machine operators, minor professionals, technicians, or semiskilled workers, suggesting the moderation of job type between job characteristics and worker outcomes predicted by this dissertation. Job type is also expected to be a moderator for skill variety-worker outcome relationships due to differing expectations for the amount of skill variety anticipated across job types which may impede the beneficial effects of skill variety on worker outcomes that have been found in JCM research (e.g., Bos et al., 2013; Lambert & Paoline, 2008; Taris, 1999; Zaniboni et al., 2013) for blue-collar jobs. There is surprisingly little prior research examining the moderating role of job type on skill variety-worker outcome relationships. However, there are several studies alluding to its potential moderating role regarding relationships between skill variety and job satisfaction, OC, turnover intentions, and well-being that will be discussed below.
Job type and skill variety-job satisfaction and skill variety-OC relationships. Due to the typical routinized and structured nature of blue-collar work, expectations for skill variety also may be lower within these jobs compared to white- or pink-collar jobs, which inherently would lead to weaker relationships between this job characteristic and job satisfaction for blue-collar jobs compared to other job types (white- and pink-collar jobs). There have been several studies showing the link between skill variety and job satisfaction but the moderating role of job type has never been tested for this relationship, nor for its moderating role of skill variety-OC relationships. Regarding the two existing studies specifically utilizing pink-collar workers (studies with other job types were reviewed in Chapter 2 for these general skill variety-job satisfaction relationships), in a sample of salespeople, Dubinsky and Skinner (1984) found the common positive relationship between several job characteristics (skill variety, role ambiguity, and role conflict) and job satisfaction. In addition, Iecovich’s study (2011) with a sample of health live-in home care workers found both job variety and job decision authority (autonomy) were positively linked to overall job satisfaction as well. These two studies provide initial support for skill variety’s positive relationship with job satisfaction in the service industry. Yet no comparisons have been made with other job types in this capacity within the same study as this dissertation does. An aforementioned study by Stepina (1985) in which jobs with high autonomy levels were positively related to job satisfaction and motivation in a professional cross-industry sample, also found a positive relationship between skill variety and job satisfaction as well, though they did not independently examine whether differences occurred across job types. Job type is expected to specifically moderate skill variety-job satisfaction and skill variety-OC relationships because employees in some jobs expect higher levels of skill variety (white-collar and pink-collar) than others (blue-collar) which in turn would impact the
strength of the relationships between skill variety and these variables. White- and pink-collar jobs logically may have stronger relationships between skill variety and these worker outcomes because skill variety has more of a beneficial impact in these jobs regarding the worker outcomes of job satisfaction and OC while blue-collar jobs are generally structured such that these employees simply have lower expectations for strong relationships between skill variety and these outcomes so if they obtain high levels of skill variety, this still may not lead to as high of worker outcome levels as it would for pink- and white-collar workers. Though there is little existing research demonstrating tests for job type as a moderator of skill variety-job satisfaction and skill variety-OC relationships, skill variety-job satisfaction and skill variety-OC relationships are predicted to be weaker for blue-collar jobs due to the expected overall lower expectations for skill variety in these jobs. Thus, the following hypotheses are offered.

**H5a)** There will be a stronger positive relationship between skill variety and job satisfaction for white- and pink-collar jobs than for blue-collar jobs.

**H5b)** There will be a stronger positive relationship between skill variety and organizational commitment for white- and pink-collar jobs than for blue-collar jobs.

**Job type and skill variety-turnover intentions relationship.** If expectation differences exist for skill variety levels in blue-collar work as predicted, this in turn would also impact this job characteristic’s effect on turnover intentions such that the typical findings from JCM-related research which indicate skill variety leads to lower turnover intentions could not necessarily be expected for jobs in which skill variety is less anticipated (i.e., blue-collar work). However, for white- and pink-collar jobs which typically highly value and expect skill variety, common findings regarding a negative relationship between skill variety and turnover intentions could be expected. Regarding skill variety’s differential impact on turnover intentions across jobs, though
Chelte and Tausky (1986) did not focus on job characteristics from the JCM besides interesting work (i.e., skill variety), they did find that across three occupation levels (administrators, faculty, and blue-collar workers), the antecedents varied greatly for turnover intentions between these groups. For example, for faculty, the significant predictors for turnover intentions were marital status, degree of role conflict, age, OC, and income, while age and number of children were the only significant predictors for blue-collar workers. In addition, Jerneić and Kutleša (2012) found that job level moderated the job attitude-turnover intentions relationship, such that differential turnover intention predictors for junior researchers and higher level researchers in an organization were found.

Again, although there is little existing research demonstrating evidence explicitly in line with job type as a moderator of the skill variety-turnover intention relationship, expectations of skill variety vary across job type, indicating higher levels of skill variety may therefore be more strongly related to lower turnover intentions for white- and pink-collar than blue-collar jobs. Thus, the following hypothesis is predicted.

**H5c**) *There will be a stronger negative relationship between skill variety and turnover intentions for white- and pink-collar jobs than for blue-collar jobs.*

**Job type and skill variety-well-being relationships.** Regarding the impact of job type on the relationship between skill variety and well-being, it is important to note that overall, blue-collar workers tend to have higher injury and illness incident rates than white-collar workers (Root & Sebastian, 1981) and general higher exhaustion and stress levels for blue-collar compared to white-collar jobs have been explained in terms of blue-collar workers’ higher prevalence rates for shift work (Monk & Tepas, 1985), repetitive work (Cox, 1985), and machine-paced work (Smith, 1985), which have low skill variety and low task significance.
Based on the similar nature of white- and pink-collar work (both typically less structured than blue-collar jobs), it is logical that employees in pink-collar jobs may also have higher well-being than those in blue-collar jobs. In their longitudinal study, Hakanen et al. (2011) found that skill variety was negatively related to burnout (for which emotional exhaustion is one aspect) for workers as measured 13 years later even after controlling for prior sources of stress and those in professional jobs had higher skill variety. Though related existing research regarding job type as a moderator of skill variety-well-being relationships is very limited, there is initial support to suggest these relationships would be stronger for pink- and white-collar jobs compared to those that are blue-collar.

Based on the literature described above, the following hypotheses are predicted regarding job type’s moderating role on skill variety-worker well-being relationships (perceptions of the job as stressful and exhausting).

**H5d)** There will be a stronger negative relationship between skill variety and perceptions of the job as stressful for white- and pink-collar jobs than for blue-collar jobs.

**H5e)** There will be a stronger negative relationship between skill variety and perceptions of the job as exhausting for white- and pink-collar jobs than for blue-collar jobs.

**Job Type Moderating Task Significance-Worker Outcome Relationships**

As discussed in Chapter 2, task significance creates a sense of meaningfulness in one’s work (Hackman & Oldham, 1976) and in fact there have been many studies demonstrating that task significance is related to many of the worker outcomes included in this dissertation (e.g., Brown & Peterson, 1993; Hackman & Oldham, 1976; Hee & Ling, 2011; Li & Bagger, 2012; Oldham et al., 1976). However, the work by Morgeson et al. (2010), Dierdorff and Morgeson (2007), as well as others (Dierdorff et al., 2009; Dierdorff & Morgeson, 2013; Morgeson &
Humphrey, 2006) suggests job type is a contextual variable that impacts characteristics of the job and perceptions or worker outcomes of the job in addition to the relationships between them. Based on the findings that blue-collar work is often more routinized, structured, and monotonous (e.g., Cox, 1985; Smith, 1985) and thus blue-collar workers are likely to have fewer expectations for task significance, this may limit the extent to which meaning through the job characteristic of task significance can affect worker outcomes in these jobs. Essentially, blue-collar work is likely to be limited in the amount of task significance that occurs (restriction of range issue) and in turn limits the beneficial impact that task significance can have on worker outcomes. However, due to their typical less structured nature and higher expectations for task significance in their work, white- and pink-collar workers may have stronger relationships with the worker outcomes in this study.

**Job type and task significance-worker outcome relationships.** No research yet to date has studied the potential moderating effect of job type on relationships between task significance and job satisfaction, OC, as well as perceptions of the job as stressful or exhausting, and thus this study attempts to fill the gap in this important area of research. There is however one study that provides initial support for the moderating role of job type on the task significance-turnover intentions relationship. Huang (2011) conducted a study of job characteristics with Chinese and Japanese samples and found a consistency across these two countries that as expected, white-collar jobs were reported by employees as having higher levels of task significance, learning, and autonomy than blue-collar jobs. Though there were some nuanced differences across the two countries (likely due to pay differences within job type between the two countries), general patterns of the aforementioned job characteristics with turnover intentions were also in support of the JCM (Hackman & Oldham, 1976; 1980). Huang (2011) argues that blue-collar jobs can
and should be redesigned to increase job satisfaction and minimize turnover intentions as his findings provide tentative support for the benefits of job characteristics proposed by the JCM for these countries across jobs, though seemingly higher for white- or pink-collar workers, as is proposed by the current study. However, the sample from Huang’s (2011) study was limited to telecommunications and electric light industries as well as to only two countries, while the proposed study examines a much larger range of industries and includes data from twenty-four countries. Huang’s (2011) findings support the idea that different factors or levels of job characteristics (including autonomy and task significance) lead to turnover intentions depending on occupation. This is likely due to the aforementioned rationale that the context of the job impacts the expectations for task significance in blue-collar jobs, in turn dampening task significance-worker outcome relationships typically found in other jobs and explained by the JCM, though for pink- and white-collar jobs, higher expectations may exist regarding creating a deeper sense of importance and meaning in their work with a greater sense of their work’s connection to others by means of task significance. Yet it is clear that further research is needed in order to explicitly test for the moderating effect of job type on task significance-worker outcome relationships and to ameliorate this gap in the existing research.

Again, though prior related research is very limited, it is hypothesized that job type moderates the relationships between the job characteristic of task significance and the worker outcomes of job satisfaction, OC, turnover intentions, and perception of the job as both stressful and exhausting. These relationships are expected due to differing expectations of task significance in blue-collar jobs compared to those that are white- or pink-collar.

**H6a)** *There will be a stronger positive relationship between task significance and job satisfaction for white- and pink-collar jobs than for blue-collar jobs.*
H6b) There will be a stronger positive relationship between task significance and organizational commitment for white- and pink-collar jobs than for blue-collar jobs.

H6c) There will be a stronger negative relationship between task significance and turnover intentions for white- and pink-collar jobs than for blue-collar jobs.

H6d) There will be a stronger negative relationship between task significance and perceptions of the job as stressful for white- and pink-collar jobs than for blue-collar jobs.

H6e) There will be a stronger negative relationship between task significance and perceptions of the job as exhausting for white- and pink-collar jobs than for blue-collar jobs.

Taken together, there is evidence regarding the effect of job type on the relationships between job characteristics and worker outcomes, though past studies have often neglected to thoroughly study the effect on these relationships and instead have been mostly descriptive in the sense that blue-collar jobs are found to be associated with lower levels of reported importance and preference for job characteristics related to the JCM (e.g., Harris & Locke, 1974; Liu, 2008; Weaver, 1975) than other job types. These descriptive findings do not indicate that the job characteristics of task significance, autonomy, and skill variety are actually less important in terms of worker outcomes for blue-collar workers however. In fact, other research indicates blue-collar workers have low job satisfaction and high psychological distress due to the tendency for these jobs to be highly monotonous (e.g., Melamed, Ben-Avi, Luz, & Green, 1995). Therefore, only through understanding these relationships more deeply and within the context of job type and culture, as will be discussed within the next chapter, can research more effectively predict
which employees will benefit most from the job characteristics of task significance, autonomy, and skill variety.
Chapter 4

Effect of Culture on Job Characteristic-Worker Outcome Relationships and the Need for Further Examination of Culture in Job Characteristics Research

While some studies have examined certain job characteristic-worker outcome relationships in countries other than the United States, this data is minimal and extremely limited in terms of the included countries. Furthermore, no study has yet examined culture’s influences on the relationships between multiple job characteristics and the outcomes of job satisfaction, OC, turnover intentions, and well-being simultaneously. There is initial evidence among the limited studies available to show that job characteristics may not function similarly across cultures. Nicholson (2001) warns “…individuality and culture have deeply rooted and enduring structural properties. Organizations are more transient structures, sitting between individuals and their culture” (pp. 391), and thus it is reasonable to study how features of work may be affected by such a robust part of identity as culture instead of expecting or assuming individuals adapt to an organization’s values. As Erez (2010) and Silverthorne (2005) denote, there is much need for cross-cultural studies of motivation in regards to work design, especially because the existing small number of studies indicate motivators tend to vary in effectiveness across cultures, though a large-scale multi-country study of job characteristics and multiple worker outcomes has not been done prior to this dissertation.

In order for organizations to be competitive, it is especially pertinent to understand how job design impacts employee motivation, satisfaction, perceptions of the job as stressful or exhausting, and other worker outcomes given the current global market (Garg & Rastogi, 2005). As the period of globalization from 1980 to the present is considered the most dramatic change in the history of overall country economies (Kunnanatt, 2013) and is characterized by a growing hypercompetitive nature, it has received a great deal of attention regarding how it is affecting
work, especially in regards to what is needed to be effective in the global marketplace. For example, this has led to the assumption that preparing the workforce in terms of education and experience is important in developing what Miller and Slocombe (2012) have coined as the five Cs for success in our new global reality: capabilities, communication, conduct, consistency, and creativity. Though this research is important in capturing how globalization has shaped or reshaped work in general, understanding in what manner cultures may differentially allow for certain characteristics of jobs has not been given much attention prior to this dissertation.

In the past, psychological theories related to organizational behavior were often simply assumed to generalize across countries or cultures due to the tendency to assume what occurs in one’s environment or experience also occurs in others, resulting in an egoistic bias. Although organizational behavior research in general has incorporated cross-cultural perspectives and research questions, research involving the JCM is lacking in this regard. This study is an attempt to remedy this deficiency. In line with Holton’s (2000) arguments regarding the unlikelihood of national cultures homogenizing over time as well as Featherstone’s (1990) viewpoint that the world is certainly multi-cultural despite globalization’s interconnectedness effect, this study proposes culture has an effect on the emergence of job characteristics.

The rationale for the potential moderation of culture on job characteristic-worker outcome relationships lays in differing expectations of these job characteristics (autonomy, skill variety, and task significance) across cultures. In line with how job type has been found to play a role in the anticipation and perception of job characteristics and in turn is expected to lead to a weaker relationships between job characteristics and worker outcomes for some jobs (blue-collar) more than others (white- and pink-collar) (see Chapter 3), tendencies and norms of some cultures are also expected to limit the potential strength of relationships typically found in JCM
related research between job characteristics and worker outcomes. It is likely that less variability occurs for the job characteristics included in this study in certain cultures such that overall, employees in those cultures may uniformly have lower expectations for these job characteristics (e.g., in general mostly low expectation levels of job autonomy) leading to weaker relationships with worker outcomes, but in other cultures, employees generally expect higher levels of them. Now, culture will first be defined and discussed in general, followed by a description of the cultural dimensions used in this study and specific predictions for each cultural dimensions’ moderating role on each of the three job characteristics (autonomy, skill variety, task significance) and the five worker outcomes (satisfaction, OC, turnover intentions, perceptions of the job as stressful, perceptions of the job as exhausting) in turn.

Culture has been explained as the shared system of meaning or values across people (Erez & Earley, 1993; Triandis, 1994). Over five decades ago, Becker (1960) acknowledged values have an effect on one’s commitment levels. Though he did not use the term ‘culture,’ the context of his explanation alludes to the personal values of individuals in general or societies. Becker states “for a complete understanding of a person’s commitments we need one more element: an analysis of the system of values or, perhaps better, valuables with which bets can be made in the world he lives in. What kinds of things are conventionally wanted, what losses feared? ...Some systems of value permeate an entire society” (pp. 39). Becker’s work indicated that individuals’ attitudes and perceptions are shaped by their environments and surrounding culture.

Similarly, the definition produced through the GLOBE (Global Leadership and Organizational Behavior Effectiveness Research Program) project states that culture is the “shared motives, values, beliefs, identities, and interpretations or meanings of significant events
that result from common experiences of members of collectives that are transmitted across
generations” (House & Javidan, 2004, pp.15) and that culture is manifested in two ways:
practices and values (House et al., 2004). Practices involve the way a culture is regarding
customs, what behaviors are expected, etc., while values refer to how individuals within a given
culture feel these things should be (House & Javidan, 2004). GLOBE practices and values will
be explained in more detail later in this chapter.

The concept of culture is useful in that it both gives an indication of what differs across
groups of people in terms of how they view the world and act upon that viewpoint as well as how
characteristics within a group are similar, which may result in patterns of understanding or
shared norms within a given culture (Smith, Fischer, Vignoles, & Bond, 2013a; Wallerstein,
1990). In fact, culture even plays a role in shaping one’s identity in terms of values, sense of self,
and motivation (e.g., independent vs. interdependent self-construals; Markus & Kitayama, 1991;
2010). Thus, we cannot assume that job characteristics function in the same way across all
cultures because the shared norms, beliefs, and values of a given culture may result in varying
expectations for certain job characteristics. Quite importantly, Hofstede (1984) also explains
culture as a set of collective beliefs and values which are in turn ingrained into the institutions of
the culture including the workplace, in line with Ardichvili and Kuchinke’s (2009) view that
work “transcends individual frames of reference and links the person to the social, economic, and
political realms” (pp. 155), of which culture is certainly a part. In fact, these authors argue that
both one’s occupation and their culture shape their self-identity at work and more importantly,
the salient impact of culture on those in a given society may extend to its impact on the
workplace, indicating which job characteristics are included in organizations or jobs must
depend in part on those shared cultural norms and what they allow to develop or materialize. Yet,
Erez (2010) and Parker (2014) note the minimal amount of existing research regarding culture’s effect on job characteristics in general. Parker (2014) even deems this as “a salient void in the context of globalization” (pp. 665).

As mentioned in Chapter 3 regarding the importance of context for understanding job type’s effect on work design, culture is another such context which must be considered in order to fully capture and comprehend job characteristic-worker outcome relationships. According to Cappelli and Sherer (1991), context is the environment within which the variable of interest resides (i.e., unit of analysis higher than the variable of interest) and thus contemplating effects of context or culture in this case, aids in our understanding of a given construct or relationships between constructs. Furthermore, according to Johns (2006; 2010), this higher level context in which jobs are nested can affect and even block work design efforts focused on improving worker outcomes. Triandis (1994) explains the major benefit of cross-cultural studies is that they aid in the explanation of the importance of particular aspects of the situation or the amount of “weight” that situational aspects (e.g., job characteristics) have. Thus, culture can be associated with actual behavior at work (Hofstede, Hofstede, & Minkov, 2010; Silverthorne, 2005; Triandis, 1994). Grant, Fried, and Juillerat (2010) also state culture should be examined as a macro-level variable in work design research because it is likely that job design processes are impacted by the national culture in which companies are contained. Hofstede (1984) argues that theories are a representation of the culture or society in which they were initially brought forth, so the JCM’s emergence in the U.S. has led to a focus on how job characteristics function within this culture.

According to Warr (2008), “…values are the standards of desirability in terms of which people evaluate aspects of their world and make choices between options…” (pp. 751). Although
values mostly represent personal (i.e., individual) preferences at the basic level and not moral preferences (Dose, 1997), these values often are resultant of shared culture and thus there are commonly patterns of values at the national cultural or societal level, including how work is designed or which job characteristics are conducive to a given culture. Culture is likely to impact work in that the more a society values a given job characteristic, the more likely the employees within that culture will expect that job characteristic in a particular job. This is due perhaps to the logic that if valued, a job characteristic is simply more likely to be anticipated across jobs or industries as opposed to cultures which do not value that job characteristic, in which case it is probable that there will be more uniformly lower expectation levels of it. This in turn would lead to stronger relationships between a given job characteristic and worker outcome overall for societies that value or practice cultural dimensions conducive to it.

Value systems are closely tied to culture (Erez, 2010; Schwartz, 1992; 1994; Schwartz & Boehnke, 2004; Schwartz, et al., 2012), resulting in culture’s potential to be a contextual variable that impacts much of our lives including the workplace. Thus, it is necessary to understand specifically how culture affects the expectations of job characteristics commonly used in job (re)design. Yet Warr (2008) points out often even current research neglects to take into account employees’ culture and its effect on work-related topics, though this is improving with a growing body of research using cross-cultural samples (e.g., DeCarlo & Agarwal, 1999; Eylon & Au, 1999; Pisanti, Van der Doef, Maes, Lazzari, & Bertini, 2011; Robert, Probst, Martocchio, Drasgow, & Lawler, 2000; Zimmerman & Darnold, 2009). However, oftentimes even the studies utilizing diverse samples do not directly study the potential differential effects of work design on multiple worker outcomes across cultures. For example, Harpaz (1990) found that employees from Belgium, Japan, the UK, Germany, Israel, the Netherlands, and the U.S.A. greatly varied
on their reports of the relative importance of the job characteristics of autonomy and variety but the study did not include an examination of how job characteristics may actually have differing expectation levels in some cultures which is important in terms of understanding how in turn the strength of these job characteristic-worker outcome relationships can vary across cultures. In line with these findings, in a study of nine European Union countries (Finland, Sweden, the UK, the Netherlands, Germany, Portugal, Spain, Hungary, and Bulgaria) Drobnič, Beham, and Präg (2010) found the Nordic countries and the Netherlands reported the most autonomy in their jobs, while Sweden, Germany, and the Netherlands reported their jobs were the most interesting and varied, with Portugal and the UK reporting the lowest levels of this job characteristic, which alludes to the existence of potential constraints of culture. Again however, they did not examine the relationships between these job characteristics and worker outcomes. I concur with Johns’ (2006; 2010) strong assertions that work design has too often been studied independently from its embedded environment or context and the current study argues it is important to take into account employees’ culture when attempting to understand the effects of employees’ perceptions of job characteristics in order to ameliorate this gap.

In order to understand culture’s influence, it is critical to study it within the context of cultural dimensions. Studies, such as those noted above, which solely compare cross-country differences on job characteristics or worker outcomes can be descriptively interesting, such as Dobbin and Boychuck’s (1999) finding that jobs in Nordic countries tend to have higher autonomy than those in the U.S., Canada, and Australia or Iyengar and Lepper’s study (1999) which found U.S. American students perceived having 50% more choices in general than Japanese students and that U.S. American students perceived choice to be more important. Additionally, Westover’s (2012) results Interestingly showed mean job satisfaction and its
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Determinants differ across countries but did not provide an explanation of how these differences may vary according to culture. In addition, stress and work exhaustion seem to be global problems among employees in general but the extent to which job characteristics of autonomy, skill variety, and task significance could minimize these experiences could reasonably be considered as varying cross-culturally (Silverthorne, 2005), potentially because of the ability for them to emerge may vary across cultures, though prior to this dissertation this has not yet been explicitly examined beyond initial attempts for descriptive studies. Related existing studies include Holman’s (2013) work involving employees from all 27 European Union countries which found that the overall level of job quality (job enrichment) in a country is partly determined by its institutional structure, as well as Peterson et al.’s study (1995) involving middle-level managers from twenty-one countries which found non-Western countries (e.g., Korea, India, Indonesia, and Nigeria) to have higher reported levels of stress and work overload than Western countries. They found that role stressors varied more by country than they varied either across individuals or organizations, and more specifically, high power distance and collectivism levels were related to higher role overload, thus supporting the expectation that culture can impact job characteristic-worker outcome relationships.

In an initial attempt to understand the endorsement of various job characteristics (including those from the JCM) across cultures, Warr (2008) used World Values Survey data, though he categorized cultures in terms of historically catholic, historically protestant, or historically communist, which is quite a different representation of culture compared to House et al.’s work (1999; 2004) which is the most widely accepted cultural framework since Hofstede’s categorization (1980) and will be discussed below. Yet, Warr (2008) found differences in individuals’ ratings of importance for job characteristics across cultures, through his
aforementioned manner of cultural classification. Thus, although this study involved questions regarding the importance of job characteristics to participants instead of asking how much their particular job encompassed each (of which the latter manner of item wording is used from the Work Orientation Scale items for the current study), it is one of the few attempts at understanding the role of culture within the framework of job design and job characteristics.

**GLOBE’s Classification of Culture**

Culture has been categorized in multiple ways. One of the most common, if not the current most common understanding of culture in the field is via the GLOBE project (House et al., 1999; 2004) including data from 17,300 managers in 951 organizations, three industries (financial services, food processing, and telecommunications), and 62 societies across the world based on Hofstede’s (1980) original findings that culture varies in meaningful ways. Through the collaboration of 160 scholars with at least one representative from each of the 62 studied societies involved in the item writing and scale validation processes, the GLOBE project found a pattern of nine cultural dimensions; institutional collectivism, in-group collectivism, power distance, uncertainty avoidance, gender egalitarianism, assertiveness, future orientation, performance orientation, and humane orientation. It is important to note that the GLOBE study did not solely utilize national boundaries to categorize what they considered as separate societies. For example, the GLOBE project considered Western and Eastern Germany as distinct societies as well as Black and White samples within South Africa as separate societies.

**GLOBE Practices vs. Values**

As mentioned earlier, project GLOBE (House et al., 2004) studied two manners of expression of culture: *practices* and *values*. Their project included parallel items for each manifestation of culture at both the society and organizational level (though the present study
will focus on the societal level of culture specifically). Practices refer to the way things are (“As Is” items) in terms of the “common behaviors, institutional practices, proscriptions, and prescriptions” (House & Javidan, 2004, pp. 16) within a culture. This manner of understanding culture derives from the importance of capturing individuals’ own perceptions of the reality of their culture. House and Javidan (2004) further explain that the values items are meant to measure individuals’ own values regarding the aforementioned practices and are considered to capture how they feel things “Should Be.” As will be indicated below, practices and values have been found to account for unique variance, be negatively correlated, and interact with each other (House et al., 2004). This suggests they differentially capture culture.

**GLOBE Cultural Dimensions**

Out of the nine cultural dimensions found through the GLOBE project (House et al., 2004), arguably the most relevant to relationships between job characteristics and worker outcomes are institutional collectivism, power distance, uncertainty avoidance, and performance orientation, as these dimensions have the most support regarding their effect on work preferences or work values as the cited literature will later indicate. More importantly, the dimensions of ingroup collectivism, gender egalitarianism, assertiveness, future orientation, and humane orientation are less related to how culture impacts the *structure of work* than institutional collectivism, power distance, uncertainty avoidance, and performance orientation dimensions, as each of their definitions indicate below.

The following cultural dimensions refer more to how relationships among members of a society are (practices) or should be (values) than how work is structured according to job characteristics. First, future orientation is how members of a given culture think their current behaviors will impact their future and the extent to which they focus on investing in or planning
for their future (Ashkanasy, Gupta, Mayfield, & Trevor-Roberts, 2004), while gender egalitarianism indicates a society’s attitudes and behaviors in regards to gender-role ideals (Emrich, Denmark, & Den Hartog, 2004). Furthermore, in-group collectivism is the degree to which members of a society tend to show pride, loyalty, and cohesiveness in their families specifically (Javidan, House, & Dorfman, 2004), while assertiveness refers to the extent to which people are (practices) or should be (values) “assertive and tough-minded, or unassertive and tender in their social relationships” (Den Hartog, 2004, pp. 401). Lastly, humane orientation is the extent to which a society rewards and expects members to be caring, fair, and altruistic to others (Javidan et al., 2004). Therefore, the present study does not include the cultural dimensions described in this paragraph, but instead specifically examines the impact of the four cultural dimensions of institutional collectivism, power distance, uncertainty avoidance, and performance orientation on job characteristic-worker outcome relationships. Below, these four dimensions used in this study will be discussed in turn.

**Institutional collectivism.** Institutional collectivism refers to the extent to which societal and organizational institutional policies and practices fortify and incite collective dissemination of resources and collective action (House et al., 1999; House, Quigley, & De Luque, 2010). Cultures high on institutional collectivism (e.g., Portugal, Taiwan) value an emphasis on group performance and group reward systems while those low on this cultural dimension (e.g., Russia, U.S.A.) value an emphasis on individual rewards. Regarding the findings of the GLOBE project, Gelfand, Bhawuk, Nishii, and Bechtold (2004) explain that in cultures high on this dimension, individuals belong to highly cohesive groups, view their sense of self as interdependent with their group, and take group goals into stronger consideration than individual goals. However, cultures low on institutional collectivism focus on the well-being of themselves or immediate
family members, view their sense of self as independent of groups, and individual goals are viewed as more important than group goals. Furthermore, in cultures high on institutional collectivism, duties and responsibilities influence social behavior more than individual attitudes and needs, while the reverse is true in cultures low on this dimension. In addition, people tend to focus on relatedness within groups and have a slower pace of life in high institutional collectivistic cultures while those in lower institutional collectivistic cultures emphasize rationality and have a quicker pace of life. Gelfand et al. (2004) describe several further features of cultures high on institutional collectivism as having more indirect communication, fewer social interactions but those are longer in duration and closer, and as more clearly defining in-groups and out-groups, while those low on institutional collectivism have more direct communication, more social interaction but these are shorter in duration and less close in nature, and tend to less clearly define in-groups and out-groups. Given the above findings, it is logical that cultures higher on institutional collectivism may not expect higher levels of autonomy or a variety of skills and responsibilities in their jobs as these societies tend to value interdependence over independence, which in turn would lead to stronger relationships between job characteristics and worker outcomes for cultures lower on institutional collectivism but weaker relationships for cultures higher on institutional collectivism due to the norms of these cultures restricting the potential benefits of autonomy, skill variety, and task significance because those that do not expect these job characteristics are less likely to be beneficially impacted by them even if they exist in a given employees’ job. Creating a sense of opportunity and achievement that autonomy and skill variety may provide could be more valuable to cultures lower on institutional collectivism than to those in cultures higher on this dimension. Furthermore, individuals from cultures lower on institutional collectivism also may benefit from higher
significance placed on the task, as they may not inherently obtain significance from a sense of collectivism with coworkers or a sense of duty towards others as those from cultures higher on institutional collectivism do, which in turn would lead to weaker relationships with worker outcomes.

Tables 4.1 and 4.2 indicate the mean institutional collectivism score for values and practices respectively, of each country included in the GLOBE project that will also be included in the present study. As can be seen, values scores are higher than practices scores, indicating that in general across countries, individuals included in the GLOBE study wanted more institutional collectivism than existed in their society. Gelfand et al. (2004) reported a negative correlation of \( r = -0.61 \) between practices and values on this dimension for GLOBE respondents which denotes that the more a society values collectivism overall, the less the society tends to actually practice collectivism in terms of focusing on group goals, interdependent view of the self, and highly regarding duties and responsibilities. This indicates individuals may more highly value a dimension if they feel their society does not practice it because they perceive a lack of this dimension in their culture. Note that the full range of institutional collectivism values scores from all countries included in the project GLOBE study ranged from 3.83-5.65 and ranged from 3.25-5.22 for institutional collectivism practices, so the countries included in the present study are representative of those in project GLOBE such that the scores in Table 4.1 and 4.2 below encompass most of the total range found by GLOBE.
Table 4.1

**GLOBE Institutional Collectivism Values Scores for Societies Examined in Present Study**

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portugal</td>
<td>5.30</td>
<td>Slovenia</td>
<td>4.38</td>
</tr>
<tr>
<td>Spain</td>
<td>5.20</td>
<td>England</td>
<td>4.31</td>
</tr>
<tr>
<td>Taiwan</td>
<td>5.15</td>
<td>Israel</td>
<td>4.27</td>
</tr>
<tr>
<td>Mexico</td>
<td>4.92</td>
<td>New Zealand</td>
<td>4.20</td>
</tr>
<tr>
<td>France</td>
<td>4.86</td>
<td>Denmark</td>
<td>4.19</td>
</tr>
<tr>
<td>Germany (West)</td>
<td>4.82</td>
<td>Canada</td>
<td>4.17</td>
</tr>
<tr>
<td>Philippines</td>
<td>4.78</td>
<td>U.S.A.</td>
<td>4.17</td>
</tr>
<tr>
<td>Switzerland</td>
<td>4.69</td>
<td>Finland</td>
<td>4.11</td>
</tr>
<tr>
<td>Germany (East)</td>
<td>4.68</td>
<td>Japan</td>
<td>3.99</td>
</tr>
<tr>
<td>Ireland</td>
<td>4.59</td>
<td>Sweden</td>
<td>3.94</td>
</tr>
<tr>
<td>Netherlands</td>
<td>4.55</td>
<td>South Korea</td>
<td>3.90</td>
</tr>
<tr>
<td>Hungary</td>
<td>4.50</td>
<td>Russia</td>
<td>3.89</td>
</tr>
<tr>
<td>Australia</td>
<td>4.40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: All items were on 7-point Likert-type scales. Higher scores indicate greater institutional collectivism.

Table 4.2

**GLOBE Institutional Collectivism Practices Scores for Societies Examined in Present Study**

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>5.22</td>
<td>Australia</td>
<td>4.29</td>
</tr>
<tr>
<td>South Korea</td>
<td>5.20</td>
<td>England</td>
<td>4.27</td>
</tr>
<tr>
<td>Japan</td>
<td>5.19</td>
<td>U.S.A.</td>
<td>4.20</td>
</tr>
<tr>
<td>New Zealand</td>
<td>4.81</td>
<td>Slovenia</td>
<td>4.13</td>
</tr>
<tr>
<td>Denmark</td>
<td>4.80</td>
<td>Mexico</td>
<td>4.06</td>
</tr>
<tr>
<td>Philippines</td>
<td>4.65</td>
<td>Switzerland</td>
<td>4.06</td>
</tr>
<tr>
<td>Ireland</td>
<td>4.63</td>
<td>France</td>
<td>3.93</td>
</tr>
<tr>
<td>Finland</td>
<td>4.63</td>
<td>Portugal</td>
<td>3.92</td>
</tr>
<tr>
<td>Taiwan</td>
<td>4.59</td>
<td>Spain</td>
<td>3.85</td>
</tr>
<tr>
<td>Russia</td>
<td>4.50</td>
<td>Germany (West)</td>
<td>3.79</td>
</tr>
<tr>
<td>Netherlands</td>
<td>4.46</td>
<td>Germany (East)</td>
<td>3.56</td>
</tr>
<tr>
<td>Israel</td>
<td>4.46</td>
<td>Hungary</td>
<td>3.53</td>
</tr>
<tr>
<td>Canada</td>
<td>4.38</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: All items were on 7-point Likert-type scales. Higher scores indicate greater institutional collectivism.

**Power distance.** Hofstede (1984) explains that a continuum exists on which cultures range from low power distance to high power distance. Regarding findings from the GLOBE
study, Carl, Gupta, and Javidan (2004) state power distance is the extent to which people in a given culture expect and believe power should be hierarchical in that those at higher levels in organizations do and should have more power than those lower in the hierarchy. Cultures higher on power distance value power or authority hierarchies where each individual has his or her own rank and these hierarchical positions are expected not to be questioned or challenged in such cultures, while those considered lower on power distance view challenging people’s power statuses or needing justification of them as a right, as opposed to unquestioning acceptance of such power differentials. More specifically, the GLOBE definition of power distance which is based on Hofstede’s description (1980; 2001) is “the degree to which members of an organization or society expect and agree that power should be shared unequally” (Carl et al., 2004, pp. 517), with higher power distance cultures being accepting of this inequality while those lower on power distance do not accept this inequality. Carl et al. (2004) further explain that simply the unequal spreading of power alone does not define a higher power distance culture, but instead if those with power demand complete unreserved compliance or if those holding power purposefully form blocks for those with little power from achieving what is needed to gain it, this is evidence of a higher power distance society. In the workplace, this clearly extends to relations between supervisors and subordinates. For example, Triandis (1994) explains higher power distance cultures have less delegation and information sharing, while having higher levels of secrecy and decision making centralization. Therefore autonomy for example, which involves independence over decision making regarding how work is done and scheduled, may not be viewed as positively in higher power distance cultures (e.g., South Korea, Hungary) compared to lower power distance cultures (e.g., Australia, U.S.A.) which results in limited availability of higher levels of the job characteristics included in this study for those within higher power
distance cultures and therefore lower expectations for them, likely due to these cultures’ tendencies to restrict autonomy, skill variety, and task significance due to their lack of conduciveness to their values and practices. Therefore, this would result in weakened job characteristic-worker outcome relationships for higher power distance cultures. In addition, high levels of skill variety and task significance put more power and responsibility (or perceptions of higher amounts of these factors) into the hands of employees and thus may not be perceived as favorably for employees in cultures higher on power distance than for those in cultures lower on this cultural dimension.

As in the institutional collectivism dimension, the GLOBE project also found a negative correlation between practices and values of power distance \((r = -.43)\), suggesting societies with higher practices scores for power distance have lower values scores on power distance. This indicates that people in these societies prefer more equal distributions of power than they actually receive. Furthermore, those in lower power distance societies more highly value power distance, meaning they would prefer a less equal distribution of power than exists in their societies. However, Carl et al. (2004) found that those in higher power distance societies were more dissatisfied by the difference between practices and values, as the disparity between the two manifestations of culture was greater for them as compared to those in lower power distance societies. See Tables 4.3 and 4.4 below for power distance values and practices scores respectively. The full range of power distance values scores from all countries included in project GLOBE ranged from 2.04-3.65 and ranged from 3.89-5.80 for power distance practices, so the countries included in the present study are representative of those in project GLOBE.
Table 4.3

**GLOBE Power Distance Values Scores for Societies Examined in Present Study**

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand</td>
<td>3.53</td>
<td>Sweden</td>
<td>2.70</td>
</tr>
<tr>
<td>Taiwan</td>
<td>3.09</td>
<td>Germany (East)</td>
<td>2.69</td>
</tr>
<tr>
<td>Japan</td>
<td>2.86</td>
<td>Russia</td>
<td>2.62</td>
</tr>
<tr>
<td>Mexico</td>
<td>2.85</td>
<td>Slovenia</td>
<td>2.57</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>2.85</td>
<td>South Korea</td>
<td>2.55</td>
</tr>
<tr>
<td>England</td>
<td>2.80</td>
<td>Germany (West)</td>
<td>2.54</td>
</tr>
<tr>
<td>Australia</td>
<td>2.78</td>
<td>Hungary</td>
<td>2.49</td>
</tr>
<tr>
<td>France</td>
<td>2.76</td>
<td>Netherlands</td>
<td>2.45</td>
</tr>
<tr>
<td>Denmark</td>
<td>2.76</td>
<td>Switzerland</td>
<td>2.44</td>
</tr>
<tr>
<td>Philippines</td>
<td>2.72</td>
<td>Portugal</td>
<td>2.38</td>
</tr>
<tr>
<td>Israel</td>
<td>2.72</td>
<td>Spain</td>
<td>2.26</td>
</tr>
<tr>
<td>Ireland</td>
<td>2.71</td>
<td>Finland</td>
<td>2.19</td>
</tr>
<tr>
<td>Canada</td>
<td>2.70</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: All items were on 7-point Likert-type scales. Higher scores indicate greater power distance.

Table 4.4

**GLOBE Power Distance Practices Scores for Societies Examined in Present Study**

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Korea</td>
<td>5.61</td>
<td>England</td>
<td>5.15</td>
</tr>
<tr>
<td>Hungary</td>
<td>5.56</td>
<td>Japan</td>
<td>5.11</td>
</tr>
<tr>
<td>Germany (East)</td>
<td>5.54</td>
<td>Switzerland</td>
<td>4.90</td>
</tr>
<tr>
<td>Russia</td>
<td>5.52</td>
<td>New Zealand</td>
<td>4.89</td>
</tr>
<tr>
<td>Spain</td>
<td>5.52</td>
<td>Finland</td>
<td>4.89</td>
</tr>
<tr>
<td>Philippines</td>
<td>5.44</td>
<td>U.S.A.</td>
<td>4.88</td>
</tr>
<tr>
<td>Portugal</td>
<td>5.44</td>
<td>Sweden</td>
<td>4.85</td>
</tr>
<tr>
<td>Slovenia</td>
<td>5.33</td>
<td>Canada</td>
<td>4.82</td>
</tr>
<tr>
<td>France</td>
<td>5.28</td>
<td>Australia</td>
<td>4.74</td>
</tr>
<tr>
<td>Germany (West)</td>
<td>5.25</td>
<td>Israel</td>
<td>4.73</td>
</tr>
<tr>
<td>Mexico</td>
<td>5.22</td>
<td>Netherlands</td>
<td>4.11</td>
</tr>
<tr>
<td>Taiwan</td>
<td>5.18</td>
<td>Denmark</td>
<td>3.89</td>
</tr>
<tr>
<td>Ireland</td>
<td>5.15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: All items were on 7-point Likert-type scales. Higher scores indicate greater power distance.

**Uncertainty avoidance.** Hofstede’s work on this aspect of culture (1984) as well as House et al.’s (2004) work explain the varying comfort levels different cultures have with
unclear or ambiguous situations. Cultures higher on uncertainty avoidance are very uncomfortable in such contexts and tend to proactively seek ways to remedy the uncertainty such as valuing conformity, endorsing strict codes or norms of conduct and tradition, while discouraging dissent, ambiguous times of change (when outcomes are unknown or risky), as well as the tendency to feel uncomfortable with novel ideas (Hofstede, 1984). House et al. (2004) state that cultures lower on uncertainty avoidance involve less rigid attempts to control others’ differing ideas, opinions, or behaviors through policies and procedures but those that are higher on uncertainty avoidance tend to put in place specific strategies and policies to avoid uncertainty. Project GLOBE defined uncertainty avoidance as “the extent to which members of collectives seek orderliness, consistency, structure, formalized procedures, and laws to cover situations in their daily lives” (Sully de Luque & Javidan, 2004, pp. 603). In the work context, lower uncertainty avoidant cultures are more likely to offer employees autonomy (although not in every job), are more accepting of novel approaches to one’s work, allow more flexibility, and also expect higher levels of the job characteristics from the JCM than those higher on uncertainty avoidance. Furthermore, rules and detailed procedures are enacted in societies and workplaces within societies higher on uncertainty avoidance so as to alleviate the anxieties that can come from unclear direction in these cultures (Sully de Luque & Javidan, 2004). Creating the sense that one’s job has higher levels of task significance may be uncomfortable for employees from cultures higher on uncertainty avoidance as they are used to authority figures taking on the perceived higher levels of responsibility and importance at work. Furthermore, higher levels of skill variety inherently lead to more uncertainty (as does more autonomy as well) because a greater variety of skills and responsibilities within one’s job indicates a requirement for continuing skill learning on the job as well as putting the decision on employees regarding when
to use which skills, which may be uncomfortable to those in cultures higher on uncertainty avoidance but is likely attractive to those from cultures lower on this dimension. Due to their level of discomfort with uncertainty, higher uncertainty avoidant cultures would be expected to be less likely to build autonomy, skill variety, and task significance into jobs than cultures lower on uncertainty avoidance and therefore would be less likely to expect these job characteristics. This would further indicate that relationships between these job characteristics would be weaker for higher uncertainty avoidant cultures because of the limited expectation for these job characteristics in general.

GLOBE findings again indicate a negative correlation between practice and value scores on the dimension of uncertainty avoidance \((r = -.62)\) indicating societies higher on practices of uncertainty avoidance tend to have lower value scores for this dimension (Sully de Luque & Javidan, 2004). This means that the less a society endorses an acceptance of uncertainty (stronger they are on uncertainty avoidance) in terms of actual practices within the culture, the less individuals on average value uncertainty avoidance which is parallel to GLOBE’s findings regarding institutional collectivism and power distance. See Tables 4.5 and 4.6 for uncertainty avoidance values and practices scores respectively. The full range of uncertainty avoidance values scores from all countries included in project GLOBE ranged from 3.16-5.61 and ranged from 2.88-5.37 for uncertainty avoidance practices, so the countries included in the present study are representative of those in project GLOBE.
Table 4.5

**GLOBE Uncertainty Avoidance Values Scores for Societies Examined in Present Study**

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taiwan</td>
<td>5.31</td>
</tr>
<tr>
<td>Mexico</td>
<td>5.26</td>
</tr>
<tr>
<td>Philippines</td>
<td>5.14</td>
</tr>
<tr>
<td>Russia</td>
<td>5.07</td>
</tr>
<tr>
<td>Slovenia</td>
<td>4.99</td>
</tr>
<tr>
<td>Spain</td>
<td>4.76</td>
</tr>
<tr>
<td>South Korea</td>
<td>4.67</td>
</tr>
<tr>
<td>Hungary</td>
<td>4.66</td>
</tr>
<tr>
<td>Portugal</td>
<td>4.43</td>
</tr>
<tr>
<td>Israel</td>
<td>4.38</td>
</tr>
<tr>
<td>Japan</td>
<td>4.33</td>
</tr>
<tr>
<td>France</td>
<td>4.26</td>
</tr>
<tr>
<td>England</td>
<td>4.11</td>
</tr>
</tbody>
</table>

Notes: All items were on 7-point Likert-type scales. Higher scores indicate greater uncertainty avoidance.

Table 4.6

**GLOBE Uncertainty Avoidance Practices Scores for Societies Examined in Present Study**

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switzerland</td>
<td>5.37</td>
</tr>
<tr>
<td>Sweden</td>
<td>5.32</td>
</tr>
<tr>
<td>Denmark</td>
<td>5.22</td>
</tr>
<tr>
<td>Germany (West)</td>
<td>5.22</td>
</tr>
<tr>
<td>Germany (East)</td>
<td>5.16</td>
</tr>
<tr>
<td>Finland</td>
<td>5.02</td>
</tr>
<tr>
<td>New Zealand</td>
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</tr>
<tr>
<td>Netherlands</td>
<td>4.70</td>
</tr>
<tr>
<td>England</td>
<td>4.65</td>
</tr>
<tr>
<td>Canada</td>
<td>4.58</td>
</tr>
<tr>
<td>France</td>
<td>4.43</td>
</tr>
<tr>
<td>Australia</td>
<td>4.39</td>
</tr>
<tr>
<td>Taiwan</td>
<td>4.34</td>
</tr>
</tbody>
</table>

Notes: All items were on 7-point Likert-type scales. Higher scores indicate greater uncertainty avoidance.

**Performance orientation.** Performance orientation reflects how much a society rewards creativity, improvement to performance, and setting high standards or goals (Javidan, 2004).
Javidan (2004) also states performance orientation explains the manner in which a society characterizes accomplishing flexibility to external challenges as well as how a society operates in regards to interrelationships among individuals. More specifically, House et al. (2004) found societies which report higher performance orientation (e.g., Canada, Philippines, U.S.A.) usually emphasize results of work more than the individuals performing that work, place importance on training and development, taking initiative, and feedback, as well as valuing direct communication. They also tend to expect difficult goals, reward performance, and have a sense of urgency. Therefore, these societies respect tasks more than interpersonal relationships along with asserting that individuals have control, thus believing that anyone who puts in substantial effort can succeed. Alternatively, Javidan (2004) describes societies that report lower performance orientation overall (e.g., Slovenia, Spain) tend to place importance on loyalty, interpersonal relationships, seniority (over placing importance on performance), tradition, sympathy, indirect communication, and integrity. These societies deem placing high importance on pay (because it can undermine harmony), providing feedback (because it is perceived as judgmental), or to being assertive as inappropriate. These societies also have a lower sense of urgency and place a lower importance on competition. Given the above findings, it is logical that employees from cultures higher on performance orientation (e.g., the U.S.A.) will find greater autonomy, skill variety, and task-related significance to be attractive, while these job characteristics may be less so to employees from cultures lower on this dimension. For this reason, jobs in cultures higher on performance orientation would likely tend to include higher levels of autonomy, skill variety, and task significance overall and employees within them would be more likely to anticipate higher levels of these job characteristics, while cultures lower in performance orientation would more consistently have lower expectations of these job
characteristics which would reasonably lead to weaker job characteristic-worker outcome relationships for cultures lower in performance orientation.

GLOBE findings indicate performance orientation has the highest mean score for values compared to all other GLOBE dimensions. This indicates that in general, countries included in the GLOBE project appreciate and think highly of performance orientation more so than how countries view the other dimensions. This suggests that individuals around the world all generally want a society that places high importance on rewards, creativity, and possibility of advancement through effort. Furthermore, there is a modest but significant negative correlation between performance orientation practice and value scores \((r = -0.28)\), with practices being reported as lower than values. However, this negative correlation between practices and values is not as strong for this dimension as the others previously reported in this chapter. Tables 4.7 and 4.8 indicate the mean performance orientation score for values and practices respectively for each society included in the GLOBE project that will also be included in the present study. Note that the full range of performance orientation values scores from all countries included in project GLOBE ranged from 4.92-6.58 and ranged from 3.20-4.94 for performance orientation practices, so the countries included in the present study are representative of those in project GLOBE.
Table 4.7

**GLOBE Performance Orientation Values Scores for Societies Examined in Present Study**

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slovenia</td>
<td>6.41</td>
<td>Australia</td>
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<tr>
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</tr>
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</tr>
<tr>
<td>Canada</td>
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<td>Israel</td>
<td>5.75</td>
</tr>
<tr>
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<td>Taiwan</td>
<td>5.74</td>
</tr>
<tr>
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<td>France</td>
<td>5.65</td>
</tr>
<tr>
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<td>Denmark</td>
<td>5.61</td>
</tr>
<tr>
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<td>Russia</td>
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<td>Japan</td>
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<tr>
<td>New Zealand</td>
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</tbody>
</table>

Notes: All items were on 7-point Likert-type scales. Higher scores indicate greater performance orientation.

Table 4.8

**GLOBE Performance Orientation Practices Scores for Societies Examined in Present Study**

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switzerland</td>
<td>4.94</td>
<td>France</td>
<td>4.11</td>
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<tr>
<td>New Zealand</td>
<td>4.72</td>
<td>Mexico</td>
<td>4.10</td>
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<td>Taiwan</td>
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<td>Germany (East)</td>
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<td>England</td>
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</tr>
<tr>
<td>Japan</td>
<td>4.22</td>
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</tr>
</tbody>
</table>

Notes: All items were on 7-point Likert-type scales. Higher scores indicate greater performance orientation.
Culture Moderating Job Characteristic-Worker Outcome Relationships

Though recently there has been a call for more multilevel research regarding culture in general (e.g., Smith et al., 2013b), limited studies have focused on the impact of cultural dimensions on job characteristics and fewer yet have examined culture’s moderating impact on job characteristic-worker outcome relationships. A few studies exist that compare cross-country findings related to job characteristics without directly studying dimensions of culture instead. Such studies will be discussed for each job characteristic of autonomy, skill variety, and task significance in turn. As mentioned throughout the beginning of this chapter, culture is expected to constrain the potential relationships commonly found in existing JCM related studies due to its known salience as a contextual or macro-level variable (Hofstede, 1984, House et al., 2004) on work-related factors. As higher level contexts in which jobs are nested can impede attempts at work design concentrated on bettering worker outcomes (Johns, 2006; 2010), culture is an important variable to examine in regards to job characteristic-worker outcome relationships. It is reasonable to expect employees from cultures which are higher on institutional collectivism, power distance, and uncertainty avoidance, but lower on performance orientation to expect job characteristics of autonomy, skill variety, and task significance at lower levels than cultures on the other end of the spectrum for these dimensions because they are not conducive to their values, expectations, and norms. Therefore, it is quite probable that jobs in the aforementioned cultures tend to have and expect lower levels of the job characteristics. Ultimately, this may impact the relationships between job characteristics and worker outcomes by limiting or weakening these relationships compared to other cultures.

Therefore, the present study argues that though job characteristics of autonomy, skill variety, and task significance could be linked to positive worker outcomes (e.g., higher job satisfaction and OC, but lower turnover intentions, perceptions of the job as stressful, and
perceptions of the job as exhausting levels) for most workers, this relationship is hypothesized to be stronger for employees in certain cultures more than others, which has not yet been explicitly examined to date. Worker outcomes for employees in cultures higher on the cultural dimensions of institutional collectivism, uncertainty avoidance, and power distance, but lower on performance orientation may not be as positively impacted by the job characteristics of autonomy, task significance, and skill variety as those from cultures ranked lower on the first three cultural dimensions above but higher on performance orientation due to cultural expectations and preferences for these job characteristics to be quite strong (potentially stronger) among the latter cultures according to the literature. This suggests higher levels of these job characteristics may be linked to higher satisfaction and OC but lower turnover intentions, as well as lower perceptions of the job as stressful and exhausting for employees in cultures that value or practice institutional collectivism, power distance, and uncertainty avoidance less and practice and value performance orientation more.

**Culture moderating autonomy-job satisfaction relationship.** In Gagné and Bhave’s work (2011), they argue according to self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2000) that every human has three basic needs, one of which is personal autonomy. Yet they concur that questions still linger regarding cross-cultural job design research and suggest that when job design researchers perform meta-analyses, culture should be examined as a possible moderator. In that self-determination theory focuses on how individuals satisfy the above three needs through either autonomous or controlled motivation instead of focusing on the potential difference of the **strength** of those needs across people (Gagné & Deci, 2005), future research is warranted in understanding these potential differences specifically regarding culture as a moderator of relationships between autonomy and worker outcomes. This is especially
needed as there has also been criticism regarding self-determination theory as representing a Western and ethnocentric view (e.g., Henrich et al., 2010).

There is initial evidence for the autonomy-worker outcome link in countries similar in culture to the U.S. such as DeVaro et al.’s (2007) study including a sample with a wide variety of occupations and organizations from England via the British Workplace Employee Relations Survey where they found support for the autonomy-job satisfaction link, indicating at least one aspect of the JCM (job characteristic of autonomy) impacts job satisfaction in a similar manner for British employees. However, regarding different cultures, there is some initial work though minimal in prevalence, supporting culture as a potential moderator of autonomy-worker outcome relationships.

With a study of Citigroup employees from Taiwan, Singapore, the Philippines, Japan, Australia, Argentina, Brazil, Mexico, and the U.S., Iyengar, Lepper, Hernandez, DeVoe, and Alpert (2001) found perceptions of choice or job autonomy predicted intrinsic motivation in general, job satisfaction, and performance significantly better for U.S. American employees than for those in the aforementioned Asian countries. Chua and Iyengar (2006) argue that “socially interdependent” cultures (i.e., those high on in-group and institutional collectivism) may be more intrinsically motivated by having choices made for them and when the chooser is part of their in-group, this may occur even more so. They suggest for people from these cultures, intrinsic motivation may come more from fulfilling their obligations and duties than if they were to exercise a lot of autonomy on the job. In addition, Robert et al. (2000) found culture to moderate the autonomy-job satisfaction relationship. More specifically, employees in India who were given more empowerment/autonomy by their managers were less satisfied than those with less autonomy, while higher autonomy was linked to higher job satisfaction for employees in Poland,
Mexico, and the U.S.A. The authors explained these differences in terms of power distance and collectivism dimensions of culture. They stated that as India is the highest in power distance of the four countries studied, more autonomy in their jobs does not fit well within this culture as they are used to people higher in the hierarchy of the organization (i.e., managers) having more power or autonomy than those lower in the hierarchy (i.e., subordinates). Furthermore, Huang and Van de Vliert (2003) studied job characteristics deemed to be intrinsic in nature (e.g., autonomy, challenge, recognition) and those considered more extrinsic such as pay and job security in order to understand how culture moderates job satisfaction. They found that intrinsic characteristics including autonomy were more strongly linked to job satisfaction for individualistic cultures and those with weaker power distance than those that are collectivistic or have stronger power distance. However, extrinsic factors were linked to job satisfaction in all 49 countries studied. The authors explain that employees from individualistic and weak power distance cultures aspire for independence and autonomy and thus are satisfied when they obtain it, yet those that are from strong power distance and/or collectivistic cultures are not comfortable or used to this independence, which is reflected in their lower job satisfaction scores when put in a position where they are given recognition, personal challenges, or autonomy.

With a sample from the United Arab Emirates (UAE), Elanain (2009) found task significance, skill variety, and task identity to have positive relationships to job satisfaction as found in Western contexts, but contrary to the majority of findings in the U.S. and similar cultures, there were no relationships between either autonomy or feedback with job satisfaction. More recently, Westover (2012) stated he found significant variation in determinants of job satisfaction across countries, though he did not provide details about which determinants differed, nor did he explain any patterns in terms of cultural dimensions.
**Culture moderating autonomy-OC relationship.** Though there is minimal existing research regarding culture as a moderator of autonomy-OC relationships, there are two studies that allude to this possibility. First, in a cross-country comparison of nurses, Doncevic, Romelsjö, and Theorell (1998) found a significant correlation between job control (autonomy) and job satisfaction \((r = .21)\) for nurses in Sweden but that this relationship was not significant for nurses in Croatia. Overall job satisfaction and OC were significantly higher in Sweden than in Croatia as well. Second, Elanain (2009) who examined a sample from five organizations in Dubai in the United Arab Emirates (UAE) reported that in line with findings from Western contexts, variety and feedback both had beneficial effects on OC, job satisfaction, and turnover intentions, but counter to prominent Western-based studies, autonomy was not related to OC or job satisfaction. Clearly, more research is needed to examine this relationship. However, the literature regarding the relationships between job characteristics and job satisfaction seem to present logical initial indications that parallel relationships may also exist between job characteristics and OC. For example, the link between autonomy and lower job satisfaction for societies higher on collectivism (Chua & Iyengar, 2006; Iyengar et al., 2001), power distance (Huang & Van de Vliert, 2003), and uncertainty avoidance (Robert et al., 2000), or lower on performance orientation may also indicate that OC would also likely be either negatively affected or at minimum less positively affected by autonomy than for cultures which are less collectivistic, have lower power distance, lower uncertainty avoidance, or higher performance orientation because of the former cultures’ lower expectations of autonomy.

**Culture moderating autonomy-turnover intentions relationship.** As autonomy is likely to be resisted and less likely to be expected in societies whose cultural dimensions are not conducive to it, the relationship between autonomy and turnover intentions inherently would be
weaker for these cultures compared to those whose norms result in a higher anticipation of autonomy. Due to the importance placed on interdependence and value of ‘the group’ and respecting authority hierarchies, (House et al., 2004) in cultures higher on institutional collectivism, power distance, and uncertainty avoidance but lower on performance orientation, it is possible that even if autonomy exists in some jobs within these cultures, the strong positive relationship depicted by JCM related research for autonomy and turnover intentions may not be as strong for these cultures. Furthermore, Elanain (2009) with a sample from the United Arab Emirates (UAE) found higher reported autonomy was linked to higher turnover intentions of employees and stated this difference in autonomy compared to what has typically been found in U.S. and other Western samples is likely a cultural difference in that the UAE tend to be higher on uncertainty avoidance. As a whole, citizens of the UAE prefer strict guidelines, policies, and rules while being quite resistant to change or potential risks. Therefore, the author indicates this culture views a higher level of autonomy as lacking in guidance which is uncomfortable for them. Thus, jobs in cultures higher on institutional collectivism, power distance, and uncertainty avoidance, but lower on performance orientation likely may not expect as high of autonomy as other cultures in general, likely making the autonomy-turnover intentions relationships weaker overall in these cultures and in circumstances when autonomy is expected, the relationship seems to be different than would be predicted by typical JCM research that does not consider culture as a moderator.

**Culture moderating autonomy-well-being relationships.** As autonomy is less likely to be expected in cultures which are less conducive to this job characteristic due to their norms and expectations, the relationship between autonomy and well-being inherently would be weaker for these cultures compared to those whose norms allow for the anticipation of high levels of
autonomy. Regarding culture’s impact on autonomy-well-being relationships, according to Chua and Iyengar (2006), in some situations and cultures (i.e., those higher on uncertainty avoidance, institutional collectivism, and power distance, or lower on performance orientation), having choice and autonomy may create a threat to one’s identity with their in-group (i.e., coworkers) especially if they are unsure of how other in-group members would approve of their personal choice in that situation. Additionally, a study reviewed by Gagné and Bhave (2011) including more than 9,000 employees from a wide array of jobs in the Netherlands found job autonomy was negatively linked to burnout (Taris, Stoffelsen, Bakker, Schaufeli, & van Dierendonck, 2002), of which emotional exhaustion is one aspect. Again, there is much need for further research regarding the autonomy-well-being relationships in relation to culture, yet there is some evidence to support that culture may moderate this relationship.

The following hypotheses are predicted for culture’s effect on job autonomy-worker outcome relationships.

**H7a and b)** There will be a stronger positive relationship between autonomy and job satisfaction for countries that report lower institutional collectivism values as well as for countries that report lower institutional collectivism practices than for countries that report higher institutional collectivism values or practices.

**H7c and d)** There will be a stronger positive relationship between autonomy and organizational commitment for countries that report lower institutional collectivism values as well as for countries that report lower institutional collectivism practices than for countries that report higher institutional collectivism values or practices.

**H7e and f)** There will be a stronger negative relationship between autonomy and turnover intentions for countries that report lower institutional collectivism values as
well as for countries that report lower institutional collectivism practices than for countries that report higher institutional collectivism values or practices.

\textbf{H7g and h)} There will be a stronger negative relationship between autonomy and perception of the job as stressful for countries that report lower institutional collectivism values as well as for countries that report lower institutional collectivism practices than for countries that report higher institutional collectivism values or practices.

\textbf{H7i and j)} There will be a stronger negative relationship between autonomy and perception of the job as exhausting for countries that report lower institutional collectivism values as well as for countries that report lower institutional collectivism practices than for countries that report higher institutional collectivism values or practices.

\textbf{H8a and b)} There will be a stronger positive relationship between autonomy and job satisfaction for countries that report lower power distance values as well as for countries that report lower power distance practices than for countries that report higher power distance values or practices.

\textbf{H8c and d)} There will be a stronger positive relationship between autonomy and organizational commitment for countries that report lower power distance values as well as for countries that report lower power distance practices than for countries that report higher power distance values or practices.

\textbf{H8e and f)} There will be a stronger negative relationship between autonomy and turnover intentions for countries that report lower power distance values as well as for countries that report lower power distance practices than for countries that report higher power distance values or practices.
**H8g and h)** There will be a stronger negative relationship between autonomy and perception of the job as stressful for countries that report lower power distance values as well as for countries that report lower power distance practices than for countries that report higher power distance values or practices.

**H8i and j)** There will be a stronger negative relationship between autonomy and perception of the job as exhausting for countries that report lower power distance values as well as for countries that report lower power distance practices than for countries that report higher power distance values or practices.

**H9a and b)** There will be a stronger positive relationship between autonomy and job satisfaction for countries that report lower uncertainty avoidance values as well as for countries that report lower uncertainty avoidance practices than for countries that report higher uncertainty avoidance values or practices.

**H9c and d)** There will be a stronger positive relationship between autonomy and organizational commitment for countries that report lower uncertainty avoidance values as well as for countries that report lower uncertainty avoidance practices than for countries that report higher uncertainty avoidance values or practices.

**H9e and f)** There will be a stronger negative relationship between autonomy and turnover intentions for countries that report lower uncertainty avoidance values as well as for countries that report lower uncertainty avoidance practices than for countries that report higher uncertainty avoidance values or practices.

**H9g and h)** There will be a stronger negative relationship between autonomy and perception of the job as stressful for countries that report lower uncertainty avoidance
values as well as for countries that report lower uncertainty avoidance practices than for countries that report higher uncertainty avoidance values or practices.

**H9i and j)** There will be a stronger negative relationship between autonomy and perception of the job as exhausting for countries that report lower uncertainty avoidance values as well as for countries that report lower uncertainty avoidance practices than for countries that report higher uncertainty avoidance values or practices.

**H10a and b)** There will be a stronger positive relationship between autonomy and job satisfaction for countries that report higher performance orientation values as well as for countries that report higher performance orientation practices than for countries that report lower performance orientation values or practices.

**H10c and d)** There will be a stronger positive relationship between autonomy and organizational commitment for countries that report higher performance orientation values as well as for countries that report higher performance orientation practices than for countries that report lower performance orientation values or practices.

**H10e and f)** There will be a stronger negative relationship between autonomy and turnover intentions for countries that report higher performance orientation values as well as for countries that report higher performance orientation practices than for countries that report lower performance orientation values or practices.

**H10g and h)** There will be a stronger negative relationship between autonomy and perception of the job as stressful for countries that report higher performance orientation values as well as for countries that report higher performance orientation practices than for countries that report lower performance orientation values or practices.
**H10i and j** There will be a stronger negative relationship between autonomy and perception of the job as exhausting for countries that report higher performance orientation values as well as for countries that report higher performance orientation practices than for countries that report lower performance orientation values or practices.

**Culture moderating skill variety-job satisfaction relationship.** There is much less existing research demonstrating the potential for culture to moderate skill variety-worker outcome relationships compared to the findings for autonomy-worker outcomes. This alludes to a gap in research regarding cross-cultural studies of job design pertaining to skill variety. As this is a commonly studied job characteristic in general as noted by its inclusion in multiple JCM related meta-analyses (Brown & Peterson, 1993; Loher et al., 1985; Mathieu & Zajac, 1990), it is surprising that there has been no past work including multiple cultures that explicitly examines cultures’ impact. There is no study examining the specific relationship between skill variety and job satisfaction prior to this dissertation. However, based on the descriptions of the cultural dimensions earlier in the chapter, cultures higher on institutional collectivism, power distance, and uncertainty avoidance, but lower on performance orientation may not value skill variety as much as other cultures because they may feel threatened by the inclusion of a higher number of skills needed in their job as it creates more responsibility, more uncertainty, and a focus on doing well at a higher number of tasks. If skill variety is not valued or conducive to these cultures, it is not likely to occur at high levels within them or be expected at high levels, which ultimately would impact the relationship between skill variety and job satisfaction as well as other outcome variables.
Culture moderating skill variety-OC relationship. If skill variety is less expected in certain cultures due to shared norms and expectations that do not allow for it, the relationship between skill variety and OC inherently would be weaker for these cultures compared to those which typically have higher expectations for skill variety. One study of Nepalese service industry employees (from airline, bank, telecommunication, and food corporation companies) by Gautam, Van Dick, and Wagner (2001) found that while job characteristics of interesting and challenging work were positively linked to normative and continuance commitment dimensions of OC as has been found in the U.S., these job characteristics were not linked to affective commitment, contrary to typical findings from Western samples. Based on Hofstede’s work (1980) which utilized an Indian sample and stated cultural dimensions of high collectivism, power distance, and uncertainty avoidance, Gautam et al. (2001) suggested that Nepal could be expected to have these same cultural dimensions as India and specifically, they stated highly collectivistic cultures may be expected to have higher commitment levels due to their interdependent focus and tendencies. However, they did find as stated above that affective commitment was not positively related to higher variety, interesting work, or challenge, thus offering initial support for the job characteristic of skill variety to play a differing role in worker outcomes across various cultures.

Culture moderating skill variety-turnover intentions relationship. As is the case for skill variety-job satisfaction relationships, there is no existing research testing for culture as a moderator of the skill variety-turnover relationship prior to this dissertation. The present study aids in ameliorating this lack of large-scale cross-cultural studies examining this relationship. The typical existing single country findings from Western samples that find strong negative relationships between skill variety and turnover intentions are expected for cultures lower in institutional collectivism, power distance, and uncertainty avoidance, but higher in performance
orientation, as the existing findings should generalize to these cultures. However, due to norms, tendencies, and expectations, not all cultures are expected to have these strong relationships because the nature of certain cultures limits the expectations for these job characteristics and in turn impact turnover intentions.

**Culture moderating skill variety-well-being relationships.** Donald and Siu (2001) have pointed out that most psychological research on worker well-being has been done with studies utilizing Western samples. Over ten years after their assertion, currently there is still very minimal cross-cultural work which has been conducted within this area of research. Some single-country sample studies outside of the U.S. have found skill variety specifically to be beneficial to well-being as has been found in the U.S. (e.g., Kumar et al., 2012; sample from New Zealand), but no studies to my knowledge have directly examined if the relationship is stronger in some cultures compared to others, as the present study proposes.

There is a study however that provides an initial indication that the skill variety-well-being relationship is different in a culture other than of typical Western samples. In this study of Taiwanese high-technology employees, job specialization (i.e., low levels of job enrichment or skill variety) was found to relate to burnout (emotional exhaustion is one aspect of burnout) such that less skill and task variety was associated with less burnout (Hsieh & Chao, 2004), which is opposite to many findings in the U.S. regarding relationships between skill variety and well-being (e.g., Lambert & Paoline’s, 2008 finding of a higher skill variety being linked to lower stress levels). Whether Hsieh and Chao’s (2004) findings were due to the unique nature of high-technology jobs or the national culture is unknown. However, it is possible that the culture of Taiwan typically results in lower expectations for high levels of skill variety and when a job is changed to include higher levels of this job characteristic, the relationship may be weaker or in a
direction typically not found within cultures lower on institutional collectivism, power distance, and uncertainty avoidance, but higher on performance orientation. Clearly, further research regarding the potential moderating effect of culture on skill variety-worker outcome relationships is needed, as this dissertation provides.

The following hypotheses are predicted for culture’s effect on skill variety-worker outcome relationships.

**H11a and b)** There will be a stronger positive relationship between skill variety and job satisfaction for countries that report lower institutional collectivism values as well as for countries that report lower institutional collectivism practices than for countries that report higher institutional collectivism values or practices.

**H11c and d)** There will be a stronger positive relationship between skill variety and organizational commitment for countries that report lower institutional collectivism values as well as for countries that report lower institutional collectivism practices than for countries that report higher institutional collectivism values or practices.

**H11e and f)** There will be a stronger negative relationship between skill variety and turnover intentions for countries that report lower institutional collectivism values as well as for countries that report lower institutional collectivism practices than for countries that report higher institutional collectivism values or practices.

**H11g and h)** There will be a stronger negative relationship between skill variety and perception of the job as stressful for countries that report lower institutional collectivism values as well as for countries that report lower institutional collectivism practices than for countries that report higher institutional collectivism values or practices.
**H11i and j)** There will be a stronger negative relationship between skill variety and perception of the job as exhausting for countries that report lower institutional collectivism values as well as for countries that report lower institutional collectivism practices than for countries that report higher institutional collectivism values or practices.

**H12a and b)** There will be a stronger positive relationship between skill variety and job satisfaction for countries that report lower power distance values as well as for countries that report lower power distance practices than for countries that report higher power distance values or practices.

**H12c and d)** There will be a stronger positive relationship between skill variety and organizational commitment for countries that report lower power distance values as well as for countries that report lower power distance practices than for countries that report higher power distance values or practices.

**H12e and f)** There will be a stronger negative relationship between skill variety and turnover intentions for countries that report lower power distance values as well as for countries that report lower power distance practices than for countries that report higher power distance values or practices.

**H12g and h)** There will be a stronger negative relationship between skill variety and perception of the job as stressful for countries that report lower power distance values as well as for countries that report lower power distance practices than for countries that report higher power distance values or practices.

**H12i and j)** There will be a stronger negative relationship between skill variety and perception of the job as exhausting for countries that report lower power distance values
as well as for countries that report lower power distance practices than for countries that report higher power distance values or practices.

**H13a and b**) There will be a stronger positive relationship between skill variety and job satisfaction for countries that report lower uncertainty avoidance values as well as for countries that report lower uncertainty avoidance practices than for countries that report higher uncertainty avoidance values or practices.

**H13c and d**) There will be a stronger positive relationship between skill variety and organizational commitment for countries that report lower uncertainty avoidance values as well as for countries that report lower uncertainty avoidance practices than for countries that report higher uncertainty avoidance values or practices.

**H13e and f**) There will be a stronger negative relationship between skill variety and turnover intentions for countries that report lower uncertainty avoidance values as well as for countries that report lower uncertainty avoidance practices than for countries that report higher uncertainty avoidance values or practices.

**H13g and h**) There will be a stronger negative relationship between skill variety and perception of the job as stressful for countries that report lower uncertainty avoidance values as well as for countries that report lower uncertainty avoidance practices than for countries that report higher uncertainty avoidance values or practices.

**H13i and j**) There will be a stronger negative relationship between skill variety and perception of the job as exhausting for countries that report lower uncertainty avoidance values as well as for countries that report lower uncertainty avoidance practices than for countries that report higher uncertainty avoidance values or practices.
H14a and b) There will be a stronger positive relationship between skill variety and job satisfaction for countries that report higher performance orientation values as well as for countries that report higher performance orientation practices than for countries that report lower performance orientation values or practices.

H14c and d) There will be a stronger positive relationship between skill variety and organizational commitment for countries that report higher performance orientation values as well as for countries that report higher performance orientation practices than for countries that report lower performance orientation values or practices.

H14e and f) There will be a stronger negative relationship between skill variety and turnover intentions for countries that report higher performance orientation values as well as for countries that report higher performance orientation practices than for countries that report lower performance orientation values or practices.

H14g and h) There will be a stronger negative relationship between skill variety and perception of the job as stressful for countries that report higher performance orientation values as well as for countries that report higher performance orientation practices than for countries that report lower performance orientation values or practices.

H14i and j) There will be a stronger negative relationship between skill variety and perception of the job as exhausting for countries that report higher performance orientation values as well as for countries that report higher performance orientation practices than for countries that report lower performance orientation values or practices.

Culture and task significance. There is also a need for the study of culture as a moderator for task significance-worker outcome relationships as there is currently only one study
examining these relationships in a culture very different from those of Western samples. Because there is only this one study alluding to the potential moderating role of culture for the job characteristic of task significance, this section includes information regarding the expected relationship between task significance and all five worker outcomes. This lack of existing research on culture’s potential impact within the domain of task significance-worker outcome relationships offers further justification for its explicit examination as this dissertation offers. Task significance is important for further study as jobs in cultures higher on institutional collectivism, power distance, and uncertainty avoidance, but lower on performance orientation are likely to have lower expectations of task significance in general, leading to weaker task significance-worker outcome relationships. These cultures are less task focused and more relationship or person-focused (performance orientation dimension), are more interdependent and concerned about the good of the immediate or close-knit group which is likely the work group or employees in a department (institutional collectivism dimension), and perhaps are more directly focused on their specific responsibilities as opposed to the larger organization’s impact on society or customers in general because managers often are expected to take responsibility for more important organizational goals (power distance dimension) (e.g., House et al., 2004). This dissertation contributes to minimizing this gap in that it explicitly tests the potential cultural moderation on relationships between three job characteristics (autonomy, skill variety, and task significance) and five worker outcomes (job satisfaction, OC, turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting).

The one existing study whose existence was briefly mentioned earlier was conducted by Birnbaum et al. (1986) and included 57 jobs within 37 organizations in Hong Kong. This study only focused on job characteristics’ relationships with one worker outcome; job satisfaction.
They found four of the five job characteristics from the JCM (autonomy, feedback, task identity, and skill variety) have the same positive relationships with job satisfaction as found with U.S. American samples. However, task significance did not show this expected relationship in Hong Kong. Their study did not include other worker outcomes such as OC, turnover intentions, or employee well-being nor was it a cross-cultural study (did not include multiple cultures as the present study does), but it was one of the first studies that attempted research on the JCM outside of the U.S.A.

The following hypotheses are predicted for culture’s effect on task significance-worker outcome relationships.

**H15a and b)** There will be a stronger positive relationship between task significance and job satisfaction for countries that report lower institutional collectivism values as well as for countries that report lower institutional collectivism practices than for countries that report higher institutional collectivism values or practices.

**H15c and d)** There will be a stronger positive relationship between task significance and organizational commitment for countries that report lower institutional collectivism values as well as for countries that report lower institutional collectivism practices than for countries that report higher institutional collectivism values or practices.

**H15e and f)** There will be a stronger negative relationship between task significance and turnover intentions for countries that report lower institutional collectivism values as well as for countries that report lower institutional collectivism practices than for countries that report higher institutional collectivism values or practices.

**H15g and h)** There will be a stronger negative relationship between task significance and perception of the job as stressful for countries that report lower institutional
collectivism values as well as for countries that report lower institutional collectivism practices than for countries that report higher institutional collectivism values or practices.

**H15i and j)** There will be a stronger negative relationship between task significance and perception of the job as exhausting for countries that report lower institutional collectivism values as well as for countries that report lower institutional collectivism practices than for countries that report higher institutional collectivism values or practices.

**H16a and b)** There will be a stronger positive relationship between task significance and job satisfaction for countries that report lower power distance values as well as for countries that report lower power distance practices than for countries that report higher power distance values or practices.

**H16c and d)** There will be a stronger positive relationship between task significance and organizational commitment for countries that report lower power distance values as well as for countries that report lower power distance practices than for countries that report higher power distance values or practices.

**H16e and f)** There will be a stronger negative relationship between task significance and turnover intentions for countries that report lower power distance values as well as for countries that report lower power distance practices than for countries that report higher power distance values or practices.

**H16g and h)** There will be a stronger negative relationship between task significance and perception of the job as stressful for countries that report lower power distance values as well as for countries that report lower power distance practices than for countries that report higher power distance values or practices.
values as well as for countries that report lower power distance practices than for countries that report higher power distance values or practices.

**H16i and j)** There will be a stronger negative relationship between task significance and perception of the job as exhausting for countries that report lower power distance values as well as for countries that report lower power distance practices than for countries that report higher power distance values or practices.

**H17a and b)** There will be a stronger positive relationship between task significance and job satisfaction for countries that report lower uncertainty avoidance values as well as for countries that report lower uncertainty avoidance practices than for countries that report higher uncertainty avoidance values or practices.

**H17c and d)** There will be a stronger positive relationship between task significance and organizational commitment for countries that report lower uncertainty avoidance values as well as for countries that report lower uncertainty avoidance practices than for countries that report higher uncertainty avoidance values or practices.

**H17e and f)** There will be a stronger negative relationship between task significance and turnover intentions for countries that report lower uncertainty avoidance values as well as for countries that report lower uncertainty avoidance practices than for countries that report higher uncertainty avoidance values or practices.

**H17g and h)** There will be a stronger negative relationship between task significance and perception of the job as stressful for countries that report lower uncertainty avoidance values as well as for countries that report lower uncertainty avoidance practices than for countries that report higher uncertainty avoidance values or practices.
H17i and j) There will be a stronger negative relationship between task significance and perception of the job as exhausting for countries that report lower uncertainty avoidance values as well as for countries that report lower uncertainty avoidance practices than for countries that report higher uncertainty avoidance values or practices.

H18a and b) There will be a stronger positive relationship between task significance and job satisfaction for countries that report higher performance orientation values as well as for countries that report higher performance orientation practices than for countries that report lower performance orientation values or practices.

H18c and d) There will be a stronger positive relationship between task significance and organizational commitment for countries that report higher performance orientation values as well as for countries that report higher performance orientation practices than for countries that report lower performance orientation values or practices.

H18e and f) There will be a stronger negative relationship between task significance and turnover intentions for countries that report higher performance orientation values as well as for countries that report higher performance orientation practices than for countries that report lower performance orientation values or practices.

H18g and h) There will be a stronger negative relationship between task significance and perception of the job as stressful for countries that report higher performance orientation values as well as for countries that report higher performance orientation practices than for countries that report lower performance orientation values or practices.

H18i and j) There will be a stronger negative relationship between task significance and perception of the job as exhausting for countries that report higher performance
orientation values as well as for countries that report higher performance orientation practices than for countries that report lower performance orientation values or practices.

An example of the anticipated form of the interactions proposed in Hypothesis 7a is presented in Figure 4.1. As can be seen in the figure, for employees in cultures ranked lower on institutional collectivism values, the job autonomy and job satisfaction relationship is expected to be stronger than for cultures ranked higher on institutional collectivism. Similar results are expected for the job characteristics of task significance and skill variety with each of the other three studied dimensions of culture on all five worker outcomes (job satisfaction, OC, turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting) for both practices and values, though the expected relationships are negative for turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting instead of the displayed positive relationship here.

![Figure 4.1](image.png)

*Figure 4.1. Example of expected moderation of culture on relationships between job characteristics and worker outcomes.*
Chapter 5

Interaction of Job Type and Culture on Job Characteristic-Worker Outcome Relationships

As explained in the previous two chapters, research on job type’s and culture’s effects on job characteristic-worker outcome relationships has been quite limited regarding studies examining each of these factors independently, and no study has examined these effects in conjunction. However, culture has such a strong impact on one’s experiences, perceptions, and values in general (e.g., Erez, 2010; Erez & Earley, 1993; House et al., 2004; Maznevski, 1994; Triandis, 1994) and is more deeply rooted than one’s later experience as a working adult both in terms of amount of time of the influence on an individual (culture has an effect during the entirety of one’s life while individuals are in their job for a much shorter duration over their lifetime) and in terms of proximity to one’s identity, as culture is considered to play one of the greatest roles in creating a person’s sense of self or identity (e.g., Markus & Kitayama, 1991; 2010; Tajfel, 1978; Turner, 1975; 1985).

As mentioned in Chapter 4, there have been various studies comparing cultures in a descriptive sense in terms of differences (e.g., Dobbin & Boychuck, 1999; Iyengar & Lepper, 1999; Westover, 2012) but as Triandis (1994) mentioned “most of this work has been in the form of ‘Do not assume that what works in the United States will work in X’ with relatively little contribution of the ‘This works in X’ variety” (pp. 108), which is still somewhat true to this day. This dissertation aims to understand when and why three specific job characteristics (autonomy, skill variety, and task significance) are linked to important worker outcomes, as suggested by the JCM. Therefore the question of ‘where do these findings generalize?’ is examined as well as an undertaking of ‘why or why not?’ in regards to cultural dimensions posed by House et al. (2004).
Certainly job type can matter but only in situations in which a higher level factor (i.e., employees’ culture) does not constrain the potential effects of job type or job characteristics, which is related to Morgeson et al.’s (2010) work surrounding the importance of context as a potential constraint for job characteristics. Therefore, job type is expected to moderate job characteristic-worker outcome relationships in some cultures more than others. More specifically, job characteristic-worker outcome relationships may be stronger for white-collar and pink-collar jobs than for blue-collar workers in some cultures but not in others. The rationale is that due to the nature of the job, as blue-collar work is typically more structured and routinized (e.g., Cox, 1985) than other jobs, job characteristics of autonomy, skill variety, and task significance are less likely to be expected in blue-collar jobs and are more likely to be expected in white- or pink-collar jobs. Because blue-collar jobs would have more consistently lower expectation levels of these job characteristics in this case, the relationships between job characteristics and worker outcomes would therefore be weaker or dampened in blue-collar jobs compared to those that are white- or pink-collar. Even more importantly however, culture is an additional contextual variable (of which job type is subsumed under because culture is a more macro-level variable) that has been found to impact the potential emergence of job characteristics. It is probable that culture may result in a lower anticipation for certain job characteristics that are not conducive or aligned to the norms, values, and practices of a given culture. Therefore, cultures that are high on institutional collectivism, power distance, and uncertainty avoidance, but are low on performance orientation may not be expected for higher levels of the aforementioned job characteristics across all jobs (generally lower levels of autonomy, skill variety, and task significance regardless of job) and in turn, relationships between job characteristics and worker outcomes may be weakened in these cultures compared
to others. Thus, job type may not predict the strength of job characteristic-worker outcome relationships at all in these cultures due to the higher order impact of culture overall.

For example, it seems logical that job type could matter more in determining the strength of job characteristic-worker outcome relationships in the U.S. than Taiwan, such that there may be stronger relationships between job characteristics and worker outcomes for white-collar and pink-collar than blue-collar workers in the U.S., but perhaps in Taiwan, stronger relationships do not exist for white-collar and pink-collar workers as compared to those that are in blue-collar jobs. Employees from cultures high on the cultural dimensions of institutional collectivism, uncertainty avoidance, and power distance, but low on performance orientation may simply not be impacted differently across jobs though countries low on these first three cultural dimensions or high on performance orientation may be differentially affected depending upon job type because these latter cultures value more and expect higher levels of the job characteristics of autonomy, skill variety, and task significance.

The literature discussed in Chapter 4 (e.g., House et al., 2004) alludes to the fact that the four specific cultural dimensions of institutional collectivism, power distance, uncertainty avoidance, and performance orientation are related in part to how work is structured. Based on the existing research explained in Chapter 4, it is logical that cultures low on the first three dimensions but high on performance orientation may tend to have more autonomy, skill variety, and task significance in that these cultures are simply better aligned to support expectations of these aspects of work and in turn have stronger relationships between job characteristics and worker outcomes because there is a higher level of anticipation for high levels of these job characteristics across jobs in these cultures but there is likely to be overall lower levels of them in other cultures, resulting in weaker relationships for those higher on institutional collectivism,
power distance, and uncertainty avoidance, but lower on performance orientation. Findings from Chapter 3 indicate not all jobs include these job characteristics to the same extent even within the U.S. (e.g., Grebner et al., 2003; Morgeson & Humphrey, 2006), though job characteristics including those from the JCM have been deemed more important to employees in professional compared to blue-collar jobs based on employee reports (e.g., Berger, 1986). However, it is logical that even those that do not expect high levels of the autonomy, skill variety, or task significance job characteristics in their jobs may still find them to be more attractive and hope for them more in general than individuals from cultures that are used to collectivism/interdependence as opposed to autonomy (high institutional collectivistic cultures), strong hierarchies of power where authority figures are the decision-makers (high power distance cultures), strong rules and regulations to minimize uncertainty (high uncertainty avoidant cultures), or that focus more on relationships than improvement to tasks, goals, and performance (low performance orientation cultures).

Based on the typical more structured nature usually involved in blue-collar compared to pink- or white-collar work which may impact the expectations for autonomy and in turn would affect the potential strength of the relationship between autonomy and worker outcomes, the following hypotheses are predicted.

**H19a-e)** *Job type will moderate the strength of the job characteristic-worker outcome relationships in some cultures more than others, such that relationships between autonomy with job satisfaction, OC, turnover intentions, and perceptions of the job as both stressful and exhausting are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report lower institutional collectivism more than countries that report higher institutional collectivism (both for values and practices).*
Job type will moderate the strength of the job characteristic-worker outcome relationships in some cultures more than others, such that relationships between autonomy with job satisfaction, OC, turnover intentions, and perceptions of the job as both stressful and exhausting are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report lower power distance more than countries that report higher uncertainty avoidance (both for values and practices).

Job type will moderate the strength of the job characteristic-worker outcome relationships in some cultures more than others, such that relationships between autonomy with job satisfaction, OC, turnover intentions, and perceptions of the job as both stressful and exhausting are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report lower uncertainty avoidance more than countries that report higher power distance (both for values and practices).

Job type will moderate the strength of the job characteristic-worker outcome relationships in some cultures more than others, such that relationships between autonomy with job satisfaction, OC, turnover intentions, and perceptions of the job as both stressful and exhausting are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report higher performance orientation more than countries that report lower performance orientation (both for values and practices).

Additionally, the limited number of skills or responsibilities typically included and the routinized nature usually involved in blue-collar compared to pink- or white-collar work could also limit the extent of expectation for skill variety and in turn its impact even if there are attempts to increase skill variety levels in blue-collar jobs in a given culture. Furthermore, it is possible that skill variety may be better received and expected by cultures lower on institutional
collectivism, power distance, and uncertainty avoidance, but higher on performance orientation (because culture is likely to impact the emergence of skill variety) as well. Therefore, the strength of skill variety-worker outcome relationships is likely to be stronger in white- and pink-collar jobs in certain cultures, which leads to the prediction of the following hypotheses.

**H20a-e)** Job type will moderate the strength of the job characteristic-worker outcome relationships in some cultures more than others, such that relationships between skill variety with job satisfaction, OC, turnover intentions, and perceptions of the job as both stressful and exhausting are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report lower institutional collectivism more than countries that report higher institutional collectivism (both for values and practices).

**H20f-j)** Job type will moderate the strength of the job characteristic-worker outcome relationships in some cultures more than others, such that relationships between skill variety with job satisfaction, OC, turnover intentions, and perceptions of the job as both stressful and exhausting are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report lower power distance more than countries that report higher power distance (both for values and practices).

**H20k-o)** Job type will moderate the strength of the job characteristic-worker outcome relationships in some cultures more than others, such that relationships between skill variety with job satisfaction, OC, turnover intentions, and perceptions of the job as both stressful and exhausting are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report lower uncertainty avoidance more than countries that report higher uncertainty avoidance (both for values and practices).
Job type will moderate the strength of the job characteristic-worker outcome relationships in some cultures more than others, such that relationships between skill variety with job satisfaction, OC, turnover intentions, and perceptions of the job as both stressful and exhausting are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report higher performance orientation more than countries that report lower performance orientation (both for values and practices).

Furthermore, it is possible that task significance may be better received and expected by employees from cultures lower on institutional collectivism, power distance, and uncertainty avoidance, but higher on performance orientation. This is possible because these cultures overall are more goal and performance driven and task-focused over relationship or person-focused. Jobs in these cultures also more often may make specific links to employees’ work and their larger impact on society or customers. However, the task significance-worker outcome relationships may still be constrained in blue-collar jobs due to their structured and routinized nature. Therefore, the strength of task significance-worker outcome relationships is likely to be stronger in white- and pink-collar jobs in certain cultures, which leads to the prediction of the following hypotheses.

H21a-e) Job type will moderate the strength of the job characteristic-worker outcome relationships in some cultures more than others, such that relationships between task significance with job satisfaction, OC, turnover intentions, and perceptions of the job as both stressful and exhausting are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report lower institutional collectivism more than countries that report higher institutional collectivism (both for values and practices).
**H21f-j)** Job type will moderate the strength of the job characteristic-worker outcome relationships in some cultures more than others, such that relationships between task significance with job satisfaction, OC, turnover intentions, and perceptions of the job as both stressful and exhausting are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report lower power distance more than countries that report higher power distance (both for values and practices).

**H21k-o)** Job type will moderate the strength of the job characteristic-worker outcome relationships in some cultures more than others, such that relationships between task significance with job satisfaction, OC, turnover intentions, and perceptions of the job as both stressful and exhausting are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report lower uncertainty avoidance more than countries that report higher uncertainty avoidance (both for values and practices).

**H21p-t)** Job type will moderate the strength of the job characteristic-worker outcome relationships in some cultures more than others, such that relationships between task significance with job satisfaction, OC, turnover intentions, and perceptions of the job as both stressful and exhausting are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report higher performance orientation more than countries that report lower performance orientation (both for values and practices).

An example of the anticipated form of the interactions proposed in Hypothesis 19a is presented in Figure 5.1. As can be seen in the figure, the relationship between autonomy and job satisfaction is expected to be strongest for employees in white- or pink-collar jobs in cultures lower on institutional collectivism values as compared to cultures higher on this cultural dimension (or blue-collar jobs in all cultures). Similar results are expected for the job
characteristics of task significance and skill variety with each of the other three studied dimensions of culture (except stronger relationships predicted for higher compared to lower performance orientation) on all five worker outcomes (job satisfaction, OC, turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting) for both practices and values, though the expected relationships are negative for turnover intentions as well as perceptions of the job as stressful and exhausting instead of the displayed positive relationship here.

![Graphical depiction of Hypothesis 19a.](image)

*Figure 5.1. Graphical depiction of Hypothesis 19a.*
Chapter 6

Method

Participants and Dataset

This study utilized the Work Orientation Survey III archival dataset which in total includes over 40,000 employees across 32 countries in a diverse set of industries and jobs. This data is a multi-stage random stratified sample collected by the International Social Survey Programme from February 2005 through February 2007. Data was collected via a standardized survey given by mail in a written format, orally in person, or in person with a written format, depending on the country. All participants were 18 years or older except for in Finland and Japan which have age minimums of 15 and 16 years respectively. Only employees working full-time, who are not self-employed, and who work for pay were utilized from this dataset. The age range was 16-87 years (M=40.69, SD=11.59) and fifty-five percent of the participants were male for the data that was used in the current study.

The 32 countries included in the original Work Orientation Survey III dataset are Bulgaria, Canada, Switzerland, Germany (West and East), Australia, Cyprus, Czech Republic, Spain, Denmark, Dominican Republic, Finland, Belgium, France, Hungary, England, Ireland, Israel, Japan, Latvia, South Korea, Mexico, the Netherlands, Norway, Portugal, New Zealand, the Philippines, Russia, Sweden, Slovenia, Taiwan, South Africa, and the United States of America. As this dissertation utilized GLOBE’s cultural dimensions of institutional collectivism, power distance, uncertainty avoidance, and performance orientation for each country in order to understand culture’s effect on job characteristic-worker outcome relationships, only countries included both in project GLOBE and the Work Orientation Survey III dataset were included in the present study’s analyses, which resulted in a total of 24 countries. The following are the countries included in the final dataset used in this study: Canada (n=371), Switzerland (n=384),
the Netherlands (n=467), Germany; West (n=339) and East (n=188), Australia (n=637), Spain (n=397), Denmark (n=752), Finland (n=455), France (n=744), Hungary (n=345), England (n=285), Ireland (n=339), Israel (n=324), Japan (n=285), South Korea (n=435), Mexico (n=298), Portugal (n=811), New Zealand (n=504), the Philippines (n=168), Russia (n=740), Sweden (n=508), Slovenia (n=411), Taiwan (n=836), and the United States of America (n=695), resulting in a final sample size of 11,718 which is a sufficient sample for the analyses run in this study (Scherbaum & Ferreter, 2009).

**Measures**

All measures are items from the Work Orientation Survey III (2005-2007) wave. As described below, most of the scales for the job characteristics and worker outcome variables have varying response options and varying numbers of response options. Therefore they were standardized overall (not within country) to z-scores so as to put all responses on the same scale. These z-scores indicate the position of the individual’s score for that item in relation to the distribution of his or her group (Fischer, 2010). Thus, a score of zero would indicate that person had a score at exactly the mean of the group for that item, a score of -1 would indicate the individual had a score of one standard deviation below the mean for the group for that item, etc. For each scale, scores were standardized to z-scores before calculating the mean score of each participant’s perception of the three job characteristics and the dependent variables. Most of the items used in this study have the additional response option of “can’t choose” which was treated as a missing response as it provides no information regarding a given participant’s endorsement of a given statement.

**Job characteristic of autonomy.** Autonomy was measured with three items. The first item is “I can work independently,” with response options ranging on a Likert scale from 1-5, 1
being strongly agree to 5 for strongly disagree. As higher scores for this item in the original dataset indicated lower autonomy, this item was reverse scored so higher scores indicated higher autonomy. The second item for autonomy is “Which of the following statements best describes how your working hours are decided? (By working hours we mean here the times you start and finish work, and not the total hours you work per week or month)”. Response options for this item ranged from 1-3; Starting and finishing times are decided by my employer and I cannot change them on my own, I can decide the time I start and finish work, within certain limits, and I am entirely free to decide when I start and finish work, with the first response option above scored as 1, the second scored as 2, and the third response options scored as 3. For this item, higher scores indicate higher autonomy and thus this item was not reverse scored. The third item for autonomy is “Which of the following statements best describes how your daily work is organized?,” with response options ranging from 1-3; I’m free to decide how my daily work is organized, I can decide how my daily work is organized, within certain limits, or I am not free to decide how my daily work is organized. In the original dataset higher response values on this item indicated less autonomy on the job. Therefore this item was reverse scored so higher scores indicated higher autonomy prior to standardizing and calculating a mean score for autonomy. These items are similar to those of other measures of job autonomy (Bass & Grzywacz, 2011; Hackman & Oldham, 1974; Hystad, Eid, & Brevik, 2011; Ishii-Kuntz, 2013; Morgeson & Humphrey, 2006; Ng, Ang, & Chan, 2008; Vitak, Crouse, & LaRose, 2011). See Appendix A for a full list of the wording for all items (not only autonomy) and see Appendix B for a comparison of each of this study’s measures with similar measures in published studies. A composite autonomy score was created by aggregating the scores of these three items (α = .62).
Job characteristic of task significance. Task significance was measured with two items; “In my job I can help other people” and “My job is useful to society.” Both items had response options from 1-5, 1 being strongly agree to 5 for strongly disagree. Low scores indicate high task significance. These items were reversed scored in order for higher scores to indicate greater task significance. These two items are similar to those of Hackman and Oldham’s (1974) and Morgeson and Humphrey’s (2006) task significance scale. A task significance score was created by aggregating the scores of these two items (α = .72).

Job characteristic of skill variety. Skill variety was measured with two items; “My job is interesting” and “My job gives me a chance to improve my skills.” Both of these items had response options from 1-5, 1 being strongly agree to 5 for strongly disagree in the original dataset with low scores indicating high skill variety. However, these were reverse scored so higher scores indicated high skill variety. A skill variety score was created by aggregating the scores of these two items (α = .70). These items are similar to skill variety items used in pre-existing measures (e.g., Bass & Grzywacz, 2011; Hackman & Oldham, 1974; Morgeson & Humphrey, 2006).

Job satisfaction. This variable was measured with one item, “How satisfied are you in your (main) job?” Responses for this item were on a 7 point Likert scale, with 1 being completely satisfied to 7 being completely dissatisfied. In the original dataset, low scores indicate higher job satisfaction. This item was reverse scored in order for a higher score to indicate greater job satisfaction. This item is similar to Malach-Pines and Keinan’s (2006) general job satisfaction item.

Organizational commitment. This variable was measured with two items; “I am willing to work harder than I have to in order to help the firm or organization I work for succeed” and “I
am proud to be working for my firm or organization.” These items were on a 5 point Likert scale, with 1 being strongly agree and 5 being strongly disagree. In the original dataset, higher scores indicated lower organizational commitment but these items were reversed scored in order for higher scores to indicate greater organizational commitment. Again, these items are similar to those used in other measures of organizational commitment (e.g., Emberland & Rundmo, 2010; Halverson, Holladay, Kazama, & Quiñones, 2004; Stinglhamber, Bentein, & Vandenberghe, 2002; Wasti & Can, 2008). An organizational commitment composite score for each respondent was created by aggregating the scores of these two items (α = .69).

**Turnover intentions.** Turnover intentions were measured with two items. The first item is “I would turn down another job that offered quite a bit more pay in order to stay with this organization.” The response scale for this item is a 5 point Likert scale, with 1 being strongly agree and 5 being strongly disagree. A higher score on this item indicates higher turnover intentions. The second item is “All in all, how likely is it that you will try to find a job with another firm or organization within the next 12 months?,” which is on a 4 point Likert scale with 1 being very likely to 4 being very unlikely. A lower score on this item indicates higher turnover intentions in the original dataset but this item was reverse scored in order for higher scores to indicate higher turnover intentions. These items are similar to those of other turnover intentions scales (e.g., Bozeman & Perrewe, 2001; Jung & Yoon, 2013). A turnover intention composite score for each respondent was created by aggregating the scores of these two items (α = .48).

**Perceptions of the job as stressful and exhausting.** Well-being was measured with two items, one regarding perceptions of the job as stressful and one regarding perceptions of the job as exhausting; “How often do you find your work stressful?” and “How often do you come home from work exhausted?” The response options for these items range from 1-5, with 1 indicating
always, to 5 indicating never, with higher scores indicating lower stress and exhaustion. These two items were used independently as they are separate constructs but are both aspects of well-being and were reverse-scored so higher scores indicate higher perceptions of the job as stressful and exhausting. These items are similar to pre-existing items of stress and exhaustion (Hystad, Eid, & Brevik, 2011; Malach-Pines & Keinan, 2006), respectively.

**Demographics.** The original dataset includes responses for a large number of demographic variables. This study examined a subset of these, including items about respondents’ sex, age, and current employment status, whether they are self-employed or an employee of an organization, time worked each week, and occupation.

**Procedure**

**Coding job type.** The Work Orientation Survey III dataset includes the occupation title for each respondent. The international labor organization codes (ISCO-88) are also provided within the dataset along with the title linked to a respondent’s given code. These occupation titles were coded as blue-collar, white-collar, or pink-collar jobs. Blue-collar jobs are considered high in manual labor components and do not typically have formal educational requirements. Therefore plant and machine operators, craft and trades workers, skilled agricultural and fishery workers, and elementary occupations (see Table 6.1 for a list), were coded as blue-collar jobs. White-collar jobs are considered as needing an educational requirement and are professional roles, resulting in technicians and associate professionals, all professionals in general, managers, and supervisors as white-collar jobs. Pink-collar jobs are non-supervisory service jobs including general service workers, shop and market sales workers, and customer service-related clerks, for example. Table 6.1 shows the ISCO-88 major occupational categories grouped by job type. See Appendices C, D, and E for a full list of all included job titles categorized by job type (pink-,
white-, or blue-collar respectively). The principle investigator coded job type in line with the descriptions of each job type stated above. The faculty advisor then examined the coding and discussed minor adjustments to the coding scheme with the principle investigator. A consensus was reached through discussion between the principle investigator and the faculty advisor for the final job type coding of every individual job title included in the data. For the analyses, white- and pink-collar jobs were grouped together for coding, while blue-collar jobs were coded separately from other types. This was done because due to the nature of the jobs regarding their typical activities and structure, white- and pink-collar jobs are more similar to each other than they are to blue-collar jobs. Also, due to a smaller number of pink-collar jobs compared to white- or blue- collar, white- and pink-collar jobs were combined. Therefore, to test the hypotheses related to these expectations, white- and pink-collar jobs had to be coded jointly (both coded as 1) while blue-collar jobs were coded independently (coded as 0).  

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1 All analyses testing for the moderating role of job type were also done with white-, pink-, and blue-collar jobs all coded separately. Out of the 15 relationships, only one became significant when all three job types were coded separately, though this relationship did not change in direction. No other relationships changed regarding significance levels or the direction of the relationships.
### Table 6.1

**ISCO-88 Major Categories by Job Type**

<table>
<thead>
<tr>
<th>Job Type</th>
<th>ISCO-88 Major Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pink-Collar</td>
<td>Clerks</td>
</tr>
<tr>
<td></td>
<td>Service workers; shop and market sales workers (includes foodservice and preparation</td>
</tr>
<tr>
<td></td>
<td>workers)</td>
</tr>
<tr>
<td>Blue-Collar</td>
<td>Skilled agricultural and fishery workers</td>
</tr>
<tr>
<td></td>
<td>Craft and related trades workers</td>
</tr>
<tr>
<td></td>
<td>Plant and machine operators and assemblers</td>
</tr>
<tr>
<td></td>
<td>Elementary occupations</td>
</tr>
<tr>
<td></td>
<td>Doorkeeping and property watching, as well as cleaning, washing, pressing, and</td>
</tr>
<tr>
<td></td>
<td>working as laborers in the fields of mining, agriculture and fishing, construction</td>
</tr>
<tr>
<td></td>
<td>and manufacturing</td>
</tr>
<tr>
<td>White-Collar</td>
<td>Legislators, managers</td>
</tr>
<tr>
<td></td>
<td>Professionals</td>
</tr>
<tr>
<td></td>
<td>Technicians and associate professionals</td>
</tr>
</tbody>
</table>

**Coding cultural dimensions.** Cultural dimensions of institutional collectivism, power distance, uncertainty avoidance, and performance orientation were coded according to House et al.’s (2004) scores for each country from the GLOBE project. See Tables 4.1-4.8 in Chapter 4 for the actual scores on each cultural dimension as they correspond to a given country indicated by GLOBE.
Chapter 7

Results

Standardizing Measures

Descriptive analyses were examined for each item (frequencies, means, and standard deviations). Means and standard deviations of each item on the original metric (prior to standardizing) but reverse coded when appropriate are included below in Table 7.1. See Appendix A for the list of all items with the full wording. As previously mentioned, most of measures of job characteristics and the scales for the worker outcome variables have varying response options and varying numbers of response options and were standardized to z-scores so as to put all responses on the same scale. All subsequent analyses will report on the standardized data.

Table 7.1

Means and Standard Deviations of each Item on Original Metric

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy 1&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3.76</td>
<td>1.08</td>
</tr>
<tr>
<td>Autonomy 2&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.52</td>
<td>.62</td>
</tr>
<tr>
<td>Autonomy 3&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.95</td>
<td>.70</td>
</tr>
<tr>
<td>Task significance 1&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3.82</td>
<td>1.01</td>
</tr>
<tr>
<td>Task significance 2&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3.85</td>
<td>.98</td>
</tr>
<tr>
<td>Skill variety 1&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3.82</td>
<td>1.00</td>
</tr>
<tr>
<td>Skill variety 2&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3.74</td>
<td>1.04</td>
</tr>
<tr>
<td>Job satisfaction&lt;sup&gt;c&lt;/sup&gt;</td>
<td>5.22</td>
<td>1.17</td>
</tr>
<tr>
<td>OC 1&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3.50</td>
<td>1.08</td>
</tr>
<tr>
<td>OC 2&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3.69</td>
<td>.96</td>
</tr>
<tr>
<td>Turnover intentions 1&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3.34</td>
<td>1.22</td>
</tr>
<tr>
<td>Turnover intentions 2&lt;sup&gt;d&lt;/sup&gt;</td>
<td>1.97</td>
<td>1.00</td>
</tr>
<tr>
<td>Perception as stressful&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3.25</td>
<td>1.02</td>
</tr>
<tr>
<td>Perception as exhausting&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3.34</td>
<td>.91</td>
</tr>
</tbody>
</table>

<sup>a</sup>: 5 point Likert scale
<sup>b</sup>: 3 point scale (not Likert scale)
<sup>c</sup>: 7 point Likert scale
<sup>d</sup>: 4 point Likert scale

Note: For all items, scores were coded such that higher scores indicated higher levels of that construct.
Correlations

Intercorrelations for job characteristics, worker outcomes, and age are presented in Table 7.2. The next section discusses the implications of the correlations between age and all but one measure in this study. Table 7.3 presents the intercorrelations between each job characteristic and the predictors (job type and cultural dimensions).

Table 7.2

Intercorrelations for Dependent Variables and Age after Standardizing

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. OC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Satisfaction</td>
<td>.48*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Exhaustion</td>
<td>-.09**</td>
<td>-.18**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Stress</td>
<td>-.06**</td>
<td>-.19**</td>
<td>.43**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Turnover Intentions</td>
<td>-.40**</td>
<td>-.45**</td>
<td>.11**</td>
<td>.09**</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Age</td>
<td>.04**</td>
<td>.08**</td>
<td>-.04**</td>
<td>.01</td>
<td>-.23**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Autonomy</td>
<td>.28**</td>
<td>.26**</td>
<td>-.12**</td>
<td>-.02*</td>
<td>-.13**</td>
<td>.06**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Skill Variety</td>
<td>.46**</td>
<td>.50**</td>
<td>-.07**</td>
<td>.01</td>
<td>-.28**</td>
<td>.12**</td>
<td>.39**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Task Significance</td>
<td>.29**</td>
<td>.28**</td>
<td>.02*</td>
<td>.03**</td>
<td>-.19**</td>
<td>.08**</td>
<td>.18**</td>
<td>.49**</td>
<td></td>
</tr>
<tr>
<td>10. Gender</td>
<td>-.03**</td>
<td>.00</td>
<td>.08**</td>
<td>.03**</td>
<td>.00</td>
<td>-.05**</td>
<td>-.08**</td>
<td>.01</td>
<td>.08**</td>
</tr>
</tbody>
</table>

*p < .05 level (two-tailed).

**p < .01 level (two-tailed).

Note: Gender was coded with male = 1, female = 2.
Table 7.3

Intercorrelations for Predictors and Job Characteristics after Standardizing

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Autonomy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Skill Variety</td>
<td>.24**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Task Significance</td>
<td>.18**</td>
<td>.19**</td>
<td></td>
</tr>
<tr>
<td>4. Job Type</td>
<td>.22**</td>
<td>.17**</td>
<td>.14**</td>
</tr>
<tr>
<td>5. Instit. Coll. Values</td>
<td>-.04**</td>
<td>-.00</td>
<td>.02*</td>
</tr>
<tr>
<td>6. Instit. Coll. Practices</td>
<td>.05**</td>
<td>-.03**</td>
<td>-.03**</td>
</tr>
<tr>
<td>7. Power Dis. Values</td>
<td>.01</td>
<td>.01</td>
<td>.03**</td>
</tr>
<tr>
<td>8. Power Dis. Practices</td>
<td>-.27**</td>
<td>-.15**</td>
<td>-.05**</td>
</tr>
<tr>
<td>9. UA Values</td>
<td>-.23**</td>
<td>-.15**</td>
<td>.00</td>
</tr>
<tr>
<td>10. UA Practices</td>
<td>.31**</td>
<td>.18**</td>
<td>.02*</td>
</tr>
<tr>
<td>11. Perf. Orient. Values</td>
<td>.03**</td>
<td>.11**</td>
<td>.11**</td>
</tr>
<tr>
<td>12. Perf. Orient. Practices</td>
<td>.21**</td>
<td>.11**</td>
<td>.04**</td>
</tr>
</tbody>
</table>

*p < .05 level (two-tailed).

**p < .01 level (two-tailed).

Age as a Control Variable

Based on prior research, employees’ age has been shown to affect perceptions of job characteristics and actual worker outcomes. For example, older employees have been found to express higher levels of job satisfaction (e.g., Duke & Sneed, 1989) or differential satisfaction and organizational commitment (Bos et al., 2013; Zaniboni, Truxillo, & Fraccaroli, 2013). Based on these differential findings of age in past research, age has been commonly used as a control variable in other work design-related studies as well (e.g., Boumans, de Jong, & Janssen, 2011; Brimeyer, Perrucci, & MacDermid-Wadsworth, 2010; Morrison & Savery, 1996). Therefore, correlations were examined between age and all job characteristics as well as all worker outcomes included in this study. As can be seen in Table 7.2 above, age was significantly correlated with each job characteristic (correlation coefficients ranged from .06-.12) as well as all but one worker outcome (not correlated with the worker outcome of perceptions of the job as stressful), with the correlation coefficient being largest for age and turnover intentions ($r = -.23$ indicating higher turnover intentions are associated with younger workers). Due to the significant
correlations between age and the above mentioned variables, age was used as a control variable at level 1 in all multilevel analyses in the present study.

**Multilevel Analyses**

**Importance of multilevel designs.** Over twenty years ago, Mathieu and Zajac (1990) explained the importance of cross-level designs and suggested further research to focus on samples from many different types of organizations, as the present study does. Tomislav (2011) continues to advocate for multilevel/cross-level research in this domain as well. According to Erez and Eden (2001), currently work motivation is indeed shifting to more multilevel designs as the importance of this type of design has increased with globalization and advanced statistical analysis programs (e.g., hierarchical linear modeling; HLM; Raudenbush & Bryk, 2002). This allows researchers to more accurately examine how the broader context (i.e., culture, job type) impacts lower-order relationships (individual perceptions of job characteristics and their relationships with worker outcomes). Past research has mostly examined job characteristics at the individual level and usually within only one culture. Furthermore, Morgeson and Campion (2003) explain that work design theory usually focuses on the job, but studies (i.e., study designs) tend to operationalize at the level of the individual. However, Parker (2014) states multilevel studies are still underused in work design research though she explains multilevel approaches would be useful in understanding job characteristic-worker outcome relationships. Macro-level and multilevel research is growing, though there are still mostly single level and single culture studies. The present study seeks to answer the call to continue utilizing multilevel designs with cross-cultural samples.

**Benefits of multilevel modeling.** Oftentimes data cannot be analyzed as an individual unit alone but may in fact be nested within another structure (Livert, Rindskopf, Saxe, & Stirratt,
Job Characteristics, Job Type, and Culture

2001; Rindskopf, 2010). In these cases, we must take into account the higher-order level or group-level that the data is nested within. According to Raudenbush and Bryk (2002), multilevel modeling can alleviate the issue of aggregation bias, which can occur when correlations at a higher level (job type or culture) are not equivalent to those at the individual level and in fact could even be in the opposite direction as one another. Multilevel models can be used to ensure the interpretation of outcomes is done at the correct level for a given study. In the case of the current study, individuals are nested within jobs and are also nested within cultures. This is quite obvious in our reality of how the world is structured, however it is essential to realize that when data is structured this way, we must not fail to recognize that this nested structure may make a difference in our findings.

Therefore, given the nested structure of the data, multilevel modeling was used in this study. In nested data situations, the assumption of independence of observations cannot be ensured (Hofmann, 1997; Raudenbush & Bryk, 2002; Rindskopf, 2010) due to the relationships that exist among the individuals that are nested within the same job or culture. In this study, there are links between the level 1 predictors (individual scores), the level 2 predictors (job type or culture), and level 3 predictors (culture as moderating the effect of job type on job characteristic-worker outcome relationships). Specifically, the perspectives, values, and in turn perceptions of job characteristics may be more similar within a given job type or culture because there may be aspects of their environment that affect all the participants in a given job or culture in a way that results in their perceptions and subsequently their responses to the job characteristics of autonomy, task significance, and skill variety to be more similar to each other than their responses are from participants in other jobs or cultures.
Assumptions. Several assumptions were tested prior to running tests of the hypotheses. First, the assumption that the variables are normally distributed was met as the data were standardized. Additionally, although not an explicit statistical assumption, the tests of the hypotheses assume that there is explainable variance at a given level in order for predictor variables to be entered into that level. Operationally, this is demonstrated when the variance components at a given level are statistically significant in a model that does not include any predictors in the level of interest (i.e., the null model). As this was found, in that there was still variance unaccounted for in the null models, further analyses were done. The general equations for the tested null models are shown in Equations 6.1 and 6.2.

Multilevel Analyses in the Present Study

Various sets of analyses were done to test whether job characteristic-worker outcome relationships systematically differ as a function of the group-level characteristics (i.e., job type and culture), which refer to the hypotheses of the current study. The first set of analyses determined if job characteristics predict worker outcomes with no level 2 predictors. The second set (level 2 analyses) tested if there is an effect of job type on worker outcomes as well as if there is an effect of culture on worker outcomes, and the third set (level 3 analysis) determined if job type effects the strength of the job characteristic-worker outcome relationships in some cultures more than others (culture as moderating the effect of job type on job characteristic-worker outcome relationships). For all statistical models, separate analyses for each dependent variable (job satisfaction, OC, turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting) were conducted.

Null models. The analyses started with an examination of the null model which is shown in the first set of equations. In the null model, the level 1 (participant-level) equation is:
In this study, \( \gamma_{ij} \) represents the individual score of a specific participant in the study on the dependent variables (job satisfaction, OC, turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting). \( \beta_{oij} \) is the mean level of the dependent variable for the \( j \)th individual in a group (group mean; also called the intercept) and \( r_{ij} \) is the level 1 residual which shows the variance not accounted for within individual scores.

The level 2 equation for the null model is as follows:

\[
\beta_{o,j} = \gamma_{00} + \mu_{0j}
\]

Eq. 6.2

For the second part of this model, \( \gamma_{00} \) is the grand mean across all level 2 groups. Therefore, the group mean is a function of the sum of the grand mean and the between group variance (\( \mu_{0j} \)) or residual. Before the current study’s hypotheses regarding level 2 (moderating effect of job type and culture) were tested, it was determined that there was variation among the group means. In this case, \( \mu_{0j} \) was significant.

**Level 1 analyses.** Hypothesis 1a that predicts employees who report their jobs to be higher on autonomy will have higher job satisfaction than those with jobs lower on autonomy was tested by the below equation set (Equation 6.3). The same analyses were conducted to test for the effect of autonomy on organizational commitment, turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting. Furthermore, the same procedure was done to test the effects of each of the other two job characteristics (task significance and skill variety) on all five worker outcomes (job satisfaction, organizational commitment, turnover
intentions, perceptions of the job as stressful, and perceptions of the job as exhausting) as well. For these hypotheses to be supported, $\gamma_{10}$ (i.e., the coefficient) needs to be significant.

**Level 1:**

$$\text{JobSatisfaction} = \beta_{0j} + \beta_{1j}(AUTONOMY) + \beta_{2j}(AGE) + r_0$$  \hspace{1cm} \text{Eq. 6.3}

**Level 2:**

$$\beta_0 = \gamma_{00} + \mu_{0j}$$

$$\beta_1 = \gamma_{10} + \mu_{1j}$$

$$\beta_2 = \gamma_{20} + \mu_{2j}$$

**Variance components.** Variance components are important to examine in results of multilevel model analyses because they indicate whether or not significant variance is left unexplained at a given level in a model. $\tau_{00}$ represents the variance component in the level 2 intercept term and $\tau_{000}$ indicates the variance component in the level 3 intercept term. If $\tau_{00}$ or $\tau_{000}$ is significant, this indicates some jobs or cultures (depending on the set of analyses) have higher mean scores on a given worker outcome than others (compared to other jobs or other cultures). Furthermore, $\tau_{11}$ represents the variance component in the level 2 slope term and $\tau_{111}$ represents the variance component in the level 3 slope term. If $\tau_{11}$ is statistically significant it indicates that there is variability in the level 1 slopes that is unexplained by the level 2 predictors. If $\tau_{111}$ is statistically significant it indicates that there is variability in the level 2 slopes that is unexplained by the level 3 predictors (Snijders & Bosker, 1994). Therefore, all results tables for the multilevel analyses conducted include variance components and indicate whether they are significant.

**Effect size.** Effect sizes for these level 1 relationships as well as for all level 2 and 3 relationships were computed using Snijders and Bosker’s (1994) technique (S&B technique) of computing total variance explained which utilizes both level 1 and level 2 variance components (for two level models) and both level 1 and level 3 variance components (for three level models).
to avoid issues of negative values of variance estimates that commonly occur when computing the amount of variance explained in a multilevel model using other effect size calculations. In their empirical test of various existing measures for computing variance explained in multilevel models, LaHuis, Hartman, Hakoyama, and Clark (2014) found the S&B technique to be an accurate and appropriate manner of calculating explained variance in multilevel models. Equation 6.4 below shows the Snijders and Bosker’s (1994) calculation technique. All multilevel analyses results tables include these effect sizes.

\[
\text{Effect size} = 1 - \frac{\left(\sigma^2_{full} + \tau_{00\text{full}}\right)}{\left(\sigma^2_{null} + \tau_{00\text{null}}\right)} \\
\text{Eq. 6.4}
\]

This effect size is computed by estimating total variance from a model with no predictor and total variance from a model with the relevant predictors.

**Autonomy.** Hypotheses 1a and 1b predicted significantly positive relationships between autonomy and both job satisfaction and organizational commitment, while Hypotheses 1c, 1d, and 1e stated negative relationships were expected for autonomy with the worker outcome variables of turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting. Significant relationships (i.e., \(\gamma_{10}\)) between autonomy and each of the five worker outcome variables (job satisfaction, organizational commitment, turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting) were in the predicted direction (\(p < .001\)). Thus, Hypotheses 1a-1e were supported.

As shown in Table 7.4 which indicates the estimates for the variance components and effect sizes, there is significant variance unexplained for the relationships between autonomy and the outcomes of OC, turnover intentions, and perceptions of the job as stressful, suggesting there is further variance that could be explained by a level 2 predictor.
### Table 7.4

**Level 1 Analyses for Job Characteristic-Worker Outcome Relationships Controlling for Age (No Level 2 Predictors)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>df</th>
<th>Coefficient ($\gamma_{10}$)</th>
<th>Standard Error</th>
<th>$\tau_{11}$</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OC</td>
<td>475</td>
<td>.31***</td>
<td>.01</td>
<td>.01***</td>
<td>.10</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>475</td>
<td>.35***</td>
<td>.01</td>
<td>.01</td>
<td>.08</td>
</tr>
<tr>
<td>Turnover Intentions</td>
<td>475</td>
<td>-.13***</td>
<td>.01</td>
<td>.01*</td>
<td>.02</td>
</tr>
<tr>
<td>Exhaustion</td>
<td>475</td>
<td>-.15***</td>
<td>.01</td>
<td>.01</td>
<td>.00</td>
</tr>
<tr>
<td>Stress</td>
<td>475</td>
<td>-.07***</td>
<td>.01</td>
<td>.01**</td>
<td>-.02</td>
</tr>
<tr>
<td>Skill Variety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OC</td>
<td>475</td>
<td>.45***</td>
<td>.01</td>
<td>.00</td>
<td>.22</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>475</td>
<td>.57**</td>
<td>.01</td>
<td>.00***</td>
<td>.27</td>
</tr>
<tr>
<td>Turnover Intentions</td>
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<td>-.26**</td>
<td>.01</td>
<td>.00**</td>
<td>.16</td>
</tr>
<tr>
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<td>-.07</td>
<td>.01</td>
<td>.00***</td>
<td>.03</td>
</tr>
<tr>
<td>Stress</td>
<td>475</td>
<td>-.03</td>
<td>.01</td>
<td>.00**</td>
<td>.09</td>
</tr>
<tr>
<td>Task Significance</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OC</td>
<td>475</td>
<td>.30***</td>
<td>.01</td>
<td>.01***</td>
<td>.10</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>475</td>
<td>.31***</td>
<td>.01</td>
<td>.01**</td>
<td>.08</td>
</tr>
<tr>
<td>Turnover Intentions</td>
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<td>-.16***</td>
<td>.01</td>
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<td>.03</td>
</tr>
<tr>
<td>Exhaustion</td>
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<td>.01</td>
<td>.01</td>
<td>.01*</td>
<td>.00</td>
</tr>
<tr>
<td>Stress</td>
<td>475</td>
<td>.00</td>
<td>.01</td>
<td>.01*</td>
<td>.01</td>
</tr>
</tbody>
</table>

* indicates significance at the .05 level  
** indicates significance at the .01 level  
*** indicates significance at the .001 level

**Skill variety.** Hypotheses 2a and 2b predicted significantly positive relationships between skill variety and both job satisfaction and organizational commitment, while Hypotheses 2c, 2d, and 2e stated negative relationships were expected for skill variety with the worker outcome variables of turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting. For the relationships between skill variety and each of the five worker outcome variables (job satisfaction, organizational commitment, turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting), all were in the predicted direction ($p < .001$) for each relationship except for perceptions of the job as stressful and exhausting. Thus, Hypotheses 2a-2c were supported. The results of the variance components (see Table 7.4) suggest there is significant variance yet unexplained for the relationships between skill variety...
and the outcome variables of satisfaction, turnover intentions, perceptions of the job as exhausting, and perceptions of the job as stressful, suggesting there is variance that could be explained by a level 2 predictor and thus further analyses are justified.

**Task significance.** Hypotheses 3a and 3b predicted significantly positive relationships between task significance and both job satisfaction and organizational commitment, while Hypotheses 3c, 3d, and 3e stated negative relationships were expected for task significance with the worker outcome variables of turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting. Significant relationships between task significance and the three worker outcome variables of job satisfaction, organizational commitment, and turnover intentions were in the predicted direction ($p < .001$). Thus, Hypotheses 3a, 3b, and 3c were supported. However, no support for Hypothesis 3d or 3e was found, as there was no significant relationship found between task significance and perceptions of the job as stressful ($p = .72$) nor between task significance and perceptions of the job as exhausting ($p = .38$). The results regarding the variance components (see Table 7.4) suggest there is still a significant amount of variance unexplained for relationships between task significance and the outcomes of OC, satisfaction, perceptions of the job as exhausting, and perceptions of the job as stressful, justifying further analyses with predictors added at level 2.

**Level 2 analyses for effect of job type.** At level 2, job type (white-collar and pink-collar compared to blue-collar) was entered into the model to test if it moderated the level 1 relationships. An example of the level 2 (group level) set of equations (Equation 6.5) to test this set of hypotheses is seen below for the equation of Hypothesis 4a and $\gamma_{11}$ needed to be significant in these equations to be supported. This would indicate that the relationship between the level 1 variables depends on the job type (i.e., the level 1 relationship is moderated by the
level 2 variable). The same steps were taken to test for the effect of job type on autonomy on the other four dependent variables (OC, turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting) as well as the effect of job type on the relationships between the job characteristics of skill variety and task significance on all five worker outcomes.

Level 1: \[ \text{JobSatisfaction} = \beta_{0j} + \beta_{1j} \text{(AUTONOMY)} + \beta_{2j} \text{(AGE)} + r_0 \]  \hspace{1cm} \text{Eq. 6.5}

Level 2:
\[
\begin{align*}
\beta_{0j} & = \gamma_{00} + \gamma_{01} \text{(JOBTYPE)} + \mu_{0j} \\
\beta_{1j} & = \gamma_{10} + \gamma_{11} \text{(JOBTYPE)} + \mu_{1j} \\
\beta_{2j} & = \gamma_{20} + \gamma_{21} + \mu_{2j}
\end{align*}
\]

**Autonomy.** Hypotheses 4a-4e predicted stronger relationships between autonomy and worker outcomes of job satisfaction, organizational commitment, turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting for white- and pink-collar jobs than for blue-collar jobs. However, there was no support for hypotheses 4a-4e, and in fact the relationship between autonomy and organizational commitment was significantly weaker \((p < .01, \text{Effect size} = .10)\) for white- and pink-collar jobs than for those that are blue-collar, which is in the opposite direction as predicted for Hypothesis 4b. See Figure 7.1 for a graphical depiction of this relationship. Table 7.5 indicates the results and estimates for the variance components and effect sizes. There is still a significant amount of variance left unexplained for the relationships between autonomy and worker outcomes of OC, turnover intentions, perceptions of the job as exhausting, and perceptions of the job as stressful, justifying further analyses testing culture at level 2 to examine if this variable accounts for additional variance over the level 2 predictor of job type.
Figure 7.1. Graphical depiction of job type results for relationship between autonomy and OC.

Table 7.5

Level 2 Analyses Testing Effect of Job Type (white- and pink-collar compared to blue-collar) on Worker Outcomes when Controlling for Age at Level 1

<table>
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</table>

* indicates significance at the .05 level
** indicates significance at the .01 level
*** indicates significance at the .001 level

Note: Job type was coded with white- and pink-collar = 1, blue-collar = 0.
**Skill variety.** Hypotheses 5a-5e predicted stronger relationships between skill variety and worker outcomes of job satisfaction, organizational commitment, turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting for white- and pink-collar jobs than for blue-collar jobs. While there was support for Hypothesis 5a (see Figure 7.2) indicating that there was a stronger relationship between skill variety and job satisfaction for white- and pink-collar jobs as compared to those that were blue-collar ($p < .001$, Effect Size $= .28$), there was no support for Hypotheses 5b-5e, and in fact the relationship between skill variety and turnover intentions (Hypothesis 5c) was significantly weaker ($p < .01$, Effect size $= .10$) for white- and pink-collar jobs than for those that are blue-collar, which is in the opposite direction as predicted. See the estimates for the variance components and effect sizes in Table 7.5. There is a significant amount of variance yet unexplained for the relationships between skill variety and worker outcomes of OC, satisfaction, perceptions of the job as exhausting, and perceptions of the job as stressful, justifying further analyses testing culture at level 2.

![Figure 7.2](image)

*Figure 7.2. Graphical depiction of results for relationship between skill variety and satisfaction.*
**Task significance.** Hypotheses 6a-6e predicted stronger relationships between task significance and worker outcomes of job satisfaction, organizational commitment, turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting for white- and pink-collar jobs than for blue-collar jobs. There was support for Hypothesis 6d indicating that there was a stronger relationship between task significance and perceptions of the job as stressful for white- and pink-collar jobs as compared to those that were blue-collar ($p < .01$, Effect size $= .05$). However, there was no support for hypotheses 6a, 6b, 6c, or 6e and instead, the relationship between task significance and organizational commitment was significantly weaker ($p < .05$, Effect size $= .11$) for white- and pink-collar jobs than for those that are blue-collar, which is in the opposite direction as predicted. There is a significant amount of variance yet unexplained for the relationships between task significance and the outcomes of OC, satisfaction, and perceptions of the job as exhausting, indicating the further analyses including culture at level 2 instead of job type is justified (see Table 7.5).

**Level 2 analyses for effect of culture.** Hypotheses 7a-18j were tested with a second set of level 2 equations (see Equation set 6.6 for example) by adding culture (institutional collectivism, power distance, uncertainty avoidance, and performance orientation) to the model at level 2 instead of job type (separate analyses were conducted for each cultural dimension practices and values). This is important to test before examining level 3 relationships with job type at level 2 and culture at level 3 because further analyses at level 3 are only justified if a significant amount of variance is unaccounted for at level 2. Again, for these hypotheses to be supported, $\gamma_{11}$ needed to be significant and in the correct direction. This would indicate whether culture moderates job characteristic-worker outcome relationships at level 1. The same steps were taken to test for the effect of culture on relationships for between autonomy and the other
four dependent variables (OC, turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting) as well as the effect of culture on the relationships between the job characteristics of skill variety and task significance on all five worker outcomes. All results, including the estimates for the variance components and effect sizes for institutional collectivism values and practices are included in Tables 7.6 and 7.7 respectively. Also, the corresponding results are included in Tables 7.8 and 7.9 for power distance values and practices, followed by Tables 7.10 and 7.11 for uncertainty avoidance values and practices. Furthermore, Tables 7.12 and 7.13 provide results for performance orientation values and practices respectively. All results are explained in turn below.

Level 1: \[ \text{JobSatisfaction} = \beta_{0j} + \beta_{1j} \text{(AUTONOMY)} + \beta_{2j} \text{(AGE)} + r_0 \] Eq. 6.6

Level 2: 
\[ \beta_{0j} = \gamma_{00} + \gamma_{01} \text{(CULTURE}_j) + \mu_{0j} \]
\[ \beta_{1j} = \gamma_{10} + \gamma_{11} \text{(CULTURE}_j) + \mu_{1j} \]
\[ \beta_{2j} = \gamma_{20} + \gamma_{21} + \mu_{2j} \]

*Autonomy and institutional collectivism.* Hypotheses 7a, 7c, 7e, 7g, and 7i predicted there would be a stronger positive relationship between autonomy and both job satisfaction (H7a) and organizational commitment (H7c) but stronger negative relationships between autonomy and worker outcomes of turnover intentions (H7e), perceptions of the job as stressful (H7g), and perceptions of the job as exhausting (H7i) for countries that report low institutional collectivism values than for countries that report high institutional collectivism values. None of these hypotheses were supported however, finding no evidence for stronger relationships between autonomy and the worker outcomes of job satisfaction, OC, turnover intentions, perceptions of the job as stressful, or perceptions of the job as exhausting. However, the variance components as shown in Table 7.6 indicate there is still significant variance left unexplained
between autonomy and all five worker outcomes, suggesting there may be additional moderators of the autonomy-worker outcome relationships beyond institutional values (perhaps other cultural dimensions).

Table 7.6

*Level 2 Analyses Testing Effect of Institutional Collectivism Values on Job Characteristic-Worker Outcome Relationships when Controlling for Age at Level 1*

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</table>

* indicates significance at the .05 level
** indicates significance at the .01 level
*** indicates significance at the .001 level

Hypotheses 7b, 7d, 7f, 7h, and 7j were parallel hypotheses for practices instead of values.

None of these results were significant at the .05 level either however, providing no support for the relationships between autonomy and worker outcomes being stronger for cultures low on institutional collectivism practices. However, the variance components as shown in Table 7.7 indicate there is significant variance left unexplained between autonomy and all five worker outcomes when institutional practices are included as the level 2 predictor, suggesting there may
be additional moderators of the autonomy-worker outcome relationships beyond institutional practices, justifying further analyses with other cultural dimensions.

Table 7.7

* Level 2 Analyses Testing Effect of Institutional Collectivism Practices on Job Characteristic-Worker Outcome Relationships when Controlling for Age at Level 1*

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<td>.06</td>
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</table>

| Skill Variety x Instit. Coll. Practices |    |                      |                |        |            |
| OC          | 23 | .03                  | .03            | .00*** | .24        |
| Satisfaction | 23 | .05                  | .05            | .01*** | .24        |
| Turnover Intentions | 23 | -.05                 | .03            | .00**  | .15        |
| Exhaustion | 23 | .03                  | .03            | .00    | -.01       |
| Stress    | 23 | -.04                 | .04            | .00**  | .07        |

| Task Significance x Instit. Coll. Practices |    |                      |                |        |            |
| OC          | 23 | -.04                 | .04            | .01*** | .12        |
| Satisfaction | 23 | -.06*                | .03            | .00    | .07        |
| Turnover Intentions | 23 | .03                  | .02            | .00    | .10        |
| Exhaustion | 23 | .04                  | .02            | .00    | -.01       |
| Stress    | 23 | .02                  | .02            | .00    | .06        |

* indicates significance at the .05 level
** indicates significance at the .01 level
*** indicates significance at the .001 level

* Autonomy and power distance. Hypotheses 8a, 8c, 8e, 8g, and 8i predicted there would be a stronger positive relationship between autonomy and both job satisfaction (H8a) and organizational commitment (H8c) but stronger negative relationships between autonomy and worker outcomes of turnover intentions (H8e), perceptions of the job as stressful (H8g), and perceptions of the job as exhausting (H8i) for countries that report low power distance values than for countries that report high power distance values. Only H8e for the worker outcome of turnover intentions was supported (p < .05, Effect size = .07). None of the other relationships were significant at the .05 level however. Therefore, there was no support for hypotheses H8a,
8c, 8g, or 8i. The results of the variance components in Table 7.8 indicate there is significant variance unexplained by this model for the relationships between autonomy and all five worker outcomes, justifying the further examination of other potential moderators at level 2.

Table 7.8

**Level 2 Analyses Testing Effect of Power Distance Values on Job Characteristic-Worker Outcome Relationships when Controlling for Age at Level 1**

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* indicates significance at the .05 level  
** indicates significance at the .01 level  
*** indicates significance at the .001 level

Hypotheses 8b (job satisfaction), 8d (OC), 8f (turnover intentions), 8h (perceptions of the job as stressful), and 8j (perceptions of the job as exhausting) were parallel hypotheses for practices instead of values. None of these hypotheses were supported however. In fact, turnover intentions and perceptions of the job as exhausting had stronger relationships for countries high on power distance practices, which is in the opposite direction predicted ($p < .05$, Effect size = .09 and $p < .05$, Effect size = .00 respectively). Therefore, there was no support for hypotheses H8b, 8d, 8f, 8h, or 8j. However, as was the case for the aforementioned model including power
distance values at level 2, this model including power distance practices at level 2 also still has significant amounts of variance left unexplained between autonomy and all five worker outcomes, suggesting the inclusion of other predictors at level 2 is appropriate (see Table 7.9).

Table 7.9

Level 2 Analyses Testing Effect of Power Distance Practices on Job Characteristic-Worker Outcome Relationships when Controlling for Age at Level 1

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</table>

* indicates significance at the .05 level
** indicates significance at the .01 level
*** indicates significance at the .001 level

**Autonomy and uncertainty avoidance (UA).** Hypotheses 9a, 9c, 9e, 9g, and 9i predicted there would be a stronger positive relationship between autonomy and both job satisfaction (H9a) and organizational commitment (H9c) but stronger negative relationships between autonomy and worker outcomes of turnover intentions (H9e), perceptions of the job as stressful (H9g), and perceptions of the job as exhausting (H9i) for countries low on UA values than for countries high on UA values. None of these hypotheses were supported however and instead, relationships between autonomy and turnover intentions ($p < .05$, Effect size = .07), perceptions
of the job as stressful ($p < .05$, Effect size = .05), and perceptions of the job as exhausting ($p < .01$, Effect size = -.01) were stronger for countries high on the cultural value of UA which is the opposite direction predicted. The results displayed in Table 7.10 demonstrate there is significant variance left unexplained in this model for the relationships between autonomy and all five worker outcomes, justifying further analyses of additional predictors at level 2 and perhaps level 3.

Table 7.10

**Level 2 Analyses Testing Effect of Uncertainty Avoidance Values on Job Characteristic-Worker Outcome Relationships when Controlling for Age at Level 1**

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</table>

* indicates significance at the .05 level
** indicates significance at the .01 level
*** indicates significance at the .001 level

Hypotheses 9b, 9d, 9f, 9h, and 9j were parallel hypotheses for practices instead of values. Hypotheses 9f and 9h were supported, as relationships between autonomy and both the worker outcomes of turnover intentions ($p < .05$, Effect size = .08) and perceptions of the job as stressful
(\(p < .05\), Effect size = .05) were stronger for countries low on UA practices than those high on UA practices. However there was no support for H9b, 9d, or 9j, providing no evidence that UA practices moderate relationships between autonomy and outcomes of job satisfaction, OC, or perceptions of the job as exhausting. Table 7.11 provides findings that there is significant variance yet unexplained by this model between autonomy and all five worker outcomes, justifying further tests of predictors at level 2.

Table 7.11

**Level 2 Analyses Testing Effect of Uncertainty Avoidance Practices on Job Characteristic-Worker Outcome Relationships when Controlling for Age at Level 1**

<table>
<thead>
<tr>
<th>Variable</th>
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<th>Standard Error</th>
<th>(\tau_{11})</th>
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</table>

* indicates significance at the .05 level
**indicates significance at the .01 level
***indicates significance at the .001 level

**Autonomy and performance orientation.** Hypotheses 10a, 10c, 10e, 10g, and 10i predicted there would be a stronger positive relationship between autonomy and both job satisfaction (H10a) and organizational commitment (H10c) but stronger negative relationships between autonomy and worker outcomes of turnover intentions (H10e), perceptions of the job as
stressful (H10g), and perceptions of the job as exhausting (H10i) for countries that report high performance orientation values than for countries that report low performance orientation values.

None of these hypotheses were supported, as there was no evidence for performance orientation values moderating the strength of relationships between autonomy and job satisfaction, OC, turnover intentions, perception of the job as stressful, or perceptions of the job as exhausting.

Table 7.12 provides the variance components and effect sizes of these relationships. It should be noted however, that there was significant variance yet unexplained by this model for relationships between autonomy and all five worker outcomes, justifying further analyses at level 3.

Table 7.12

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</table>

* indicates significance at the .05 level
** indicates significance at the .01 level
*** indicates significance at the .001 level
Furthermore, hypotheses 10b, 10d, 10f, 10h, and 10j were parallel hypotheses for practices instead of values but again none of these relationships were significant, providing no evidence that performance orientation practices moderate the strength of relationships between autonomy and job satisfaction, OC, turnover intentions, perception of the job as stressful, or perceptions of the job as exhausting. There was however significant variance left unexplained regarding this model between autonomy and all five worker outcome variables (see Table 7.1), indicating further analyses at level 3 is warranted.

**Table 7.1**

*Level 2 Analyses Testing Effect of Performance Orientation Practices on Job Characteristic-Worker Outcome Relationships when Controlling for Age at Level 1*

<table>
<thead>
<tr>
<th>Variable x Perf. Orient. Practices</th>
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</table>

* indicates significance at the .05 level  
** indicates significance at the .01 level  
*** indicates significance at the .001 level

**Skill variety and institutional collectivism.** Hypotheses 11a, 11c, 11e, 11g, and 11i predicted there would be a stronger positive relationship between skill variety and both job satisfaction (H11a) and organizational commitment (H11c) but stronger negative relationships
between skill variety and worker outcomes of turnover intentions (H11e), perceptions of the job as stressful (H11g), and perceptions of the job as exhausting (H11i) for countries that report low institutional collectivism values than for countries that report high institutional collectivism values. Hypotheses 11a, 11c, and 11i were supported, indicating expected stronger relationships between skill variety and the worker outcomes of job satisfaction \((p < .01, \text{Effect size} = .25)\), OC \((p < .01, \text{Effect size} = .24)\), and perceptions of the job as exhausting \((p < .01, \text{Effect size} = -.01)\) for cultures lower on institutional collectivism values. See Figure 7.3 for a graphical depiction of findings supporting Hypothesis 11a for the relationship between skill variety and job satisfaction and Figure 7.4 for a graphical depiction of findings supporting Hypothesis 11c for the relationship between skill variety and OC. However, Hypotheses 11e and 11g were not supported, as a significantly stronger relationship for skill variety and turnover intentions was found in higher institutional collectivistic cultures instead of the expected weaker relationship \((p < .05, \text{Effect size} = .15)\) and there was no significant relationship between skill variety and perceptions of the job as stressful. However, the variance components as shown in Table 7.6 indicate there is still significant variance left unexplained between skill variety and all the included worker outcomes in this study except perceptions of the job as exhausting, suggesting there may be additional moderators of the skill variety-worker outcome relationships beyond institutional collectivism values, justifying further analyses.
Figure 7.3. Graphical depiction of relationship between skill variety and satisfaction for institutional collectivism values.

Figure 7.4. Graphical depiction of relationship between skill variety and OC for institutional collectivism values.

Hypotheses 11b, 11d, 11f, 11h, and 11j were parallel hypotheses for practices instead of values. None of these results were significant at the .05 level however, showing no support for stronger relationships between skill variety and worker outcomes of job satisfaction, OC,
turnover intentions, perceptions of the job as stressful, or perceptions of the job as exhausting for cultures lower on institutional collectivism practices. Therefore, there was no support for hypotheses H11b, 11d, 11f, 11h, or 11j. The variance components as shown in Table 7.7 indicate there is significant variance yet unexplained between skill variety and all five worker outcomes except perceptions of the job as exhausting, suggesting there may be additional moderators of the skill variety-worker outcome relationships beyond institutional collectivism practices as well.

**Skill variety and power distance.** Hypotheses 12a, 12c, 12e, 12g, and 12i predicted there would be a stronger positive relationship between skill variety and both job satisfaction (H12a) and organizational commitment (H12c) but stronger negative relationships between skill variety and worker outcomes of turnover intentions (H12e), perceptions of the job as stressful (H12g), and perceptions of the job as exhausting (H12i) for countries that report low power distance values than for countries that report high power distance values. None of these hypotheses were supported however, as there was no evidence that power distance values moderate the strength of relationships between skill variety and worker outcomes of job satisfaction, OC, turnover intentions, perceptions of the job as stressful, or perceptions of the job as exhausting. There was however significant variance left unexplained by this model for relationships between skill variety and all outcomes except perceptions of the job as exhausting, justifying the further test of other potential moderators of relationships between skill variety and OC, satisfaction, turnover intentions, and perceptions of the job as stressful (see Table 7.8).

Hypotheses 12b (job satisfaction), 12d (OC), 12f (turnover intentions), 12h (perceptions of the job as stressful), and 12j (perceptions of the job as exhausting) were parallel hypotheses for practices instead of values. Hypotheses 12d, 12f, 12h, and 12j were not supported and in fact, turnover intentions (H12f) had a stronger relationship for countries high on power distance,
which is in the opposite direction predicted ($p < .001$, Effect size = .16). However, there was support for H12b, as the relationship between skill variety and job satisfaction was weaker in countries high on power distance, as expected ($p < .05$, Effect size = .23). As for the model with power distance values as a predictor at level 2, the results regarding this model with power distance practices at level 2 (see Table 7.9) indicate significant variance is yet unexplained by relationships between skill variety and all outcome variables except perceptions of the job as exhausting, suggesting analyses including other predictors at level 2 is appropriate.

**Skill variety and uncertainty avoidance.** Hypotheses 13a, 13c, 13e, 13g, and 13i predicted there would be a stronger positive relationship between skill variety and both job satisfaction (H13a) and organizational commitment (H13c) but stronger negative relationships between skill variety and worker outcomes of turnover intentions (H13e), perceptions of the job as stressful (H13g), and perceptions of the job as exhausting (H13i) for countries that report low UA values than for countries that report high UA values. Only H13a was supported, as the skill variety-job satisfaction relationship ($p < .01$, Effect size = .23) was weaker for cultures high on UA as expected (see Figure 7.5 for a graphical depiction of these findings). None of the other hypotheses were supported however, as there was no evidence for UA values moderating skill variety relationships with OC, perceptions of the job as stressful, or perceptions of the job as exhausting. Additionally, the relationship between skill variety and turnover intentions ($p < .001$, Effect size = .15), was stronger for countries high on the cultural value of UA which is the opposite direction predicted. Table 7.10 indicates there is a significant amount of variance yet unexplained in this model for relationships between skill variety and all worker outcomes except perceptions of the job as exhausting, suggesting there may be other significant predictors at level 2.
Figure 7.5. Graphical depiction of relationship between skill variety and job satisfaction for uncertainty avoidance values.

Hypotheses 13b, 13d, 13f, 13h, and 13j were parallel hypotheses for practices instead of values. Only H13h was supported, showing that the relationship between skill variety and perceptions of the job as stressful \((p < .05, \text{Effect size } = .06)\) was stronger for countries low on UA practices than those high on UA practices as predicted. However there was no support for H13b, 13d, 13f, or 13j, as there was no evidence for stronger relationships between skill variety and the worker outcomes of job satisfaction, OC, turnover intentions, or perceptions of the job as exhausting for countries low on UA than those high on UA. Table 7.11 provides results demonstrating there is significant variance left unexplained by this model between the job characteristic of skill variety and all worker outcomes included in this study except perceptions of the job as exhausting, justifying further analyses of additional predictors.

**Skill variety and performance orientation.** Hypotheses 14a, 14c, 14e, 14g, and 14i predicted there would be a stronger positive relationship between skill variety and both job satisfaction (H14a) and organizational commitment (H14c) but stronger negative relationships between skill variety and worker outcomes of turnover intentions (H14e), perceptions of the job
as stressful (H14g), and perceptions of the job as exhausting (H14i) for countries that report high performance orientation values than for countries that report low performance orientation values. None of these hypotheses were supported, indicating no evidence that performance orientation values moderate the strength of the relationships between skill variety and the worker outcomes of job satisfaction, OC, turnover intentions, perception of the job as stressful, or perceptions of the job as exhausting. There was however significant variance yet unexplained by this model for the relationships between skill variety and worker outcomes of OC, satisfaction, turnover intentions, and perceptions of the job as stressful (see Table 7.1), suggesting further analyses with additional predictors is appropriate.

Furthermore, Hypotheses 14b, 14d, 14f, 14h, and 14j were parallel hypotheses for practices instead of values but again none of these relationships were significant, providing no evidence for performance orientation practices moderating the strength of the relationships between skill variety and job satisfaction, OC, turnover intentions, perception of the job as stressful, or perceptions of the job as exhausting. Findings from Table 7.13 show the inclusion of additional predictors may be warranted, as there is variance left unexplained in this model for relationships between skill variety and all worker outcomes except perceptions of the job as exhausting.

**Task significance and institutional collectivism.** Hypotheses 15a, 15c, 15e, 15g, and 15i predicted there would be a stronger positive relationship between task significance and both job satisfaction (H15a) and organizational commitment (H15c) but stronger negative relationships between task significance and worker outcomes of turnover intentions (H15e), perceptions of the job as stressful (H15g), and perceptions of the job as exhausting (H15i) for countries that report low institutional collectivism values than for countries that report high institutional collectivism
values. None of these hypotheses were supported however, as there was no evidence that institutional collectivism values moderate the strength of relationships between task significance and worker outcomes of job satisfaction, OC, turnover intentions, perceptions of the job as stressful, or perceptions of the job as exhausting. There was significant variance left unexplained for relationships between task significance and the outcomes of OC and perceptions of the job as exhausting (see Table 7.6), indicating further analyses of additional potential moderators is justified.

Hypotheses 15b, 15d, 15f, 15h, and 15j were parallel hypotheses for practices instead of values. Only H15b was supported, showing the expected weaker relationship between task significance and job satisfaction for countries high on institutional collectivism ($p < .05$, Effect size = .07). None of the other relationships were significant at the .05 level however, indicating no support for H15d, 15f, 15h, or 15j. There was however significant variance left unexplained for the task significance-OC relationship (see Table 7.7), suggesting further analyses should be done to examine additional level 2 predictors for this relationship.

**Task significance and power distance.** Hypotheses 16a, 16c, 16e, 16g, and 16i predicted there would be a stronger positive relationship between task significance and both job satisfaction (H16a) and organizational commitment (H16c) but stronger negative relationships between task significance and worker outcomes of turnover intentions (H16e), perceptions of the job as stressful (H16g), and perceptions of the job as exhausting (H16i) for countries that report low power distance values than for countries that report high power distance values. None of these hypotheses were supported however, indicating there is no evidence that power distance values moderate the strength of relationships between task significance and worker outcomes. Table 7.8 shows there is significant variance left unexplained by the multilevel model with
power distance values at level 2 for the task significance-OC relationship as well as the task significance-perceptions of the job as exhausting relationship, suggesting there may be additional moderators for these relationships at level 2.

Hypotheses 16b (job satisfaction), 16d (OC), 16f (turnover intentions), 16h (perceptions of the job as stressful), and 16j (perceptions of the job as exhausting) were parallel hypotheses for practices instead of values. None of these hypotheses were supported however. In fact, OC had a stronger relationship for countries high on power distance, which is in the opposite direction predicted ($p < .05$, Effect size = .13). Therefore, there is no support for power distance practices moderating the strength of the relationships between task significance and worker outcomes except for the outcome of OC. Table 7.9 indicates there is significant variance still unexplained by this model including power distance practices for both the task significance-OC and task significance-perceptions of the job as exhausting relationships, suggesting the further examination of additional moderators is warranted.

**Task significance and uncertainty avoidance.** Hypotheses 17a, 17c, 17e, 17g, and 17i predicted there would be a stronger positive relationship between task significance and both job satisfaction (H17a) and organizational commitment (H17c) but stronger negative relationships between task significance and worker outcomes of turnover intentions (H17e), perceptions of the job as stressful (H17g), and perceptions of the job as exhausting (H17i) for countries that report low UA values than for countries that report high UA values. None of these hypotheses were supported, as there was no evidence for UA values moderating relationships between task significance and job satisfaction, turnover intentions, or perceptions of the job as exhausting. Interestingly, the relationships between task significance and both OC ($p < .01$, Effect size = .14) and perceptions of the job as stressful ($p < .05$, Effect size = .06) were actually stronger for
countries high on the cultural value of UA which is the opposite direction than what was predicted. Table 7.10 shows there was significant variance left unexplained in this model for relationships between task significance and the outcomes of OC and perceptions of the job as exhausting, supporting the examination of additional predictors at level 2 for these relationships.

Hypotheses 17b, 17d, 17f, 17h, and 17j were parallel hypotheses for practices instead of values. H17b, 17d, and 17h were supported, showing that the relationship between task significance and job satisfaction ($p < .05$, Effect size = .07), OC ($p < .01$, Effect size = .14), and perceptions of the job as stressful ($p < .05$, Effect size = .06) were stronger for countries low on UA practices than those high on UA practices as expected. However, there was no support for H17f or 17j, as no evidence was found for the moderation of UA practices on relationships between task significance and turnover intentions or perceptions of the job as exhausting. Table 7.11 indicates there were no relationships for which significant variance was left unexplained for these relationships.

**Task significance and performance orientation.** Hypotheses 18a, 18c, 18e, 18g, and 18i predicted there would be a stronger positive relationship between task significance and both job satisfaction (H18a) and organizational commitment (H18c) but stronger negative relationships between task significance and worker outcomes of turnover intentions (H18e), perceptions of the job as stressful (H18g), and perceptions of the job as exhausting (H18i) for countries that report high performance orientation values than for countries that report low performance orientation values. None of these hypotheses were supported, offering no evidence for performance orientation values as a moderator of the strength of relationships between job satisfaction, OC, turnover intentions, perception of the job as stressful, or perceptions of the job as exhausting. Table 7.12 indicates there is significant variance left unexplained between task significance and
both OC and perceptions of the job as exhausting for this model, justifying the further examination at level 3.

Furthermore, Hypotheses 18b, 18d, 18f, 18h, and 18j were parallel hypotheses for practices instead of values but again, none of these relationships were significant and there is no support for performance orientation values as a moderator for the strength of relationships between task significance and worker outcomes of job satisfaction, turnover intentions, perception of the job as stressful, or perceptions of the job as exhausting. Furthermore, the relationship between task significance and OC was significant in the opposite direction of what was predicted ($p < .05$, Effect size = .14), indicating this relationship was weaker for countries high on performance orientation practices compared to those low on this dimension for practices, contrary to expectations. Table 7.13 demonstrates there is significant variance still unexplained for this model between task significance and both the worker outcomes of OC and perceptions of the job as exhausting, suggesting further analyses for these relationships at level 3 is justified.

**Level 3 analyses.** In order to examine whether job type moderates job characteristic-worker outcome relationships in certain cultures but not others, Hypotheses 19a-21t were tested at level 3, keeping culture as a fixed effect with no error term (see Equation set 6.7). The same steps were taken to test for the moderating effect of culture on job type’s impact for relationships between autonomy and the other four worker outcome variables as well as for task significance and skill variety relationships with all five worker outcome variables (job satisfaction, OC, turnover intentions, perception of the job as stressful, and perceptions of the job as exhausting). For the level 3 hypotheses to be supported, $\gamma_{111}$ needed to be significant. The results of these analyses including estimates for the variance components and the effect sizes for institutional collectivism values and practices are included in Tables 7.14 and 7.15 respectively. Also, the
corresponding results are included in Tables 7.16 and 7.17 for power distance values and practices, followed by Tables 7.18 and 7.19 for uncertainty avoidance values and practices. Furthermore, Tables 7.20 and 7.21 provide results including estimates for the variance components and the effect sizes for performance orientation values and practices respectively.

Level 1: $\text{JobSatisfaction} = \beta_{0j} + \beta_{1j}(\text{AUTONOMY}) + \beta_{2j}(\text{AGE}) + r_0$ \hspace{1cm} Eq. 6.7

Level 2: 
\begin{align*}
\beta_{0j} & = \gamma_{00} + \gamma_{01}(\text{JOBTYPE}) + \mu_{0j} \\
\beta_{1j} & = \gamma_{10} + \gamma_{11}(\text{JOBTYPE}) + \mu_{1j} \\
\beta_{2j} & = \gamma_{20} + \gamma_{21} + \mu_{2j}
\end{align*}

Level 3: 
\begin{align*}
\gamma_{00} & = \gamma_{000} + \gamma_{001}(\text{CULTURE}_k) \\
\gamma_{01} & = \gamma_{010} + \gamma_{011}(\text{CULTURE}_k) \\
\gamma_{10} & = \gamma_{100} + \gamma_{101}(\text{CULTURE}_k) \\
\gamma_{11} & = \gamma_{110} + \gamma_{111}(\text{CULTURE}_k) \\
\gamma_{12} & = \gamma_{120} + \gamma_{121} + \mu_{3j}
\end{align*}

**Institutional collectivism and autonomy.** Hypotheses 19a, 19b, 19c, 19d, and 19e predicted job type would moderate the strength of the job characteristic-worker outcome relationships in some cultures more than others, such that relationships between autonomy with job satisfaction (H19a), OC (H19b), turnover intentions (H19c), perceptions of the job as stressful (H19d), and perceptions of the job as exhausting (H19e) are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report low institutional collectivism (both for values and practices). Though no support was found for H19a-H19e, results showed evidence that for institutional collectivism values, the autonomy-perceptions of the job as stressful ($p < .05$, Effect Size = .03) and autonomy-perceptions of the job as exhausting ($p < .05$, Effect Size = .03) relationships were significantly stronger for white- and
pink-collar workers in cultures with high institutional collectivism values, showing relationships in the opposite direction predicted by Hypotheses 19d and 19e. Table 7.14 indicates there is significant variance yet unexplained at both level 2 and level 3 for the autonomy-perceptions of the job as stressful and autonomy-perceptions of the job as exhausting relationships, suggesting other cultural dimensions or variables may explain additional variance which justifies further analyses with other cultural dimensions.

Regarding institutional collectivism practices, results provided evidence in the predicted direction only for the autonomy-perceptions of the job as exhausting relationship (\( p < .05, \) Effect Size = .03), as this relationship was found to be stronger for white- and pink-collar jobs compared to blue-collar jobs in cultures low on institutional collectivism practices as predicted, supporting Hypothesis 19e for practices. Table 7.15 indicates there is significant variance left unaccounted for at levels 2 and 3 for all autonomy-worker outcome relationships except for the autonomy-OC relationship at level 2, indicating further analyses are warranted to examine additional moderators.
Table 7.14

Level 3 Analyses for Institutional Collectivism Values with Job Type at Level 2 and Controlling for Age at Level 1

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<th>τ_{111}</th>
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* indicates significance at the .05 level
** indicates significance at the .01 level
*** indicates significance at the .001 level
Table 7.15

**Level 3 Analyses for Institutional Collectivism Practices with Job Type at Level 2 and Controlling for Age at Level 1**

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* indicates significance at the .05 level  
** indicates significance at the .01 level  
*** indicates significance at the .001 level

**Power distance and autonomy.** Hypotheses 19f, 19g, 19h, 19i, and 19j predicted job type would moderate the strength of job characteristic-worker outcome relationships in some cultures more than others, such that relationships between autonomy with job satisfaction (H19f), OC (H19g), turnover intentions (H19h), perceptions of the job as stressful (H19i), and perceptions of the job as exhausting (H19j) are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report low power distance compared to countries high on power distance (both for values and practices). Regarding values, no support was found for H19f-H19j, as there was no evidence that relationships were significantly stronger for white- and pink-collar workers in cultures with low power distance values. Table 7.16 indicates there is significant variance unexplained at both levels 2 and level 3 for all autonomy-worker outcome relationships except...
the autonomy-OC relationship at level 2, justifying further analyses with other cultural dimensions.

Regarding power distance practices, results were parallel to that of power distance values in that there was no support for any autonomy-worker outcome relationships being stronger for white- or pink-collar jobs compared to those that are blue-collar in low power distance countries. Again, there was significant variance left unaccounted for at level 2 and 3 for all autonomy-worker outcome relationships except for the autonomy-OC relationship at level 2 (see Table 7.17), indicating further analyses are warranted to examine additional moderators.

Table 7.16

| Level 3 Analyses for Power Distance Values with Job Type at Level 2 and Controlling for Age at Level 1 |
|-------------------------------------------------|-------------------------------------------------|--------------------------------------|
| Variable                                        | df     | Coefficient (γ_{111}) | Std Error τ_{11} | τ_{111} | Effect Size |
| Autonomy x Power Dis. Values                   |        |                      |                   |        |             |
| OC                                             | 3119   | -.03                 | .10              | .03    | .07***     | .08        |
| Satisfaction                                    | 3119   | .05                  | .11              | .04*** | .04***     | .04        |
| Turnover Intentions                             | 3119   | -.10                 | .09              | .02*   | .04***     | .07        |
| Exhaustion                                      | 3119   | -.18                 | .11              | .03*   | .02***     | .03        |
| Stress                                          | 3119   | -.02                 | .11              | .03*   | .03***     | .03        |
| Task Significance x Power Dis. Values           |        |                      |                   |        |             |
| OC                                             | 3119   | -.02                 | .07              | .03*** | .05***     | .14        |
| Satisfaction                                    | 3119   | .12                  | .08              | .04*** | .02***     | .03        |
| Turnover Intentions                             | 3119   | -.20**               | .07              | .02**  | .03***     | .09        |
| Exhaustion                                      | 3119   | -.06                 | .09              | .03*   | .02***     | .06        |
| Stress                                          | 3119   | -.12                 | .09              | .03*** | .03***     | .05        |

* indicates significance at the .05 level
** indicates significance at the .01 level
*** indicates significance at the .001 level
Table 7.17

*Level 3 Analyses for Power Distance Practices with Job Type at Level 2 and Controlling for Age at Level 1*

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* indicates significance at the .05 level  
** indicates significance at the .01 level  
*** indicates significance at the .001 level  

Uncertainty avoidance and autonomy. Hypotheses 19k, 19l, 19m, 19n, and 19o predicted job type would moderate the strength of job characteristic-worker outcome relationships in some cultures more than others, such that relationships between autonomy with job satisfaction (H19k), OC (H19l), turnover intentions (H19m), perceptions of the job as stressful (H19n), and perceptions of the job as exhausting (H19o) are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report low uncertainty avoidance (both for values and practices). Regarding values, no support was found for H19k-H19o, as there was no evidence that relationships were significantly stronger for white- and pink-collar workers in cultures with low uncertainty avoidance values. Table 7.18 indicates there is significant variance unexplained at both levels 2 and level 3 for all autonomy-worker outcome relationships.
except the autonomy-OC relationship at level 2, justifying further analyses with other cultural dimensions.

Regarding uncertainty avoidance practices, results were parallel to that of uncertainty avoidance values in that there was no support for any autonomy-worker outcome relationships being stronger for white- or pink-collar jobs compared to those that are blue-collar in low uncertainty avoidant countries. Again, there was significant variance left unaccounted for at levels 2 and 3 for all autonomy-worker outcome relationships except for the autonomy-OC relationship at level 2 (see Table 7.19), indicating further analyses are warranted to examine additional moderators.

Table 7.18

Level 3 Analyses for Uncertainty Avoidance Values with Job Type at Level 2 and Controlling for Age at Level 1

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* indicates significance at the .05 level
** indicates significance at the .01 level
*** indicates significance at the .001 level
Table 7.19

Level 3 Analyses for Uncertainty Avoidance Practices with Job Type at Level 2 and Controlling for Age at Level 1

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* indicates significance at the .05 level
** indicates significance at the .01 level
*** indicates significance at the .001 level

Performance orientation and autonomy. Hypotheses 19p, 19q, 19r, 19s, and 19t predicted job type would moderate the strength of job characteristic-worker outcome relationships in some cultures more than others, such that relationships between autonomy with job satisfaction (H19p), OC (H19q), turnover intentions (H19r), perceptions of the job as stressful (H19s), and perceptions of the job as exhausting (H19t) are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report high performance orientation than countries low on orientation (both for values and practices). Regarding values, no support was found for H19p-H19t, as there was no evidence that relationships were significantly stronger for white- and pink-collar workers in cultures with high performance orientation values. Table 7.20 indicates there is significant variance unexplained at both levels 2
and level 3 for all autonomy-worker outcome relationships except the autonomy-OC relationship at level 2, justifying further analyses with other cultural dimensions.

Regarding performance orientation practices, results were parallel to that of performance orientation values in that there was no support for any autonomy-worker outcome relationships being stronger for white- or pink-collar jobs compared to those that are blue-collar in high performance orientation countries. Again, there was significant variance left unaccounted for at levels 2 and 3 for all autonomy-worker outcome relationships except for the autonomy-OC relationship at level 2 (see Table 7.21), indicating further analyses are warranted to examine additional moderators.

Table 7.20

**Level 3 Analyses for Performance Orientation Values with Job Type at Level 2 and Controlling for Age at Level 1**

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* indicates significance at the .05 level
** indicates significance at the .01 level
*** indicates significance at the .001 level
Table 7.2

**Level 3 Analyses for Performance Orientation Practices with Job Type at Level 2 and Controlling for Age at Level 1**

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* indicates significance at the .05 level
** indicates significance at the .01 level
*** indicates significance at the .001 level

**Institutional collectivism and skill variety.** Hypotheses 20a, 20b, 20c, 20d, and 20e predicted job type would moderate the strength of job characteristic-worker outcome relationships in some cultures more than others, such that relationships between skill variety with job satisfaction (H20a), OC (H20b), turnover intentions (H20c), perceptions of the job as stressful (H20d), and perceptions of the job as exhausting (H20e) are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report low institutional collectivism than countries that report high institutional collectivism (both for values and practices). Regarding values, no support was found for H20a-H20e, as there was no evidence that the skill variety-worker outcome relationships were significantly stronger for white- and pink-collar workers in cultures with high institutional collectivism values. Table 7.14 indicates
there is significant variance yet unexplained at both levels 2 and level 3 for all skill variety-worker outcome relationships, suggesting other cultural dimensions or variables may explain additional variance.

Regarding institutional collectivism practices, results were in line with only one of the predicted hypotheses, that of the skill variety-perceptions of the job as stressful relationship ($p < .05$, Effect Size = .05). This relationship was found to be stronger for white- and pink-collar jobs compared to blue-collar jobs in cultures low on institutional collectivism practices as predicted, supporting Hypothesis 20d for practices. Table 7.15 indicates there is significant variance left unaccounted for at levels 2 and 3 for all skill variety-worker outcome relationships indicating other moderating variables may exist.

**Power distance and skill variety.** Hypotheses 20f, 20g, 20h, 20i, and 20j predicted job type would moderate the strength of job characteristic-worker outcome relationships in some cultures more than others, such that relationships between skill variety with job satisfaction (H20f), OC (H20g), turnover intentions (H20h), perceptions of the job as stressful (H20i), and perceptions of the job as exhausting (H20j) are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report low power distance (both for values and practices). Regarding power distance values, no support was found for H20f, H20g, H20i, or H20j, as there was no evidence that relationships were significantly stronger for white- and pink-collar workers in cultures with low power distance values for these worker outcomes. However, Hypothesis 20h was supported, as the relationship between skill variety and turnover intentions was stronger for white- and pink-collar compared to blue-collar jobs in cultures low on power distance values as expected ($p < .01$, Effect Size = .09). Table 7.16 indicates there is significant variance
unexplained at both levels 2 and level 3 for all skill variety-worker outcome relationships, suggesting other moderators may play a role in these relationships beyond power distance values.

Regarding power distance practices, there was no support for any skill variety-worker outcome relationships being stronger for white- or pink-collar jobs compared to those that are blue-collar in low power distance countries. However, interestingly results show the skill variety-perceptions of the job as stressful relationship was stronger for white- and pink- compared to blue-collar jobs in cultures high on power distance ($p < .05$, Effect Size = .05), which is the opposite direction predicted by Hypothesis 20i for practices. Again, there was significant variance left unaccounted for at levels 2 and 3 for all skill variety-worker outcome relationships (see Table 7.17) for power distance practices, indicating further analyses are warranted to examine additional moderators.

**Uncertainty avoidance and skill variety.** Hypotheses 20k, 20l, 20m, 20n, and 20o predicted job type would moderate the strength of job characteristic-worker outcome relationships in some cultures more than others, such that relationships between skill variety with job satisfaction (H20k), OC (H20l), turnover intentions (H20m), perceptions of the job as stressful (H20n), and perceptions of the job as exhausting (H20o) are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report low uncertainty avoidance (both for values and practices). Regarding values, no support was found for H20k-H20o, as there was no evidence that relationships were significantly stronger for white- and pink-collar workers in cultures with low uncertainty avoidance values. Table 7.18 indicates there is significant variance unexplained at both levels 2 and level 3 for all skill variety-worker outcome relationships, justifying further analyses with other cultural dimensions.
Regarding uncertainty avoidance practices, there was no support for any skill variety-worker outcome relationships being stronger for white- or pink-collar jobs compared to those that are blue-collar in low uncertainty avoidant countries except for the outcome of perceptions of the job as stressful. Therefore, Hypothesis 20n for practices was supported in that as expected, the relationship between skill variety and this worker outcome was stronger for white- and pink-collar jobs compared to those that are blue-collar in cultures low on uncertainty avoidance practices \((p < .01, \text{Effect Size} = .05)\). Again, there was significant variance left unaccounted for at levels 2 and 3 for all skill variety-worker outcome relationships (see Table 7.19), indicating further analyses are warranted to examine additional moderators.

**Performance orientation and skill variety.** Hypotheses 20p, 20q, 20r, 20s, and 20t predicted job type would moderate the strength of job characteristic-worker outcome relationships in some cultures more than others, such that relationships between skill variety with job satisfaction (H20p), OC (H20q), turnover intentions (H20r), perceptions of the job as stressful (H20s), and perceptions of the job as exhausting (H20t) are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report high performance orientation than countries low on performance orientation (both for values and practices). Regarding values, no support was found for H20p-H20t, as there was no evidence that relationships were stronger for white- and pink-collar workers in cultures with high performance orientation values. Table 7.20 indicates there is significant variance unexplained at both levels 2 and level 3 for all skill variety-worker outcome relationships for performance orientation values, justifying further analyses with other cultural dimensions.

Regarding performance orientation practices, there was no support for any skill variety-worker outcome relationships being stronger for white- or pink-collar jobs compared to those
that are blue-collar in high performance orientation countries. Interestingly, for the worker outcome of turnover intentions (Hypothesis 20r for practices), the results indicated the relationship between skill variety and turnover intentions was stronger for white- and pink-compared to blue-collar jobs for cultures low on performance orientation for practices, which is in the opposite direction predicted ($p < .01$, Effect Size = .09). Again, there was significant variance left unaccounted for at levels 2 and 3 for all skill variety-worker outcome relationships (see Table 7.2), indicating further analyses are warranted to examine additional moderators.

**Institutional collectivism and task significance.** Hypotheses 21a, 21b, 21c, 21d, and 21e predicted job type would moderate the strength of job characteristic-worker outcome relationships in some cultures more than others, such that relationships between task significance with job satisfaction (H21a), OC (H21b), turnover intentions (H21c), perceptions of the job as stressful (H21d), and perceptions of the job as exhausting (H21e) are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report low institutional collectivism (both for values and practices). Regarding values, no support was found for H21a-H21e, as there was no evidence that task significance-worker outcome relationships were significantly stronger for white- and pink-collar workers in cultures with low institutional collectivism values. Table 7.14 indicates that for institutional collectivism values and the job characteristic of task significance, there is significant variance yet unexplained at level 2 only for the worker outcome of perceptions of the job as stressful but at level 3, there is significant variance left unexplained for all task significance-worker outcome relationships, suggesting other cultural dimensions or variables may explain additional variance at level 3.

Regarding institutional collectivism practices and task significance, parallel results were found as for institutional collectivism values as explained above. No support was found for any
of the hypotheses specific to practices. Table 7.15 indicates there is significant variance left unaccounted for at level 2 only for the worker outcome of perceptions of the job as stressful but for level 3, there was a significant amount of unexplained variance for all task significance-worker outcome relationships, indicating other moderating variables may exist.

**Power distance and task significance.** Hypotheses 21f, 21g, 21h, 21i, and 21j predicted job type would moderate the strength of job characteristic-worker outcome relationships in some cultures more than others, such that relationships between task significance with job satisfaction (H21f), OC (H21g), turnover intentions (H21h), perceptions of the job as stressful (H21i), and perceptions of the job as exhausting (H21j) are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report low power distance than for those high on the cultural dimension of power distance (both for values and practices). Regarding power distance values, no support was found for H21f, H21g, H21i, or H21j, as there was no evidence that relationships were significantly stronger for white- and pink-collar workers in cultures with low power distance values for these worker outcomes. However, Hypothesis 21h was supported as the relationship between task significance and turnover intentions was stronger for white- and pink-collar compared to blue-collar jobs in cultures low on power distance values as expected ($p < .05$, Effect Size = .07). Table 7.16 indicates that for power distance values, there is significant variance unexplained at level 2 for only the skill variety-perceptions of the job as stressful relationship but at level 3, there is still significant unexplained variance for all task significance-worker outcome relationships, suggesting other moderators may play a role in these relationships beyond power distance values at level 3.

Regarding power distance practices, there was no support for any task significance-worker outcome relationships being stronger for white- or pink-collar jobs compared to those
that are blue-collar in low power distance countries except for turnover intentions. Results showed support for job type moderating the task significance-turnover intentions relationship such that this was stronger for white- and pink-collar jobs in cultures low on power distance practices ($p < .01$, Effect Size = .07). However, interestingly results show the task significance-OC relationship was stronger for white- and pink- compared to blue-collar jobs in cultures high on power distance, which is the opposite direction predicted by Hypothesis 21g for practices. At level 2, there was significant variance left unaccounted for only for the relationship with perceptions of the job as stressful, but at level 3 there was significant variance yet unexplained for all task significance-worker outcome relationships (see Table 7.17), indicating further analyses are warranted to examine additional moderators.

**Uncertainty avoidance and task significance.** Hypotheses 21k, 21l, 21m, 21n, and 21o predicted job type would moderate the strength of job characteristic-worker outcome relationships in some cultures more than others, such that relationships between task significance with job satisfaction (H21k), OC (H21l), turnover intentions (H21m), perceptions of the job as stressful (H21n), and perceptions of the job as exhausting (H21o) are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report low uncertainty avoidance than countries that report high uncertainty avoidance (both for values and practices). Regarding uncertainty avoidance values, no support was found for H21k-H21n, as there was no evidence that relationships were significantly stronger for white- and pink-collar workers in cultures with low uncertainty avoidance values for these worker outcomes. However, there was support for Hypothesis 21o, as results show the relationship between task significance and perceptions of the job as exhausting was stronger for white- and pink- compared to blue-collar jobs in cultures low on uncertainty avoidance as expected ($p < .01$, Effect Size = .04). Table 7.18 also indicates there
is no significant variance unexplained at level 2 but for level 3, there is significant variance yet unexplained for all task significance-worker outcome relationships, justifying further analyses with other cultural dimensions at level 3.

Regarding uncertainty avoidance practices, there was no support for either the task significance-perceptions of the job as stressful (H21n) or task significance-perceptions of the job as exhausting (H21o) relationships being stronger for white- or pink-collar jobs compared to those that are blue-collar in countries low on uncertainty avoidance practices. Also, for turnover intentions (H21m), the relationship was significant but in the opposite direction predicted, as it was found that this relationship was stronger for white- and pink-collar jobs in cultures high on uncertainty avoidance ($p < .05$, Effect Size = .07). However, Hypotheses 21k and 21l were supported, in that as expected, the relationships between task significance and the worker outcomes of job satisfaction ($p < .05$, Effect Size = .03) and OC ($p < .05$, Effect Size = .10) were stronger for white- and pink-collar jobs compared to those that are blue-collar in culture low on uncertainty avoidance practices. Again, there was no significant variance left unaccounted for at level 2 but at 3 there was a significant amount of unexplained variance for all task significance-worker outcome relationships (see Table 7.19), indicating further analyses are warranted to examine additional moderators at level 3.

**Performance orientation and task significance.** Hypotheses 21p, 21q, 21r, 21s, and 21t predicted job type would moderate the strength of job characteristic-worker outcome relationships in some cultures more than others, such that relationships between task significance with job satisfaction (H21p), OC (H21q), turnover intentions (H21r), perceptions of the job as stressful (H21s), and perceptions of the job as exhausting (H21t) are stronger for white- and pink-collar jobs compared to blue-collar jobs in countries that report high performance
orientation (both for values and practices). Regarding performance orientation values and the job characteristic of task significance, no support was found for H21p-H21t, as there was no evidence that relationships were significantly stronger for white- and pink-collar workers in cultures with high performance orientation values. Table 7.20 indicates there is significant variance unexplained at level 2 only for the worker outcome of perceptions of the job as stressful but at level 3, there is significant unexplained variance for all task significance-worker outcome relationships for performance orientation values, justifying further analyses with other cultural dimensions at level 3.

Regarding performance orientation practices, there was no support for any task significance-worker outcome relationships being stronger for white- or pink-collar jobs compared to those that are blue-collar in high performance orientation countries. Again, there was significant variance left unaccounted for at level 2 only for the outcome variable of perceptions of the job as stressful but for level 3, there was still a significant amount of variance unaccounted for regarding all the task significance-worker outcome relationships (see Table 7.21), indicating further analyses are justified to examine additional moderators at level 3.
Chapter 8

Discussion

The purpose of this study was to examine potential moderators of relationships depicted by the job characteristics model (JCM). Though much existing research is in support of the general tenets of the JCM regarding job characteristics’ impact on employee motivation, job satisfaction, and turnover intentions (e.g., Birnbaum et al., 1986; Dude, 2012; Hackman & Lawler, 1971; Hosie et al., 2013; Huang & Van de Vliert, 2003; Lambert et al., 2012; Oldham & Hackman, 1980; Oldham et al., 1976; Warr, 2008), there are gaps in this research domain in terms of additional worker outcomes as well as the examination of macro-level contextual variables as possible moderators of these relationships. Furthermore, prior research has not thoroughly studied job characteristic-worker outcome relationships on a large scale with a multilevel design. Oldham and Hackman (2010) recently discussed how the context of work is changing and their model must be used in novel ways, as have Grant et al. (2010). The present study follows this call to move work design research forward in several novel ways.

First, additional worker outcomes of perceptions of the job as exhausting and perceptions of the job as stressful were examined regarding their relationships to the job characteristics of autonomy, skill variety, and task significance in addition to the more commonly studied outcomes of job satisfaction, OC, and turnover intentions. Second, the current study utilized an extremely large employee-based dataset diverse in job title, industry, and country to examine multilevel relationships, for which there has been a recent call (e.g., Tomislav, 2011). Third, this study independently tested two salient macro-level moderators: job type (blue-, pink-, or white-collar) and culture (dimensions of institutional collectivism, power distance, uncertainty avoidance, and performance orientation: both values and practices for each). Lastly, job type and culture were also examined in conjunction through a three level model to determine if job type
affects job characteristic-worker outcome relationships more in some cultures compared to others, which has never before been done.

**Summary of Results**

This dissertation found further support for the JCM’s predicted relationships between autonomy and all three worker outcomes commonly studied in past research (job satisfaction, OC, and turnover intentions) in addition to the predicted relationships between autonomy and the additional worker outcomes of perceptions of the job as stressful and perceptions of the job as exhausting, such that autonomy was positively linked to satisfaction and OC and negatively related to turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting as expected. Regarding skill variety and task significance, these were also positively associated with the first two worker outcomes and negatively related to turnover intentions as predicted. Therefore in general, the typical relationships found in existing JCM-related research are also supported in this study, though no significant relationships were found between these two job characteristics and the outcomes of perceptions of the job as stressful or exhausting. However, as there was significant variance unexplained in most relationships, this indicated potential moderators may exist, supporting this study’s test of job type and culture in multilevel analyses. These findings will be discussed in detail below in turn, with a summary of the findings presented prior to the explanation of their theoretical implications. Practical implications of the findings will be discussed later in this chapter.

Furthermore, in line with the main purpose of this study, findings indicated job type and culture each independently act as a moderator for various job characteristic-worker outcome relationships and that the nature of this moderating role is specific to the given job characteristic and worker outcome in question. In addition, culture was found to constrain the moderating
impact of job type for some relationships, as job type moderated job characteristic-worker outcome relationships in some cultures but not others.

**Theoretical Implications**

The JCM has largely ignored the impacts of both job type and culture on its predicted relationships, yet it is arguably more important than ever to understand the potential interplay of macro-level contextual variables such as these on factors related to work design in this time of globalization (Parker, 2014). The findings of existing work design research are commonly used to implement work design or redesign across countries despite the lack of a previous large-scale cross-cultural study involving a diverse set of jobs as support for such generalizations. Further evidence is needed to justify the effect of autonomy, skill variety, and task significance on various worker outcomes before assuming these characteristics play the same role across employees. This study offers such an examination of work design relationships related to relevant and timely questions raised recently in this domain. The main focus of this study was to examine potential moderators of job characteristic-worker outcome relationships. Individual level moderators have been proposed by early JCM research, especially growth need strength (GNS) (e.g., Hackman & Lawler, 1971), but macro-level moderators have been much less studied. Surprisingly, job type and culture have rarely been examined as moderators of these relationships prior to this study and no existing work has tested these salient variables on a large-scale across numerous industries, countries, and job titles as this dissertation does. Implications for findings regarding the moderating role of job type and culture separately, as well as when culture constricts the moderating role of job type are each discussed in turn below.

**Job type.** Findings from this study indicated relationships between skill variety and job satisfaction as well as between task significance and perceptions of the job as stressful were
stronger for white- and pink-collar jobs compared to blue-collar jobs. Therefore as expected, professional and service jobs may experience more beneficial effects from higher skill variety and task significance levels on worker outcomes of job satisfaction and perceptions of the job as stressful, suggesting these job characteristics are important to consider for organizations looking to improve satisfaction and minimize perceptions of stress for these workers. However, relationships between autonomy and OC, skill variety and turnover intentions, as well as task significance and OC were weaker for white- and pink-collar compared to blue-collar jobs, indicating manual labor and manufacturing jobs may benefit more from these job characteristics than other jobs in terms of OC and turnover intentions. These findings are interesting, counter to the predictions, and will be discussed further later in this chapter.

Overall, these findings are consistent with previous research that has denoted that job type can impact relationships between job characteristics and work outcomes, such as Johns (2006) who suggested knowing a person’s job allows one to understand certain aspects and tasks a given employee likely performs at work in addition to his or her behavior and attitudes regarding their job, as well as Morgeson et al. (2010) who claimed the context of one’s job plays a role in terms of which job characteristics affect worker outcomes, though this has been previously understudied. The present large-scale study utilizing a diverse sample concurs with these initial studies which included smaller, more limited samples, in that job type was found to moderate job characteristic-worker outcome relationships.

The unexpected findings that pink- and white-collar jobs had weaker autonomy-OC, skill variety-turnover intentions, and task significance-OC relationships than blue-collar jobs suggests turnover intentions could be decreased and OC could be increased for blue-collar workers if they are provided these three job characteristics within their work. Perhaps the typical routinized and
repetitive nature of many blue-collar jobs (e.g., Cox, 1985; Smith, 1985) may not overpower the potential beneficial impact of these specific job characteristics in these jobs, though following Morgeson et al.’s work (2010), it was predicted they would minimize the effect of these job characteristics. It is possible that the nature of white- and pink-collar work inherently tends to have high levels of these job characteristics or perhaps people going into these jobs simply expect them to be at higher levels. Potentially these findings are rooted in blue-collar workers’ stronger positive responses when experiencing these job characteristics because these jobs do not tend to have high levels of them. Overall, it should be noted that this study indicates job type, which has been largely ignored as a potential moderator of job characteristic-worker outcome relationships, has a place in work design theory as a macro-level variable that can impact these relationships in important ways. These findings provide support for further work examining job type specifically and acknowledging contextual variables in general, for research related to work design, including the JCM.

The theoretical implications of the findings indicating the moderating role of job type on multiple job characteristic-worker outcome relationships are that these results support the prediction that job type is an important contextual variable that should be acknowledged in future work design research as well as existing and future work design theories. Including job type in work design theory would allow for a better understanding of which job characteristics are likely to be related to which worker outcomes given a specific job of interest. These results support the viewpoint that the relationships found by the JCM in existing research may not generalize across all jobs.

Culture. Culture was also found to be a moderator of some job characteristic-worker outcome relationships as expected. Specifically, cultures higher on institutional collectivism
values had weaker relationships between skill variety and the three worker outcomes of OC, satisfaction, and perceptions of the job as exhausting than cultures lower on this dimension for values, though the relationship between skill variety and turnover intentions was significantly stronger for those higher on institutional collectivism. Therefore, as predicted, for employees from more collectivistic cultures, the relationship between skill variety in their jobs and the outcomes of OC, job satisfaction, and perceptions of the job as exhausting were weaker, suggesting the increase in responsibility and empowerment that occurs with higher levels of skill variety in one’s job may not be linked to beneficial worker outcomes for those from collectivistic cultures because inherently this requires independently deciding when to use a host of skills within one’s job, though it is linked to beneficial outcomes for those that are from less collectivistic cultures maybe due to the fact that these cultures thrive on independence and strive for continual personal improvement of individualized goals and abilities.

Regarding the unexpected findings, perhaps employees in cultures higher on institutional collectivism appreciated skill variety enough to intend on staying in the organization (because they had lower turnover intentions) more when they had higher skill variety within their jobs, though employees in these cultures were impacted less by skill variety for the outcomes of OC, job satisfaction, and perceptions of the job as exhausting as mentioned above. For practices, only one relationship was weaker for cultures lower on institutional collectivism, which was that between task significance and satisfaction. This finding suggests cultures higher on institutional collectivistic practices respond more strongly (and more positively) to task significance regarding the outcome of satisfaction. This is logical because these cultures practice more interdependence and task significance provides clear connections between one’s work and how it impacts others.
Power distance also was found to play a moderating role for some job characteristic-worker outcome relationships. Some relationships were expected and several interesting unexpected findings were provided by this study as well. First, the relationship between autonomy and turnover intentions was weaker for cultures higher in power distance values as expected and for practices, the skill variety-satisfaction relationship was weaker for culture higher on power distance, suggesting turnover intentions and satisfaction are more positively impacted by these job characteristics in cultures with less hierarchical power structures. However, autonomy-perceptions of the job as exhausting, skill variety-turnover intentions, and task significance-OC relationships were stronger for cultures higher on power distance, which is opposite to expectations, suggesting employees from cultures that practice power distance more, actually respond well to autonomy in regards to the specific well-being outcome of perceptions of the job as exhausting.

Autonomy could be linked to lower perceptions of the job as exhausting for cultures that practice more power distance because though these cultures practice more hierarchical authority levels in general, this does not necessarily indicate the employees themselves as a whole value these rigid power structures. These findings may instead imply that though the culture as a whole practices higher power distance, when employees are given autonomy, this may actually lead to lower levels of exhaustion because individuals in these cultures still appreciate autonomy when it is given, though perhaps it is given more rarely compared to cultures lower in power distance practices. A higher level of autonomy, when existing for these employees, may be a way for them to take some control over their work that is otherwise strictly structured by power hierarchies. Furthermore, employees from these cultures tend to respond better to skill variety in that this job characteristic is linked to lower turnover intentions. Lastly, for these cultures, task
significance is positively linked to OC, suggesting those from cultures higher in power distance practices react more positively to higher levels of task significance, suggesting task significance plays a more beneficial role for the outcome of OC in these cultures than expected, perhaps due to the nature of task significance as being focused on perceiving meaning in one’s work regarding how the work impacts others, as mentioned earlier.

Results from this study indicate mixed findings regarding uncertainty avoidance (UA). Though cultures higher on UA values had a weaker skill variety-satisfaction relationship as expected, many relationships for UA values were stronger for cultures higher on UA. Specifically, relationships between autonomy and turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting were stronger for cultures higher on UA values, as were relationships between skill variety and turnover intentions in addition to task significance with both the outcomes of OC and perceptions of the job as stressful. This indicates employees in cultures which typically ‘should be’ uncomfortable with uncertainty and which value structure as a means to avoid this uncertainty actually appreciate autonomy which leads to lower turnover intentions, perceptions of the jobs as stressful, and perceptions of the job as exhausting. In line with hypotheses, relationships between autonomy and both turnover intentions and perceptions of the job as stressful, skill variety and perceptions of the job as stressful, as well as task significance and the three worker outcomes of OC, satisfaction, and perceptions of the job as stressful were weaker for cultures higher on UA practices. Therefore, findings related to UA practices (‘as is’ viewpoint about a given culture) imply employees from cultures where uncertainty ‘is’ (as opposed to ‘should be’) typically avoided, react less positively to autonomy and task significance than cultures where individuals report the society is not typically avoiding uncertainty. It is logical that those less adverse to uncertainty perceive placing
emphasis on autonomy and task significance in their jobs as more attractive than individuals from cultures that are anxious about uncertainty.

The cultural dimension of performance orientation did not seem to have a moderating role on job characteristic-worker outcome relationships overall, as no relationships were moderated by performance orientation values and only one was moderated by performance orientation practices though this was in the opposite direction predicted. Specifically, the task significance-OC relationship was weaker for cultures higher on performance orientation practices. This may indicate cultures which practice performance orientation to a lower extent may focus more on the significance of the task and the meaning they can derive regarding how their work can beneficially impact others. This is logical in that cultures higher on performance orientation practices as well as values expect or think their society should be performance, goal, and improvement focused, which is a different viewpoint than that of perceiving meaning through impacting others through one’s work, which is the core of task significance.

The theoretical implications of the findings indicating the moderating role of culture on many job characteristic-worker outcome relationships are that in general, these results support the expectations that culture is a salient macro-level variable that must be considered when investigating the JCM or other work design theories (e.g., DCS). Including culture in work design theory would allow for a more accurate understanding of which job characteristics are likely to be related to worker outcomes depending on the cultural values and practices of the society in which a given organization is functioning. These findings suggest the typical relationships found by the JCM do not generalize to all cultures, and furthermore, that cultural dimension values and practices must both be considered (as opposed to only values, only practices, or a focus on country instead), as job characteristic-worker outcome relationships often
differ depending upon various cultural dimensions and in fact also at times differ within the same cultural dimension regarding whether values or practices were examined as the cultural moderator. Again, as was the case regarding the findings of job type as a moderator of these relationships, these findings related to culture as a moderator further allude to the importance of studying contextual variables when examining these relationships. This points towards the inclusion of contextual variables and the conceptualization of multilevel relationships within work design theories.

**Culture constricting the moderating role of job type.** For some relationships, job type did have a stronger effect in certain cultures more than others, though these relationships were not always as expected. First, regarding institutional collectivism values, autonomy-perception of the job as stressful and autonomy-perceptions of the job as exhausting relationships were stronger for white- and pink-collar compared to blue-collar jobs in cultures high on institutional collectivism values which is in the opposite direction predicted. This implies that within cultures that deem their societies ‘should be’ collectivistic, autonomy is actually beneficial for professional and service employees’ well-being, more so than for blue-collar workers in these cultures. However, regarding institutional collectivism practices, autonomy-perceptions of the job as exhausting and skill variety-perception of the job as stressful relationships were stronger for cultures lower on institutional collectivism practices as expected. This suggests job type matters in that autonomy has a more beneficial impact on perceptions of the job as exhausting (linked to lower perceptions of exhaustion) and skill variety is linked to lower perceptions of stress in one’s job for those in professional and service jobs in cultures reported ‘to be’ more individualistic (or those low on institutional collectivism). This could be due to the typical expectations for high levels of autonomy and skill variety in these jobs for less collectivistic
cultures and that when they experience job control/independence in their work and have multiple skills at their disposal to use when they deem necessary, these workers have better well-being.

Regarding power distance values, relationships between both skill variety and task significance with turnover intentions were stronger for pink- and white-collar jobs for cultures low on power distance as hypothesized, which indicates employees in professional and service jobs may have stronger intentions to stay in their organization if they have higher skill variety and task significance levels in their jobs, while those in blue-collar jobs within cultures high on power distance values are not as impacted by these job characteristics regarding their turnover intentions. Perhaps these cultures which are high on power distance values do have lower expectations of these job characteristics’ which minimizes the beneficial impact on worker outcomes. However, for power distance practices, the task significance-turnover intentions relationship was stronger for white- and pink-collar jobs in low power distance cultures as expected but were stronger for those jobs in cultures high on power distance practices regarding the skill variety-perceptions of the job as stressful and task significance-OC relationships. Therefore, regarding these unexpected power distance practices-related findings, it is possible that because employees in societies high on power distance practices need to comply with strict and structured guidelines, rules, and policies, having skill variety in their work seems to minimize the negative well-being variable of perceptions of stress in one’s job. In other words, if these cultures impact employees by creating more stress perceptions in general because of the inflexibility and importance placed on following order and rules, it may be the case that providing some variety in the job alleviates some of this pressure from stress perceptions. Furthermore, within these structured cultural environments, task significance may provide these
employees with a sense of commitment beyond that of the mandatory commitment expectations that may be required by authority figures from their subordinates in these cultures.

Regarding uncertainty avoidance values, the relationship between task significance and perceptions of the job as exhausting was stronger for pink- and white-collar jobs in cultures lower on UA values as expected, suggesting employees from cultures who feel their society should not be high on uncertainty avoidance and are within professional or service jobs, are more beneficially impacted by task significance than those in blue-collar jobs or from cultures where individuals report their societies should endorse high uncertainty avoidance. For UA practices, skill variety-perceptions of the job as stressful, task significance-OC, and task significance-satisfaction relationships were stronger for these jobs in cultures lower on UA practices as expected but were stronger for cultures higher on UA practices specifically for the task significance-turnover intentions relationship. For the relationships in the expected direction, this implies skill variety and task significance are assets for professional and service workers more than blue-collar workers in determining their perceptions of stress as well as their commitment and job satisfaction levels. However, turnover intentions of employees in professional and service jobs for cultures higher on UA practices were more beneficially impacted (had lower turnover intentions) when they experienced task significance, again indicating the importance of task significance for these cultures, as this job characteristic is focused on how work impacts others in providing meaning in one’s work.

Performance orientation does not seem to moderate the strength of job type’s impact on job characteristic-worker outcome relationships overall, as performance orientation values did not impact any of these relationships and for performance orientation practices, only the skill variety-turnover intentions relationship was stronger for white- or pink-collar jobs in cultures
lower on performance orientation, which is opposite to what was hypothesized. Therefore, turnover intentions for professional and service workers in cultures that tend to place greater importance on relationships and workers than performance and the reaching of task-related goals (which are core aspects of cultures low on performance orientation), were lower when skill variety was reported to be high. Perhaps white- and pink-collar workers in cultures lower on performance orientation were found to have a stronger skill variety-turnover intention relationship because skill variety may undermine the goal and task-focused nature of higher performance orientation cultures. Higher levels of skill variety inherently mean there are more skills employees in higher performance orientation cultures must master and perform well as well as more skills for which they must achieve goals. Lower performance orientation cultures are not as goal or performance driven and therefore it is possible that having skill variety in their jobs served a developmental purpose and led to lower intentions to leave the company when they experienced higher skill variety levels while turnover intentions for those in higher performance orientation cultures and these job types seem not to have been beneficially impacted by higher skill variety.

Overall, these findings from three level analyses suggest job type can play a role in determining the strength of job characteristic-worker outcome relationships in some cultures but not others, which is further support for the past work that initially brought forth the importance of context in work design issues (e.g., Dierdorff & Morgeson, 2013; Erez, 2010). Job characteristics do not exist in a vacuum and thus the surrounding environment seems to impact the effectiveness of job characteristics’ relationships to beneficial outcomes (job satisfaction and OC) while minimizing detrimental outcomes (turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting).
The findings showing the impact culture has on the moderating role of job type on job characteristic-worker outcome relationships further supports the needed inclusion of various levels (individual level and group level) of variables in work design theory. The inclusion of these contextual variables seems to improve our understanding of job characteristic-worker outcome relationships and thus to move related theories forward, job type and culture should both be considered as additional variables in progressing JCM related theory for the purpose of better explanatory power in determining these relationships.

Practical Implications

Job type as a moderator. The finding that job type was found to moderate job characteristic-worker outcome relationships is crucial information for organizations which plan to implement job redesign, as some specific job characteristics seem to be linked to important worker outcomes more in certain jobs than others. As the redesign process is often expensive and time-consuming, it is most efficient to focus those resources on jobs that may benefit most from these changes and the findings from this study offer initial evidence to guide their appropriate allocation. Additionally, the unexpected findings showing pink- and white-collar jobs had weaker autonomy-OC, skill variety-turnover intentions, and task significance-OC relationships than blue-collar jobs is valuable information for organizations attempting to improve their employee retention rate and commitment levels in manual labor and manufacturing jobs. These findings provide initial evidence that higher autonomy and task significance could improve commitment levels of blue-collar employees and combined with skill variety, they also have less intent to leave the company. Therefore these three job characteristics do seem to be providing meaning and a sense of personal responsibility (Hackman & Oldham, 1976) and in turn are linked to beneficial worker outcomes for blue-collar jobs, perhaps even more so than other job
types. These findings are also in line with Levinson et al.’s (1992) expectations that blue-collar workers would benefit from training on additional skills/cross-training (i.e., skill variety), as this could “revitalize and make workers more productive, particularly those workers who have been trained on only a few routine and limited skills” (pp. 64). Therefore, interestingly perhaps the JCM (e.g., Hackman & Oldham, 1975; Oldham & Hackman, 1980) holds for blue-collar jobs more than other jobs for these specific relationships. This is not so for findings related to skill variety-job satisfaction or task significance-perceptions of the job as stressful relationships as mentioned earlier, which indicate organizations wishing to improve job satisfaction and minimize perceptions of stress from one’s job for professional or service workers should focus on increasing skill variety and task significance levels respectively.

**Culture as a moderator.** Overall, the findings regarding the moderating role of culture on job characteristic-worker outcome relationships have implications for how work is designed cross-culturally. This suggests that though some of the effects may be small, cultural dimensions should be considered when redesigning jobs in order to obtain higher employee satisfaction and OC, but lower turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting. This supports Erez’s viewpoint that perceptions of one’s job are influenced by norms that vary across cultures and these norms affect whether job characteristics are viewed in a positive or negative manner (Erez, 2010). Therefore, it is likely that multinational or global companies may not be able to have a single job design strategy. Instead, findings from the present study suggest investing time and finances into tailored or separate job design strategies will likely pay dividends later. Fitting a specific redesign strategy to the job types which are of priority and understanding the culture in which these jobs are subsumed seems necessary in order to most effectively and efficiently obtain the worker outcomes wanted by a given company.
These findings indicate that one simple and standardized approach towards job or work design is not likely to lead to the same results across various cultures and is therefore not appropriate.

First, findings regarding institutional collectivism values suggest companies within cultures lower on this dimension may want to increase skill variety if they feel the need to improve job satisfaction and OC as well as minimize employees’ perceptions of exhaustion. However, if organizations in these cultures wish to minimize turnover intentions, increasing skill variety levels may not do so, though it seems to minimize them in cultures higher on institutional collectivism values. Additionally, organizations in cultures lower on institutional collectivism practices may be able to increase job satisfaction through higher levels of task significance.

Power distance should also be considered by organizations when contemplating job redesign as turnover intentions may be minimized by increasing autonomy and job satisfaction may be increased by higher skill variety levels in cultures lower on power distance values and practices respectively. However, organizations should be aware that autonomy may be linked to lower perceptions of the job as exhausting, task significance may be related to OC, and skill variety may be linked to lower turnover intentions in cultures higher on power distance practices but not for cultures lower on power distance practices surprisingly. Therefore power distance should be considered with care in its moderating role of job characteristic-worker outcome relationships in that the manner in which it moderates them is dependent upon the specific job characteristic as well as whether power distance values or practices are utilized as the cultural dimension.

As with power distance, organizations should contemplate the moderating role of UA carefully as well, in that these relationships also are complicated in nature. Organizations in cultures lower on UA values may be able to improve employee satisfaction if skill variety levels
are increased, but many relationships between job characteristics and worker outcomes were found to be stronger for cultures higher on UA values. Therefore, companies located in cultures higher on UA values may actually be more beneficially impacted by autonomy, skill variety, and task significance than the typical samples in existing job characteristics-related research which include cultures lower on UA values. However findings indicate that cultures lower on UA practices will likely benefit more from these job characteristics than countries higher on UA practices. Therefore again, the specification of values vs. practices is essential in understanding which cultures may be most impacted by job characteristics from the JCM and in turn will impact worker outcomes.

Overall, it seems organizations need not focus on performance orientation when attempting to understand which cultures would react most positively to job characteristics based on the findings from this study which indicate performance orientation values and practices do not moderate job characteristic-worker outcome relationships in general, though companies could potentially improve OC with higher levels of task significance in cultures lower on performance orientation.

Culture was found in this study to play a role in the strength of varying job characteristic-worker outcome relationships. Therefore, the cultural context is a salient variable to consider when attempting to alter job characteristics within the workplace as well as when contemplating the extent to which job characteristics are expected in jobs within given cultures. Additionally, at the individual level, managers must pay attention to their employees’ endorsement of a given cultural dimension (both for values and practices) to understand when job characteristics may impact these outcomes and when they likely do not. Much time and money are invested in job redesign efforts, thus it is essential to understand when they are likely to succeed. These findings
provide initial support for the consideration of cultural dimensions as important contextual variables in job or work design research and its applications in the workplace.

**Culture constricting the moderating role of job type.** Regarding institutional collectivism values, the findings that autonomy-perception of the job as stressful and autonomy-perceptions of the job as exhausting relationships were stronger for white- and pink-collar compared to blue-collar jobs in cultures high on institutional collectivism values suggests workers in these jobs and cultures specifically, may benefit from higher levels of autonomy if managers are concerned about their perceptions of the job as exhausting or stressful. Regarding findings for institutional collectivism practices, autonomy-perceptions of the job as exhausting and skill variety-perception of the job as stressful relationships being stronger for cultures lower on institutional collectivism practices is salient information for companies attempting to improve their professional and service workers’ well-being.

Findings for power distance values showing relationships between both skill variety and task significance with turnover intentions were stronger for pink- and white-collar jobs for cultures low on power distance as was the case for power distance practices regarding the task significance-turnover intention relationship, suggest it may prove fruitful for organizations in these cultures which are focused on retaining their service and professional employees to increase levels of skill variety and task significance in these jobs. However, the findings indicating skill variety-perceptions of the job as stressful and task significance-OC relationships were stronger for white- and pink-collar jobs in cultures higher on power distance practices compared to those lower on this dimension complicates our understanding of culture impacting job type’s moderation, as it seems for cultures higher on power distance practices, higher levels of skill variety may be more likely to minimize perceptions of stress from the job. Also, it seems
organizations in these cultures and not those lower on power distance practices would be more likely to improve organizational commitment by increasing task significance.

Furthermore, findings suggest higher levels of task significance is linked to lower perceptions of the job as exhausting for pink- and white-collar jobs in cultures lower on uncertainty avoidance (UA) values and higher levels of skill variety may result in lower perceptions of the job as stressful, while higher levels of task significance seem to be linked to higher job satisfaction and OC for these jobs in cultures lower on UA practices. Interestingly however, task significance was related to lower turnover intentions in white- and pink-collar jobs in cultures higher on UA practices. The first UA findings described here suggest managers or organizations in cultures lower on UA values attempting to minimize negative well-being outcomes of stress and exhaustion perceptions in service or professional jobs could do so by increasing levels of these employees’ task significance and skill variety. However, companies within lower UA practices cultures that are interested in improving satisfaction and OC worker outcomes for employees in these jobs may also benefit from higher task significance levels. The latter findings indicate that if the focus is on minimizing turnover intentions, this may best be done by increasing task significance levels specifically for these jobs in cultures higher on UA practices but this change may not be as beneficial in other cultures.

Lastly, if organizations in cultures lower on performance orientation intend to minimize turnover intentions for white- or pink-collar workers, increasing skill variety in these jobs may aid in this attempt. However, regarding practical implications overall, it is clear that it is essential for companies to understand the cultural context when determining which job characteristics’ levels should be increased depending on which worker outcomes they are focusing on improving. The effect job characteristics may have (or the strength of the relationships between
them and worker outcomes) depends on multiple factors; the job type, the culture in which the organization is functioning, and the worker outcome of interest.

**Potential Limitations**

As is true of all research, there are potential limitations to the findings of this study. The first is the use of an archival data source. The data in this archival dataset is cross-sectional, and though longitudinal data would be quite interesting to examine, this study is a strong initial attempt to test culture and job type as moderators as it utilizes employee data across 24 countries and hundreds of job titles and organizations. The use of an existing data source constrains the variables available and the quality of measurement as the researcher can only use the items that are available in the data. For example, the effect of the job characteristics of feedback or task identity could not be tested because the Work Orientation III dataset did not include them. In addition, job satisfaction, perceptions of the job as stressful, and perceptions of the job as exhausting were one-item measures and therefore the reliability estimates for the scores on these measures could not be computed.

More importantly and related to these issues, the use of an archival dataset in this study results in a potential issue regarding the measures’ construct validity. Items from the Work Orientation III dataset that were most similar to items used previously or items from existing measures were identified and used in this study. No measure used in this study included a full range of exact items included in published scales for a given construct. However, as seen in Appendix B, many items used in this dissertation were closely aligned with specific items from published measures. In support of construct validity however, many of the correlations between the three job characteristics included in this study and the worker outcomes are similar to reported correlations between these constructs in existing research. Regarding autonomy, Brown
and Peterson’s meta-analysis (1993) found a correlation of .21 with job satisfaction while the present study found a correlation of .26. Furthermore, Thatcher et al. 2003 found correlations between autonomy and the worker outcomes of OC and turnover intentions to be .21 and -.15 respectively while this dissertation found correlations of .28 and -.13 respectively. Existing research by Griffin et al. (2013) reports the correlation between autonomy and exhaustion to be -.44 while we found -.12, so for well-being outcomes, so if this study included more items for well-being as opposed to the single-item measures possible with this dataset, perhaps even stronger relationships would have been found. For skill variety, correlations with worker outcomes were also similar to published studies, such as Loher and Noe’s meta-analytic findings (1985) for a corrected correlation of .41 for the skill variety-job satisfaction relationship (this study found a correlation of .50 for this relationship). Furthermore, Thatcher et al. (2003) found a skill variety-OC correlation of .27 and a -.23 correlation with turnover intentions, while the present study found correlations of .46 and -.28 for these outcomes respectively. Additionally, correlations between task significance and worker outcomes were similar to those in existing research such as its relationship with job satisfaction which Brown and Peterson (1993) found to be .24 (the present study found a correlation of .28). Also, Thatcher et al. (2003) found a task significance-OC correlation of .30 and a task significance-turnover intentions relationship of -.18, while this study found correlations of .29 and -.19 respectively. As a whole, there is support for construct validity of this study’s autonomy, skill variety, and task significance measures in that measures of these job characteristics have been found to have similar relationships overall with the worker in this study. There is less existing research on perceptions of the job as stressful and exhausting for which to compare our correlations, so future work should examine these worker outcomes with validated scales.
Another potential limitation to this study is the restricted range of the included countries. Many European countries but no African or South American countries were included in the final dataset utilized by this study. Thus, there may be some limitations to the generalizability of the findings to those countries. However, the benefit to examining cultural dimensions instead of countries is that the core nature of culture is studied as opposed to a focus on geographical location as a categorization of culture and each cultural dimension (institutional collectivism, power distance, uncertainty avoidance, and performance orientation) had countries both lower and higher for both values and practices, so job characteristic-worker outcome relationships from employees in African or South American countries matched on a given cultural dimension to other countries included in this study would be expected to be similar. It should be noted that for each cultural dimension included in this study (for both practices and values scores), the range of scores for the countries included in the present study span nearly the entire total range of project GLOBE scores, suggesting these countries are representative of those found in project GLOBE (see notes regarding this in Chapter 4 for each cultural dimension in turn). Yet, results derived from a future study that includes countries from Africa and South America may still be beneficial towards the further generalizations of such findings.

Furthermore, culture may impact the degree to which people can choose the type of job in which they work. The extent to which people have the freedom to choose jobs may create a levels issue or a confound in this dissertation as inherently individuals in some countries have less control over their education or job choice (e.g., China) than others (e.g., New Zealand). Therefore, individuals that may seek out pink- or white-collar jobs in countries that include more choice regarding one’s career path, may not have this opportunity if they are in countries or societies that minimize this chance. It is of course possible that employees that are attracted to
higher levels of autonomy, skill variety, and task significance exist in societies which do not allow for these job characteristics to emerge in general across job types. This possibility does not minimize the crux of this study that culture can impact the extent to which job characteristics are expected which in turn can impact job characteristic-worker outcome relationships by resulting in weaker relationships for employees in these cultures. Though an individual employee may hope for a higher level of a given job characteristic or a different type of job, the culture in which they work can inhibit higher levels of these job characteristics from occurring regardless of their job type, indicating the amount of choice one has in selecting the job type (white-, pink-, or blue-collar), may not actually affect job characteristic-worker outcome relationships.

**Future Research**

Though this dissertation answers the recent call that has been put forth by multiple researchers (e.g., Grant et al., 2010; Johns, 2010; Morgeson et al., 2010; Oldham & Hackman, 2010; Parker, 2014) for large-scale, multilevel, cross-cultural work design research that examines additional moderators of job characteristic-worker outcome relationships, this is an initial study toward this purpose. This study does find that job type and culture each independently moderate some job characteristic-worker outcome relationships and that job type also has a stronger effect in certain cultures more than others which indicates the importance of examining job type and culture in conjunction within work design research. However, future research must be conducted to further examine these complex relationships in order for further theory building as well informing practitioners how, when, and why given job characteristics impact worker outcomes. Below are examples of specific areas for which to focus such future work.

**Counterintuitive findings.** Future work should delve into further examining the counterintuitive findings from this dissertation. For example, relationships between autonomy
and OC, skill variety and turnover intentions, as well as task significance and OC were weaker for white- and pink-collar compared to blue-collar jobs, which is opposite of what was hypothesized. Future work should investigate these relationships to determine if manual labor and manufacturing jobs may indeed benefit more from these job characteristics than other jobs regarding the worker outcomes of OC and turnover intentions. If this finding is replicated, subsequent studies should attempt to understand why this is the case. Future research could be conducted through quasi-experimental or experimental designs within organizations which specifically manipulate autonomy and task significance levels for a subset of both blue-collar as well as pink- and white-collar positions within the company to determine if blue-collar jobs benefit more from these job characteristics regarding the specific outcome of OC than other jobs (which was found in this study). This would assist in a thorough understanding of these relationships across jobs by varying actual levels of autonomy and task significance as opposed to obtaining employee self-reports for their perceptions of existing levels of these characteristics. Additionally a quasi-experimental or experimental longitudinal study over the duration of several years in which skill variety levels for blue-collar as well as white- and pink-collar employees are manipulated could compare the effects of skill variety on turnover intentions across various job types to further examine whether the negative relationship is indeed stronger for blue-collar workers as was found in this study. If this finding is replicated with such a design, it would provide a further indication for the possible benefit of higher skill variety levels even for blue-collar workers, which would be useful for minimizing high turnover rates in these jobs.

Furthermore, some unexpected findings regarding culture occurred as well. First, for institutional collectivism, the relationship between skill variety and turnover intentions was significantly stronger for employees higher on institutional collectivism. Second, for power
distance, autonomy-perceptions of the job as exhausting, skill variety-turnover intentions, and task significance-OC relationships were stronger for cultures higher on power distance. Third, for uncertainty avoidance, relationships between autonomy and turnover intentions, perceptions of the job as stressful, and perceptions of the job as exhausting were stronger for cultures higher on UA values, as were relationships between skill variety and turnover intentions in addition to task significance with both the outcomes of OC and perceptions of the job as stressful. Lastly, the task significance-OC relationship was weaker for cultures higher on performance orientation practices, which is opposite to our predictions.

These counterintuitive findings were discussed in more detail earlier in this chapter, but it is important to note that these interesting relationships should be explored further in order to determine if these are truly existing patterns, and if so, to attempt to determine why the specific relationships exist in these jobs. These relationships along with those in this study that were found to be in the hypothesized direction, are equally essential to understand in order to make work design efforts as efficient and effective as possible within varying jobs.

Additional potentially relevant variables. As the results in Chapter 7 indicate, for most job characteristic-worker outcome relationships, there was a significant amount of variance left unexplained when including job type as a level 2 predictor, culture as a level 2 predictor, as well as when including job type as a level 2 predictor with culture as a level 3 predictor within the same model. Thus, this suggests additional moderators may exist for these relationships beyond that of job type and culture and future research should attempt to study additional moderators to more thoroughly understand which variables impact job characteristic-worker outcome relationships. One such potential variable may be organizational culture, which Schein (2010) proposes has three aspects: artifacts, espoused beliefs and values, and underlying assumptions.
Just as culture in the sense that this dissertation discusses it, has different dimensions, different types of organizational culture also exist (e.g., adhocracy, clan, market, hierarchy; Hartnell, Ou, & Kinicki, 2011) which provide an indication of which artifacts, espoused beliefs and values, and underlying assumptions are involved in a given organization. As organizational culture is a macro-level contextual variable, it too is likely to shape expectations of job characteristics which in turn would impact job characteristic-worker outcome relationships differently across various organizational cultures that differ on how conducive given job characteristics are to that organizational culture. Thus, multilevel work design studies could examine organizational culture as a possible additional variable that may explain further variance in job characteristic-worker outcome relationships. Though testing organizational culture as a moderator is a recent trend or direction in organizational culture research (Schneider et al., 2013) this has not yet been brought forth as a moderator in the context proposed here. From project GLOBE findings, it is known that societal culture impacts organizational culture (House et al., 2004) but Schneider et al. (2013) succinctly explain regarding these GLOBE findings that “the impact leaves considerable variability in the organizational culture profiles possible; national culture is influential but not determinant” (pp. 372).

Additionally, Huang and Van de Vliert (2003) studied economic indicators of national wealth and social security. These may affect perceptions beyond that of culture in some circumstances and should be further studied, though the goal of the present research was to understand culture and job type as the macro-level moderators of job characteristic-worker outcome relationships.

Other related avenues for future research. Additionally, further research is needed in regards to not only the other job characteristics of the JCM that were not included in the present
study (task identity and feedback), but to also go beyond the JCM’s five job characteristics to study alternative characteristics as Mohrman (2003) has done regarding the study of network building and growth/professional development job characteristics as motivators, especially for knowledge or white-collar workers, as these jobs have been found to typically involve more work with knowledge or information than blue-collar workers (Cortada, 1998). In line with Grotto and Lyness’ (2010) examination of autonomy and skill development job characteristics in relation to negative work to nonwork spillover, there are interesting avenues for the job characteristic of development opportunities and alternative well-being related outcomes such as spillover. These variables could be examined especially for jobs that have exceptionally high turnover rates such as those in foodservice and preparation jobs (a specific type of pink-collar job), blue-collar jobs such as elementary occupations (see Table 6.1; e.g., construction and manufacturing jobs), or white-collar jobs such as technicians as a route towards minimizing turnover in these jobs while also increasing satisfaction, OC, and well-being for these workers.

In addition, future work should examine white-collar and pink-collar jobs separately to examine whether each job type functions differently regarding the moderating role of job type on job characteristic-worker outcome relationships. In order to better understand the impact of job characteristics on worker outcomes while controlling for organizational culture, future studies could examine and compare pink- and white-collar jobs within a given company in terms of job characteristic-worker outcome relationships to determine if there are nuanced differences across these jobs of which to be aware. As a practical applied example of such research, if leaders are considering how to increase OC levels in their company and want to do so efficiently, they may want to determine if white-collar workers have stronger positive autonomy-OC relationships than pink-collar workers in their organization. Basic research could also benefit from explicitly
studying these two job types separately to determine if slight differences occur, which if existing, could matter on a large scale (very large companies). Due to the typical commonality between pink- and white-collar work as less structured overall than blue-collar work and the ambiguous nature of multiple pink- and white-collar jobs in terms of how they were titled in the Work Orientation III dataset, it was most appropriate to examine pink- and white-collar jobs conjointly in comparison to blue-collar jobs within this study. Though it may prove useful for future research to examine white-collar and pink-collar jobs separately, it should be noted that all analyses conducted with job type as a moderator of job characteristic-worker outcome relationships were also run with white-, pink-, and blue-collar jobs coded separately. The results of these analyses indicated there was no directional change in the relationships when examining the three job types separately compared to consolidating white- and pink-collar jobs. Furthermore, the only relationship that became significant ($p < .05$) was that between skill variety and perceptions of the job as exhausting. Additionally, no significant relationships when combining white- and pink-collar categories became nonsignificant when running them separately.

Another avenue for related future research could be to utilize Schwartz’s conceptualization of cultural values (Schwartz, 1992; Schwartz et al., 2012) instead of House et al.’s (2004) cultural dimensions. The same variables used in the present study could be utilized with another large and diverse sample in terms of culture, industry, and job type in order to more deeply understand cultural values and how they may be related to job characteristics from the angle of Schwartz’s perspective on culture. Also, research regarding culture’s impact on job design in team contexts could be valuable, as diverse teams are becoming common in the
workplace and Parker (2014) has voiced the call for more research in the work teams job design domain as well.

Furthermore, Daniels et al. (2013) bring forward the idea of job crafting in regards to work design and that job characteristics in some jobs may be dynamic or changeable in nature. Both Griffin (1981) as well as Piccolo and Colquitt (2006) have shown the perceptions of job characteristics can be shaped by leaders even when no objective redesign is done. Furthermore, Piccolo and Colquitt (2006) found employees with transformational leaders had higher levels of the five job characteristics depicted by the JCM. Interestingly, in turn, these employees were found to be more internally motivated as well as having more goal commitment and participated in more organizational citizenship behaviors (OCBs). Thus, not only is it possible for transformational leaders to shape the meaning and perceptions of job characteristics through communication, persuasion, and presenting a vision, but these changes in perceptions are also related to important worker outcomes (e.g., OCBs). Therefore, future work testing which jobs are more amenable to shifts or changes in job characteristics by the employee could prove useful in that offering training or providing knowledge regarding the usefulness of altering job characteristics could minimize the need for expensive, time-consuming formal redesign process in those jobs. For example, if white-collar jobs are conducive to job crafting by employees themselves, perhaps the focus of redesigning job characteristics could be best focused on pink- and blue-collar jobs in order to improve their worker outcomes.

**Conclusion**

Though the general relationships predicted by the JCM were found between the job characteristics of autonomy, skill variety, and task significance and the five included worker outcomes (job satisfaction, OC, turnover intentions, perceptions of the job as stressful, and
perceptions of the job as exhausting) showing support for the JCM and extending it to several well-being outcomes, these relationships were at times moderated by job type and culture. Importantly however, these moderating relationships were dependent upon the specific job characteristic or worker outcome in question, complicating our understanding of the moderating role of both job type and culture. Regarding job type, relationships were stronger for white- and pink-collar than blue-collar jobs in some instances but were stronger in blue-collar jobs for other relationships. In line with this, individuals from cultures low on the studied dimensions (institutional collectivism, power distance, uncertainty avoidance, and performance orientation) at times had stronger job characteristic-worker outcome relationships, but for other variables were weaker for employees from cultures low on these dimensions. Furthermore, job type did impact relationships more strongly in some cultures than others, indicating the importance of future research examining both factors simultaneously. Overall, the present study has demonstrated job type and culture do play moderating roles in job characteristic-worker outcome relationships but this is specific to the job characteristic and outcome variable of interest. This dissertation provides initial evidence for these important macro-level variables in work design research while urging both researchers and practitioners alike to acknowledge the complicated nature of these relationships. It is important to study job characteristics separately, as they have differing impacts on worker outcomes. Therefore, future researchers are encouraged to examine independent job characteristics as opposed to studying relationships between aggregated versions of them such as the commonly used motivating potential score (MPS) (see Equation 2.1 in Chapter 2) and worker outcomes, as an understanding of these unique relationships would be lost with such a treatment of job characteristics. These findings are useful regarding work design
within organizations, as they justify that employees’ culture and job type must both be taken into account to most accurately understand how job characteristics are related to worker outcomes.
Appendix A

<table>
<thead>
<tr>
<th>Measure</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td>1. I can work independently.(^a)</td>
</tr>
<tr>
<td></td>
<td>2. Which of the following statements best describes how your working</td>
</tr>
<tr>
<td></td>
<td>hours are decided? (By working hours we mean here the times you</td>
</tr>
<tr>
<td></td>
<td>start and finish work, and not the total hours you work per week</td>
</tr>
<tr>
<td></td>
<td>or month).(^b)</td>
</tr>
<tr>
<td></td>
<td>3. Which of the following statements best describes how your daily</td>
</tr>
<tr>
<td></td>
<td>work is organized?(^b)</td>
</tr>
<tr>
<td>Task significance</td>
<td>1. In my job I can help other people.(^a)</td>
</tr>
<tr>
<td></td>
<td>2. My job is useful to society.(^a)</td>
</tr>
<tr>
<td>Skill variety</td>
<td>1. My job is interesting.(^a)</td>
</tr>
<tr>
<td></td>
<td>2. My job gives me a chance to improve my skills.(^a)</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>1. How satisfied are you in your (main) job?(^c)</td>
</tr>
<tr>
<td>Organizational commitment</td>
<td>1. I am willing to work harder than I have to in order to help the firm or organization I work for succeed.(^a)</td>
</tr>
<tr>
<td></td>
<td>2. I am proud to be working for my firm or organization.(^a)</td>
</tr>
<tr>
<td>Turnover intentions</td>
<td>1. I would turn down another job that offered quite a bit more pay in order to stay with this organization.(^a)</td>
</tr>
<tr>
<td></td>
<td>2. All in all, how likely is it that you will try to find a job with another firm or organization within the next 12 months?(^d)</td>
</tr>
<tr>
<td>Perception of the job as stressful</td>
<td>1. How often do you find your work stressful?(^a)</td>
</tr>
<tr>
<td>Exhaustion</td>
<td>1. How often do you come home from work exhausted?(^a)</td>
</tr>
</tbody>
</table>

\(^a\): 5 point Likert scale  
\(^b\): 3 point scale (not Likert scale)  
\(^c\): 7 point Likert scale  
\(^d\): 4 point Likert scale

Note: Response options for second autonomy item: Starting and finishing times are decided by my employer and I cannot change them on my own, I can decide the time I start and finish work within certain limits, and I am entirely free to decide when I start and finish work. Response options for third autonomy item: I’m free to decide how my daily work is organized, I can decide how my daily work is organized within certain limits, or I am not free to decide how my daily work is organized.

Note: For all items, scores were coded such that higher scores indicated higher levels of that construct.
## Appendix B

### Comparing Measures in Current Study to Similar Measures in Existing Studies

#### Job Autonomy

<table>
<thead>
<tr>
<th>Items in this Study</th>
<th>Similar Items from other Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can work independently</td>
<td>I have a lot of say about what happens on my job&lt;sup&gt;ac&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>I have the freedom to decide what I do on my job&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>It is basically my own responsibility to decide how my job gets done&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>The job gives me a chance to use my personal initiative or judgment in carrying out the work&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>The job allows me to make a lot of decisions on my own&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>The job provides me with significant autonomy in making decisions&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>The job gives me considerable opportunity for independence and freedom in how I do the work&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>The job allows me to decide on my own how to go about doing my work&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>The job allows me to make decisions about what methods I use to complete my work&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>This job gives me considerable opportunity for independence and freedom in how I do the work&lt;sup&gt;g&lt;/sup&gt;</td>
</tr>
<tr>
<td><em>Which of the following statements best describes how your working hours are decided? (By working hours we mean here the times you start and finish work, and not the total hours you work per week or month)</em></td>
<td>I can flexibly decide my work hours&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>The job allows me to make my own decisions about how to schedule my work&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Which of the following statements best describes how your daily work is organized?</strong></td>
<td>I can decide the amount and procedure of my work&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>The job allows me to decide on the order in which things are done on the job&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>The job allows me to plan how I do my work&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>How much authority do you have in establishing rules and procedures about how your work is to be done?&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>I have the freedom to influence my own work pace&lt;sup&gt;f&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>I have general freedom to decide and plan my own work day&lt;sup&gt;f&lt;/sup&gt;</td>
</tr>
</tbody>
</table>
*Response options ranged from “Starting and finishing times are decided by my employer and I cannot change them on my own, I can decide the time I start and finish work, within certain limits, and I am entirely free to decide when I start and finish work”

**Response options ranged from “I’m free to decide how my daily work is organized, I can decide how my daily work is organized, within certain limits, or I am not free to decide how my daily work is organized”

a Bass & Grzywacz (2011)
b Ishii-Kuntz (2013)
c Vitak, Crouse, & LaRose (2011)
d Morgeson & Humphrey (2006)
e Ng, Ang, & Chan (2008)
 f Hystad, Eid, & Brevik (2011)
g Hackman & Oldham (1974): JDS published measure

**Task Significance**

<table>
<thead>
<tr>
<th>Items in this Study</th>
<th>Similar Items from other Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>In my job I can help other people</td>
<td>The results of my work are likely to significantly affect the lives of other people(^a)</td>
</tr>
<tr>
<td></td>
<td>This job is one where a lot of other people can be affected by how well the work gets done(^b)</td>
</tr>
<tr>
<td></td>
<td>In general, how significant or important is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?(^b)</td>
</tr>
<tr>
<td>My job is useful to society</td>
<td>The job itself is very significant and important in the broader scheme of things(^a)</td>
</tr>
<tr>
<td></td>
<td>The job has a large impact on people outside the organization(^a)</td>
</tr>
<tr>
<td></td>
<td>The work performed on the job has a significant impact on people outside the organization(^a)</td>
</tr>
<tr>
<td></td>
<td>The job itself is not very significant or important in the broader scheme of things(^b)</td>
</tr>
<tr>
<td></td>
<td>(reverse coded)</td>
</tr>
</tbody>
</table>

\(^a\) Morgeson & Humphrey (2006)
\(^b\) Hackman & Oldham (1974): JDS published measure

**Skill Variety**

<table>
<thead>
<tr>
<th>Items in this Study</th>
<th>Similar Items from other Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>My job is interesting</td>
<td>The job requires me to use a number of complex or high-level skills(^ac)</td>
</tr>
<tr>
<td></td>
<td>The job requires the use of a number of skills(^a)</td>
</tr>
</tbody>
</table>
The job requires me to utilize a variety of different skills in order to complete the work\(^a\)
Stimulating and challenging work\(^c\)
The job is quite simple and repetitive\(^c\) (reverse scored)

My job gives me a chance to improve my skills

The job requires a variety of skills\(^a\)
My job requires that I keep learning new things\(^b\)
My job requires that I be creative\(^b\)
My job lets me use my skills and abilities\(^b\)

\(^a\)Morgeson & Humphrey (2006)
\(^b\)Bass & Grzywacz (2011): Calls these items “learning opportunities” instead of skill variety
\(^c\)Hackman & Oldham (1974): JDS published measure

**Job Satisfaction**

<table>
<thead>
<tr>
<th>Items in this Study</th>
<th>Similar Items from other Job Satis. Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>How satisfied are you in your (main) job?</td>
<td>To what extent are you satisfied with your current job?(^a)</td>
</tr>
</tbody>
</table>

\(^a\)Malach-Pines & Keinan (2006)

**Organizational commitment**

<table>
<thead>
<tr>
<th>Items in this Study</th>
<th>Similar Items from other OC Measures</th>
</tr>
</thead>
</table>
| I am willing to work harder than I have to in order to help the firm or organization I work for succeed. | If he asks me to do something to help the company, I will do it even if it might involve extra responsibility\(^a\)  
If he asks me to do something to help the company, I will do it even if it might involve some risk\(^a\)  
If he asks me to do something to help the company, I will do it even if it might bring me some discomfort\(^a\) |
| I am proud to be working for my firm or organization. | I talk positively about my job to people I see off-hours\(^b\)  
I am happy to tell others about my good job and good working conditions\(^b\)  
I am proud to be a member of this work group\(^c\)  
I really feel that I belong in this organization\(^c\)  
I do not feel emotionally attached to this organization (reverse coded)\(^d\) |

\(^a\)Halverson, Holladay, Kazama, & Quiñones (2004)
\(^b\)Emberland & Rundmo (2010)
### Turnover Intentions

<table>
<thead>
<tr>
<th>Items in this Study</th>
<th>Similar Items from other Turnover Intentions Measures</th>
</tr>
</thead>
</table>
| I would turn down another job that offered quite a bit more pay in order to stay with this organization. | I do not intend to quit my job<sup>b</sup><br>I am not thinking about quitting my job at the present time<sup>b</sup>  
*I I sometimes feel compelled to quit my job in my current workplace<sup>a</sup>  
*I I am currently seriously considering leaving my current job to work at another company<sup>a</sup>  
*I I will quit this company if the given condition gets even a little worse than now<sup>a</sup>  
*I I will probably look for a new job in the next year<sup>a</sup>  
*I I will probably look for a new job in the near future<sup>b</sup>  
*I At the present time, I am actively searching for another job in a different organization<sup>b</sup>  
It is unlikely that I will actively look for a different organization to work for in the next year<sup>b</sup> |
| All in all, how likely is it that you will try to find a job with another firm or organization within the next 12 months? |                                                                                                                                                                                             |

Note: Intentions to stay are the opposite of turnover intentions. Items listed from other measures indicated by an asterisk are in the turnover intentions direction.

<sup>a</sup>Jung & Yoon (2013)
<sup>b</sup>Bozeman & Perrewe (2001)

### Perceptions of the Job as Stressful

<table>
<thead>
<tr>
<th>Items in this Study</th>
<th>Similar Items from other Measures</th>
</tr>
</thead>
</table>
| How often do you find your work stressful?                                       | What is your general stress level?<sup>a</sup>  
Is your job generally stressful and hurried?<sup>b</sup>                                                                 |
|                                                                                   |                                                                                                                                 |
| <sup>a</sup>Malach-Pines & Keinan (2006)                                           |                                                                                                                                 |
| <sup>b</sup>Hystad, Eid, & Brevik (2011)                                           |                                                                                                                                 |

### Perceptions of the Job as Exhausting

<table>
<thead>
<tr>
<th>Items in this Study</th>
<th>Similar Items from other Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often do you come home from work exhausted?</td>
<td>When you think about your work overall, how often do you feel tired?&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;sup&gt;a&lt;/sup&gt;Malach-Pines &amp; Keinan (2006) (Note: Similar item is one item in a list to capture burnout)</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix C

**Full List of Job Titles Coded as Pink-Collar**

<table>
<thead>
<tr>
<th>Job Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housekeeping + restaurant services workers</td>
</tr>
<tr>
<td>Housekeepers and related workers</td>
</tr>
<tr>
<td>Waiters waitresses and bartenders</td>
</tr>
<tr>
<td>Shop salespersons and demonstrators</td>
</tr>
<tr>
<td>Stall and market salespersons</td>
</tr>
<tr>
<td>Faith healers</td>
</tr>
<tr>
<td>Radio television + other announcers</td>
</tr>
<tr>
<td>Sales/Factory customer assistant</td>
</tr>
<tr>
<td>Door to door business</td>
</tr>
<tr>
<td>Merchandiser/ Buy and sell / Direct selling</td>
</tr>
<tr>
<td>Decorators and commercial designers</td>
</tr>
<tr>
<td>Fortune-tellers + related workers</td>
</tr>
<tr>
<td>Religious associate professionals</td>
</tr>
<tr>
<td>Sales + services elementary occupation</td>
</tr>
<tr>
<td>Street vendors and related workers</td>
</tr>
<tr>
<td>Street food vendors</td>
</tr>
<tr>
<td>Street vendors non-food products</td>
</tr>
<tr>
<td>Door-to-door telephone salesperson</td>
</tr>
<tr>
<td>Shoe cleaning + other street services</td>
</tr>
<tr>
<td>Domestic + related helpers</td>
</tr>
<tr>
<td>Domestic helpers and cleaners</td>
</tr>
<tr>
<td>Helpers + cleaners in offices hotels</td>
</tr>
<tr>
<td>Hand-launderers and pressers</td>
</tr>
<tr>
<td>Building caretakers window + related cleaner</td>
</tr>
<tr>
<td>Building caretakers</td>
</tr>
<tr>
<td>Vehicle window + related cleaners</td>
</tr>
<tr>
<td>Messengers porters doorkeepers + related</td>
</tr>
<tr>
<td>Messengers package luggage porters</td>
</tr>
<tr>
<td>Doorkeepers watchpersons</td>
</tr>
<tr>
<td>Hairdressers beauticians + related workers</td>
</tr>
<tr>
<td>Companions and valets</td>
</tr>
<tr>
<td>Coding proof-reading + related clerks</td>
</tr>
<tr>
<td>Scribes and related workers</td>
</tr>
<tr>
<td>Other office clerks</td>
</tr>
<tr>
<td>Customer services clerks</td>
</tr>
<tr>
<td>Cashiers tellers and related clerks</td>
</tr>
<tr>
<td>Cashiers and ticket clerks</td>
</tr>
<tr>
<td>Tellers and other counter clerks</td>
</tr>
<tr>
<td>Institution-based personal care workers</td>
</tr>
<tr>
<td>Customer services clerks not elsewhere classified</td>
</tr>
<tr>
<td>Client information clerks</td>
</tr>
<tr>
<td>Travel agency and related clerks</td>
</tr>
<tr>
<td>Personal care + related workers not elsewhere classified</td>
</tr>
<tr>
<td>Home-based personal care workers</td>
</tr>
<tr>
<td>Other customer services clerks</td>
</tr>
<tr>
<td>Other personal services workers not elsewhere classified</td>
</tr>
<tr>
<td>Astrologers fortune-tellers</td>
</tr>
<tr>
<td>Astrologers and related workers</td>
</tr>
<tr>
<td>Personal service sale</td>
</tr>
<tr>
<td>Child care workers</td>
</tr>
<tr>
<td>Travel attendants + related workers</td>
</tr>
<tr>
<td>Travel attendants + travel stewards</td>
</tr>
<tr>
<td>Other personal services workers</td>
</tr>
<tr>
<td>Travel guides</td>
</tr>
<tr>
<td>Personal care and related workers</td>
</tr>
<tr>
<td>Pawnbrokers and money-lenders</td>
</tr>
<tr>
<td>Debt-collections and related workers</td>
</tr>
</tbody>
</table>
Appendix D

Full List of Job Titles Coded as White-Collar

Legislators senior officials + managers
Legislators and senior officials
Legislators
Senior government official
Traditional chiefs + heads of villages
Senior officials of interest organization
Senior officials of political party
Senior officials of employers’ + workers’ organizations
Senior officials of humanitarian + other interest organizations
Corporate managers
Directors and chief executives
Production + operations managers
Other department managers
Finance + administration department managers
Personnel + industrial relations department managers
Sales + marketing department managers
Advertising + public relations department managers
Supply + distribution department managers
Computing services department managers
Research + development department managers
Other department managers not elsewhere classified
Other department managers
Miscellaneous office supervisors
General managers
General managers
General managers in agriculture
General managers in manufacture
General managers in construction
General managers in wholesale + retail trade
General managers of restaurants + hotels
General managers in transport + communication
General managers of business services
General managers in personal care cleaning
General managers not elsewhere classified
Professionals
Physical mathematical + engineering science
Physicists chemists + related professionals
Physicists and astronomers
Meteorologists
Chemists
Geologists and geophysicists
Mathematicians statisticians + related professionals
Mathematicians and related professionals
Statisticians
Computing professionals
Computing systems designers + analysts
Computer programmers
Computing professionals not elsewhere classified
Architects engineers + related professionals
Architects town + traffic planners
Civil engineers
Electrical engineers
Electronics + telecommunication engineers
Mechanical engineers
Chemical engineers
Mining engineers metallurgists + related professionals
Cartographers and surveyors
Architects engineers + related professionals
Other natural scientist
Life science + health professionals
Life science professionals
Biologist botanist zoologist + related professionals
Pharmacologists pathologists
Agronomists + related professionals
Health professionals
Medical doctors
Dentists
Veterinarians
Pharmacists
Health professionals not elsewhere classified
Nursing + midwifery professionals
Teaching professionals
College university + higher education teacher
Secondary education teacher
Primary + pre-primary education teacher
Primary education teaching professionals
Pre-primary education teaching professionals
Special education teaching professionals
Other teaching professionals not elsewhere classified
Education methods specialists
School inspectors
Extra-systemic. teacher
Other professionals
Business professionals
Accountants
Personnel + careers professionals
Business professionals not elsewhere classified
Legal professionals
Lawyers
Judges
Legal professionals not elsewhere classified
Archivists librarians + related information professionals
Archivists and curators
Librarians + related information professionals
Social science + related professionals
Economists
Sociologists anthropologists + related professionals
Philosophers historians + political scientist
Philologists translators + interpreter
Psychologists
Social work professionals
Authors journalists
Library mail and related clerks
Library and filing clerks
Mail carriers and sorting clerks
Office helping workers
Post office higher civil service
Religious professionals
Public service administrative professionals
Education professionals not elsewhere classified
Technicians and related professionals
Physical + engineering science technicians
Chemical + physical science technicians
Civil engineering technicians
Electrical engineering technicians
Mechanical engineering technicians
Chemical engineering technicians
Mining and metallurgical technicians
Draughts persons
Physical + engineering science technicians not elsewhere classified
Computer associate professionals
Computer assistants
Computer equipment operators
Receptionists + information clerks
Optical + electronic equipment operators
Calculating machine operators
Secretaries
Medical equipment operators
Optical + electronic operators not elsewhere classified
Ship aircraft controllers + technicians
Ships engineers
Ship deck officers and pilots
Aircraft pilots + related professionals
Air traffic pilots
Air traffic safety technicians
Safety and quality inspectors
Building and fire inspectors
Safety health + quality inspectors
Life science + health associate professionals
Life science technicians + related professionals
professionals
Life science technicians
Agronomy and forestry technicians
Farming and forestry advisers
Modern health associate professionals
Medical assistants
Sanitarians
Dieticians and nutritionists
Optometrists and opticians
Dental assistants
Physiotherapists + related associate professionals
Veterinary assistants
Pharmaceutical assistants
Modern health associate professionals not elsewhere classified
Nursing + midwifery associate professionals
Nursing associate professionals
Midwifery associate professionals
Traditional medicine practitioner + faith healer
Traditional medicine practitioners
Teaching associate professionals
Primary education teaching associate professionals
Pre-primary education teaching associate professionals
Special education teaching associate professionals
Other teaching associate professionals
Other associate professionals
Finance + sales associate professionals
Securities + finance dealers and brokers
Insurance representatives
Estate agents
Travel consultants and organizers
Technical + commercial sales representatives
Buyers
Appraisers valuers + auctioneers
Finance + sales associate professionals not elsewhere classified
Business services agents + trade broker
Trade brokers
Clearing and forwarding agents
Employment agents + labor contractors
Other business services agents not elsewhere classified
Administrative associate professionals
Administrative secretaries + related professionals
Legal + related business associate professionals
Bookkeepers
Statistical mathematical + related professionals
Clerical Supervisors
Administrative associate professionals not elsewhere classified
Customs tax + related government professionals
Customs and border inspectors
Government tax and excise officials
Government social benefits officials
Government licensing officials
Government administrative officers
Senior government executive officers
Middle level government executive officers
Customs tax + related government professionals not elsewhere classified
Statistical and finance clerks
Material-recording + transport clerks
Production clerks
Social work associate professionals
Numerical clerks
Accounting and bookkeeping clerks
Supervisors and general foremen (Fabrication of products)
Supervisors and general foremen (Food and beverage processing)
Supervisors and general foremen (Construction works)
Supervisors and general foremen (Printing)
Other production supervisors and general foremen
Secondary (high-) school teacher
Teacher in vocational training
Second vocational teacher
Transport clerks
Laboratory assistants
Manager/ Managing family business/ Canteen owner
Bank agent/ Bank employee
Government employee/ Barangay Council Member/ Barangay Treasurer/ Barangay ex-officer
Office worker clerks
Office clerks
Secretaries + keyboard-operating clerks
Stenographers and typists
Word-processor and related operators
Data entry operators
Appendix E

Full List of Job Titles Coded as Blue-Collar

Cooks
Mixed animal producers
Market-oriented animal producers not elsewhere classified
Market-oriented crop animal producer
Farmers
Farm supervisors
Forestry and related worker
Forestry workers and logger
Charcoal burners and related worker
Fishery workers hunters + trappers
Aquatic-life cultivation worker
Inland + coastal waters fishery worker
Deep-sea fishery worker
Hunters and trappers
Subsistence agricultural + fishery worker
Subsistence agricultural + fishery worker
Craft and trade workers
Extraction and building trades worker
Miners shotfirers stone cutters + carvers
Miners and quarry workers
Shotfirers and blasters
Stone splitters cutters and carvers
Building frame + related trades workers
Builders traditional materials
Bricklayers and stonemasons
Concrete placers finishers + related
Carpenters and joiners
Building frame + related trades workers not elsewhere classified
Building finishers + related trades workers
Roofers
Floor layers and tile setters
Plasterers
Insulation workers
Glaziers
Plumbers and pipe fitters
Building + related electricians
Building finishers + related trade workers
Painters building cleaners + related worker
Painters and related workers
Varnishers and related painters
Building structure cleaners
Metal machinery + related trades workers
Metal molders sheet metal workers + related
Metal molders and core-makers
Welders and flame-cutters
Sheet-metal workers
Structural-metal preparers + erectors
Poultry producers
Apiarists and sericulturists
Blacksmiths tool-makers + related trade
Blacksmiths + forging-press worker
Tool-makers and related workers
Machine-tool setters + setter-operators
Metal wheel-grinders + tool sharpeners
Blacksmiths tool-makers + related trade
not elsewhere classified
Machinery mechanics and fitters
Motor vehicle mechanics and fitters
Aircraft engine mechanics and fitters
Agricultural-industrial mechanics
Electrical + electronic equipment mechanic
Electrical mechanics and fitters
Electronics fitters
Electronics mechanics + servicers
Telegraph + telephone installers + service
Electrical line installers repairers
Precision handicraft printing + other
Precision metal workers + related materials
Precision-instrument makers + repairers
Musical-instrument makers + tuners
Jewelry and precious-metal workers
Potters glass-makers + related trades worker
Abrasive wheel formers potters + related
Glass-makers cutters + finishers
Glass engravers and etchers
Glass ceramics + related decorative painter
Handicraft in wood textile
Handicraft in wood + related materials
Handicraft in textile leather + related
Printing + related trades workers
Compositors typesetters + related worker
Electrotypers
Printing engravers and etchers
Photographic + related workers
Bookbinders + related workers
Silk-screen block + textile printers
Printing + related trades workers not elsewhere classified
Other craft + related trades workers
Food processing + related trades workers
Butchers + related food preparers
Bakers + confectionary makers
Dairy-products makers
Fruit vegetable + related preservers
Food beverage tasters + graders
Tobacco preparers + tobacco production maker
Other Food processing + related trades workers
Dairy and livestock producers
Wood treaters + related trades
Wood treaters
Cabinet-makers + related workers
Woodworking-machine setters + operators
Basketry weavers + related worker
Textile garment + related trades workers
Fiber preparers
Weavers knitters + related workers
Tailors dressmakers + hatters
Furriers and related workers
Textile leather + related pattern-makers
Sewers embroiderers + related workers
Upholsterers and related workers
Pelt leather + shoemaking trades worker
Pelt dressers tanners + fellmongers
Shoemakers + related workers
Metal worker general
Metal worker not elsewhere classified
Electronics engineers not elsewhere classified
Master craftsmen supervisor
Plant + machine operators
Stationary-plant + related operators
Mining + mineral-processing-plant operator
Mining-plant operators
Mineral-ore + stone processing plant operator
Well drillers + borers + related workers
Metal-processing-plant operators
Ore and metal furnace operators
Metal melters, casters
Metal-heat-treating-plant operator
Metal drawers and extruders
Glass ceramics + related plant operators
Glass ceramics + related machine operator
Glass ceramics + related plant operators not elsewhere classified
Wood-processing + papermaking-plant operators
Wood-processing-plant operators
Paper-pulp plant operators
Papermaking-plant operators
Chemical-processing-plant operators
Crushing grinding machinery operator
Chemical-heat-treating-plant operators
Chemical-filtering-equipment operators
Chemical-still + reactor operators
Petroleum + natural-gas-refining-plant operators
Chemical-processing-plant operators not elsewhere classified
Power-production + related plant operators
Power-production plant operators
Steam-engine and boiler operators
Incinerator, water-treatment + related operators
Automated-assembly-line + industrial-robot operators
Automated-assembly-line operators
Industrial-robot operators
Machine operators and assemblers
Metal + mineral-products machine operators
Machine-tool operators
Cement + other mineral products machine operators
Chemical-products machine operators
Pharmaceutical products machine operator
Ammunition products machine operator
Metal finishing + coating-machine operators
Photographic-products machine operator
Chemical-products machine operators not elsewhere classified
Rubber + plastic-products machine operators
Rubber-products machine operators
Plastic-products machine operators
Wood-products machine operators
Printing + paper-products machine operators
Printing-machine operators
Bookbinding-machine operators
Paper-products machine operators
Textile + leather-products machine operators
Spinning + winding-machine operators
Weaving + knitting-machine operators
Sewing-machine operators
Bleaching + cleaning-machine operators
Fur + leather-preparing-machine operator
Shoemaking + related machine operator
Textile products machine operators not elsewhere classified
Food + related products machine operators
Meat + fish-processing-machine operator
Dairy-products machine operators
Grain + spice-milling-machine operator
Baked-goods + chocolate-products machine operators
Fruit + nut-processing-machine operators
Sugar production machine operators
Tea coffee + cocoa-processing machine operators
Beverage machine operators
Tobacco production machine operators
Assemblers
Mechanical-machinery assemblers
Electrical-equipment assemblers
Electronic-equipment assemblers
Metal + plastic-products assemblers
Wood + related products assemblers
Paperboard textile + related production assembler
Composite products assemblers
Other machine operators + assemblers
Drivers and mobile-plant operators
Locomotive-engine drivers + related workers
Locomotive-engine drivers
Railway brakers, signallers + shunters
Motor-vehicle drivers
Motor-cycle drivers
Car taxi and van drivers
Bus and tram drivers
Heavy truck and lorry drivers
Agricultural + other mobile-plant operators
Motorized farm + forestry plant operators
Earth-moving + related plant operators
Crane hoist and related plant operators
Lifting-truck operators
Agricultural + other mobile-plant operators not elsewhere classified
Ships deck crews and related workers
Elementary occupations + unskilled workers
Market-oriented agricultural skilled worker
Market gardeners and crop growers
Field crop and vegetable growers
Tree and shrub crop growers
Gardeners horticultural + nursery growers
Mixed-crop growers
Market-oriented animal producers
Dishwasher/ Kitchen crew
Industrial robot controllers
Stock clerks
Bookmakers and croupiers
Transport conductors
Nonfarm foremen
Skilled manual
Semi skilled worker
Construction/ Carpenter
Vending-machine money collectors
Garbage collectors + related labourers
Garbage collectors
Sweepers and related labourers
Agricultural fishery + related labourers
Agricultural fishery + related laborers
Farm-hands and laborers
Forestry laborers
Fishery hunting + trapping laborers
Laborers in mining construction
    manufacturing
Mining and construction laborers

Mining and quarrying laborers
Construction + maintenance laborers
Building construction laborers
Manufacturing laborers
Assembling laborers
Hand packers + other manufacturing laborers
Transport laborers + freight handlers
Hand or pedal vehicle drivers
Drivers of animal-drawn vehicles + machines
Freight handlers
Other laborers
Appendix F

Significant Findings

2 LEVEL ANALYSES FOR JOB TYPE

Supported Hypotheses
Skill Variety-Satisfaction stronger for white- & pink-collar
Task Significance-Perceptions of the job as stressful stronger for white- & pink-collar

Findings in Opposite Direction Predicted
Autonomy-Organizational Commitment (OC) stronger for blue-collar
Skill Variety-Turnover intentions stronger for blue-collar
Task Significance-OC stronger for blue-collar

2 LEVEL ANALYSES FOR CULTURE

Supported Hypotheses for VALUES
Institutional Collectivism
    Skill Variety-OC, Skill Variety-Satisfaction, & Skill Variety-Perception of the job as exhausting all stronger for cultures lower in Institutional Collectivism

Power Distance
    Autonomy-Turnover intentions stronger for cultures lower in Power Distance

Uncertainty Avoidance (UA)
    Skill Variety-Satisfaction stronger for cultures lower in UA

VALUES Findings in Opposite Direction Predicted
UA
    Autonomy-Turnover intentions, Autonomy-Perceptions of the job as stressful, Autonomy-Perceptions of the job as exhausting, Skill Variety-Turnover intentions, Task Significance-OC, & Task Significance-Perceptions of the job as stressful were all stronger for cultures higher on UA

Supported Hypotheses for PRACTICES
Institutional Collectivism
    Task Significance-Satisfaction stronger for cultures lower on Institutional Collectivism
Power Distance
   Skill Variety-Satisfaction stronger for cultures lower on Power Distance

UA
   Autonomy-Turnover intentions, Autonomy-Perceptions of the job as stressful,
   Skill Variety-Perceptions of the job as stressful,
   Task Significance-OC, Task Significance-Satisfaction, & Task Significance-Perceptions
   of the job as stressful all stronger for cultures lower on UA

PRACTICES Findings in Opposite Direction Predicted

Power Distance
   Autonomy-Turnover intentions, Autonomy-Perceptions of the job as exhausting,
   Skill Variety-Turnover intentions, Task Significance-Turnover intentions are all stronger
   for cultures higher on Power Distance

Performance Orientation
   Task Significance-OC stronger for cultures lower on Performance Orientation

3 LEVEL ANALYSES FOR CULTURE (WITH JOB TYPE AT LEVEL 2)

Supported Hypotheses for VALUES

Power Distance
   Skill Variety-Turnover intentions & Task Significance-Turnover intentions stronger for
   white- & pink-collar than blue-collar jobs in cultures lower on Power Distance

UA
   Task Significance-Perceptions of the job as exhausting stronger for white- & pink-collar
   than blue-collar jobs in cultures lower on UA

VALUES Findings in Opposite Direction Predicted

Institutional Collectivism
   Autonomy-Perceptions of the job as exhausting,
   Autonomy-Perceptions of the job as stressful both were stronger for white- &
   pink-collar than blue-collar jobs in cultures higher on Institutional Collectivism

Supported Hypotheses for PRACTICES

Institutional Collectivism
   Autonomy-Perceptions of the job as exhausting, &
Skill Variety - Perceptions of the job as stressful both were stronger for white- & pink-collar than blue-collar jobs in cultures lower on Institutional Collectivism

Power Distance

Task Significance-Turnover intentions stronger for white- & pink-collar than blue-collar jobs in cultures lower on Power Distance

UA

Skill Variety-Perceptions of the job as stressful, Task Significance-OC, & Task Significance-Satisfaction were all stronger for white- & pink-collar than blue-collar jobs in cultures lower on UA

PRACTICES Findings in Opposite Direction Predicted

Power Distance

Skill Variety-Perceptions of the job as stressful & Task Significance-OC were stronger for white- and pink-collar than blue-collar jobs in cultures higher on Power Distance

UA

Task Significance-Turnover intentions stronger for white- and pink-collar than blue-collar jobs in cultures higher on UA

Performance Orientation

Skill Variety-Turnover intentions stronger for white- and pink-collar than blue-collar jobs in cultures lower on Performance Orientation
References


*Work and Stress, 24*, 1-35.


