## ABSTRACT

TRAVININ, GARY IGOR. Toward a More Complete Understanding of Work Analysis Variation: Individual Differences and Situational Antecedents of Job Crafting. (Under the direction of Dr. Mark A. Wilson).

Under the framing that job crafting could explain idiosyncratic differences in work analysis variation the following study examined individual and situational antecedents of job crafting. Work analysis is a critical component of most private and public sector human capital initiatives. Given the importance of work analysis, research has called for an examination of the causes for variation in work analysis data, specifically citing job crafting literature as a possible explanation for differences in ratings. Using a sample from Amazon's Mechanical Turk, the following study found growth need strength, job complexity, and higher-order and facet-level personality to be significant predictors of four dimensions of job crafting (increasing structural job resources, increasing social job resources, increasing challenging job demands, and decreasing hindering job demands). Additionally, the study observed significant interactions with autonomy and job tenure, suggesting moderation effects that both promote and inhibit job crafting. The following study furthered our understanding into the individual and situational antecedents that predict when employees may make actual changes to their job resources and demands. Practical implications and future research directions are discussed.

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# Toward a More Complete Understanding of Work Analysis Variation: Individual Differences and Situational Antecedents of Job Crafting

by
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## DEDICATION

To my mother Natalie Goldin, the strongest person I know, without whom this would not have been possible.

## BIOGRAPHY

Gary Travinin was born in 1989 in Saint Petersburg, Russia eventually moving to Cleveland, OH in his youth. After graduating from Solon High School he received his Bachelor of Arts degree in Psychology from The Ohio State University. He then began his graduate education in the Industrial and Organizational Psychology Doctoral Program at North Carolina State University under the direction of Dr. Mark A. Wilson.

Gary holds a Master of Science degree in Industrial and Organizational Psychology and is a full-time consultant for PDRI, an SHL company. Gary specializes in assessment and selection work activities. While at PDRI, he has worked on several test development and maintenance initiatives in the intelligence community and in private industry. Additionally, he won a proposal and led an effort to redesign the assessment process for Astronaut selection and completed an agency-level work analysis for NASA. He has also been employed as a graduate teaching assistant in the psychology department, a program coordinator for the Institute for Nonprofits at North Carolina State University, and as a contractor for Aon Hewitt's selection and assessment service line.

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Thank you as well to all of the friends in my life who have made every moment of stress bearable and remind me to smile in the face of disaster. There are literally hundreds of actions you may never remember that have helped me through a difficult day. For that I will always be grateful.

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## Introduction

Human capital initiatives implemented at both private and public sector organizations are most often preceded by a work analysis, or "the systematic investigation of work role requirements and the broader context within which work roles are enacted" (Morgeson & Dierdorff, 2011, p. 4). Given the practical implications, understanding the factors impacting the data points gathered from a work analysis is critical. DuVernet, Dierdorff, and Wilson synthesized this research with their 2015 meta-analysis examining 19 variables that influence work analysis data. This collection of variables ranged from descriptor choices (e.g., type of data collected, level of specificity), collection method choices (e.g., rater training, number of methods), rating scale decisions (e.g., type of scale, subjectivity of the scale), data source decisions (e.g., variability of age, sex, race, or tenure), and work analysis purposes (e.g., used for selection, personal relevance). The authors found that these variables did impact work analysis quality, conceptualized as measures of reliability, agreement, as well as factor structure and mean ratings. Given their findings, they called for future research to examine idiosyncratic differences in work analysis data, particularly calling out job crafting as a person-centric fruitful stream of research to explore. They specifically cited prosocial values, role orientation, and autonomy as factors that have been shown to predict job crafting and thus might explain differences in work analysis outcomes. In addition, Sanchez and Levine (2012) also called for the literature to explore job crafting as a possible explanation for interrater variation in work analysis. The following study examined whether individual differences for job crafting as well as situational antecedents leading to perceived opportunities to job craft were related to four dimensions of job crafting.

**Job Crafting**

Job crafting is defined as employees who "shape, mold, and redefine their jobs" by changing physical and psychological task boundaries as well as relationships at work (Wrzesniewski & Dutton, 2001, p.180; Tims, Bakker, & Derks, 2012). These changes to task boundaries or relationships are done under the initiative of the employee, differentiating job crafting from more formal job redesign (Tims et al., 2012). Job crafting behavior has long been seen as a function of both the situation and the person (Wrzesniewski & Dutton, 2001). For the purposes of this study, job crafting was conceptualized from the perspective of the job demands-resources (JD-R) model, which Tims et al. (2012) argued captured a broader array of job characteristics employees may alter. The JD-R model is similar to Wrzesniewski and Dutton's (2001) view in that they both suggest job crafting takes place every day. Additionally, there is overlap between demands, resources, task, and relational crafting. However, the primary difference in the two views is that while Wrzesniewski and Dutton (2001) emphasize crafting behaviors to find meaning, the JD-R model is "focused on job characteristics that can influence the motivation and health of employees" (Demerouti, 2014, p.239).

Tims et al. (2012) describe job demands as "all aspects of the job that require sustained physical and/or psychological (cognitive or emotional) effort or skills" (p.174). Whereas job resources refer to "aspects of the job that are either/or functional in achieving work goals, reduce job demands and the associated physiological and psychological costs, and stimulate personal growth, learning, and development" (Tims et al., 2012, p.174). For the purposes of this study, I adopted the conceptualization of job crafting identified by Tims et al. (2012), which included: a) increasing social job resources (social interactions on the job

aimed at development or feedback), b) increasing structural job resources (actions an employee may take to increase their responsibility and/or develop themselves in their job), c) increasing challenging job demands (aspects of the job that encourage employee development and goal setting), and d) decreasing hindering job demands (aspects of the job that are stressors, thought to relate to burnout or turnover). A 2014 review article found that outcomes of job crafting include motivation, work engagement, experienced meaning at work, health, and job performance (Demerouti). Table 1 outlines several of the variables examined as predictors of job crafting recently in the literature.

The following study examined several predictors of job crafting as well as the effects of two moderators. The next two sections describe the variables, their relationship with job crafting, and the methodology of the study. Figure 1 displays the study's first model, which examined a novel predictor of growth need strength (GNS), as well as job complexity, and two higher-order personality variables (conscientiousness and agreeableness). The following study also examined two moderators: 1) job tenure and 2) autonomy. In addition, Figure 2 displays the study's facet-level model, in which the relationship between job crafting and two novel predictor facets of conscientiousness (achievement-striving and perseverance) and agreeableness (flexibility and cooperation) were examined along with GNS and job complexity. The following study contributed to the research by examining several individual and situational antecedents that may contribute to work analysis variation through actual changes to job demands and job resources.

**Growth Need Strength**

Hackman and Oldham defined growth need strength (GNS) as the "desire to obtain growth satisfaction from his or her work" and described GNS as a moderator of the job

characteristics model (1975, p.162-163). Although both are in the motivational framework of performance, GNS is commonly examined separately from other dispositional factors such as goal orientation. Although related, GNS focuses more on concepts of higher-order personal growth as opposed to specific everyday learning or performance goals (Frese, Stewart, & Hannover, 1987). With respect to job crafting, Wrzesniewski and Dutton (2001) suggested that intrinsic motivations could lead employees to job craft. Research has proposed GNS as a moderator between job crafting and career instrumentality, as well as a moderator between work design and performance (Fried, Grand, Levi, Hadani, & Slowik, 2007; Parker & Turner, 2002). Empirical research has also found evidence for the moderating ability of GNS on measures of productivity (Graen, Scandura, & Graen 1986; Das, 1991). Despite this, Dierdorff (2003) pointed out that GNS has rarely garnered much attention as a predictor, often being relegated to a moderator. The following study examined GNS not as a moderator, but as a direct predictor of job crafting. Given the evidence of GNS to facilitate job crafting and productivity as a moderator, the study hypothesized that those high on GNS would be more likely to craft their jobs with the exception of the decreasing hindering job demands dimension. Tims et al. (2012) found a significant negative correlation between personal initiative and the decreasing hindering job demands dimension, thus a similar directionality was predicted with GNS.

**Hypothesis 1.** Growth need strength (GNS) will positively predict the job crafting dimensions of a) increasing structural job resources, b) increasing social job resources, c) increasing challenging job demands, and d) negatively predict decreasing hindering job demands.

**Job Complexity**

Morgeson and Humphrey (2006) defined job complexity as "the extent to which the tasks on a job are complex and difficult to perform" (p.1323). Lievens, Sanchez, Bartam, and Brown (2010) partly used job crafting literature to find that job complexity, job content, and the nature of occupational activities accounted for variance in competency ratings for the same occupations. Additionally, Lievens et al. (2010) and Sanchez and Levine (2012) suggest studies have almost exclusively focused on individual antecedents of job crafting, ignoring the situation. It has been suggested that job complexity will make interpretations of a job more idiosyncratic (Sanchez et al., 1998), and Ghitulescu (2007) found that task complexity enabled job crafting behaviors. Finally, Dierdorff and Morgeson (2007) examined interdependence, autonomy, and routinization in relation to work requirements and found that occupational context impacted consensus in work role requirements. Although there is some evidence that job complexity could enable job crafting behaviors, more research is needed.

While job complexity is most often examined as a moderator, the following study examined it as a predictor. There are practical implications to organizations conducting work analysis to examine whether job complexity has a relationship with job crafting. Organizations may not always have measures on their employee's level of individual antecedents, but they do often have an understanding of the complexity of their jobs. As a predictor, we may expect those with more complex jobs to seek higher levels of job resources to address more complex demands, or more complex jobs may come with more hindering job demands that employees look to decrease. The presence of a significant relationship may drive future research, while still serving an immediate practical implication. The following

study proposed a research question about the relationship between job complexity and job crafting.

**Research Question 1.** What is the relationship between job complexity and the job crafting dimensions of a) increasing structural job resources, b) increasing social job resources, c) increasing challenging job demands, and d) decreasing hindering job demands?

**Personality**

Conscientious individuals exhibit traits such as dependability, being careful, thorough, responsible, organized, planful, being a hard worker, achievement orientation, and perseverance (Barrick & Mount, 1991). Agreeable individuals exhibit traits such as being "courteous, flexible, trusting, good-natured, cooperative, forgiving, soft-hearted, and tolerant" (Barrick & Mount, 1991, p.4). Those who persevere and are achievement oriented, as a part of their conscientiousness, might be more likely to engage in job crafting. For example, they may look to increase their job resources to tackle more challenging demands, while also reducing stressors. Similarly, an agreeable individual may use their flexibility to address job demands and their cooperative nature to increase their job resources. To this end, Bipp and Demerouti (2015) noted that only a handful of studies have provided evidence of the relationship between personality and job crafting. The studies specifically cited small to moderate positive correlations between personality antecedents (self-image, perceived control, readiness to change, and proactive personality and personal initiative) and job crafting (Lyons, 2008; Bakker, Tims, & Derks, 2012; Tims et al., 2012). In addition to these studies, Bell and Njolli (2016) and Laurence (2010) both examined agreeableness and conscientiousness in relation to job crafting. The former found both to be significant predictors of job crafting, while the latter found both to have a significant moderating effect

on the relationship between drivenness to work and enjoyment of work on job crafting. Finally, a 2017 meta-analysis found that conscientiousness and agreeableness were related to all of the four job crafting dimensions and overall job crafting, however the authors noted that the relationship between conscientiousness and increasing social job resources was small and the relationship between conscientiousness and decreasing hindering job demands was small and negative (Rudolph, Katz, Lavigne, & Zacher).

Given the evidence that personality could predict job crafting behaviors, the following study hypothesized that those who are more conscientiousness and agreeable would be more likely to craft their jobs, with the exception of the decreasing hindering job demands dimension. Tims et al. (2012) found a significant negative correlation between personal initiative and the decreasing hindering job demands dimension, as well as a significant positive correlation with cynicism and the decreasing hindering job demands dimension. Given the relationship with personal initiative and that conscientiousness can reflect elements such as achievement orientation and being hardworking, a negative directionality was proposed for the decreasing hindering job demands dimension (Barrick & Mount, 1991). Additionally, the relationship between the decreasing hindering job demands dimension and cynicism suggests that agreeableness, which can reflect elements such as being courteous, tolerant, and forgiving, would also have a negative directionality (Barrick & Mount, 1991).

**Hypothesis 2.** Conscientiousness will positively predict the job crafting dimensions of a) increasing structural job resources, b) increasing social job resources, c) increasing challenging job demands, and d) negatively predict decreasing hindering job demands.

**Hypothesis 3.** Agreeableness will positively predict the job crafting dimensions of a) increasing structural job resources, b) increasing social job resources, c) increasing challenging job demands, and d) negatively predict decreasing hindering job demands.

In addition to the higher-order factors, the following study also examined two facets each associated with conscientiousness and agreeableness: 1) achievement-striving, 2) perseverance, 3) flexibility, and 4) cooperation. These facets of the higher-order constructs could help explain how conscientiousness and agreeableness are related to job crafting. For example, is achievement-striving the driving facet of conscientiousness that facilitates employees pursuing challenging goals? Or is achievement-striving not related to job crafting dimensions, which draws attention to other facets of conscientiousness, such as perseverance in the prediction of job crafting. Achievement-striving is a facet of conscientiousness and defined as those with "high aspiration levels", who "work hard to achieve their goals" and are purposeful with a "sense of direction in life" (Costa & McCrae, 1992, p.18). The second facet of conscientiousness is perseverance, which is commonly defined within concepts such as grit or "perseverance and passion for long-term goals" (Duckworth, Peterson, Matthews, & Kelly, 2007, p.1087). Regarding the agreeableness facets, flexibility is defined as an individual's skill in responding behaviorally or cognitively to demands and/or stimuli (Scott, 1962; Zaccaro, Gilbert, Thor, & Mumford, 1991). Finally, cooperation is defined as a process "by which individuals interact and form psychological relationships for mutual gain or benefit" (Smith, Carroll, & Ashford, 1995; Breuer, Hüffmeier, & Hertel, 2016, p.1152). Given the evidence regarding the higher-order factors it is likely that these four facets will predict job crafting dimensions. For example, it may be that achievement-striving, perseverance, and cooperation drive employees to increase their structural and social job

resources in an attempt to complete challenging tasks and that their flexibility facilitates avenues for them to decrease hindering demands. However, to the best of my knowledge, no studies have examined the direct relationship between these four facets and job crafting behaviors. The following four research questions were examined in relation to the facets of conscientiousness and agreeableness.

**Research Question 2.** What is the relationship between achievement-striving and the job crafting dimensions of a) increasing structural job resources, b) increasing social job resources, c) increasing challenging job demands, and d) decreasing hindering job demands?

**Research Question 3.** What is the relationship between perseverance and the job crafting dimensions of a) increasing structural job resources, b) increasing social job resources, c) increasing challenging job demands, and d) decreasing hindering job demands?

**Research Question 4.** What is the relationship between flexibility and the job crafting dimensions of a) increasing structural job resources, b) increasing social job resources, c) increasing challenging job demands, and d) decreasing hindering job demands?

**Research Question 5.** What is the relationship between cooperation and the job crafting dimensions of a) increasing structural job resources, b) increasing social job resources, c) increasing challenging job demands, and d) decreasing hindering job demands?

## Moderators

### Job Tenure and Autonomy

In addition to the above predictors, the study also examined two moderators: 1) job tenure (i.e., time spent in an employee's current position) and 2) autonomy (i.e., "the degree to which the job provides substantial freedom, independence, and discretion to the employee in scheduling the work and in determining the procedures to be used in carrying it out")

(Hackman & Oldham, 1975, p.162). Kooji, Tims, and Kanfer (2015) proposed that older workers may use job crafting to "age successfully at work" (p.146), also stating that they were not aware of any studies examining job crafting among specifically older employees. Leana, Appelbaum, and Shevchuk (2009) observed that those with higher organizational status engage in more job crafting. A 2017 meta-analysis called for future research to examine job tenure in relation to job crafting after finding a small negative relationship with job crafting, specifically citing the strongest relationship of the four dimensions being between tenure and increasing social job resources (Rudolph et al.). Those having spent more time in their current positions are more likely to have greater organizational status, thus the following study hypothesized job tenure would moderate the relationship between the predictors and the job crafting dimensions.

Autonomy is thought to be a key component of the motivation to craft portion of the Wrzesniewski and Dutton (2001) model. More specifically, autonomy is key to the perceived opportunity to craft and proposed to moderate the relationship between motivations to craft and job crafting behaviors. Employees in jobs with little control or discretion over the completion of work tasks are unlikely to enact actual changes to their resources or demands given the structural limitations of doing so. To this end, studies have observed positive relationships between decision latitude and job crafting (Leana et al., 2009; Lyons, 2008). Additionally, a 2017 meta-analysis found that autonomy was positively related to job crafting overall and all of the individual dimensions with the exception of decreasing hindering job demands (Rudolph et al.). They called for future research to examine how higher levels of autonomy may prevent employees from decreasing hindering job demands. The following study examined autonomy's interaction with the predictors outlined above. Given the

evidence that autonomy could be related to job crafting behaviors, the study hypothesized that it would moderate the relationship between the predictors and job crafting dimensions.

**Hypothesis 4.** Job tenure will moderate the relationship between growth needs strength, job complexity, conscientiousness, and agreeableness and job crafting, such that greater levels of job tenure will be related to greater levels of a) increasing structural job resources, b) increasing social job resources, c) increasing challenging job demands, and d) decreasing hindering job demands.

**Hypothesis 5.** Autonomy will moderate the relationship between growth needs strength, job complexity, conscientiousness, and agreeableness and job crafting, such that greater levels of autonomy will be related to greater levels of a) increasing structural job resources, b) increasing social job resources, c) increasing challenging job demands, and d) decreasing hindering job demands.

In addition to the higher-order factors, the following study also examined the moderation effects of job tenure and autonomy with the facet-level variables. More specifically, would job tenure and autonomy moderate the relationship between facets of conscientiousness and agreeableness and job crafting. As noted above, the facets of the constructs could help explain why these factors of the big five are related to job crafting behaviors. Additionally, they represent novel insights into the relationship between facets of personality and job crafting behaviors.

**Research Question 6.** Will job tenure moderate the relationship between growth needs strength, job complexity, achievement-striving, perseverance, flexibility, and cooperation and the job crafting dimensions of a) increasing structural job resources, b)

increasing social job resources, c) increasing challenging job demands, and d) decreasing hindering job demands?

**Research Question 7.** Will autonomy moderate the relationship between growth needs strength, job complexity, achievement-striving, perseverance, flexibility, and cooperation and the job crafting dimensions of a) increasing structural job resources, b) increasing social job resources, c) increasing challenging job demands, and d) decreasing hindering job demands?

## Method

### Participants

The study utilized Amazon's Mechanical Turk (hereafter: Mturk) to elicit responses from participants. Mturk is an online platform that has been shown to be an inexpensive, rapid, and reliable method of collecting data (Buhrmester, Kwang, & Gosling, 2011). Mturk allows "workers", or participants, to complete assignments (i.e. "HITS") in exchange for a financial reward. All Mturk participants needed to be at least 18 years old with access to the internet. In addition, I also restricted my participant pool by imposing qualifications that a participant needed before they could have completed the assignments. Namely, that they were a full-time employee, resided in the United States, and that they had not already completed the assignment once. I also included 2 attention-check questions to test for careless responding. When collecting Mturk data it is important to consider the number of cases needed to avoid a Type II error. Kenny (2015) noted that when examining the effect size of tests of moderation with a categorial moderator and continuous causal variable, in order to have 80 percent power at a small effect size, one should expect to collect a sample size of about 316. Kenny (2015) also noted that this small effect size may be unrealistic

given the average effect sizes found are quite smaller than what Cohen (1988) originally suggested. Additionally, power tests with continuous variables are low (McClelland & Judd, 1993; Kenny, 2015). Considering this, and the relatively inexpensive nature of Mturk, I proposed collecting at least 450-550 cases of clean data.

The survey received 550 HITS, which after data cleaning resulted in a clean sample of 465. Cases were excluded if they were incomplete ($N$ = 44) and if they answered one or both attention-checks incorrectly ($N$ = 28). In line with previous research, an additional 13 cases were removed if they took less than 2 seconds per item (Ward & Meade, 2018). The sample was generally well distributed across gender (44% female, 55% male, <1% non-binary). Participants were more educated with nearly 80% reporting having at least a college degree and less than 1% noting no degree. Career clusters were also evenly distributed with information technology (17%) and Finance (12%) being the only two clusters with greater than 10% of respondents. The sample was also more tenured, with nearly 80% reporting having been in their current position 2-3 years or greater.

**Procedures**

Participants on Mturk reviewed a brief recruitment page about the assignment and then clicked a link to Qualtrics where they read a statement about informed consent and indicated that they wanted to participate. They were informed that they would be paid $1.33 for their participation if they completed the assignment and answered both attention-check questions correctly. Once they consented, they were asked to confirm they were at least 18 years old. Anyone, who either did not consent or indicated they were less than 18 years old was not allowed to proceed as the survey automatically terminated.

Participants on Mturk completed responses for the 4 job crafting dimensions, growth need strength, job complexity, conscientiousness and its facets, agreeableness and its facets, job tenure, and autonomy. They also provided their gender (*0 = male, 1 = female, 2 = non-binary*), and education level (*0 = no degree, 1 = high school degree, 2= college degree, 3= post-graduate degree*). Finally, participants selected their career cluster. These career clusters were those 16 identified on O*NET (1) *Agriculture, Food & Natural Resources, 2) Architecture & Construction, 3) Arts, Audio/Video Technology & Communications, 4) Business Management & Administration, 5) Education & Training, 6) Finance, 7) Government & Public Administration, 8) Health Science, 9) Hospitality & Tourism, 10) Human Services, 11) Information Technology, 12) Law, Public Safety, Corrections & Security, 13) Manufacturing, 14) Marketing, 15) Science, Technology, Engineering & Mathematics, 16) Transportation, Distribution & Logistics).* Participants were compensated for completing the survey and answering both attention-check questions correctly. Mturk IDs were gathered in order to provide compensation but kept under encryption and deleted after the survey was closed and compensation was completed.

**Measures**

**Job Crafting.** The job crafting scale developed by Tims et al. (2012) was used to measure 4 dimensions of job crafting. This measure was 21 items and used a 5-point Likert scale that ranged from 1 (*never*) to 5 (*very often*). Cronbach's alpha for each dimension was above .80 (increasing structural job resources (.83), decreasing hindering job demands (.89), increasing social job resources (.89), and increasing challenging job demands (.86)). Higher scores on this measure indicated higher levels of each job crafting dimension. See Appendix A for the full measure.

**Growth Need Strength.** The growth need strength scale portion of the Job Diagnostic Survey (JDS) developed by Hackman and Oldham (1975) was used to measure growth need strength. This measure was 11 items and used a 7-point Likert scale that ranged from 1 (*would like having this only a moderate amount (or less)*) to 7 (*would like having this extremely much*), however only 6 of the items on the scale were scored. Cronbach's alpha for this scale was .87. Higher scores on this measure indicated higher levels of growth need strength. See Appendix B for the full measure.

**Job Complexity.** Job complexity items developed by Semmer (1982) and Zapf (1993) was used to measure job complexity. This measure was 4 items and used a 5-point Likert scale that ranged from 1 (*very little*) to 5 (*very much*). Cronbach's alpha for this scale was .76. Higher scores on this measure indicated higher levels of job complexity. See Appendix C for the full measure.

**Conscientiousness.** The International Personality Item Pool was used to measure conscientiousness. This measure was 20 items and used a 7-point Likert scale that ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). Cronbach's alpha for this scale was .92. Higher scores on this measure indicated higher levels of conscientiousness. The order in which items appeared was randomized for participants, as the original scale contained positively keyed items first and negatively keyed items second. See Appendix D for the full measure.

Facets of conscientiousness were also measured using items from the International Personality Item Pool. Achievement-striving was 10 items, while perseverance was 8 items, both used a 7-point Likert scale that ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). Cronbach's alpha was .86 for achievement-striving and .83 for perseverance. The order in

which items appeared was randomized for participants, as the original scales contained positively keyed items first and negatively keyed items second. Higher scores on this measure indicated higher levels of each facet. See Appendix E and F for the full measures.

**Agreeableness.** The International Personality Item Pool was used to measure agreeableness. This measure was 20 items and used a 7-point Likert scale that ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). Cronbach's alpha for this scale was .94. Higher scores on this measure indicated higher levels of agreeableness. The order in which items appeared was randomized for participants, as the original scale contained positively keyed items first and negatively keyed items second. See Appendix G for the full measure.

Facets of agreeableness were also measured using items from the International Personality Item Pool. Flexibility and cooperation were 10 items each and used a 7-point Likert scale that ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). Cronbach's alpha was .88 for flexibility and .83 for cooperation. The order in which items appeared was randomized for participants, as the original scales contained positively keyed items first and negatively keyed items second. Higher scores on this measure indicated higher levels of each facet. See Appendix H and I for the full measures.

**Job Tenure.** A job tenure measure was created for the purposes of this study. Participants indicated time spent in their current position. Responses were crafted to be sensitive to lower amounts of tenure and included: 1) 0-1 months, 2) 1-4 months, 3) 5-8 months, 4) 9-12 months, 5) 13-18 months, 6) 19-23 months, 7) 2-3 years, 8) 4-5 years, or 9) more than 5 years. Cronbach's alpha cannot be calculated on a single-item measure.

**Autonomy.** Autonomy was measured using two different measures. The autonomy portion of the Job Diagnostic Survey (JDS) developed by Hackman and Oldham (1975) was

used to measure a more global autonomy. This measure was 3 items and used a 7-point Likert scale that ranged from 1 (*very little; the job gives me almost no personal "say" about how and when the work is done*) to 7 (*very much; the job gives me almost complete responsibility for deciding how and when the work is done*) for the first item and 1 (*very inaccurate)* to 7 *(very accurate)* for items 2 and 3. Cronbach's alpha for this scale was .69. Higher scores on this measure indicated higher levels of autonomy. See Appendix J for the full measure.

The Word Design Questionnaire (WDQ) developed by Morgeson and Humphrey (2006) was used to measure dimension-level autonomy. This measure was 9 items and used a 5-point Likert scale that ranged from 1 (*strongly disagree*) to 5 (*strongly agree*) across 3 dimensions of autonomy. Cronbach's alpha for each dimension was above .80 (work scheduling (.88), decision-making (.88), work methods (.90)). Higher scores on this measure indicated higher levels of each dimension of autonomy. See Appendix K for the full measure.

## Analyses

Analyses took place using SPSS software. All measures were averaged across scale or dimension items to create an overall score. Descriptive statistics, intercorrelations, and reliability estimates were calculated and are presented in Table 2. As can be seen in Table 2, all measures demonstrated a good to excellent Cronbach's alpha of at least .80 or higher with the exception of job complexity (.76) and global autonomy (.69). While these values are lower, they are still generally within acceptable ranges. Cronbach's alpha cannot be calculated for single-item measures, so it was not calculated for job tenure. Descriptives generally showed that participants demonstrated higher levels of each of the study measures. The intercorrelation matrix did display some indications of multicollinearity, which I did

expect, considering both higher-order and facet-level personality measures were included as well as multiple measures of autonomy. All resulting regression analyses were examined for multicollinearity indices (i.e., VIF less than 5.0 and tolerance greater than .20), and no worrisome findings were observed. For the purposes of hierarchical linear regression, assumptions of linearity and homoscedasticity were tested and produced satisfactory results.

All hypotheses and research questions were tested using hierarchical regression. Prior to analysis, predictor variables were centered by subtracting the mean from each value (Aiken & West, 1991). Although there has been recent discussion on the merit of centering variables, the general consensus remains that while doing so may not impact the test of interaction it may make regression coefficients have more meaningful interpretations. Analysis was conducted on each dimension of job crafting individually. The first regression equation, or step 1, included control variables only (i.e., gender, and education level). Gender and education were controlled for because a 2017 meta-analysis found that women and those with more education engaged in more job crafting (Rudolph et al.). Step 2 included the predictor variables of growth need strength (GNS), job complexity, conscientiousness, and agreeableness, as well as one of the moderator variables (i.e., job tenure, global autonomy, work scheduling autonomy, decision-making autonomy, or work methods autonomy). Step 3 included the interaction terms between the predictor and moderator variables. While GNS and job complexity were entered in each regression model, higher-order personality predictors and their facets were conducted separately. If step 3 entry of the interaction terms resulted in a significant $R^2$ change and there was a significant interaction term(s), the relationship was further examined using methods outlined by Preacher and Rucker (2003) to develop plots. More specifically, the moderator variable was considered intermediate at its

mean, low 1 standard deviation below the mean, and high 1 standard deviation above the mean. The maximum and minimum values of each predictor were used when developing plots. The dependent variable was plotted along the Y-axis. Regression coefficients are presented for each step in Tables 3-7 for higher-order factors of personality with job tenure, global autonomy, and each dimension of autonomy, respectively. Regression coefficients are presented for each step in Tables 8-12 for facet-level personality with job tenure, global autonomy, and each dimension of autonomy, respectively. A full summary of results is presented in Table 13.

The above analyses resulted in 8 hierarchical regressions for job tenure (i.e., 4 hierarchical regressions examining each of the 4 job crafting dimensions with GNS, job complexity, and higher-order personality and another 4 hierarchical regressions examining each of the 4 job crafting dimensions with GNS, job complexity, and facet-level personality). Each of the 4 autonomy measures (i.e., global autonomy and dimension-level) were run separately in their own hierarchical regressions as noted above for job tenure, resulting in 32 total hierarchical regressions (i.e., 4 hierarchical regressions examining each of the 4 job crafting dimensions with GNS, job complexity, and higher-order personality and another 4 hierarchical regressions examining each of the 4 job crafting dimensions with GNS, job complexity, and facet-level personality for each measure of autonomy). Results are presented below broken out by control variables (i.e., gender and education) and each dependent variable (i.e., dimension of job crafting).

**Control variables.** Step 1 of each hierarchical regression was identical and included the entry of the study's 2 control variables (i.e., gender and education). Hierarchical regression for increasing structural job resources and decreasing hindering job demands

revealed gender and ethnicity did not contribute significantly to the regression model and did not account for a significant amount of variance with respect to those dimensions of job crafting. However, hierarchical regression did reveal that gender and education contributed significantly to the regression model for increasing social job resources ($F$ (2,462) = 5.68, $p$ < .01) and increasing challenging job demands ($F$ (2,462) = 4.18, $p$ < .05) and accounted for 2% of the variance in both dimensions of job crafting. While gender was not a significant predictor of either dimension of job crafting, education was a significant and positive predictor of both (β= .13, $p$ < .01).

**Increasing Structural Job Resources**. Step 2 of all of the hierarchical regressions revealed that the entry of the predictor and moderator variables contributed significantly to the regression model for increasing structural job resources. Regression models with job tenure and higher-order personality ($F$ (5,457) = 86.31, $p$ < .01) and job tenure and facet-level personality ($F$ (7,455) = 60.12, $p$ < .01) explained an additional 48% of the variance each. Regression models with global autonomy and higher-order personality ($F$ (5,457) = 88.06, $p$ < .01) and global autonomy and facet-level personality ($F$ (7,455) = 60.94, $p$ < .01) explained an additional 49% and 48% of the variance, respectively. Regression models with each dimension of autonomy with higher-order personality (work scheduling, ($F$ (5,457) = 91.04, $p$ < .01); decision-making, ($F$ (5,457) = 90.38, $p$ < .01); work methods ($F$ (5,457) = 89.44, $p$ < .01)) explained an additional 50% of the variance for work scheduling and decision making, and 49% of the variance for work methods. Regression models with each dimension of autonomy with facet-level personality (work scheduling, ($F$ (7,455) = 64.06, $p$ < .01); decision-making, ($F$ (7,455) = 62.52, $p$ < .01); work methods ($F$ (7,455) = 62.31, $p$ < .01)) explained an additional 50% of the variance in work scheduling, and 49% of the

variance in decision-making and work methods. In all regression models, the introduction of the interaction terms in step 3 did not lead to a significant change in the amount of variance explained for increasing structural job resources.

Hypothesis 1a predicted that GNS would be positively related to increasing structural job resources. Hypothesis 1a was supported in all higher-order personality regression models (job tenure, β= .31, $p < .01$; global autonomy, β= .28, $p < .01$; work scheduling autonomy, β= .28, $p < .01$; decision-making autonomy, β= .28, $p < .01$; work methods autonomy, β= .28, $p < .01$). Hypothesis 1a was also supported in all facet-level personality regression models (job tenure, β= .30, $p < .01$; global autonomy, β= .28, $p < .01$; work scheduling autonomy, β= .27, $p < .01$; decision-making autonomy, β= .27, $p < .01$; work methods autonomy, β= .27, $p < .01$).

Research question 1a asked about the relationship between job complexity and increasing structural job resources. Regression results revealed that job complexity was positively and significantly related to increasing structural job resources in all higher-order personality regression models (job tenure, β= .34, $p < .01$; global autonomy, β= .32, $p < .01$; work scheduling autonomy, β= .30, $p < .01$; decision-making autonomy, β= .30, $p < .01$; work methods autonomy, β= .31, $p < .01$). Regression results also revealed that job complexity was positively and significantly related to increasing structural job resources in all facet-level personality regression models (job tenure, β= .33, $p < .01$; global autonomy, β= .31, $p < .01$; work scheduling autonomy, β= .29, $p < .01$; decision-making autonomy, β= .29, $p < .01$; work methods autonomy, β= .30, $p < .01$).

Hypotheses 2a and 3a predicted that the higher-order personality variables of conscientiousness and agreeableness would be positively related to increasing structural job

resources. Hypotheses 2a and 3a were supported for conscientiousness (job tenure, β= .15, $p < .01$; global autonomy, β= .11, $p < .01$; work scheduling autonomy, β= .12, $p < .01$; decision-making autonomy, β= .12, $p < .01$; work methods autonomy, β= .12, $p < .01$) and agreeableness (job tenure, β= .22, $p < .01$; global autonomy, β= .22, $p < .01$; work scheduling autonomy, β= .22, $p < .01$; decision-making autonomy, β= .22, $p < .01$; work methods autonomy, β= .22, $p < .01$).

Research questions 2a, 3a, 4a, and 5a asked about the relationship between the facet-level personality variables of achievement-striving, perseverance, flexibility, and cooperation and increasing structural job resources. No significant relationship was revealed for research questions 3a (perseverance) and 5a (cooperation). However, regression did reveal that achievement-striving (job tenure, β= .22, $p < .01$; global autonomy, β= .22, $p < .01$; work scheduling autonomy, β= .22, $p < .01$; decision-making autonomy, β= .22, $p < .01$; work methods autonomy, β= .21, $p < .01$) and flexibility (job tenure, β= .10, $p < .05$; global autonomy, β= .10, $p < .05$; work scheduling autonomy, β= .11, $p < .05$; decision-making autonomy, β= .11, $p < .05$; work methods autonomy, β= .11, $p < .05$) were positively and significantly related to increasing structural job resources.

Hypotheses 4a and 5a predicted that job tenure and autonomy would moderate the relationship between GNS, job complexity, conscientiousness, agreeableness and increasing structural job resources, such that greater levels of each moderator would result in greater levels of job crafting. Neither hypothesis 4a or 5a was supported, given that step 3 of the regression equation did not result in a significant change in the amount of variance explained for increasing structural job resources.

Research questions 6a and 7a asked the same question as above, however at the facet-level for achievement-striving, perseverance, flexibility, and cooperation. No significant relationships were found for research questions 6a or 7a, given that step 3 of the regression equation did not result in a significant change in the amount of variance explained for increasing structural job resources.

**Increasing Social Job Resources.** Step 2 of all of the hierarchical regressions revealed that the entry of the predictor and moderator variables contributed significantly to the regression model for increasing social job resources. Regression models with job tenure and higher-order personality ($F$ (5,457) = 31.03, $p < .01$) and job tenure and facet-level personality ($F$ (7,455) = 20.45, $p < .01$) explained an additional 25% and 23% of the variance, respectively. Regression models with global autonomy and higher-order personality ($F$ (5,457) = 30.20, $p < .01$) and global autonomy and facet-level personality ($F$ (7,455) = 20.07, $p < .01$) explained an additional 24% and 23% of the variance, respectively. Regression models with each dimension of autonomy with higher-order personality (work scheduling, ($F$ (5,457) = 27.33, $p < .01$); decision-making, ($F$ (5,457) = 28.16, $p < .01$); work methods ($F$ (5,457) = 27.95, $p < .01$)) explained an additional 23% of the variance each. Regression models with each dimension of autonomy with facet-level personality (work scheduling, ($F$ (7,455) = 18.45, $p < .01$); decision-making, ($F$ (7,455) = 19.15, $p < .01$); work methods ($F$ (7,455) = 19.11, $p < .01$)) explained an additional 22% of the variance each. For the work scheduling autonomy with facet-level personality regression model, the introduction of the interaction terms in step 3 lead to a significant change in the amount of variance explained for increasing social job resources (($F$ (6,449) = 2.68, $p < .05$), which explained an additional 3% of the variance.

Hypothesis 1b predicted that GNS would be positively related to increasing social job resources. Hypothesis 1b was only supported in the global autonomy higher-order personality regression model (β= .10, $p < .05$). Hypothesis 1b was also supported in all facet-level personality regression models (job tenure, β= .12, $p < .05$; global autonomy, β= .13, $p < .05$; work scheduling autonomy, β= .11, $p < .05$; decision-making autonomy, β= .12, $p < .05$; work methods autonomy, β= .12, $p < .05$).

Research question 1b asked about the relationship between job complexity and increasing social job resources. Regression results revealed that job complexity was positively and significantly related to increasing social job resources in all higher-order personality regression models (job tenure, β= .32, $p < .01$; global autonomy, β= .36, $p < .01$; work scheduling autonomy, β= .34, $p < .01$; decision-making autonomy, β= .36, $p < .01$; work methods autonomy, β= .35, $p < .01$). Regression results also revealed that job complexity was positively and significantly related to increasing social job resources in all facet-level personality regression models (job tenure, β= .32, $p < .01$; global autonomy, β= .36, $p < .01$; work scheduling autonomy, β= .34, $p < .01$; decision-making autonomy, β= .36, $p < .01$; work methods autonomy, β= .36, $p < .01$).

Hypotheses 2b and 3b predicted that the higher-order personality variables of conscientiousness and agreeableness would be positively related to increasing social job resources. Hypotheses 2b was not supported as conscientiousness was negatively and significantly related to increasing social job resources (job tenure, β= -.20, $p < .01$; global autonomy, β= -.21, $p < .01$; work scheduling autonomy, β= -.24, $p < .01$; decision-making autonomy, β= -.24, $p < .01$; work methods autonomy, β= -.24, $p < .01$). Hypothesis 3b was supported for agreeableness (job tenure, β= .25, $p < .01$; global autonomy, β= .24, $p < .01$;

work scheduling autonomy, β= .25, $p < .01$; decision-making autonomy, β= .24, $p < .01$; work methods autonomy, β= .24, $p < .01$).

Research questions 2b, 3b, 4b, and 5b asked about the relationship between the facet-level personality variables of achievement-striving, perseverance, flexibility, and cooperation and increasing social job resources. Regression results revealed no significant relationship for research question 4b (flexibility). Regression results revealed a positive and significant relationship for achievement striving (job tenure, β= .24, $p < .01$; global autonomy, β= .23, $p < .01$; work scheduling autonomy, β= .23, $p < .01$; decision-making autonomy, β= .23, $p < .01$; work methods autonomy, β= .24, $p < .01$) and a negative and significant relationship for perseverance (job tenure, β= -.27, $p < .01$; global autonomy, β= -.27, $p < .01$; work scheduling autonomy, β= -.29, $p < .01$; decision-making autonomy, β= -.28, $p < .01$; work methods autonomy, β= -.29, $p < .01$) and cooperation (job tenure, β= -.15, $p < .05$; global autonomy, β= -.16, $p < .01$; work scheduling autonomy, β= -.18, $p < .01$; decision-making autonomy, β= -.18, $p < .01$; work methods autonomy, β= -.18, $p < .01$).

Hypotheses 4b and 5b predicted that job tenure and autonomy would moderate the relationship between GNS, job complexity, conscientiousness, agreeableness and increasing social job resources, such that greater levels of each moderator would result in greater levels of job crafting. Neither hypothesis 4b or 5b was supported, given that step 3 of the regression equation did not result in a significant change in the amount of variance explained for increasing social job resources.

Research questions 6b and 7b asked the same question as above, however at the facet-level for achievement-striving, perseverance, flexibility, and cooperation. Regression results revealed no significant relationship for research question 6b but did find a significant

relationship for research question 7b with regard to work scheduling autonomy and facet-level personality. The introduction of the interaction terms led to a significant $R^2$ change, explaining an additional 3% of the variance, and two significant interaction terms for job complexity (β= .10, $p < .05$) and flexibility (β= -.13, $p < .05$) with work scheduling autonomy. Interaction terms for job complexity and flexibility with work scheduling autonomy were plotted in Figures 3 and 4, respectively.

**Increasing Challenging Job Demands.** Step 2 of all of the hierarchical regressions revealed that the entry of the predictor and moderator variables contributed significantly to the regression model for increasing challenging job demands. Regression models with job tenure and higher-order personality ($F$ (5,457) = 71.94, $p < .01$) and job tenure and facet-level personality ($F$ (7,455) = 55.94, $p < .01$) explained an additional 43% and 45% of the variance, respectively. Regression models with global autonomy and higher-order personality ($F$ (5,457) = 70.52, $p < .01$) and global autonomy and facet-level personality ($F$ (7,455) = 55.16, $p < .01$) explained an additional 43% and 45% of the variance, respectively. Regression models with each dimension of autonomy with higher-order personality (work scheduling, ($F$ (5,457) = 71.26, $p < .01$); decision-making, ($F$ (5,457) = 71.11, $p < .01$); work methods ($F$ (5,457) = 70.94, $p < .01$)) explained an additional 43% of the variance each. Regression models with each dimension of autonomy with facet-level personality (work scheduling, ($F$ (7,455) = 55.76, $p < .01$); decision-making, ($F$ (7,455) = 55.42, $p < .01$); work methods ($F$ (7,455) = 55.28, $p < .01$)) explained an additional 45% of the variance each. For the work scheduling autonomy with higher-order personality ($F$ (4,453) = 2.57, $p < .01$) regression model, and each dimension of autonomy with facet-level personality (work scheduling, ($F$ (6,449) = 3.18, $p < .01$); decision-making, ($F$ (6,449) = 2.44, $p < .05$); work

methods ($F$ (6,449) = 3.35, $p < .01$), introduction of the interaction terms in step 3 lead to a significant change in the amount of variance explained for increasing challenging job demands. This explained an additional 1% of the variance for the higher-order personality regression model and 2% for each of the facet-level personality regression models.

Hypothesis 1c predicted that GNS would be positively related to increasing challenging job demands. Hypothesis 1c was supported in all higher-order personality regression models (job tenure, β= .32, $p < .01$; global autonomy, β= .32, $p < .01$; work scheduling autonomy, β= .30, $p < .01$; decision-making autonomy, β= .30, $p < .01$; work methods autonomy, β= .30, $p < .01$). Hypothesis 1c was also supported in all facet-level personality regression models (job tenure, β= .28, $p < .01$; global autonomy, β= .28, $p < .01$; work scheduling autonomy, β= .26, $p < .01$; decision-making autonomy, β= .27, $p < .01$; work methods autonomy, β= .27, $p < .01$).

Research question 1c asked about the relationship between job complexity and increasing challenging job demands. Regression results revealed that job complexity was positively and significantly related to increasing challenging job demands in all higher-order personality regression models (job tenure, β= .37, $p < .01$; global autonomy, β= .38, $p < .01$; work scheduling autonomy, β= .36, $p < .01$; decision-making autonomy, β= .36, $p < .01$; work methods autonomy, β= .36, $p < .01$). Regression results also revealed that job complexity was positively and significantly related to increasing challenging job demands in all facet-level personality regression models (job tenure, β= .34, $p < .01$; global autonomy, β= .34, $p < .01$; work scheduling autonomy, β= .32, $p < .01$; decision-making autonomy, β= .33, $p < .01$; work methods autonomy, β= .33, $p < .01$).

Hypotheses 2c and 3c predicted that the higher-order personality variables of conscientiousness and agreeableness would be positively related to increasing challenging job demands. Hypothesis 2c (conscientiousness) was not supported as no significant relationship was found. Hypothesis 3c was supported for agreeableness (job tenure, β= .22, $p < .01$; global autonomy, β= .22, $p < .01$; work scheduling autonomy, β= .22, $p < .01$; decision-making autonomy, β= .22, $p < .01$; work methods autonomy, β= .22, $p < .01$).

Research questions 2c, 3c, 4c, and 5c asked about the relationship between the facet-level personality variables of achievement-striving, perseverance, flexibility, and cooperation and increasing challenging job demands. Regression results revealed no significant relationship for research question 4c (flexibility). Regression results revealed a positive and significant relationship for achievement striving (job tenure, β= .43, $p < .01$; global autonomy, β= .42, $p < .01$; work scheduling autonomy, β= .43, $p < .01$; decision-making autonomy, β= .43, $p < .01$; work methods autonomy, β= .43, $p < .01$) and a negative and significant relationship for perseverance (job tenure, β= -.21, $p < .01$; global autonomy, β= -.22, $p < .01$; work scheduling autonomy, β= -.23, $p < .01$; decision-making autonomy, β= -.23, $p < .01$; work methods autonomy, β= -.22, $p < .01$) and cooperation (job tenure, β= -.17, $p < .01$; global autonomy, β= -.18, $p < .01$; work scheduling autonomy, β= -.19, $p < .01$; decision-making autonomy, β= -.18, $p < .01$; work methods autonomy, β= -.19, $p < .01$).

Hypotheses 4c and 5c predicted that job tenure and autonomy would moderate the relationship between GNS, job complexity, conscientiousness, agreeableness and increasing challenging job demands, such that greater levels of each moderator would result in greater levels of job crafting. Hypothesis 4c was not supported, given that step 3 of the regression equation did not result in a significant change in the amount of variance explained for

increasing challenging job demands. Hypothesis 5c received partial support as the introduction of the interaction terms led to a significant $R^2$ change, explaining an additional 1% of the variance in the work scheduling autonomy with higher-order personality regression model. Only the job complexity (β= .09, $p < .05$) with work scheduling autonomy interaction term was significant. This interaction term for job complexity with work scheduling autonomy was plotted in Figure 5.

Research questions 6c and 7c asked the same question as above, however at the facet-level for achievement-striving, perseverance, flexibility, and cooperation. Regression results revealed no significant relationship for research question 6c but did find a significant relationship for research question 7c with regard to each dimension of autonomy and facet-level personality. The introduction of the interaction terms led to a significant $R^2$ change, explaining an additional 2% of the variance in each regression model. Only one interaction term was significant in each regression model for work scheduling (job complexity, β= .09, $p < .05$), decision-making (flexibility, β= -.11, $p < .05$), and work methods (job complexity, β= .10, $p < .05$). Interaction terms for job complexity with work scheduling autonomy and work methods autonomy were plotted in Figures 6 and 7, respectively. The interaction term for flexibility with decision-making autonomy was plotted in Figure 8.

**Decreasing Hindering Job Demands.** Step 2 of all of the hierarchical regressions revealed that the entry of the predictor and moderator variables contributed significantly to the regression model for decreasing hindering job demands. Regression models with job tenure and higher-order personality ($F$ (5,457) = 9.13, $p < .01$) and job tenure and facet-level personality ($F$ (7,455) = 15.37, $p < .01$) explained an additional 9% and 19% of the variance, respectively. Regression models with global autonomy and higher-order personality ($F$

(5,457) = 9.44, $p < .01$) and global autonomy and facet-level personality ($F$ (7,455) = 15.44, $p < .01$) explained an additional 9% and 19% of the variance, respectively. Regression models with each dimension of autonomy with higher-order personality (work scheduling, ($F$ (5,457) = 8.93, $p < .01$); decision-making, ($F$ (5,457) = 8.93, $p < .01$); work methods ($F$ (5,457) = 8.89, $p < .01$)) explained an additional 9% of the variance each. Regression models with each dimension of autonomy with facet-level personality (work scheduling, ($F$ (7,455) = 15.36, $p < .01$); decision-making, ($F$ (7,455) = 15.40, $p < .01$); work methods ($F$ (7,455) = 15.37, $p < .01$)) explained an additional 19% of the variance each. For the higher-order personality regression models with job tenure ($F$ (4,453) = 3.27, $p < .05$) and global autonomy ($F$ (4,453) = 3.65, $p < .01$), introduction of the interaction terms in step 3 lead to a significant change in the amount of variance explained for decreasing hindering job demands. This explained an additional 3% of the variance in each regression model.

Hypothesis 1d predicted that GNS would be negatively related to decreasing hindering job demands. Hypothesis 1d was not supported as GNS was positively related to decreasing hindering job demands. GNS was positive and significant in the job tenure (β= .11, $p < .05$) and global autonomy (β= .11, $p < .05$) higher-order personality regression models. GNS was also positive and significant in all facet-level personality regression models (job tenure, β= .18, $p < .01$; global autonomy, β= .19, $p < .01$; work scheduling autonomy, β= .18, $p < .01$; decision-making autonomy, β= .18, $p < .01$; work methods autonomy, β= .18, $p < .01$).

Research question 1d asked about the relationship between job complexity and decreasing hindering job demands. Regression results revealed only one significant and

positive relationship in the global autonomy and higher-order personality regression model (β= .10, $p < .05$).

Hypotheses 2d and 3d predicted that the higher-order personality variables of conscientiousness and agreeableness would be negatively related to decreasing hindering job demands. Hypotheses 2d and 3d were supported for conscientiousness (job tenure, β= -.22, $p < .01$; global autonomy, β= -.21, $p < .01$; work scheduling autonomy, β= -.23, $p < .01$; decision-making autonomy, β= -.23, $p < .01$; work methods autonomy, β= -.23, $p < .01$) and agreeableness (job tenure, β= -.14, $p < .01$; global autonomy, β= -.15, $p < .01$; work scheduling autonomy, β= -.14, $p < .01$; decision-making autonomy, β= -.14, $p < .01$; work methods autonomy, β= -.14, $p < .01$).

Research questions 2d, 3d, 4d, and 5d asked about the relationship between the facet-level personality variables of achievement-striving, perseverance, flexibility, and cooperation and decreasing hindering job demands. Regression results revealed no significant relationship for research questions 3d (perseverance) and 5d (cooperation). Regression results revealed a negative and significant relationship for achievement striving (job tenure, β= -.26, $p < .01$; global autonomy, β= -.26, $p < .01$; work scheduling autonomy, β= -.26, $p < .01$; decision-making autonomy, β= -.26, $p < .01$; work methods autonomy, β= -.26, $p < .01$) and flexibility (job tenure, β= -.16, $p < .05$; global autonomy, β= -.16, $p < .01$; work scheduling autonomy, β= -.16, $p < .01$; decision-making autonomy, β= -.16, $p < .01$; work methods autonomy, β= -.16, $p < .01$).

Hypotheses 4d and 5d predicted that job tenure and autonomy would moderate the relationship between GNS, job complexity, conscientiousness, agreeableness and decreasing hindering job demands, such that greater levels of each moderator would result in greater

levels of job crafting. For Hypothesis 4d and 5d, the introduction of the interaction terms did lead to a significant $R^2$ change, explaining an additional 3% of the variance in the job tenure and global autonomy with higher-order personality regression models. For job tenure, only the job complexity (β= -.14, $p < .01$) interaction term was significant. The global autonomy regression model had two significant interaction terms for job complexity (β= -.11, $p < .05$) and agreeableness (β= .12, $p < .05$). Interaction terms for job complexity with job tenure and global autonomy were plotted in Figures 9 and 10, respectively The interaction term for agreeableness with global autonomy was plotted in Figure 11. Hypothesis 4d and 5d were not supported, as the interaction led to lower levels of job crafting.

Research questions 6d and 7d asked the same question as above, however at the facet-level for achievement-striving, perseverance, flexibility, and cooperation. Regression results revealed no significant relationship for research questions 6d and 7d, given that step 3 of the regression equation did not result in a significant change in the amount of variance explained for decreasing hindering job demands.

## Discussion

The following study examined several individual and situational antecedents that may contribute to work analysis variation, by framing those variations as actual changes to job demands and job resources (i.e., job crafting). Additional research is needed to examine idiosyncratic differences in work analysis variation, and the literature has noted job crafting specifically as an area of future research (DuVernet et al., 2015). The following study hoped to contribute to this research by examining job crafting's relationship with growth need strength (GNS), job complexity, and higher-order and facet-level personality. The following

study also examined two potential moderators (i.e., job tenure and autonomy) of the predictors above and job crafting dimensions.

**Main Effects**. Results showed support for GNS as a predictor of the dimensions of job crafting across higher-order and facet-level personality models. However, hypothesis 1 predicted that GNS would be negatively related to the decreasing hindering job demands dimension. While significant relationships were supported, they were positive. This finding supports the Wrzeniewski and Dutton (2001) model suggesting intrinsic motivations could lead to job crafting but are somewhat counter to findings of a negative relationship between personal initiative and decreasing hindering job demands (Tims et al., 2012). Overall, findings suggest that those focused on personal growth will be more likely to make actual changes to their job demands and resources, likely resulting in idiosyncratic differences in work analysis data. An employee high on GNS, would seek to maximize resources to further their development and personal growth, as well as look to challenge themselves at work with difficult goals, while reducing stressors. The study findings suggest that those high on GNS redefine their jobs by pursuing social and structural resources and challenging job demands, while actively seeking to decrease hindering job demands. These behaviors result in actual changes to the job that could impact work analysis data.

Results generally supported conscientiousness and agreeableness as predictors of the dimensions of job crafting. However, no relationship was found between increasing challenging job demands and conscientiousness. Additionally, a negative relationship was found between increasing social job resources and conscientiousness. A 2017 meta-analysis noted that conscientiousness and agreeableness were related to job crafting dimensions, however the relationship between conscientiousness and increasing social job resources was

small and the relationship between conscientiousness and decreasing hindering job demands was small and negative (Rudolph et al.). The following study replicated the negative relationship between conscientiousness and decreasing hindering job demands, but also found the same directionality with agreeableness. The following study also found a significant relationship between conscientiousness and increasing social job resources, albeit negative, and was unable to replicate significant findings related to increasing challenging job demands. Overall, the findings suggest that conscientious individuals will seek to increase their structural job resources, but not their challenging job demands. Additionally, findings suggested that conscientious individuals increase their social job resources and decrease their hindering job demands less. Conscientious employees are hard workers, organized, and thorough. In this lens, they may increase their structural job resources that aid in their development or increase their responsibility, but not seek out or even refuse challenging assignments not designated to them, explaining a null finding. Additionally, they feel less comfortable seeking social interactions that signal needing support on their work or feel uncomfortable abandoning or avoiding hindering job demands and instead seek to complete or accomplish them. Agreeable employees are forgiving, flexible, and tolerant. These employees may feel comfortable pursuing opportunities for development, social interactions aimed at support, and be more resilient to challenging demands. Their flexibility and resilience may also make them less likely to decrease hindering job demands. Taken together, these findings suggest that these higher-order personality factors are antecedents to employee's making actual changes to the job that could impact work analysis data.

With respect to the research questions, results revealed that job complexity was positively related to dimensions of job crafting across higher-order and facet-level

personality models. However, job complexity was only significant in the higher-order personality with global autonomy model for decreasing hindering job demands, suggesting a weaker relationship for that dimension of crafting. Job complexity has been theorized as a situational antecedent that may impact interpretations of a job (Sanchez et al., 1998), and occupational context has been found to impact consensus on work role requirements (Dierdorff & Morgeson, 2007). These findings suggest that those with difficult or complex jobs are likely to job craft, with the possible exception of decreasing hindering job demands. This may be due to an employee being unable to craft a complex job due to the rigidity of the task itself. Otherwise, findings point to employees utilizing structural and social resources for aid in completing a challenging task, and even increasing challenging job demands in an already complex job. Overall, these findings suggest that job complexity is a situational antecedent to employee's making actual changes to the job that could impact work analysis data.

Results for the facet-level prediction of job crafting dimensions were mixed. Achievement-striving and flexibility were positively related to increasing structural job resources. This finding was in-line with the higher-order personality factors, reinforcing that those who were achievement oriented and resilient would engage in job crafting for the sake of capability development. Achievement-striving was also positively related to increasing social job resources and increasing challenging job demands, but perseverance and cooperation were negatively related to both dimensions. The findings for achievement-striving are interesting as they are counter to the higher-order findings for conscientiousness. Positive relationships were observed, whereas with conscientiousness, there was a negative relationship with increasing social job resources and no relationship with increasing

challenging job demands. This may suggest the importance of achievement-striving to predicting job crafting, and signal that other elements of conscientiousness, such as perseverance do not contribute to job crafting. This suggestion is supported by the negative findings for perseverance with increasing social job resources and increasing challenging job demands. Elements of conscientiousness such as perseverance seem to weaken the relationship with job crafting. Cooperation's negative findings with increasing social job resources and increasing challenging job demands runs counter to the higher-order personality findings with agreeableness. Once again, this suggests that the other components of agreeableness may drive the higher-order relationship, and that cooperation may actually be driving employees not to pursue these dimensions of job crafting. Finally, achievement-striving and flexibility were negatively related to decreasing hindering job demands. These findings were in-line with the higher-order personality factors, reinforcing that employee's high in these facets are not likely to abandon or decrease hindering job tasks. Overall, these findings suggest that facet-level personality does predict employee's making actual changes to the job that could impact work analysis data.

**Interaction Effects**. With respect to higher-order personality regression models, results did not reveal support for interaction effects for the dimensions of increasing structural or social job resources. A significant interaction was found for changes in increasing challenging job demands as a function of job complexity and work scheduling autonomy. Figure 5 displays that those who had more complex jobs and higher levels of work scheduling autonomy reported higher levels of increasing challenging job demands. This finding suggests that autonomy around the timing of work may be an important mechanism in whether an employee with a complex job can take on additional challenging

demands. A significant interaction was also found for changes in decreasing hindering job demands as a function of job complexity and tenure. Figure 9 displays that those who had more complex jobs and higher levels of tenure reported lower levels of decreasing hindering job demands. A 2017 meta-analysis found a small negative correlation between tenure and job crafting, which the current study has replicated (Rudolph et al.). This finding may suggest that more tenured employees have less use for crafting, as they've likely already crafted their positions. Two significant interactions were found for changes in decreasing hindering job demands as a function of job complexity and global autonomy, as well as agreeableness and global autonomy. Figures 10 and 11 display that those who had more complex jobs or higher levels of agreeableness, along with higher levels of global autonomy reported lower levels of decreasing hindering job demands. A 2017 meta-analysis noted that autonomy was negatively related to the decreasing hindering job demands dimension and called for future research to examine how autonomy may prevent employees from decreasing hindering job demands (Rudolph et al.). These findings suggest that given global autonomy those with complex jobs or who are more agreeable do not reduce stressors or minimize difficult demands or interactions at work.

With respect to facet-level personality regression models, results did not reveal support for interaction effects for the dimensions of increasing structural job resources or decreasing hindering job demands. A significant interaction was found for changes in increasing social job resources as a function of job complexity and work scheduling autonomy and flexibility and work scheduling autonomy. Figure 3 displays that those who had more complex jobs and higher levels of work scheduling autonomy reported higher levels of increasing social job resources. This finding suggests that autonomy around the

timing of work may be an important mechanism in whether an employee with a complex job will seek out social resources at work for the purposes of development or feedback. Figure 4 displays that those who reported being more flexible and higher levels of work scheduling autonomy reported lower levels of increasing social job resources. This finding suggests that autonomy around the timing of work may be an important mechanism that inhibits whether an employee who is more flexible will seek out social resources at work for the purposes of development or feedback. In this case, the scheduling autonomy may allow those who are more flexible to develop themselves, as opposed to seeking out social resources. Three significant interactions were found for changes in increasing challenging job demands as a function job complexity, flexibility, and the dimensions of autonomy. Figure 6 displays that those who had more complex jobs and higher levels of work scheduling autonomy reported higher levels of increasing challenging job demands. This finding suggests that autonomy around the timing of work may be an important mechanism in whether an employee with a complex job will seek out demands that increase employee development or goal setting. Figure 7 displays that those who had more complex jobs and higher levels of work methods autonomy reported higher levels of increasing challenging job demands. This finding suggests that autonomy around how work gets done may be an important mechanism in whether an employee with a complex job will seek out demands that increase employee development or goal setting. Figure 8 displays that those who reported being more flexible and higher levels of decision-making autonomy reported lower levels of increasing challenging job demands. This finding suggests that autonomy around decision-making may be an important mechanism that inhibits whether an employee who is more flexible will seek out demands that increase employee development or goal setting. In this case, the decision-

making autonomy may allow those who are more flexible to avoid challenging goals, despite opportunities for development.

**Practical Implications**

The findings from this study suggest that practitioners need to consider several individual and situational antecedents, as well as the potential for interaction effects when planning the collection of work analysis data. The study found that several individual and situational antecedents are related to actual changes to job resources and job demands, through the act of job crafting. Work analysis is primarily accomplished through the use of subject matter expert (SME) input and ratings. The following study suggests that organizations should consider a SMEs relative standing on higher-order and facet-level personality traits, as well as their GNS and tenure, as they may alter the actual performance of their job through job crafting. For example, SMEs with higher levels of GNS or agreeableness may be more likely to job craft and that may impact the quality of the work analysis data. Additionally, organizations should evaluate the level of job complexity and autonomy, when selecting SMEs. Work analysis often involves multiple jobs, across complexity and autonomy levels. These more situational antecedents were shown to be related to job crafting and may lead to work analysis variation. For example, a highly complex job may be best for observation as opposed to focus groups, as SMEs in the role are likely have crafted the position's resources and demands idiosyncratically.

**Limitations and Future Directions**

When interpreting the findings of the study, some limitations should be considered. Firstly, study data was gathered through single source self-report measures on Mturk. While several steps were taken to help ensure the quality of the data, concessions are made with

Mturk on quality, careless responding, and generalizability of the data. While the sample was largely representative, there was some evidence of oversampling for those who were more educated and tenured. Additionally, although the study was not aimed at the psychometric evaluation of the autonomy measures, a moderate amount of collinearity was observed on the various measures of autonomy. Finally, although the study's many relationships were based on previous research and preplanned comparisons, given the number of hypotheses tested on a single set of data, considerations around Type I error should be taken. For example, if a more conservative interpretation of the data was desired, significant results could be reevaluated or interpreted following a Bonferroni correction, resulting in a modified *p* value calculated based on the number of hypotheses and research questions evaluated by the study. Given this study's number of tests the modified *p* value would be .001.

Future research involving this work should further explore facet-level relationships with job crafting and the role of autonomy on decreasing hindering job demands. The study unveiled counter findings between higher-order factors like conscientiousness and agreeableness and their facets, namely achievement-striving and cooperation. Overall, there is little to no research that I am aware of exploring facet-level personality and job crafting. The following study begins to address this gap and unveiled key facets of the higher-order personality factors that seem to be critical in predicting job crafting. Finally, more research is needed to explain how autonomy may actually prevent employees from eliminating stressors or hindering job demands. The following study revealed that job complexity and agreeableness when paired with autonomy result in lower levels of decreasing hindering job demands. Why these components result in that finding, and what other individual or

situational antecedents may lead to increases in that dimension of crafting remains an outstanding question.

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Table 1
*Predictors of Job Crafting*

| *Source* | *Predictors Examined* |
|---|---|
| Bakker et al., (2012) | Proactive Personality* |
| Berg, Wrzesniewski, & Dutton (2010) | Employee Rank |
| Bell & Njoli, (2016) | Conscientiousness*, Extraversion*, Agreeableness*, Openness to Experience*, & Neuroticism* |
| Bipp & Demerouti (2015) | Approach Temperament* & Avoidance Temperament* |
| Ghitulescu, (2007) | Work Discretion*, Task Complexity*, & Interdependence* |
| Hakanen, Peeters, & Schaufeli (2018) | Work Engagement*, Workaholism*, Burnout*, Job Satisfaction |
| Laurence, (2010) | Drivenness to Work* & Enjoyment of Work* |
| Leana et al., (2009) | Discretion at Work*, Interdependence, Calling Orientation, Career Orientation*, Job Orientation, Supportive Supervision, Social Ties, & Teacher Status* |
| Li, Sekiguchi, & Qi (2014) | Skill Variety* & Procedural Justice Climate* |
| Lu, Wang, Lu, Du, & Bakker (2014) | Work Engagement* |
| Lyons, (2008) | Self-Image*, Perceived Control*, & Readiness to Change* |
| Niessen, Weseler, & Kostova (2016) | Need for Positive Self-Image*, Work Experience*, & Need for Human Connection* |
| Qi, Li, & Zhang (2014) | Organizational Embeddedness* & Affective Commitment* |
| Roczniewska & Bakker (2016) | Psychopathy*, Extraversion*, Neuroticism*, Machiavellianism, & Age* |
| Tims, Bakker, & Derks (2015) | Job Crafting Intentions*, Work Engagement* |
| Wang, Demerouti, & Blanc, (2017) | Transformational Leadership* |
| Petrou, Demerouti, Peeters, Schaufeli, & Hetland, (2012) | Work Pressure*, Autonomy* |
| Petrou, Demerouti, & Schaufeli (2015) | Perceived Impact of Implemented Changes* & Employee Willingness to Follow Changes* |
| Petrou, Demerouti, & Schaufeli, (2018) | Quality of organizational change communication* |

*Note*. *Indicates relationship was supported.

Table 2

*Summary of Intercorrelations, Means, and Standard Deviations*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Gender | - | | | | | | | | | | | | |
| 2. Education | -.03 | - | | | | | | | | | | | |
| 3. Job Tenure | .05 | -.02 | - | | | | | | | | | | |
| 4. Growth Need Strength | .08 | .11* | .18** | (.87) | | | | | | | | | |
| 5. Job Complexity | -.05 | .14** | -.01 | .34** | (.76) | | | | | | | | |
| 6. Conscientiousness | .06 | -.03 | .33** | .30** | .08 | (.92) | | | | | | | |
| 7. Achievement-striving | .12** | .02 | .27** | .53** | .28** | .71** | (.86) | | | | | | |
| 8. Perseverance | .06 | -.01 | .29** | .38** | .18** | .79** | .82** | (.83) | | | | | |
| 9. Agreeableness | .15** | -.05 | .18** | .43** | .23** | .45** | .59** | .52** | (.94) | | | | |
| 10. Flexibility | .03 | -.13** | .19** | .16** | -.02 | .39** | .37** | .41** | .51** | (.88) | | | |
| 11. Cooperation | .17** | -.09 | .29** | .16** | -.10* | .52** | .46** | .48** | .53** | .66** | (.83) | | |
| 12. Global Autonomy | -.00 | -.00 | .22** | .28** | .26** | .29** | .30** | .32** | .19** | .18** | .21** | (.69) | |
| 13. Work Scheduling Autonomy | -.07 | .09* | .03 | .23** | .33** | .12** | .16** | .14** | .12* | -.05 | -.04 | .67** | (.88) |
| 14. Decision-making Autonomy | -.03 | .06 | .10* | .28** | .37** | .14** | .23** | .21** | .13** | -.01 | -.03 | .74** | .79** |
| 15. Work Methods Autonomy | -.02 | .11* | .11* | .28** | .34** | .16** | .23** | .19** | .13** | -.05 | -.02 | .74** | .82** |
| 16. Increasing Structural Job Resources | .03 | .05 | .08 | .55** | .50** | .35** | .53** | .43** | .48** | .22** | .17** | .34** | .34** |
| 17. Decreasing Hindering Job Demands | -.04 | -.04 | -.13** | -.01 | .06 | -.25** | -.31** | -.32** | -.18** | -.31** | -.32** | -.11* | .02 |
| 18. Increasing Social Job Resources | -.08 | .13** | -.17** | .22** | .41** | -.09* | .08 | -.06 | .22** | -.08 | -.20** | -.04 | .12** |
| 19. Increasing Challenging Job Demands | .01 | .13** | .00 | .52** | .53** | .15** | .43** | .23** | .40** | .06 | -.04 | .18** | .27** |
| *M* | 1.45 | 3.03 | 7.51 | 5.69 | 3.40 | 5.54 | 5.65 | 5.69 | 5.38 | 4.42 | 5.07 | 5.06 | 3.85 |
| *SD* | 0.50 | 0.69 | 1.88 | 1.03 | 0.79 | 0.97 | 0.96 | 1.01 | 1.06 | 1.19 | 1.15 | 1.29 | 0.90 |

Table 2 (continued).

| Variable | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|
| 14. Decision-making Autonomy | (.88) | | | | | |
| 15. Work Methods Autonomy | .85** | (.90) | | | | |
| 16. Increasing Structural Job Resources | .37** | .35** | (.83) | | | |
| 17. Decreasing Hindering Job Demands | -.01 | -.00 | .11* | (.89) | | |
| 18. Increasing Social Job Resources | .08 | .08 | .43** | .33** | (.89) | |
| 19. Increasing Challenging Job Demands | .30** | .28** | .65** | .14** | .63** | (.86) |
| *M* | 3.90 | 3.88 | 3.91 | 2.93 | 2.92 | 3.28 |
| *SD* | 0.89 | 0.90 | 0.71 | 0.98 | 1.00 | 0.93 |

*Note.* Numbers along the diagonal are Cronbach's coefficient alpha values. All measures were on a 7-point Likert scale with the exception of job crafting dimensions (5), job complexity (5), and dimension-level autonomy (5). Control variables were (*0 = male, 1 = female, 2 = non-binary*), and education level (*0 = no degree, 1 = high school degree, 2= college degree, 3= post-graduate degree*). Job tenure was measured on a 1) 0-1 months, 2) 1-4 months, 3) 5-8 months, 4) 9-12 months, 5) 13-18 months, 6) 19-23 months, 7) 2-3 years, 8) 4-5 years, or 9) more than 5 years. *$p < .05$ **$p < .01$.

Table 3

*Hierarchical Multiple Regression Analysis Predicting Job Crafting Dimensions with Job Tenure as a Moderator and Higher-order Factors of Personality*

| Predictor | Outcome Variable | | | |
|---|---|---|---|---|
| | Increasing Structural Job Resources | Decreasing Hindering Job Demands | Increasing Social Job Resources | Increasing Challenging Job Demands |
| Step 1: | | | | |
| Gender | .04 | -.04 | -.08 | .01 |
| Education | .05 | -.04 | .13** | .13** |
| | | | | |
| Step 2: | | | | |
| Growth Needs Strength (GNS) | .31** | .11* | .09 | .32** |
| Job Complexity (JC) | .34** | .08 | .32** | .37** |
| Conscientiousness (Con) | .15** | -.22** | -.20** | -.05 |
| Agreeableness (A) | .22** | -.14** | .25** | .22** |
| Job Tenure (JT) | -.07 | -.05 | -.16** | -.08* |
| $\Delta R^2$ | .48** | .09** | .25** | .43** |
| | | | | |
| Step 3: | | | | |
| GNS x JT | -.02 | .00 | -.01 | -.04 |
| JC x JT | .01 | -.14** | -.03 | -.01 |
| Con x JT | -.04 | .00 | -.03 | -.04 |
| A x JT | .03 | -.05 | .01 | .06 |
| $\Delta R^2$ | .00 | .03* | .00 | .00 |
| Total $\Delta R^2$ | .49 | .12 | .27 | .45 |
| Total Adjusted $R^2$ | .48 | .10 | .26 | .44 |

*Note.* $*p < .05$ $**p < .01$.

Table 4

*Hierarchical Multiple Regression Analysis Predicting Job Crafting Dimensions with Global Autonomy as a Moderator and Higher-order Factors of Personality*

| Predictor | Outcome Variable | | | |
|---|---|---|---|---|
| | Increasing Structural Job Resources | Decreasing Hindering Job Demands | Increasing Social Job Resources | Increasing Challenging Job Demands |
| Step 1: | | | | |
| Gender | .04 | -.04 | -.08 | .01 |
| Education | .05 | -.04 | .13** | .13** |
| Step 2: | | | | |
| Growth Needs Strength (GNS) | .28** | .11* | .10* | .32** |
| Job Complexity (JC) | .32** | .10* | .36** | .38** |
| Conscientiousness (Con) | .11** | -.21** | -.21** | -.07 |
| Agreeableness (A) | .22** | -.15** | .24** | .22** |
| Global Autonomy (GA) | .10** | -.08 | -.15** | -.03 |
| $\Delta R^2$ | .49** | .09** | .24** | .43** |
| Step 3: | | | | |
| GNS x GA | .04 | -.08 | -.02 | -.02 |
| JC x GA | -.06 | -.11* | -.06 | .01 |
| Con x GA | .06 | .06 | .11* | .10* |
| A x GA | -.09* | .12* | -.01 | .01 |
| $\Delta R^2$ | .01 | .03** | .01 | .01 |
| Total $\Delta R^2$ | .50 | .12 | .28 | .45 |
| Total Adjusted $R^2$ | .49 | .10 | .26 | .44 |

*Note.* $*p < .05$ $**p < .01$.

Table 5

*Hierarchical Multiple Regression Analysis Predicting Job Crafting Dimensions with Work Scheduling Autonomy as a Moderator and Higher-order Factors of Personality*

| Predictor | Outcome Variable | | | |
|---|---|---|---|---|
| | Increasing Structural Job Resources | Decreasing Hindering Job Demands | Increasing Social Job Resources | Increasing Challenging Job Demands |
| Step 1: | | | | |
| Gender | .04 | -.04 | -.08 | .01 |
| Education | .05 | -.04 | .13** | .13** |
| Step 2: | | | | |
| Growth Needs Strength (GNS) | .28** | .10 | .08 | .30** |
| Job Complexity (JC) | .30** | .08 | .34** | .36** |
| Conscientiousness (Con) | .12** | -.23** | -.24** | -.08 |
| Agreeableness (A) | .22** | -.14** | .25** | .22** |
| Work Scheduling Autonomy (SA) | .14** | .02 | -.02 | .06 |
| $\Delta R^2$ | .50** | .09** | .23** | .43** |
| Step 3: | | | | |
| GNS x SA | -.04 | -.12* | -.05 | .01 |
| JC x SA | .04 | .08 | .11* | .09* |
| Con x SA | -.01 | -.05 | .04 | .06 |
| A x SA | -.06 | .09 | -.04 | -.02 |
| $\Delta R^2$ | .01 | .02 | .01 | .01* |
| Total $\Delta R^2$ | .51 | .11 | .26 | .46 |
| Total Adjusted $R^2$ | .50 | .09 | .24 | .45 |

*Note.* $*p < .05$ $**p < .01$.

Table 6

*Hierarchical Multiple Regression Analysis Predicting Job Crafting Dimensions with Decision-making Autonomy as a Moderator and Higher-order Factors of Personality*

| Predictor | Outcome Variable | | | |
|---|---|---|---|---|
| | Increasing Structural Job Resources | Decreasing Hindering Job Demands | Increasing Social Job Resources | Increasing Challenging Job Demands |
| Step 1: | | | | |
| Gender | .04 | -.04 | -.08 | .01 |
| Education | .05 | -.04 | .13** | .13** |
| | | | | |
| Step 2: | | | | |
| Growth Needs Strength (GNS) | .28** | .10 | .09 | .30** |
| Job Complexity (JC) | .30** | .09 | .36** | .36** |
| Conscientiousness (Con) | .12** | -.23** | -.24** | -.08 |
| Agreeableness (A) | .22** | -.14** | .24** | .22** |
| Decision-making Autonomy (DA) | .14** | -.02 | -.08 | .06 |
| $\Delta R^2$ | .50** | .09** | .23** | .43** |
| | | | | |
| Step 3: | | | | |
| GNS x DA | .03 | -.06 | -.04 | .00 |
| JC x DA | .01 | -.01 | .05 | .05 |
| Con x DA | .01 | -.04 | .05 | .04 |
| A x DA | -.10* | .11* | -.02 | .04 |
| $\Delta R^2$ | .01 | .01 | .00 | .01 |
| Total $\Delta R^2$ | .51 | .10 | .26 | .45 |
| Total Adjusted $R^2$ | .49 | .08 | .24 | .44 |

*Note.* $*p < .05$ $**p < .01$.

Table 7

*Hierarchical Multiple Regression Analysis Predicting Job Crafting Dimensions with Work Methods Autonomy as a Moderator and Higher-order Factors of Personality*

| Predictor | Outcome Variable | | | |
|---|---|---|---|---|
| | Increasing Structural Job Resources | Decreasing Hindering Job Demands | Increasing Social Job Resources | Increasing Challenging Job Demands |
| Step 1: | | | | |
| Gender | .04 | -.04 | -.08 | .01 |
| Education | .05 | -.04 | .13** | .13** |
| Step 2: | | | | |
| Growth Needs Strength (GNS) | .28** | .10 | .09 | .30** |
| Job Complexity (JC) | .31** | .09 | .35** | .36** |
| Conscientiousness (Con) | .12** | -.23** | -.24** | -.08 |
| Agreeableness (A) | .22** | -.14** | .24** | .22** |
| Work Methods Autonomy (WMA) | .12** | .00 | -.07 | .05 |
| $\Delta R^2$ | .49** | .09** | .23** | .43** |
| Step 3: | | | | |
| GNS x WMA | .04 | -.14* | -.06 | -.03 |
| JC x WMA | .01 | .05 | .08 | .09* |
| Con x WMA | -.01 | -.04 | .01 | .04 |
| A x WMA | -.09* | .08 | -.02 | .01 |
| $\Delta R^2$ | .01 | .02 | .01 | .01 |
| Total $\Delta R^2$ | .50 | .11 | .26 | .46 |
| Total Adjusted $R^2$ | .49 | .08 | .24 | .44 |

*Note.* $*p < .05$ $**p < .01$.

Table 8

*Hierarchical Multiple Regression Analysis Predicting Job Crafting Dimensions with Job Tenure as a Moderator and Facet-level Personality*

| Predictor | Outcome Variable | | | |
|---|---|---|---|---|
| | Increasing Structural Job Resources | Decreasing Hindering Job Demands | Increasing Social Job Resources | Increasing Challenging Job Demands |
| Step 1: | | | | |
| Gender | .04 | -.04 | -.08 | .01 |
| Education | .05 | -.04 | .13** | .13** |
| | | | | |
| Step 2: | | | | |
| Growth Needs Strength (GNS) | .30** | .18** | .12* | .28** |
| Job Complexity (JC) | .33** | .09 | .32** | .34** |
| Achievement-striving (AS) | .22** | -.26** | .24** | .43** |
| Perseverance (P) | .07 | -.09 | -.27** | -.21** |
| Flexibility (F) | .10* | -.16** | .07 | .08 |
| Cooperation (Coop) | -.03 | -.09 | -.15* | -.17** |
| Job Tenure (JT) | -.06 | -.01 | -.14** | -.07 |
| $\Delta R^2$ | .48** | .19** | .23** | .45** |
| | | | | |
| Step 3: | | | | |
| GNS x JT | -.04 | .00 | -.07 | -.05 |
| JC x JT | -.01 | -.11* | .01 | .01 |
| AS x JT | .05 | -.09 | .19* | -.01 |
| P x JT | .02 | .05 | -.16 | .08 |
| F x JT | -.04 | .04 | -.01 | -.02 |
| Coop x JT | -.02 | -.07 | .06 | -.01 |
| $\Delta R^2$ | .00 | .02 | .01 | .00 |
| Total $\Delta R^2$ | .49 | .21 | .27 | .48 |
| Total Adjusted $R^2$ | .47 | .19 | .24 | .46 |

*Note.* $*p < .05$ $**p < .01$.

Table 9

*Hierarchical Multiple Regression Analysis Predicting Job Crafting Dimensions with Global Autonomy as a Moderator and Facet-level Personality*

| Predictor | Outcome Variable | | | |
|---|---|---|---|---|
| | Increasing Structural Job Resources | Decreasing Hindering Job Demands | Increasing Social Job Resources | Increasing Challenging Job Demands |
| Step 1: | | | | |
| Gender | .04 | -.04 | -.08 | .01 |
| Education | .05 | -.04 | .13** | .13** |
| | | | | |
| Step 2: | | | | |
| Growth Needs Strength (GNS) | .28** | .19** | .13* | .28** |
| Job Complexity (JC) | .31** | .09 | .36** | .34** |
| Achievement-striving (AS) | .22** | -.26** | .23** | .42** |
| Perseverance (P) | .04 | -.08 | -.27** | -.22** |
| Flexibility (F) | .10* | -.16** | .07 | .08 |
| Cooperation (Coop) | -.05 | -.09 | -.16** | -.18** |
| Global Autonomy (GA) | .09* | -.03 | -.14** | -.02 |
| $\Delta R^2$ | .48** | .19** | .23** | .45** |
| | | | | |
| Step 3: | | | | |
| GNS x GA | .00 | .00 | -.02 | -.05 |
| JC x GA | -.07 | -.03 | -.04 | .02 |
| AS x GA | -.06 | -.05 | -.05 | .07 |
| P x GA | .10 | .10 | .15* | .05 |
| F x GA | -.08 | -.08 | -.12* | -.07 |
| Coop x GA | .04 | .12 | .06 | .06 |
| $\Delta R^2$ | .01 | .02 | .02 | .01 |
| Total $\Delta R^2$ | .50 | .21 | .27 | .48 |
| Total Adjusted $R^2$ | .48 | .18 | .25 | .46 |

*Note.* $*p < .05$ $**p < .01$.

Table 10

*Hierarchical Multiple Regression Analysis Predicting Job Crafting Dimensions with Work Scheduling Autonomy as a Moderator and Facet-level Personality*

| Predictor | Outcome Variable | | | |
|---|---|---|---|---|
| | Increasing Structural Job Resources | Decreasing Hindering Job Demands | Increasing Social Job Resources | Increasing Challenging Job Demands |
| Step 1: | | | | |
| Gender | .04 | -.04 | -.08 | .01 |
| Education | .05 | -.04 | .13** | .13** |
| | | | | |
| Step 2: | | | | |
| Growth Needs Strength (GNS) | .27** | .18** | .11* | .26** |
| Job Complexity (JC) | .29** | .09 | .34** | .32** |
| Achievement-striving (AS) | .22** | -.26** | .23** | .43** |
| Perseverance (P) | .04 | -.09 | -.29** | -.23** |
| Flexibility (F) | .11* | -.16** | .07 | .08 |
| Cooperation (Coop) | -.04 | -.09 | -.18** | -.19** |
| Work Scheduling Autonomy (SA) | .15** | .00 | -.03 | .06 |
| $\Delta R^2$ | .50** | .19** | .22** | .45** |
| | | | | |
| Step 3: | | | | |
| GNS x SA | -.08* | -.08 | -.06 | -.04 |
| JC x SA | .04 | .08 | .10* | .09* |
| AS x SA | .04 | .02 | -.05 | .11 |
| P x SA | -.05 | .02 | .09 | .00 |
| F x SA | -.01 | -.12* | -.13* | -.09 |
| Coop x SA | .00 | .10 | .04 | .06 |
| $\Delta R^2$ | .01 | .02 | .03* | .02** |
| Total $\Delta R^2$ | .51 | .21 | .27 | .49 |
| Total Adjusted $R^2$ | .49 | .18 | .24 | .48 |

*Note.* $*p < .05$ $**p < .01$.

Table 11

*Hierarchical Multiple Regression Analysis Predicting Job Crafting Dimensions with Decision-making Autonomy as a Moderator and Facet-level Personality*

| Predictor | Outcome Variable | | | |
|---|---|---|---|---|
| | Increasing Structural Job Resources | Decreasing Hindering Job Demands | Increasing Social Job Resources | Increasing Challenging Job Demands |
| Step 1: | | | | |
| Gender | .04 | -.04 | -.08 | .01 |
| Education | .05 | -.04 | .13** | .13** |
| Step 2: | | | | |
| Growth Needs Strength (GNS) | .27** | .18** | .12* | .27** |
| Job Complexity (JC) | .29** | .09 | .36** | .33** |
| Achievement-striving (AS) | .22** | -.26** | .23** | .43** |
| Perseverance (P) | .04 | -.09 | -.28** | -.23** |
| Flexibility (F) | .11* | -.16** | .07 | .08 |
| Cooperation (Coop) | -.03 | -.09 | -.18** | -.18** |
| Decision-making Autonomy (DA) | .13** | -.02 | -.09* | .04 |
| $\Delta R^2$ | .49** | .19** | .22** | .45** |
| Step 3: | | | | |
| GNS x DA | -.01 | .01 | -.03 | -.03 |
| JC x DA | -.02 | .03 | .05 | .03 |
| AS x DA | .01 | -.04 | -.06 | .05 |
| P x DA | .00 | .04 | .11 | .07 |
| F x DA | -.09* | -.10 | -.14* | -.11* |
| Coop x DA | .03 | .08 | .04 | .06 |
| $\Delta R^2$ | .00 | .01 | .02 | .02* |
| Total $\Delta R^2$ | .50 | .20 | .26 | .49 |
| Total Adjusted $R^2$ | .48 | .17 | .24 | .47 |

*Note.* $*p < .05$ $**p < .01$.

Table 12

*Hierarchical Multiple Regression Analysis Predicting Job Crafting Dimensions with Work Methods Autonomy as a Moderator and Facet-level Personality*

| Predictor | Outcome Variable | | | |
|---|---|---|---|---|
| | Increasing Structural Job Resources | Decreasing Hindering Job Demands | Increasing Social Job Resources | Increasing Challenging Job Demands |
| Step 1: | | | | |
| Gender | .04 | -.04 | -.08 | .01 |
| Education | .05 | -.04 | .13** | .13** |
| | | | | |
| Step 2: | | | | |
| Growth Needs Strength (GNS) | .27** | .18** | .12* | .27** |
| Job Complexity (JC) | .30** | .09 | .36** | .33** |
| Achievement-striving (AS) | .21** | -.26** | .24** | .43** |
| Perseverance (P) | .05 | -.09 | -.29** | -.22** |
| Flexibility (F) | .11* | -.16** | .06 | .08 |
| Cooperation (Coop) | -.04 | -.09 | -.18** | -.19** |
| Work Methods Autonomy (WMA) | .12** | -.01 | -.09* | .03 |
| $\Delta R^2$ | .49** | .19** | .22** | .45** |
| | | | | |
| Step 3: | | | | |
| GNS x WMA | -.03 | -.07 | -.08 | -.08 |
| JC x WMA | .00 | .07 | .08 | .10* |
| AS x WMA | .04 | -.04 | .03 | .11 |
| P x WMA | -.04 | .06 | .04 | .02 |
| F x WMA | -.05 | -.11 | -.13* | -.09 |
| Coop x WMA | .01 | .07 | .04 | .07 |
| $\Delta R^2$ | .00 | .02 | .02 | .02** |
| Total $\Delta R^2$ | .50 | .21 | .27 | .49 |
| Total Adjusted $R^2$ | .48 | .18 | .24 | .48 |

*Note.* $*p < .05$ $**p < .01$.

Table 13
*Summary of Results*

| *Hypothesis/Research Question* | $\Delta R^2$ | β |
|---|---|---|
| Increasing Structural Job Resources | | |
| ○ Hypothesis 1a: Growth Need Strength (GNS)[1] | | |
| ○ Research Question 1a: Job Complexity (JC)[1] | | |
| ○ Hypothesis 2a: Conscientiousness (Con) | | |
| ○ Hypothesis 3a: Agreeableness (A) | | |
| ○ Hypothesis 4a: Job Tenure moderation | | |
| ○ Hypothesis 5a: Autonomy moderation | | |
| ○ **Step 1:** Gender, Education[2] | | .04, .05 |
| Higher-order Personality | | |
| ○ **Step 2:** GNS, JC, Con, A, Job Tenure (JT) | $\Delta R^2$ = .48** | .31**, .34**, .15**, .22**, -.07 |
| ○ **Step 3:** GNS x JT, JC x JT, Con x JT, A x JT | $\Delta R^2$ = .00 | -.02, .01, -.04, .03 |
| ○ **Step 2:** GNS, JC, Con, A, Global Autonomy (GA) | $\Delta R^2$ = .49** | .28**, .32**, .11**, .22**, .10** |
| ○ **Step 3:** GNS x GA, JC x GA, Con x GA, A x GA | $\Delta R^2$ = .01 | .04, -.06, .06, -.09* |
| ○ **Step 2:** GNS, JC, Con, A, Work Scheduling Autonomy (SA) | $\Delta R^2$ = .50** | .28**, .30**, .12**, .22**, .14** |
| ○ **Step 3:** GNS x SA, JC x SA, Con x SA, A x SA | $\Delta R^2$ = .01 | -.04, .04, -.01, -.06 |
| ○ **Step 2:** GNS, JC, Con, A, Decision-making Autonomy (DA) | $\Delta R^2$ = .50** | .28**, .30**, .12**, .22**, .14** |
| ○ **Step 3:** GNS x DA, JC x DA, Con x DA, A x DA | $\Delta R^2$ = .01 | .03, .01, .01, -.10* |
| ○ **Step 2:** GNS, JC, Con, A, Work Methods Autonomy (WMA) | $\Delta R^2$ = .49** | .28**, .31**, .12**, .22**, .12** |
| ○ **Step 3:** GNS x WMA, JC x WMA, Con x WMA, A x WMA | $\Delta R^2$ = .01 | .04, .01, -.01, -.09* |
| ○ Research Question 2a: Achievement-striving (AS) | | |
| ○ Research Question 3a: Perseverance (P) | | |
| ○ Research Question 4a: Flexibility (F) | | |
| ○ Research Question 5a: Cooperation (Coop) | | |
| ○ Research Question 6a: Job Tenure moderation | | |
| ○ Research Question 7a: Autonomy moderation | | |
| Facet-level Personality | | |
| ○ **Step 2:** GNS, JC, AS, P, F, Coop, Job Tenure (JT) | $\Delta R^2$ = .48** | .30**, .33**, .22**, .07, .10*, -.03, -.06 |
| ○ **Step 3:** GNS x JT, JC x JT, AS x JT, P x JT, F x JT, Coop x JT | $\Delta R^2$ = .00 | -.04, -.01, .05, .02, -.04, -.02 |
| ○ **Step 2:** GNS, JC, AS, P, F, Coop, Global Autonomy (GA) | $\Delta R^2$ = .48** | .28**, .31**, .22**, .04, .10*, -.05, .09* |
| ○ **Step 3:** GNS x GA, JC x GA, AS x GA, P x GA, F x GA, Coop x GA | $\Delta R^2$ = .01 | .00, -.07, -.06, .10, -.08, .04 |

Table 13 (continued).

| | | |
|---|---|---|
| ○ **Step 2:** GNS, JC, AS, P, F, Coop, Work Scheduling Autonomy (SA) | $\Delta R^2$ = .50** | .27**, .29**, .22**, .04, .11*, -.04, .15** |
| ○ **Step 3:** GNS x SA, JC x SA, AS x SA, P x SA, F x SA, Coop x SA | $\Delta R^2$ = .01 | -.08*, .04, .04, -.05, -.01, .00 |
| ○ **Step 2:** GNS, JC, AS, P, F, Coop, Decision-making Autonomy (DA) | $\Delta R^2$ = .49** | .27**, .29**, .22**, .04, .11**, -.03, .13** |
| ○ **Step 3:** GNS x DA, JC x DA, AS x DA, P x DA, F x DA, Coop x DA | $\Delta R^2$ = .00 | -.01, -.02, .01, .00, -.09*, .03 |
| ○ **Step 2:** GNS, JC, AS, P, F, Coop, Work Methods Autonomy (WMA) | $\Delta R^2$ = .49** | .27**, .30**, .21**, .05, .11*, -.04, .12** |
| ○ **Step 3:** GNS x WMA, JC x WMA, AS x WMA, P x WMA, F x WMA, Coop x WMA | $\Delta R^2$ = .00 | -.03, .00, .04, -.04, -.05, .01 |

Decreasing Hindering Job Demands

- Hypothesis 1d: Growth Need Strength (GNS)[1]
- Research Question 1d: Job Complexity (JC)[1]

- Hypothesis 2d: Conscientiousness (Con)
- Hypothesis 3d: Agreeableness (A)
- Hypothesis 4d: Job Tenure moderation
- Hypothesis 5d: Autonomy moderation

| | | |
|---|---|---|
| ○ **Step 1:** Gender, Education[2] | | -.04, -.04 |
| Higher-order Personality | | |
| ○ **Step 2:** GNS, JC, Con, A, Job Tenure (JT) | $\Delta R^2$ = .09** | .11*, .08, -.22**, -.14**, -.05 |
| ○ **Step 3:** GNS x JT, JC x JT, Con x JT, A x JT | $\Delta R^2$ = .03* | .00, -.14**, .00, -.05 |
| ○ **Step 2:** GNS, JC, Con, A, Global Autonomy (GA) | $\Delta R^2$ = .09** | .11*, .10*, -.21**, -.15**, -.08 |
| ○ **Step 3:** GNS x GA, JC x GA, Con x GA, A x GA | $\Delta R^2$ = .03** | -.08, -.11*, .06, .12* |
| ○ **Step 2:** GNS, JC, Con, A, Work Scheduling Autonomy (SA) | $\Delta R^2$ = .09** | .10, .08, -.23**, -.14**, .02 |
| ○ **Step 3:** GNS x SA, JC x SA, Con x SA, A x SA | $\Delta R^2$ = .02 | -.12*, .08, -.05, .09 |
| ○ **Step 2:** GNS, JC, Con, A, Decision-making Autonomy (DA) | $\Delta R^2$ = .09** | .10, .09, -.23**, -.14**, -.02 |
| ○ **Step 3:** GNS x DA, JC x DA, Con x DA, A x DA | $\Delta R^2$ = .01 | -.06, -.01, -.04, .11* |
| ○ **Step 2:** GNS, JC, Con, A, Work Methods Autonomy (WMA) | $\Delta R^2$ = .09** | .10, .09, -.23**, -.14**, .00 |
| ○ **Step 3:** GNS x WMA, JC x WMA, Con x WMA, A x WMA | $\Delta R^2$ = .02 | -.14*, .05, -.04, .08 |

- Research Question 2d: Achievement-striving (AS)
- Research Question 3d: Perseverance (P)
- Research Question 4d: Flexibility (F)
- Research Question 5d: Cooperation (Coop)
- Research Question 6d: Job Tenure moderation
- Research Question 7d: Autonomy moderation

Table 13 (continued).

| | | |
|---|---|---|
| Facet-level Personality | | |
| ○ **Step 2:** GNS, JC, AS, P, F, Coop, Job Tenure (JT) | $\Delta R^2$ = .19** | .18**, .09, -.26**, -.09, -.16**, -.09, -.01 |
| ○ **Step 3:** GNS x JT, JC x JT, AS x JT, P x JT, F x JT, Coop x JT | $\Delta R^2$ = .02 | .00, -.11*, -.09, .05, .04, -.07 |
| ○ **Step 2:** GNS, JC, AS, P, F, Coop, Global Autonomy (GA) | $\Delta R^2$ = .19** | .19**, .09, -.26**, -.08, -.16**, -.09, -.03 |
| ○ **Step 3:** GNS x GA, JC x GA, AS x GA, P x GA, F x GA, Coop x GA | $\Delta R^2$ = .02 | .00, -.03, -.05, .10, -.08, .12 |
| ○ **Step 2:** GNS, JC, AS, P, F, Coop, Work Scheduling Autonomy (SA) | $\Delta R^2$ = .19** | .18**, .09, -.26**, -.09, -.16**, -.09, .00 |
| ○ **Step 3:** GNS x SA, JC x SA, AS x SA, P x SA, F x SA, Coop x SA | $\Delta R^2$ = .02 | -.08, .08, .02, .02, -.12*, .10 |
| ○ **Step 2:** GNS, JC, AS, P, F, Coop, Decision-making Autonomy (DA) | $\Delta R^2$ = .19** | .18**, .09, -.26**, -.09, -.16**, -.09, -.02 |
| ○ **Step 3:** GNS x DA, JC x DA, AS x DA, P x DA, F x DA, Coop x DA | $\Delta R^2$ = .01 | .01, .03, -.04, .04, -.10, .08 |
| ○ **Step 2:** GNS, JC, AS, P, F, Coop, Work Methods Autonomy (WMA) | $\Delta R^2$ = .19** | .18**, .09, -.26**, -.09, -.16**, -.09, -.01 |
| ○ **Step 3:** GNS x WMA, JC x WMA, AS x WMA, P x WMA, F x WMA, Coop x WMA | $\Delta R^2$ = .02 | -.07, .07, -.04, .06, -.11, .07 |
| Increasing Social Job Resources | | |
| ○ Hypothesis 1b: Growth Need Strength (GNS)[1] | | |
| ○ Research Question 1b: Job Complexity (JC)[1] | | |
| ○ Hypothesis 2b: Conscientiousness (Con) | | |
| ○ Hypothesis 3b: Agreeableness (A) | | |
| ○ Hypothesis 4b: Job Tenure moderation | | |
| ○ Hypothesis 5b: Autonomy moderation | | |
| ○ **Step 1:** Gender, Education[2] | | -.08, .13** |
| Higher-order Personality | | |
| ○ **Step 2:** GNS, JC, Con, A, Job Tenure (JT) | $\Delta R^2$ = .25** | .09, .32**, -.20**, .25**, -.16** |
| ○ **Step 3:** GNS x JT, JC x JT, Con x JT, A x JT | $\Delta R^2$ = .00 | -.01, -.03, -.03, .01 |
| ○ **Step 2:** GNS, JC, Con, A, Global Autonomy (GA) | $\Delta R^2$ = .24** | .10*, .36**, -.21**, .24**, -.15** |
| ○ **Step 3:** GNS x GA, JC x GA, Con x GA, A x GA | $\Delta R^2$ = .01 | -.02, -.06, .11*, -.01 |
| ○ **Step 2:** GNS, JC, Con, A, Work Scheduling Autonomy (SA) | $\Delta R^2$ = .23** | .08, .34**, -.24**, .25**, -.02 |
| ○ **Step 3:** GNS x SA, JC x SA, Con x SA, A x SA | $\Delta R^2$ = .01 | -.05, .11*, .04, -.04 |
| ○ **Step 2:** GNS, JC, Con, A, Decision-making Autonomy (DA) | $\Delta R^2$ = .23** | .09, .36**, -.24**, .24**, -.08 |
| ○ **Step 3:** GNS x DA, JC x DA, Con x DA, A x DA | $\Delta R^2$ = .00 | -.04, .05, .05, -.02 |
| ○ **Step 2:** GNS, JC, Con, A, Work Methods Autonomy (WMA) | $\Delta R^2$ = .23** | .09, .35**, -.24**, .24**, -.07 |
| ○ **Step 3:** GNS x WMA, JC x WMA, Con x WMA, A x WMA | $\Delta R^2$ = .01 | -.06, .08, .01, -.02 |

Table 13 (continued).

- Research Question 2b: Achievement-striving (AS)
- Research Question 3b: Perseverance (P)
- Research Question 4b: Flexibility (F)
- Research Question 5b: Cooperation (Coop)
- Research Question 6b: Job Tenure moderation
- Research Question 7b: Autonomy moderation

| | | |
|---|---|---|
| Facet-level Personality | | |
| **Step 2:** GNS, JC, AS, P, F, Coop, Job Tenure (JT) | $\Delta R^2$ = .23** | .12*, .32**, .24**, -.27**, .07, -.15*, -.14** |
| **Step 3:** GNS x JT, JC x JT, AS x JT, P x JT, F x JT, Coop x JT | $\Delta R^2$ = .01 | -.07, .01, .19*, -.16, -.01, .06 |
| **Step 2:** GNS, JC, AS, P, F, Coop, Global Autonomy (GA) | $\Delta R^2$ = .23** | .13*, .36**, .23**, -.27**, .07, -.16**, -.14** |
| **Step 3:** GNS x GA, JC x GA, AS x GA, P x GA, F x GA, Coop x GA | $\Delta R^2$ = .02 | -.02, -.04, -.05, .15*, -.12*, .06 |
| **Step 2:** GNS, JC, AS, P, F, Coop, Work Scheduling Autonomy (SA) | $\Delta R^2$ = .22** | .11*, .34**, .23**, -.29**, .07, -.18**, -.03 |
| **Step 3:** GNS x SA, JC x SA, AS x SA, P x SA, F x SA, Coop x SA | $\Delta R^2$ = .03* | -.06, .10*, -.05, .09, -.13*, .04 |
| **Step 2:** GNS, JC, AS, P, F, Coop, Decision-making Autonomy (DA) | $\Delta R^2$ = .22** | .12*, .36**, .23**, -.28**, .07, -.18**, -.09* |
| **Step 3:** GNS x DA, JC x DA, AS x DA, P x DA, F x DA, Coop x DA | $\Delta R^2$ = .02 | -.03, .05, -.06, .11, -.14*, .04 |
| **Step 2:** GNS, JC, AS, P, F, Coop, Work Methods Autonomy (WMA) | $\Delta R^2$ = .22** | .12*, .36**, .24**, -.29**, .06, -.18**, -.09* |
| **Step 3:** GNS x WMA, JC x WMA, AS x WMA, P x WMA, F x WMA, Coop x WMA | $\Delta R^2$ = .02 | -.08, .08, .03, .04, -.13*, .04 |
| Increasing Challenging Job Demands | | |

- Hypothesis 1c: Growth Need Strength (GNS)[1]
- Research Question 1c: Job Complexity (JC)[1]

- Hypothesis 2c: Conscientiousness (Con)
- Hypothesis 3c: Agreeableness (A)
- Hypothesis 4c: Job Tenure moderation
- Hypothesis 5c: Autonomy moderation

| | | |
|---|---|---|
| **Step 1:** Gender, Education[2] | | .01, .13** |
| Higher-order Personality | | |
| **Step 2:** GNS, JC, Con, A, Job Tenure (JT) | $\Delta R^2$ = .43** | .32**, .37**, -.05, .22**, -.08* |
| **Step 3:** GNS x JT, JC x JT, Con x JT, A x JT | $\Delta R^2$ = .00 | -.04, -.01, -.04, .06 |
| **Step 2:** GNS, JC, Con, A, Global Autonomy (GA) | $\Delta R^2$ = .43** | .32**, .38**, -.07, .22**, -.03 |
| **Step 3:** GNS x GA, JC x GA, Con x GA, A x GA | $\Delta R^2$ = .01 | -.02, .01, .10*, .01 |
| **Step 2:** GNS, JC, Con, A, Work Scheduling Autonomy (SA) | $\Delta R^2$ = .43** | .30**, .36**, -.08, .22**, .06 |
| **Step 3:** GNS x SA, JC x SA, Con x SA, A x SA | $\Delta R^2$ = .01* | .01, .09*, .06, -.02 |

Table 13 (continued).

| | | |
|---|---|---|
| ○ **Step 2:** GNS, JC, Con, A, Decision-making Autonomy (DA) | $\Delta R^2$ = .43** | .30**, .36**, -.08, .22**, .06 |
| ○ **Step 3:** GNS x DA, JC x DA, Con x DA, A x DA | $\Delta R^2$ = .01 | .00, .05, .04, .04 |
| ○ **Step 2:** GNS, JC, Con, A, Work Methods Autonomy (WMA) | $\Delta R^2$ = .43** | .30**, .36**, -.08, .22**, .05 |
| ○ **Step 3:** GNS x WMA, JC x WMA, Con x WMA, A x WMA | $\Delta R^2$ = .01 | -.03, .09*, .04, .01 |
| ○ Research Question 2c: Achievement-striving (AS) | | |
| ○ Research Question 3c: Perseverance (P) | | |
| ○ Research Question 4c: Flexibility (F) | | |
| ○ Research Question 5c: Cooperation (Coop) | | |
| ○ Research Question 6c: Job Tenure moderation | | |
| ○ Research Question 7c: Autonomy moderation | | |
| Facet-level Personality | | |
| ○ **Step 2:** GNS, JC, AS, P, F, Coop, Job Tenure (JT) | $\Delta R^2$ = .45** | .28**, .34**, .43**, -.21**, .08, -.17**, -.07 |
| ○ **Step 3:** GNS x JT, JC x JT, AS x JT, P x JT, F x JT, Coop x JT | $\Delta R^2$ = .00 | -.05, .01, -.01, .08, -.02, -.01 |
| ○ **Step 2:** GNS, JC, AS, P, F, Coop, Global Autonomy (GA) | $\Delta R^2$ = .45** | .28**, .34**, .42**, -.22**, .08, -.18**, -.02 |
| ○ **Step 3:** GNS x GA, JC x GA, AS x GA, P x GA, F x GA, Coop x GA | $\Delta R^2$ = .01 | -.05, .02, .07, .05, -.07, .06 |
| ○ **Step 2:** GNS, JC, AS, P, F, Coop, Work Scheduling Autonomy (SA) | $\Delta R^2$ = .45** | .26**, .32**, .43**, -.23**, .08, -.19**, .06 |
| ○ **Step 3:** GNS x SA, JC x SA, AS x SA, P x SA, F x SA, Coop x SA | $\Delta R^2$ = .02** | -.04, .09*, .11, .00, -.09, .06 |
| ○ **Step 2:** GNS, JC, AS, P, F, Coop, Decision-making Autonomy (DA) | $\Delta R^2$ = .45** | .27**, .33**, .43**, -.23**, .08, -.18**, .04 |
| ○ **Step 3:** GNS x DA, JC x DA, AS x DA, P x DA, F x DA, Coop x DA | $\Delta R^2$ = .02* | -.03, .03, .05, .07, -.11*, .06 |
| ○ **Step 2:** GNS, JC, AS, P, F, Coop, Work Methods Autonomy (WMA) | $\Delta R^2$ = .45** | .27**, .33**, .43**, -.22**, .08, -.19**, .03 |
| ○ **Step 3:** GNS x WMA, JC x WMA, AS x WMA, P x WMA, F x WMA, Coop x WMA | $\Delta R^2$ = .02** | -.08, .10*, .11, .02, -.09, .07 |

*Note*. [1]Variables were analyzed across higher-order and facet-level. [2]Control variables were identical across hierarchical regressions. *$p$ < .05 **$p$ < .01.

*Figure 1.* Model of Study with Higher-order Personality

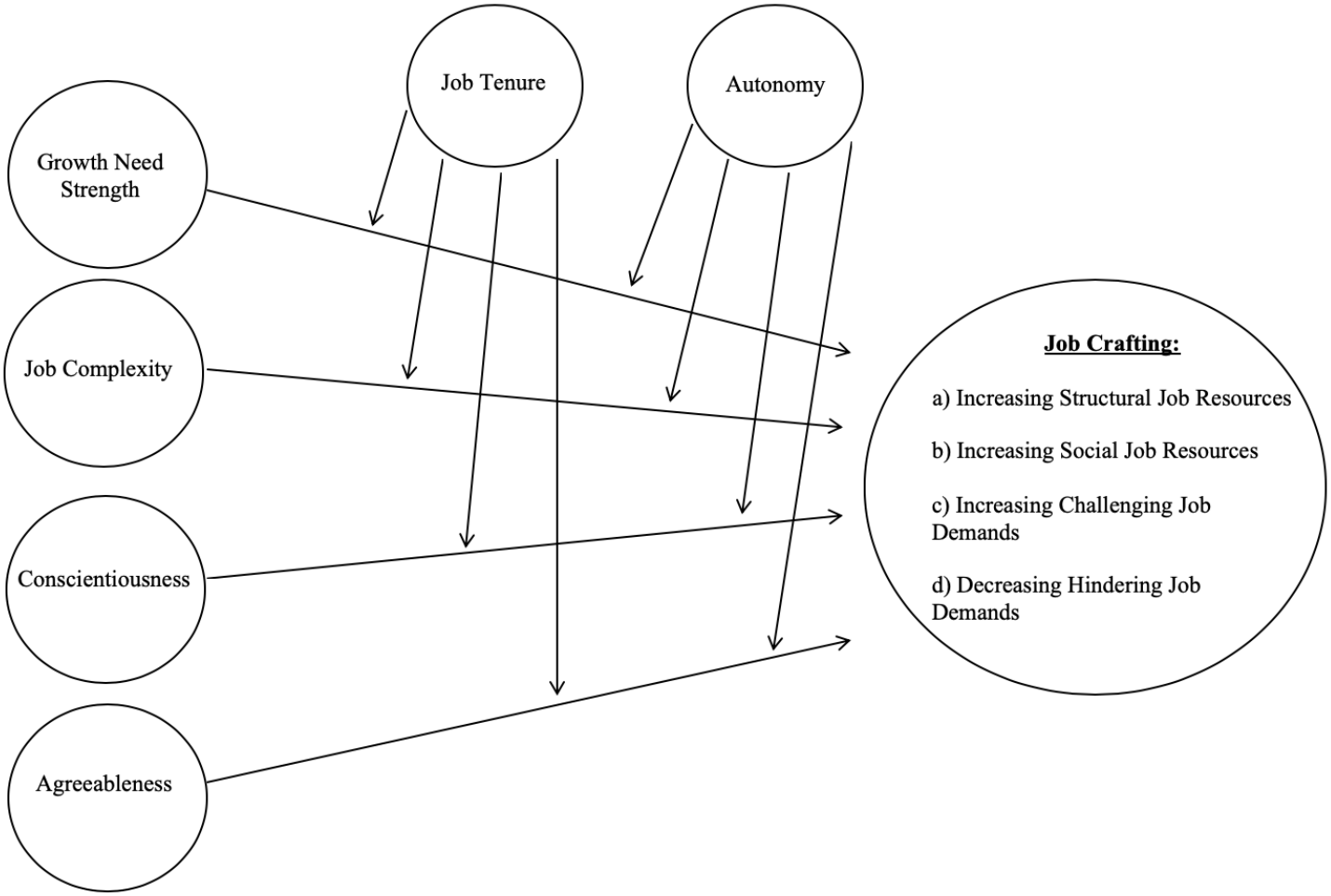


*Figure 2.* Model of Study with Facet-level Personality

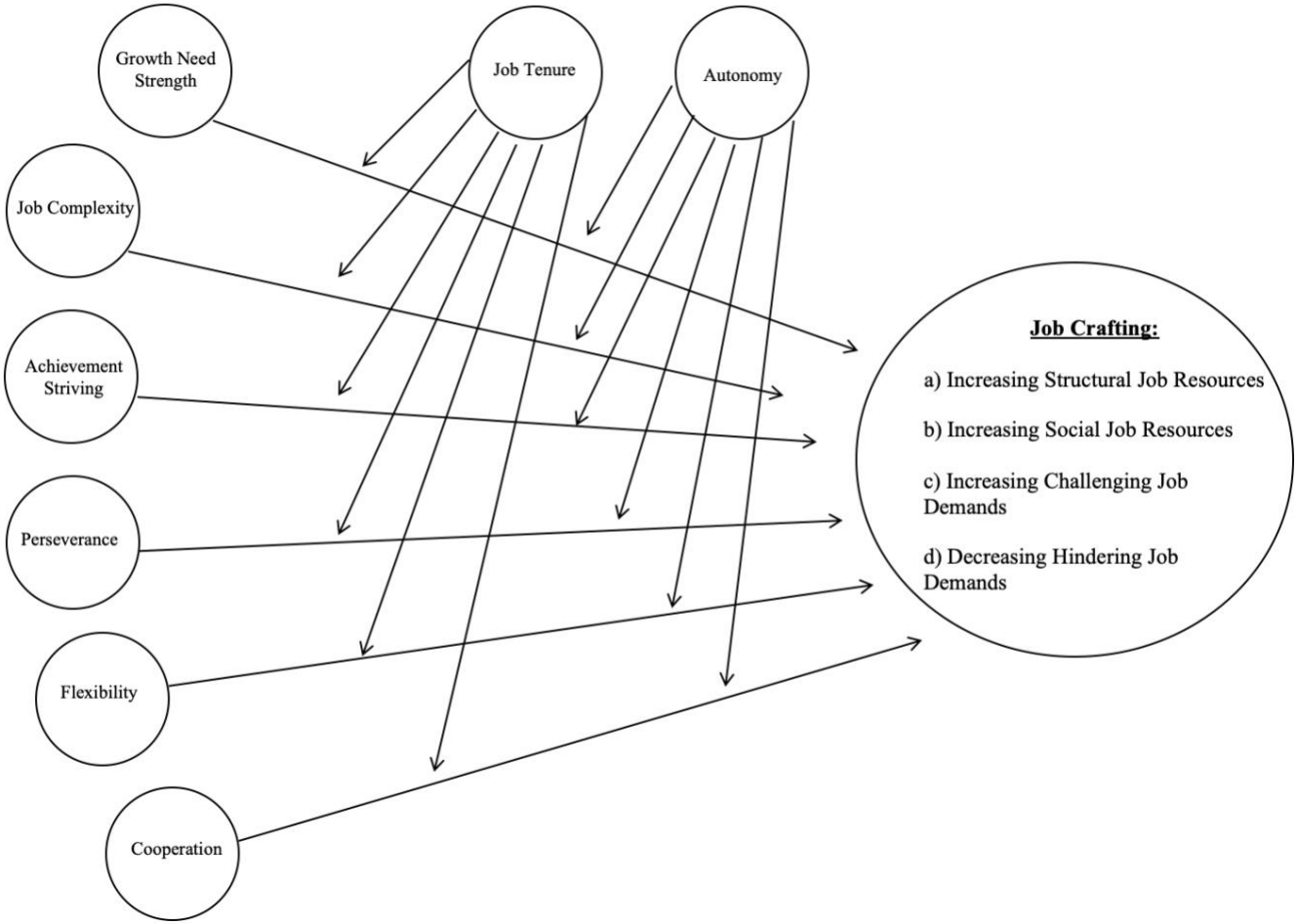


*Figure 3.* Changes in Increasing Social Job Resources as Function of Job Complexity and Work Scheduling Autonomy (Z), Facet-level Personality Regression Model

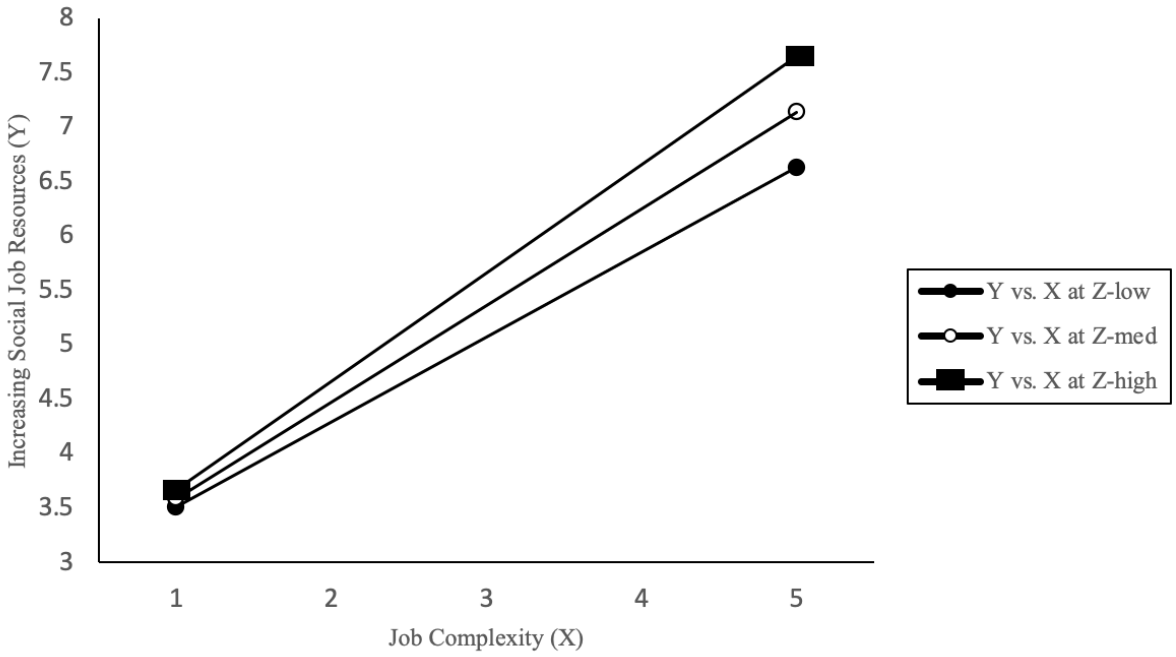


*Figure 4.* Changes in Increasing Social Job Resources as Function of Flexibility and Work Scheduling Autonomy (Z), Facet-level Personality Regression Model

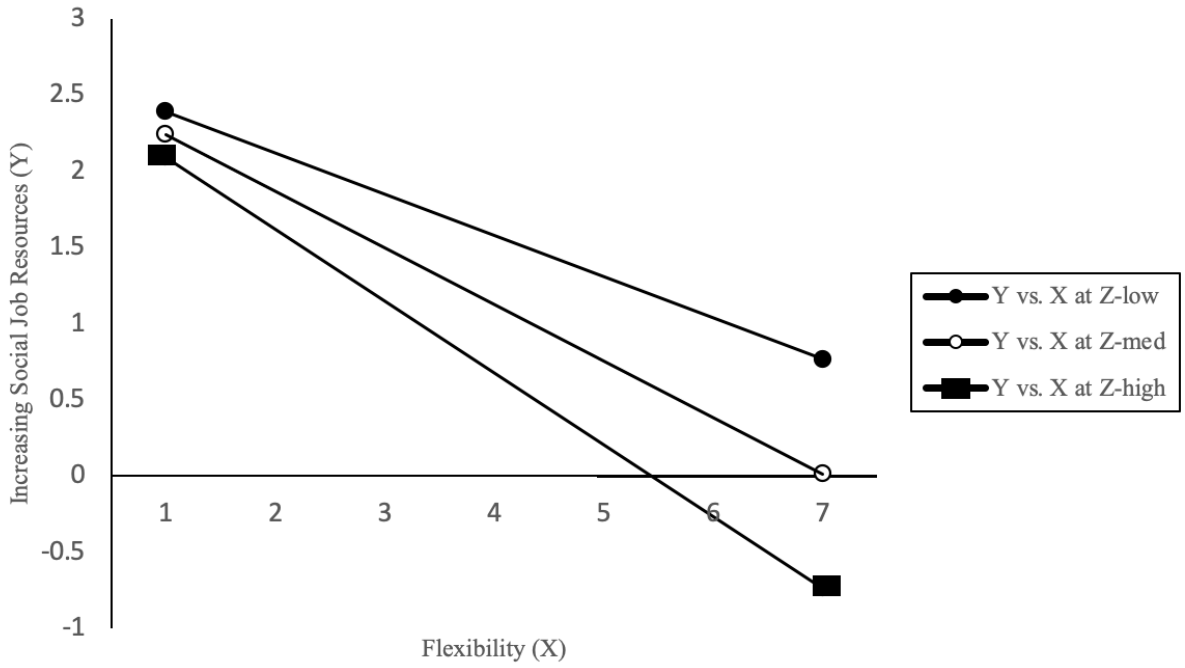


*Figure 5.* Changes in Increasing Challenging Job Demands as Function of Job Complexity and Work Scheduling Autonomy (Z), Higher-order Personality Regression Model

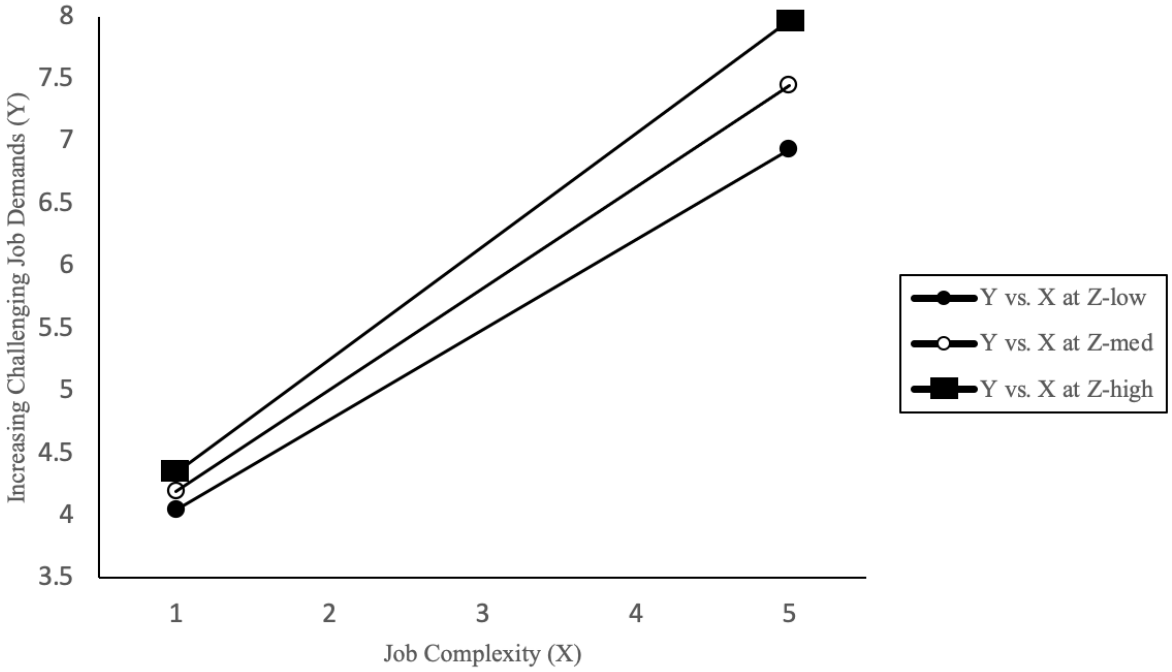


*Figure 6.* Changes in Increasing Challenging Job Demands as Function of Job Complexity and Work Scheduling Autonomy (Z), Facet-level Personality Regression Model

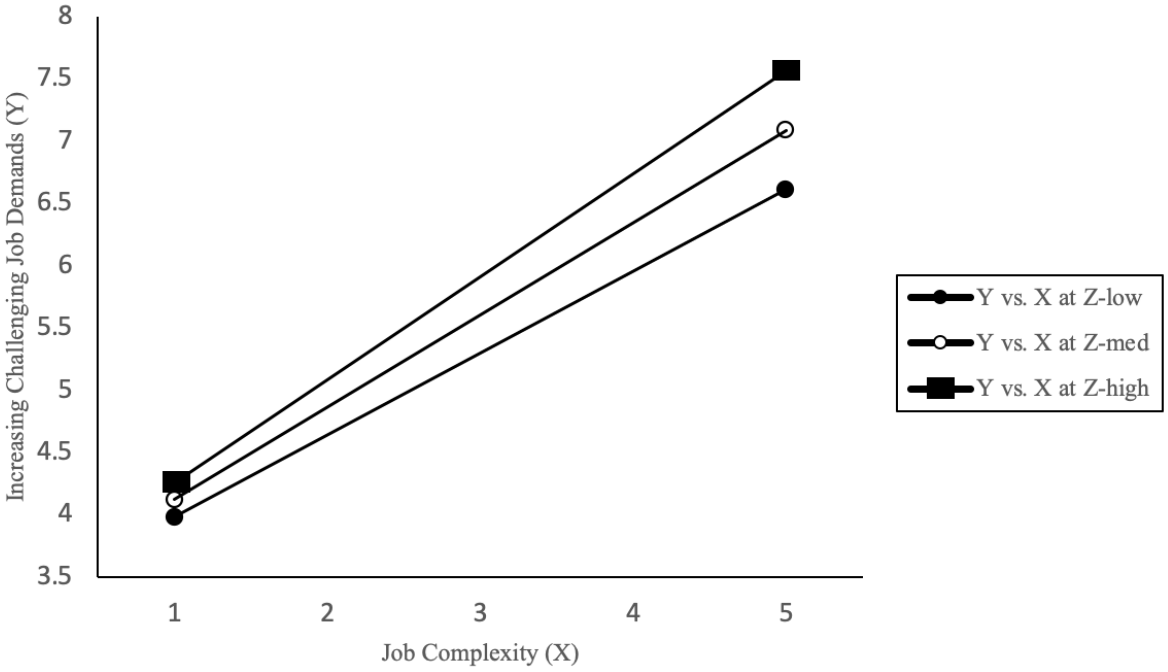


*Figure 7.* Changes in Increasing Challenging Job Demands as Function of Job Complexity and Work Methods Autonomy (Z), Facet-level Personality Regression Model

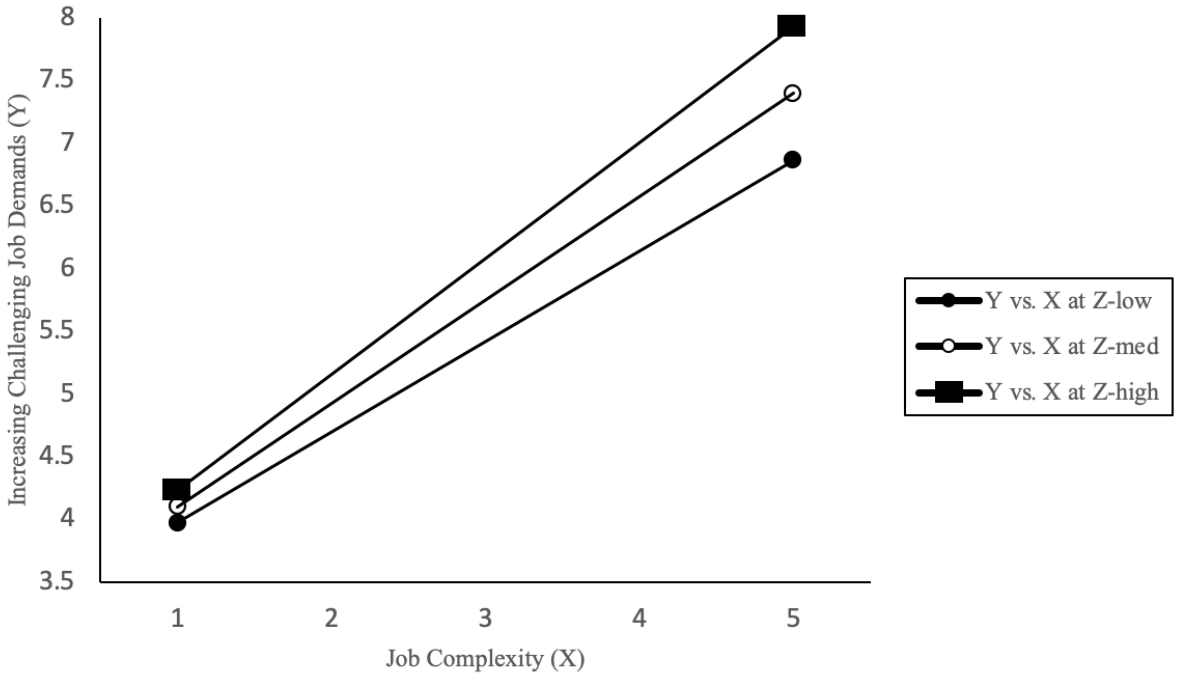


*Figure 8.* Changes in Increasing Challenging Job Demands as Function of Flexibility and Decision-making Autonomy (Z), Facet-level Personality Regression Model

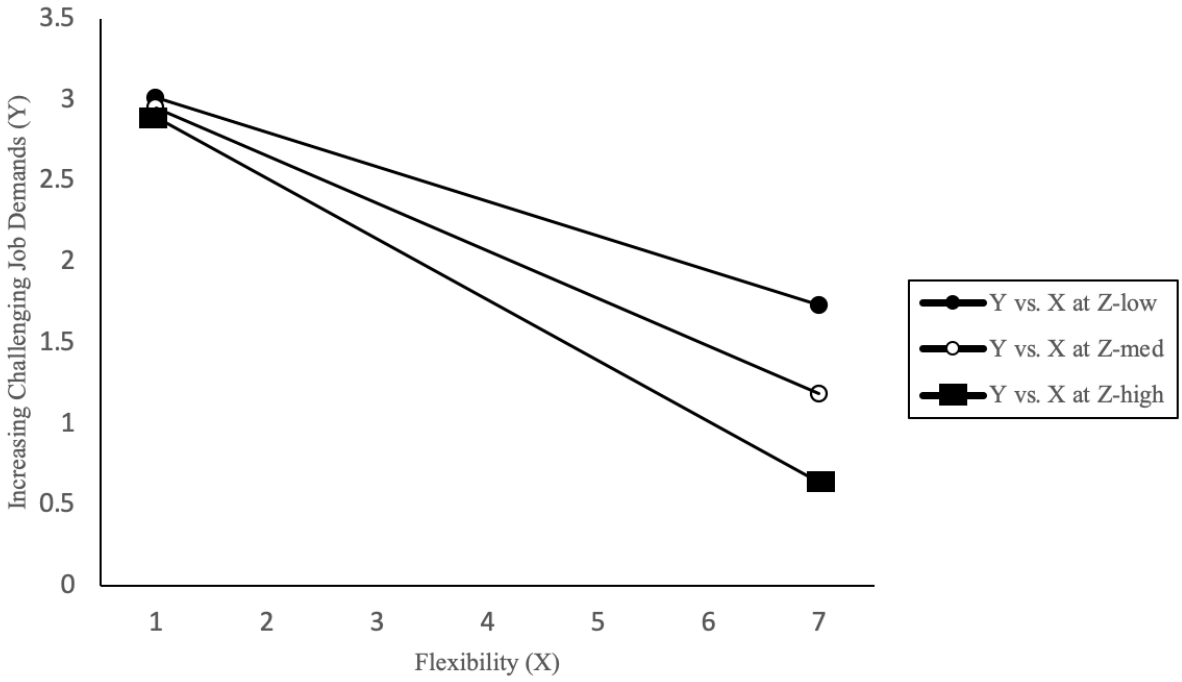


*Figure 9.* Changes in Decreasing Hindering Job Demands as Function of Job Complexity and Job Tenure (Z), Higher-order Personality Regression Model

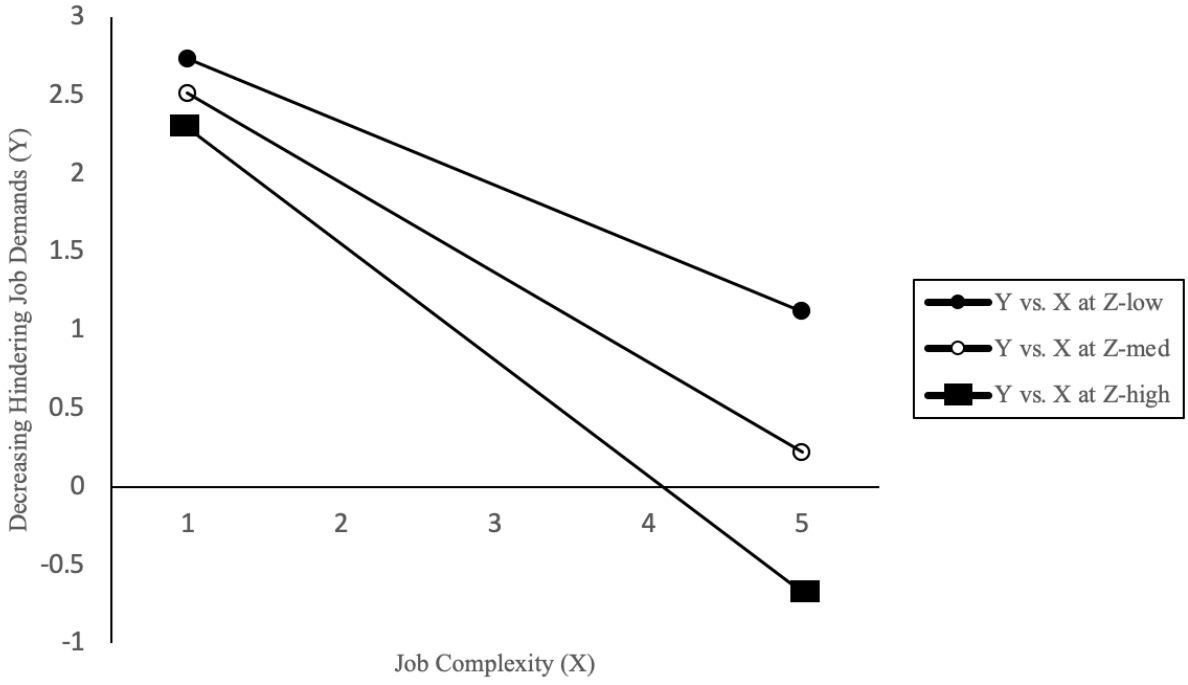


*Figure 10.* Changes in Decreasing Hindering Job Demands as Function of Job Complexity and Global Autonomy (Z), Higher-order Personality Regression Model

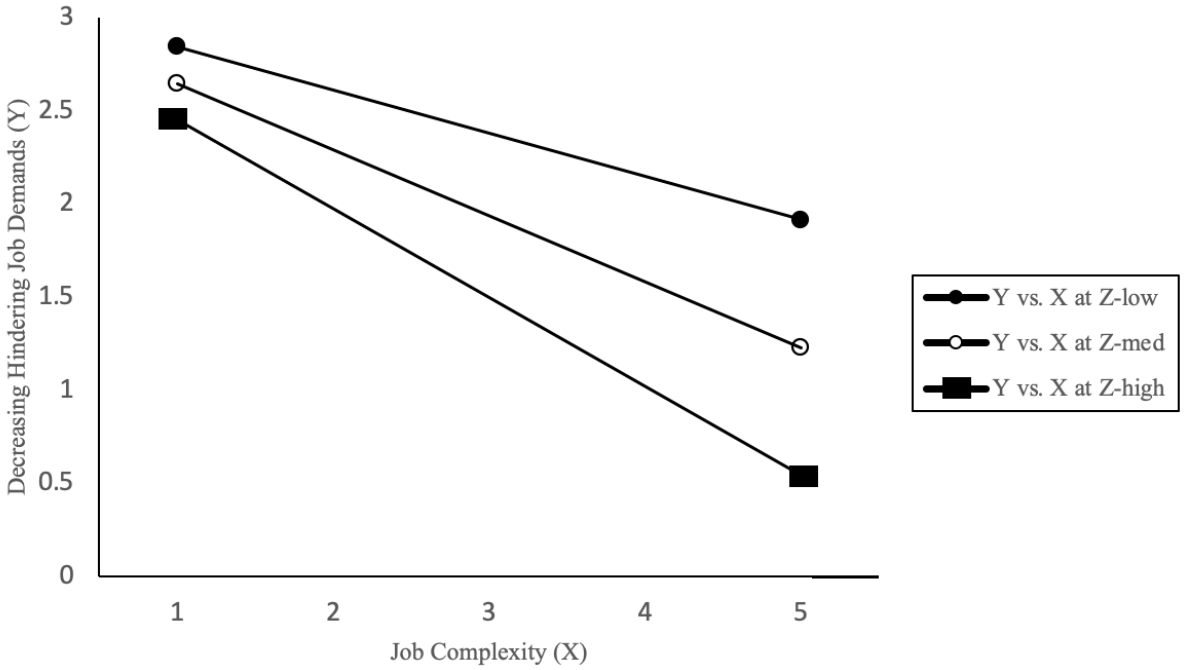
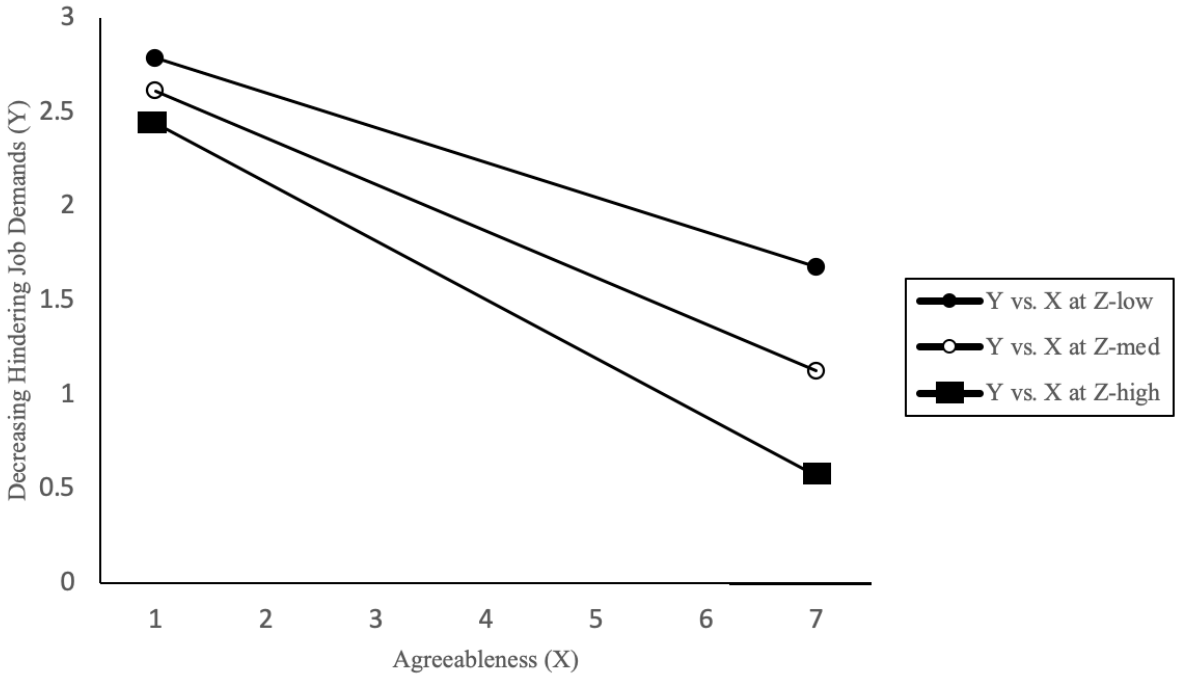


*Figure 11.* Changes in Decreasing Hindering Job Demands as Function of Agreeableness and Global Autonomy (Z), Higher-order Personality Regression Model



# APPENDICES

# Appendix A

## Job Crafting Scale

In my job...

| Never | Rarely | Regularly | Often | Very Often |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

*Increasing structural job resources*

1. I try to develop my capabilities
2. I try to develop myself professionally
3. I try to learn new things at work
4. I make sure that I use my capacities to the fullest
5. I decide on my own how I do things

*Decreasing hindering job demands*

6. I make sure that my work is mentally less intense
7. I try to ensure that my work is emotionally less intense
8. I manage my work so that I try to minimize contact with people whose problems affect me emotionally
9. I organize my work so as to minimize contact with people whose expectations are unrealistic
10. I try to ensure that I do not have to make many difficult decisions at work
11. I organize my work in such a way to make sure that I do not have to concentrate for too long a period at once

*Increasing social job resources*

12. I ask my supervisor to coach me
13. I ask whether my supervisor is satisfied with my work
14. I look to my supervisor for inspiration
15. I ask others for feedback on my job performance
16. I ask colleagues for advice

*Increasing challenging job demands*

17. When an interesting project comes along, I offer myself proactively as project co-worker
18. If there are new developments, I am one of the first to learn about them and try them out
19. When there is not much to do at work, I see it as a chance to start new projects
20. I regularly take on extra tasks even though I do not receive extra salary for them

21. I try to make my work more challenging by examining the underlying relationships between aspects of my job

# Appendix B

## Job Diagnostic Survey - Growth Need Strength

Please indicate the degree to which you would like to have, each characteristic present in your job.

| Would like having this only a moderate amount (or less) | | | Would like having this very much | | | Would like having this extremely much |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

1. High respect and fair treatment from my supervisor
2. Stimulating and challenging work *(scored)*
3. Chances to exercise independent thought and action in my job *(scored)*
4. Great job security
5. Very friendly co-workers
6. Opportunities to learn new things from my work *(scored)*
7. High salary and good fringe benefits
8. Opportunities to be creative and imaginative in my work *(scored)*
9. Quick promotions
10. Opportunities for personal growth and development in my job *(scored)*
11. A sense of worthwhile accomplishment in my work *(scored)*

# Appendix C

## Job Complexity Scale

| Very Little | Rather Little | Somewhat | Rather Much | Very Much |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

1. Do you receive tasks that are extraordinary and particularly difficult?
2. Do you often have to make very complicated decisions in your work?
3. Can you use all your knowledge and skills in your work?
4. Can you learn new things in your work?

# Appendix D

## International Personality Item Pool (IPIP) - Conscientiousness

Please indicate the extent to which you agree or disagree with the following statements.

| Strongly Disagree | Somewhat Disagree | Slightly Disagree | Neither Agree or Disagree | Slightly Agree | Somewhat Agree | Strongly Agree |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

1. Am always prepared
2. Pay attention to details
3. Get chores done right away
4. Like order
5. Follow a schedule
6. Am exacting in my work
7. Do things according to a plan
8. Continue until everything is perfect
9. Make plans and stick to them
10. Love order and regularity
11. Like to tidy up

12. Leave my belongings around (*negatively keyed*)
13. Make a mess of things (*negatively keyed*)
14. Often forget to put things back in their proper place (*negatively keyed*)
15. Shirk my duties (*negatively keyed*)
16. Neglect my duties (*negatively keyed*)
17. Waste my time (*negatively keyed*)
18. Do things in a half-way manner (*negatively keyed*)
19. Find it difficult to get down to work (*negatively keyed*)
20. Leave a mess in my room (*negatively keyed*)

# Appendix E

## International Personality Item Pool (IPIP) - Achievement-striving

Please indicate the extent to which you agree or disagree with the following statements.

| Strongly Disagree | Somewhat Disagree | Slightly Disagree | Neither Agree or Disagree | Slightly Agree | Somewhat Agree | Strongly Agree |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

1. Go straight for the goal
2. Work hard
3. Turn plans into actions
4. Plunge into tasks with all my heart
5. Do more than what's expected of me
6. Set high standards for myself and others
7. Demand quality

8. Am not highly motivated to succeed (*negatively keyed*)
9. Do just enough work to get by (*negatively keyed*)
10. Put little time and effort into my work (*negatively keyed*)

# Appendix F

## International Personality Item Pool (IPIP) - Perseverance

Please indicate the extent to which you agree or disagree with the following statements.

| Strongly Disagree | Somewhat Disagree | Slightly Disagree | Neither Agree or Disagree | Slightly Agree | Somewhat Agree | Strongly Agree |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

1. Don't quit a task before it is finished
2. Am a goal-oriented person
3. Finish things despite obstacles in the way
4. Am a hard worker
5. Don't get sidetracked when I work

6. Don't finish what I start (*negatively keyed*)
7. Give up easily (*negatively keyed*)
8. Do not tend to stick with what I decide to do (*negatively keyed*)

# Appendix G

## International Personality Item Pool (IPIP) - Agreeableness

Please indicate the extent to which you agree or disagree with the following statements.

| Strongly Disagree | Somewhat Disagree | Slightly Disagree | Neither Agree or Disagree | Slightly Agree | Somewhat Agree | Strongly Agree |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

1. Am interested in people
2. Sympathize with others' feelings
3. Have a soft heart
4. Take time out for others
5. Feel others' emotions
6. Make people feel at ease
7. Inquire about others' well-being
8. Know how to comfort others
9. Love children
10. Am on good terms with nearly everyone
11. Have a good word for everyone
12. Show my gratitude
13. Think of others first
14. Love to help others

15. Insult people (*negatively keyed*)
16. Am not interested in other people's problems (*negatively keyed*)
17. Feel little concern for others (*negatively keyed*)
18. Am not really interested in others (*negatively keyed*)
19. Am hard to get to know (*negatively keyed*)
20. Am indifferent to the feelings of others (*negatively keyed*)

# Appendix H

## International Personality Item Pool (IPIP) - Flexibility

Please indicate the extent to which you agree or disagree with the following statements.

| Strongly Disagree | Somewhat Disagree | Slightly Disagree | Neither Agree or Disagree | Slightly Agree | Somewhat Agree | Strongly Agree |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

1. Adjust easily
2. Am good at taking advice

3. When interacting with a group of people, am often bothered by at least one of them (*negatively keyed*)
4. React strongly to criticism (*negatively keyed*)
5. Get upset if others change the way that I have arranged things (*negatively keyed*)
6. Am hard to convince (*negatively keyed*)
7. Am annoyed by others' mistakes (*negatively keyed*)
8. Can't stand being contradicted (*negatively keyed*)
9. Am hard to satisfy (*negatively keyed*)
10. Am hard to reason with (*negatively keyed*)

# Appendix I

## International Personality Item Pool (IPIP) - Cooperation

Please indicate the extent to which you agree or disagree with the following statements.

| Strongly Disagree | Somewhat Disagree | Slightly Disagree | Neither Agree or Disagree | Slightly Agree | Somewhat Agree | Strongly Agree |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

1. Am easy to satisfy
2. Can't stand confrontations
3. Hate to seem pushy

4. Have a sharp tongue (*negatively keyed*)
5. Contradict others (*negatively keyed*)
6. Love a good fight (*negatively keyed*)
7. Yell at people (*negatively keyed*)
8. Insult people (*negatively keyed*)
9. Get back at others (*negatively keyed*)
10. Hold a grudge (*negatively keyed*)

# Appendix J

## Job Diagnostic Survey - Autonomy

1. How much autonomy is there in your job? That is, to what extent does your job permit you to decide on your own how to go about doing your work?

| Very little; the job gives me almost no personal "say" about how and when the work is done. | | Moderate autonomy; many things are standardized and not under my control, but I can make some decisions about the work. | | | | Very much; the job gives me almost complete responsibility for deciding how and when the work is done. |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

How accurate is the statement in describing your job?

| Very Inaccurate | Mostly Inaccurate | Slightly Inaccurate | Uncertain | Slightly Accurate | Mostly Accurate | Very Accurate |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

2. The job gives me considerable opportunity for independence and freedom in how I do the work
3. The job denies me any chance to use my personal initiative or judgment in carrying out the work (*negatively keyed*)

# Appendix K

## Work Design Questionnaire (WDQ) - Autonomy

| Strongly Disagree | Disagree | Neither Agree or Disagree | Agree | Strongly Agree |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

*Work Scheduling Autonomy*

1. The job allows me to make my own decisions about how to schedule my work.
2. The job allows me to decide on the order in which things are done on the job.
3. The job allows me to plan how I do my work.

*Decision-Making Autonomy*

4. The job gives me a chance to use my personal initiative or judgment in carrying out the work.
5. The job allows me to make a lot of decisions on my own.
6. The job provides me with significant autonomy in making decisions.

*Work Methods Autonomy*

7. The job allows me to make decisions about what methods I use to complete my work.
8. The job gives me considerable opportunity for independence and freedom in how I do the work.
9. The job allows me to decide on my own how to go about doing my work.

Appendix L

Dissertation Proposal

# Toward a More Complete Understanding of Work Analysis Variation: Individual Differences and Situational Antecedents of Job Crafting

by
Gary Igor Travinin

A proposal submitted to the Graduate Faculty of
North Carolina State University
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

Psychology

Raleigh, North Carolina
2020

APPROVED BY:

| | |
|---|---|
| _____ | _____ |
| Dr. Mark A. Wilson<br>Chair of Advisory Committee | Dr. S. Bartholomew Craig |
| _____ | _____ |
| Dr. Adam W. Meade | Dr. Lori L. Foster |

## Toward a More Complete Understanding of Work Analysis Variation: Individual Differences and Situational Antecedents of Job Crafting

Human capital initiatives implemented at both private and public sector organizations are most often preceded by a work analysis, or "the systematic investigation of work role requirements and the broader context within which work roles are enacted" (Morgeson & Dierdorff, 2011, p. 4). Given the practical implications, understanding the factors impacting the data points gathered from a work analysis is critical. DuVernet, Dierdorff, and Wilson synthesized this research with their 2015 meta-analysis examining 19 variables that influence work analysis data. This collection of variables ranged from descriptor choices (e.g., type of data collected, level of specificity), collection method choices (e.g., rater training, number of methods), rating scale decisions (e.g., type of scale, subjectivity of the scale), data source decisions (e.g., variability of age, sex, race, or tenure), and work analysis purposes (e.g., used for selection, personal relevance). The authors found that these variables did impact work analysis quality, conceptualized as measures of reliability, agreement, as well as factor structure and mean ratings. Given their findings, they called for future research to examine idiosyncratic differences in work analysis data, particularly calling out job crafting as a person-centric fruitful stream of research to explore. They specifically cited prosocial values, role orientation, and autonomy as factors that have been shown to predict job crafting and thus might explain differences in work analysis outcomes. In addition, Sanchez and Levine (2012) also called for the literature to explore job crafting as a possible explanation for interrater variation in work analysis. This study will examine whether individual differences for job crafting as well as situational antecedents leading to perceived opportunities to job craft are related to four dimensions of job crafting.

**Job Crafting**

Job crafting is defined as employees who "shape, mold, and redefine their jobs" by changing physical and psychological task boundaries as well as relationships at work (Wrzesniewski & Dutton, 2001, p.180; Tims, Bakker, & Derks, 2012). These changes to task boundaries or relationships are done under the initiative of the employee, differentiating job crafting from more formal job redesign (Tims et al., 2012). Job crafting behavior has long been seen as a function of both the situation and the person (Wrzesniewski & Dutton, 2001). For the purposes of this study, job crafting is conceptualized from the perspective of the job demands-resources (JD-R) model, which Tims et al. (2012) argued captured a broader array of job characteristics employees may alter. The JD-R model is similar to Wrzesniewski and Dutton's (2001) view in that they both suggest job crafting takes place every day. The primary difference in the two views is that while Wrzesniewski and Dutton (2001) emphasize crafting behaviors to find meaning, the JD-R model is "focused on job characteristics that can influence the motivation and health of employees" (Demerouti, 2014, p.239). For the purposes of this study, I adopt the conceptualization of job crafting identified by Tims et al. (2012), which includes: a) increasing social job resources, b) increasing structural job resources, c) increasing, challenging job demands, and d) decreasing hindering job demands. A 2014 review article found that outcomes of job crafting include motivation, work engagement, experienced meaning at work, health, and job performance (Demerouti). Table 1 outlines several of the variables examined as predictors of job crafting recently in the literature.

The following study proposes to examine several predictors of job crafting as well as the effects of two moderators. The next two sections describe the proposed variables,

proposed relationship with job crafting, and the proposed methodology of the study. Figure 1 displays the study's design, which examines a novel predictor of growth need strength (GNS), as well as a replication of job complexity, conscientiousness, and agreeableness. The following study also proposes to examine two moderators of job tenure and autonomy. The proposed study contributes to the research by examining several individual and situational antecedents that may contribute to work analysis variations through actual changes to job demands or job resources.

**Growth Need Strength**

Hackman and Oldham defined growth need strength (GNS) as the "desire to obtain growth satisfaction from his or her work" (1975, p.162-163). Hackman and Oldham (1975) described GNS as a moderator of the job characteristics model. With respect to job crafting, Wrzesniewski and Dutton (2001) suggested that intrinsic motivations could lead employees to job craft. Research has proposed GNS as a moderator between job crafting and career instrumentality, as well as a moderator between work design and performance (Fried, Grand, Levi, Hadani, & Slowik, 2007; Parker & Turner, 2002). Empirical research has also found evidence for the moderating ability of GNS on measures of productivity (Graen, Scandura, & Graen 1986; Das, 1991). Despite this, Dierdorff (2003) pointed out that GNS has rarely garnered much attention as a predictor, often being relegated to a moderator. The proposed study examines GNS not as a moderator, but as a direct predictor of job crafting. Given the evidence of GNS to facilitate crafting and productivity as a moderator, the proposed study hypothesizes that those high on GNS will be more likely to craft their jobs with the exception of the decreasing hindering job demands dimension. Tims et al. (2012) found a significant

negative correlation between personal initiative and the decreasing hindering job demands dimension, thus a similar directionality is predicted with GNS.

**Hypothesis 1.** Growth need strength (GNS) will positively predict the job crafting dimensions of a) increasing social job resources, b) increasing structural job resources, c) increasing challenging job demands, and d) negatively predict decreasing hindering job demands.

**Job Complexity**

Lievens, Sanchez, Bartam, and Brown (2010) partly used job crafting literature to find that job complexity, job content, and the nature of occupational activities accounted for variance in competency ratings for the same occupations. Additionally, Lievens et al. (2010) and Sanchez and Levine (2012) suggest studies have almost exclusively focused on individual antecedents of job crafting, ignoring the situation. It has been suggested that job complexity will make interpretations of a job more idiosyncratic (Sanchez et al., 1998), and Ghitulescu (2007) found that task complexity enabled job crafting behaviors. Finally, Dierdorff and Morgeson (2007) examined interdependence, autonomy, and routinization in relation to work requirements and found that occupational context impacted consensus in work role requirements. Given the evidence that job complexity could enable job crafting behaviors, the proposed study hypothesizes that more complex jobs will result in more job crafting behaviors.

**Hypothesis 2.** Job complexity will positively predict the job crafting dimensions of a) increasing social job resources, b) increasing structural job resources, c) increasing challenging job demands, and d) decreasing hindering job demands.

**Personality**

Bipp and Demerouti (2015) noted that only a handful of studies have provided evidence of the relationship between personality and job crafting. The studies specifically cited small to moderate positive correlations between personality antecedents (self-image, perceived control, readiness to change, and proactive personality and personal initiative) and job crafting (Lyons, 2008; Bakker, Tims, & Derks, 2012; Tims et al., 2012). In addition to these studies, Bell and Njolli (2016) and Laurence (2010) both examined agreeableness and conscientiousness in relation to job crafting. The former found both to be significant predictors of job crafting, while the latter found both to have a significant moderating effect on job crafting. Given the evidence that personality could predict job crafting behaviors, the proposed study hypothesizes that those who are more conscientiousness and agreeable will be more likely to craft their jobs, with the exception of the decreasing hindering job demands dimension. Tims et al. (2012) found a significant negative correlation between personal initiative and the decreasing hindering job demands dimension, as well as a significant positive correlation with cynicism and the decreasing hindering job demands dimension. Given the relationship with personal initiative and that conscientiousness can reflect elements such as achievement orientation and being hardworking, a negative directionality is proposed for the decreasing hindering job demands dimension (Barrick & Mount, 1991). Additionally, the relationship between the decreasing hindering job demands dimension and cynicism suggests that agreeableness, which can reflect elements such as being courteous, tolerant, and forgiving, will also have a negative directionality (Barrick & Mount, 1991).

**Hypothesis 3.** Conscientiousness will positively predict the job crafting dimensions of a) increasing social job resources, b) increasing structural job resources, c) increasing challenging job demands, and d) negatively predict decreasing hindering job demands.

**Hypothesis 4.** Agreeableness will positively predict the job crafting dimensions of a) increasing social job resources, b) increasing structural job resources, c) increasing challenging job demands, and d) negatively predict decreasing hindering job demands.

## Proposed Moderators

### Job Tenure and Autonomy

In addition to the above predictors, the proposed study also examines two moderators: 1) job tenure and 2) autonomy. Kooji, Tims, and Kanfer (2015) proposed that older workers may use job crafting to "age successfully at work" (p.146), also stating that they were not aware of any studies examining job crafting among specifically older employees. Additionally, autonomy is thought to be a key component of the motivation to craft portion of the Wrzesniewski and Dutton (2001) model. To this end, studies have observed positive relationships between decision latitude and job crafting (Leana, Appelbaum, & Shevchuk, 2009; Lyons, 2008). Given the evidence that job tenure and autonomy could be related to job crafting behaviors, the proposed study hypothesizes that both will moderate the relationship between the proposed predictors and job crafting dimensions.

**Hypothesis 5.** Job tenure will moderate the relationship between growth needs strength, job complexity, agreeableness, and conscientiousness and job crafting, such that greater levels of job tenure will be related to greater levels of a) increasing social job resources, b) increasing structural job resources, c) increasing challenging job demands, and d) decreasing hindering job demands.

**Hypothesis 6.** Autonomy will moderate the relationship between growth needs strength, job complexity, agreeableness, and conscientiousness and job crafting, such that greater levels of autonomy will be related to greater levels of a) increasing social job

resources, b) increasing structural job resources, c) increasing challenging job demands, and d) decreasing hindering job demands.

## Method

### Participants

The proposed study will utilize Amazon's Mechanical Turk (hereafter: Mturk) to elicit responses from participants. Mturk is an online platform that has been shown to be an inexpensive, rapid, and reliable method of collecting data (Buhrmester, Kwang, & Gosling, 2011). Mturk allows "Workers", or participants, to complete assignments (i.e. "HITS") in exchange for a financial reward. All Mturk participants must be at least 18 years old and have access to the Internet. In addition, I also propose to restrict my participant pool by imposing qualifications that a participant must meet before they can complete my assignments. Namely, that they be a full-time employee, reside in the United States, and that they have not already completed the assignment once. I will also include 1 to 2 "attention-check" questions to test for careless responding. When collecting Mturk data it is important to consider the number of cases needed to avoid a Type 2 error. Kenny (2015) noted that when examining the effect size of tests of moderation with a categorial moderator and continuous causal variable, in order to have 80 percent power at a small effect size, one should expect to collect a sample size of about 316. Kenny (2015) also notes that this small effect size may be unrealistic given the average effect sizes found are quite smaller than what Cohen (1988) originally suggested. Additionally, power tests with continuous variables are low (McClelland & Judd, 1993; Kenny, 2015). Considering this, and the relatively inexpensive nature of Mturk, I will plan to collect at least 500 cases of clean data.

### Procedures

Participants on Mturk will be asked to complete responses for the four job crafting dimensions, growth need strength, job complexity, conscientiousness, agreeableness, job tenure, and autonomy. In addition, they will be asked to provide their age, gender (*0 = male, 1 = female*), and education level (*0 = no degree, 1 = high school degree, 2= college degree, 3= post-graduate degree*). Participants will be compensated for completing the survey. No information will be collected that could identify the participant and all responses will be gathered voluntarily for compensation. Participants will be required to complete each measure listed below and answer each careless responding question correctly to receive compensation. Only complete cases will be retained for analysis.

**Measures**

**Job Crafting.** The job crafting scale developed by Tims et al. (2012) will be used to measure four dimensions of job crafting. This measure is 21 items using a 5-point Likert scale that ranges from 1 (*never*) to 5 (*very often*). Tims et al. (2012) found each dimension to have a Cronbach's alpha of greater than .70 (increasing structural job resources (.82), increasing social job resources (.77), increasing challenging job demands (.75), decreasing hindering job demands (.79)). Higher scores on this measure indicate higher levels of each job crafting dimension. See Appendix A for the full measure.

**Growth Need Strength.** The growth need strength scale portion of the Job Diagnostic Survey (JDS) developed by Hackman and Oldham (1975) will be used to measure growth need strength. This measure is 11 items using a 7-point Likert scale that ranges from 1 (*would like having this only a moderate amount (or less)*) to 7 (*would like having this extremely much*), however only 6 of items on the scale are scored. Hackman and Oldham

(1975) found this scale to have a Cronbach's alpha of .88. Higher scores on this measure indicate higher levels of growth need strength. See Appendix B for the full measure.

**Job Complexity.** Job complexity items developed by Semmer (1982) and Zapf (1993) will be used to measure job complexity. This measure is 4 items using a 5-point Likert scale that ranges from 1 (*very little*) to 5 (*very much*). Zacher and Frese (2011) found this scale to have a Cronbach's alpha of .76. Higher scores on this measure indicate higher levels of job complexity. See Appendix C for the full measure.

**Conscientiousness.** The International Personality Item Pool will be used to measure conscientiousness. This measure is 20 items using a 7-point Likert scale that ranges from 1 (*strongly disagree*) to 7 (*strongly agree*). This scale has a Cronbach's alpha of .88 (IPIP; Goldberg, 1999). Higher scores on this measure indicate higher levels of conscientiousness. The order with which items appear will be randomized for participants, as the original scale contains positively keyed items first and negatively keyed items second. See Appendix D for the full measure.

**Agreeableness.** The International Personality Item Pool will be used to measure agreeableness. This measure is 20 items using a 7-point Likert scale that ranges from 1 (*strongly disagree*) to 7 (*strongly agree*). This scale has a Cronbach's alpha of .88 (IPIP; Goldberg, 1999). Higher scores on this measure indicate higher levels of agreeableness. The order with which items appear will be randomized for participants, as the original scale contains positively keyed items first and negatively keyed items second. See Appendix E for the full measure.

**Job Tenure.** A job tenure measure will be created for the purposes of this study. Participants will be asked to indicate their time in their current position. Responses will be

crafted to be sensitive to lower amounts of tenure and will include: 1) 0-1 months, 2) 1-4 months, 3) 5-8 months, 4) 9-12 months, 5) 13-18 months, 6) 19-23 months, 7) 2-3 years, 8) 4-5 years, or 9) more than 5 years.

**Autonomy.** The autonomy portion of the Job Diagnostic Survey (JDS) developed by Hackman and Oldham (1975) will be used to measure autonomy. This measure is 3 items using a 7-point Likert scale that ranges from 1 (*very little; the job gives me almost no personal "say" about how and when the work is done*) to 7 (*very much; the job gives me almost complete responsibility for deciding how and when the work is done*) for the first item and 1 (*very inaccurate)* to 7 *(very accurate)* for items 2 and 3. Hackman and Oldham (1975) found this scale to have a Cronbach's alpha of .66. Higher scores on this measure indicate higher levels of autonomy. See Appendix F for the full measure.

## Proposed Analyses

Analysis will take place using SPSS software. All measures will be averaged across scale items to create an overall score. Descriptive statistics, intercorrelations, and reliability estimates will be calculated and presented in Table 2.

Hypothesis 1 through 6 will be tested using hierarchical regression. Prior to analysis, predictor variables will be centered by subtracting the mean from each value (Aiken & West, 1991). Analysis will be conducted on each dimension of job crafting individually. The first regression equation, or step 1, will include control variables only (i.e., age, gender, and education level). Step 2 will include the predictor variables of growth need strength, job complexity, conscientiousness, and agreeableness, as well as one of the moderator variables. Step three will contain the interaction terms between the predictor and moderator variables.

This process will be repeated for the second moderator variable. Outputs of the analyses will be presented in Tables 3 through 10.

Results will be evaluated based on the difference in variance explained between steps and whether the interaction term is statistically significant. Results will be plotted to examine interaction effects, using methods outlined by Preacher and Rucker (2003) to develop plots. More specifically, the moderator variable will be considered intermediate at its mean, low 1 standard deviation below the mean, and high 1 standard deviation above the mean. The maximum and minimum values of each predictor will be used when developing plots. The dependent variable will be plotted along the Y-axis.

## Discussion

Table 1
*Predictors of Job Crafting*

| *Source* | *Predictors Examined* |
|---|---|
| Bakker et al., (2012) | Proactive Personality |
| Berg, Wrzesniewski, & Dutton (2010) | Job Challenges & Employee Rank |
| Bell & Njoli, (2016) | Conscientiousness, Extraversion, Agreeableness, Openness to experience and Neuroticism |
| Bipp & Demerouti (2015) | Approach & Avoidance Temperament |
| Ghitulescu, (2007) | Work Discretion, Task Complexity, & Interdependence |
| Hakanen, Peeters, & Schaufeli (2018) | Work Engagement, Workaholism, Burnout, Job Satisfaction |
| Laurence, (2010) | Conscientiousness, Agreeableness, Driveness to Work, Enjoyment of Work, Political Skill, Creative Performance, Social Support, Level of Routinization, & Work Family Conflict |
| Leana et al., (2009) | Discretion at Work, Interdependence, Calling Orientation, Supportive Supervision, & Social Ties with Peers, |
| Li, Sekiguchi, & Qi (2014) | Skill Variety, Promotion Focus, & Procedural Justice |
| Lu, Wang, Lu, Du, & Bakker (2014) | Work Engagement, & Work Insecurity |
| Lyons, (2008) | Self-Image, Perceived Control, & Readiness to Change |
| Niessen, Weseler, & Kostova (2016) | Need for Positive Self-Image, Work Experience, & Need for Human Connection |
| Qi, Li, & Zhang (2014) | Organizational Embeddedness, & Affective Commitment |
| Roczniewska & Bakker (2016) | Psychopathy, Extraversion, Neuroticism, Machiavellianism, & Age |
| Tims, Bakker, & Derks (2015) | Job Crafting Intentions, Work Engagement |

Table 1 (continued).

| | |
|---|---|
| Wang, Demerouti, & Blanc, (2017) | Transformational Leadership, Adaptability, & Organizational Identification |
| Petrou, Demerouti, Peeters, Schaufeli, & Hetland, (2012) | Work Pressure, Autonomy |
| Petrou, Demerouti, & Schaufeli (2015) | Perceived Impact of Implemented Changes & Employee Willingness to Follow Changes |
| Petrou, Demerouti, & Schaufeli, (2018) | Quality of organizational change communication |

Table 2
*Summary of Intercorrelations, Means, and Standard Deviations*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Age | | | | | | | | | | | | | |
| 2. Gender | | | | | | | | | | | | | |
| 3. Education | | | | | | | | | | | | | |
| 4. Growth Need Strength | | | | | | | | | | | | | |
| 5. Job Complexity | | | | | | | | | | | | | |
| 6. Conscientiousness | | | | | | | | | | | | | |
| 7. Agreeableness | | | | | | | | | | | | | |
| 8. Job Tenure | | | | | | | | | | | | | |
| 9. Autonomy | | | | | | | | | | | | | |
| 10. Increasing Structural Job Resources | | | | | | | | | | | | | |
| 11. Increasing Social Job Resources | | | | | | | | | | | | | |
| 12. Increasing Challenging Job Demands | | | | | | | | | | | | | |
| 13. Decreasing Hindering Job Demands | | | | | | | | | | | | | |
| *M* | | | | | | | | | | | | | |
| *SD* | | | | | | | | | | | | | |

*Note.* Numbers along the diagonal are Cronbach's coefficient alpha values. All measures will be on a 7-point Likert scale with the exception of job crafting dimensions (5) and job complexity (5). Control variables will be (*0 = male, 1 = female*), and education level (*0 = no degree, 1 = high school degree, 2= college degree, 3= post-graduate degree*). Job tenure will be measured on a 1) 0-1 months, 2) 1-4 months, 3) 5-8 months, 4) 9-12 months, 5) 13-18 months, 6) 19-23 months, 7) 2-3 years, 8) 4-5 years, or 9) more than 5 years. *$p < .05$ **$p < .01$.

Table 3
*Regression Analysis Predicting Increasing Structural Job Resources with Job Tenure as a moderator.*

| Variable | *B* | *SE* | *β* | *B* | *SE* | *β* | *B* | *SE* | *β* |
|---|---|---|---|---|---|---|---|---|---|
| Step 1: | | | | | | | | | |
| Age | | | | | | | | | |
| Gender | | | | | | | | | |
| Education | | | | | | | | | |
| Step 2: | | | | | | | | | |
| Growth Needs Strength (GNS) | | | | | | | | | |
| Job Complexity (JC) | | | | | | | | | |
| Conscientiousness (C) | | | | | | | | | |
| Agreeableness (A) | | | | | | | | | |
| Job Tenure (JT) | | | | | | | | | |
| Step 3: | | | | | | | | | |
| GNS x JT | | | | | | | | | |
| JC x JT | | | | | | | | | |
| C x JT | | | | | | | | | |
| A x JT | | | | | | | | | |
| $\Delta R^2$ | | | | | | | | | |
| $R^2$ | | | | | | | | | |

*Note*. *df* = .
*$p < .05$ **$p < .01$

Table 4
*Regression Analysis Predicting Increasing Social Job Resources with Job Tenure as a moderator.*

| Variable | *B* | *SE* | *β* | *B* | *SE* | *β* | *B* | *SE* | *β* |
|---|---|---|---|---|---|---|---|---|---|
| Step 1: | | | | | | | | | |
| Age | | | | | | | | | |
| Gender | | | | | | | | | |
| Education | | | | | | | | | |
| Step 2: | | | | | | | | | |
| Growth Needs Strength (GNS) | | | | | | | | | |
| Job Complexity (JC) | | | | | | | | | |
| Conscientiousness (C) | | | | | | | | | |
| Agreeableness (A) | | | | | | | | | |
| Job Tenure (JT) | | | | | | | | | |
| Step 3: | | | | | | | | | |
| GNS x JT | | | | | | | | | |
| JC x JT | | | | | | | | | |
| C x JT | | | | | | | | | |
| A x JT | | | | | | | | | |
| $\Delta R^2$ | | | | | | | | | |
| $R^2$ | | | | | | | | | |

*Note*. *df* = .
*$p < .05$ **$p < .01$

Table 5
*Regression Analysis Predicting Increasing Challenging Job Demands with Job Tenure as a moderator.*

| Variable | *B* | *SE* | *β* | *B* | *SE* | *β* | *B* | *SE* | *β* |
|---|---|---|---|---|---|---|---|---|---|
| Step 1: | | | | | | | | | |
| Age | | | | | | | | | |
| Gender | | | | | | | | | |
| Education | | | | | | | | | |
| Step 2: | | | | | | | | | |
| Growth Needs Strength (GNS) | | | | | | | | | |
| Job Complexity (JC) | | | | | | | | | |
| Conscientiousness (C) | | | | | | | | | |
| Agreeableness (A) | | | | | | | | | |
| Job Tenure (JT) | | | | | | | | | |
| Step 3: | | | | | | | | | |
| GNS x JT | | | | | | | | | |
| JC x JT | | | | | | | | | |
| C x JT | | | | | | | | | |
| A x JT | | | | | | | | | |
| $\Delta R^2$ | | | | | | | | | |
| $R^2$ | | | | | | | | | |

*Note*. *df* = .
*$p < .05$ **$p < .01$

Table 6
*Regression Analysis Predicting Decreasing Hindering Job Demands with Job Tenure as a moderator.*

| Variable | *B* | *SE* | *β* | *B* | *SE* | *β* | *B* | *SE* | *β* |
|---|---|---|---|---|---|---|---|---|---|
| Step 1: | | | | | | | | | |
| Age | | | | | | | | | |
| Gender | | | | | | | | | |
| Education | | | | | | | | | |
| Step 2: | | | | | | | | | |
| Growth Needs Strength (GNS) | | | | | | | | | |
| Job Complexity (JC) | | | | | | | | | |
| Conscientiousness (C) | | | | | | | | | |
| Agreeableness (A) | | | | | | | | | |
| Job Tenure (JT) | | | | | | | | | |
| Step 3: | | | | | | | | | |
| GNS x JT | | | | | | | | | |
| JC x JT | | | | | | | | | |
| C x JT | | | | | | | | | |
| A x JT | | | | | | | | | |
| $\Delta R^2$ | | | | | | | | | |
| $R^2$ | | | | | | | | | |

*Note. df* = .
*$p$ < .05 **$p$ < .01

Table 7
*Regression Analysis Predicting Increasing Structural Job Resources with Autonomy as a moderator.*

| Variable | *B* | *SE* | *β* | *B* | *SE* | *β* | *B* | *SE* | *β* |
|---|---|---|---|---|---|---|---|---|---|
| Step 1: | | | | | | | | | |
| Age | | | | | | | | | |
| Gender | | | | | | | | | |
| Education | | | | | | | | | |
| Step 2: | | | | | | | | | |
| Growth Needs Strength (GNS) | | | | | | | | | |
| Job Complexity (JC) | | | | | | | | | |
| Conscientiousness (C) | | | | | | | | | |
| Agreeableness (A) | | | | | | | | | |
| Autonomy (AU) | | | | | | | | | |
| Step 3: | | | | | | | | | |
| GNS x AU | | | | | | | | | |
| JC x AU | | | | | | | | | |
| C x AU | | | | | | | | | |
| A x AU | | | | | | | | | |
| $\Delta R^2$ | | | | | | | | | |
| $R^2$ | | | | | | | | | |

*Note*. *df* = .
*$p$ < .05 **$p$ < .01

Table 8
*Regression Analysis Predicting Increasing Social Job Resources with Autonomy as a moderator.*

| Variable | *B* | *SE* | *β* | *B* | *SE* | *β* | *B* | *SE* | *β* |
|---|---|---|---|---|---|---|---|---|---|
| Step 1: | | | | | | | | | |
| Age | | | | | | | | | |
| Gender | | | | | | | | | |
| Education | | | | | | | | | |
| Step 2: | | | | | | | | | |
| Growth Needs Strength (GNS) | | | | | | | | | |
| Job Complexity (JC) | | | | | | | | | |
| Conscientiousness (C) | | | | | | | | | |
| Agreeableness (A) | | | | | | | | | |
| Autonomy (AU) | | | | | | | | | |
| Step 3: | | | | | | | | | |
| GNS x AU | | | | | | | | | |
| JC x AU | | | | | | | | | |
| C x AU | | | | | | | | | |
| A x AU | | | | | | | | | |
| $\Delta R^2$ | | | | | | | | | |
| $R^2$ | | | | | | | | | |

*Note. df* = .
*$p < .05$ **$p < .01$

Table 9
*Regression Analysis Predicting Increasing Challenging Job Demands with Autonomy as a moderator.*

| Variable | *B* | *SE* | *β* | *B* | *SE* | *β* | *B* | *SE* | *β* |
|---|---|---|---|---|---|---|---|---|---|
| Step 1: | | | | | | | | | |
| Age | | | | | | | | | |
| Gender | | | | | | | | | |
| Education | | | | | | | | | |
| Step 2: | | | | | | | | | |
| Growth Needs Strength (GNS) | | | | | | | | | |
| Job Complexity (JC) | | | | | | | | | |
| Conscientiousness (C) | | | | | | | | | |
| Agreeableness (A) | | | | | | | | | |
| Autonomy (AU) | | | | | | | | | |
| Step 3: | | | | | | | | | |
| GNS x AU | | | | | | | | | |
| JC x AU | | | | | | | | | |
| C x AU | | | | | | | | | |
| A x AU | | | | | | | | | |
| $\Delta R^2$ | | | | | | | | | |
| $R^2$ | | | | | | | | | |

*Note*. *df* = .
*$p$ < .05 **$p$ < .01

Table 10
*Regression Analysis Predicting Decreasing Hindering Job Demands with Autonomy as a moderator.*

| Variable | *B* | *SE* | *β* | *B* | *SE* | *β* | *B* | *SE* | *β* |
|---|---|---|---|---|---|---|---|---|---|
| Step 1: | | | | | | | | | |
| Age | | | | | | | | | |
| Gender | | | | | | | | | |
| Education | | | | | | | | | |
| Step 2: | | | | | | | | | |
| Growth Needs Strength (GNS) | | | | | | | | | |
| Job Complexity (JC) | | | | | | | | | |
| Conscientiousness (C) | | | | | | | | | |
| Agreeableness (A) | | | | | | | | | |
| Autonomy (AU) | | | | | | | | | |
| Step 3: | | | | | | | | | |
| GNS x AU | | | | | | | | | |
| JC x AU | | | | | | | | | |
| C x AU | | | | | | | | | |
| A x AU | | | | | | | | | |
| $\Delta R^2$ | | | | | | | | | |
| $R^2$ | | | | | | | | | |

*Note*. *df* = .
*$p$ < .05 **$p$ < .01

*Figure 1.* Model of Study Main Effects