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The Agreeableness of Conscientiousness: The Effects of Personality Facets on the Curvilinear Citizenship Behavior and Task Performance Relationship

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THE AGREEABLENESS OF CONSCIENTIOUSNESS: THE EFFECTS OF
PERSONALITY FACETS ON THE CURVILINEAR CITIZENSHIP BEHAVIOR AND
TASK PERFORMANCE RELATIONSHIP

A Thesis
Presented to
the Graduate School of
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In Partial Fulfillment
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Master of Science
Applied Psychology

by
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Abstract

Recent research has highlighted that the relationship between organizational citizenship behavior and task performance is nonlinear such that the occurrence of task performance behaviors will decrease as more time and resources are devoted to organizational citizenship behaviors. This occurs because of the restrictions of resource allocation theory which posit that employee resources are finite and limited, thus, there will be some tradeoff between engaging in various performance behaviors. The current study examined the potential moderating effect of specific facets of agreeableness, conscientiousness, and their interaction. Results showed that, as employees engaged in more individually focused citizenship behaviors, increasing levels of agreeableness increased the rate at which task performance decreased. When employees were high in both agreeableness and conscientiousness, task performance showed a linear relationship with organizationally focused citizenship behaviors. Agreeableness showed a direct negative effect on task performance, but had positive effects when mediated through job satisfaction and OCB. Conscientiousness had a direct positive effect on task performance, but showed negative effects when mediated through job satisfaction. Future research directions and implications are discussed.

Keywords: citizenship, agreeableness, conscientiousness, job satisfaction

Table of Contents

	Page
TITLE PAGE	i
ABSTRACT	ii
LIST OF TABLES	v
LIST OF FIGURES	vi
CHAPTER	
I. INTRODUCTION	1
Allocation of Employee Resources	3
OCB-I and OCB-O	4
Statistical Theory	6
Dimensioning Returns	6
Interaction and Curvilinearity.....	7
Moderating Pathways	9
Agreeableness.....	9
Conscientiousness	13
Interaction of Agreeableness and Conscientiousness	18
Mediating Pathways	20
Job Satisfaction.....	20

Table of Contents (Continued)	Page
II. Method.....	23
Participants	23
Measures.....	23
III. Results	26
Data Simulation.....	26
Hypothesis Testing.....	26
IV. GENERAL DISCUSSION	30
Limitations	32
Sampling Issues.....	32
Measurement Issues	34
Future Research and Alternative Designs	36
APPENDICES	39
A: Study Model	40
B: Tables and Figures.....	41
C: Simulation R Code.....	55
REFERENCES	56

List of Tables

Table	Page
1. Means, Standard Deviations, and Correlations	41
2. Task Performance Regressed on OCB.....	41
3. Task Performance Regressed on OCB-I and Agreeableness	42
4. Task Performance Regressed on OCB-O and Conscientiousness	42
5. Task Performance Regressed on OCB-I, Agreeableness and Conscientiousness	43
6. Task Performance Regressed on OCB-O, Agreeableness, and Conscientiousness	44
7. Task Performance Regressed on OCB-O and Conscientiousness when split by Agreeableness	45
8. Points of Inflection for Significant Hypotheses.....	46
9. Mediation Effects of Job Satisfaction and OCB	47

List of Figures

Figure	Page
1. Curve Demonstration	48
2. Scatterplot of OCB and Task Performance with Empirical Data	49
3. Simple Curves at High and Low Values of Agreeableness for OCB-I predicting Task Performance	50
4. Curves Task Performance Regressed on OCB-O and Conscientiousness for High and Low Agreeableness	51
5. Histogram of Empirical Task Performance	53
6. Histogram of Empirical OCB	54

Chapter I

Introduction

Organizational citizenship behaviors have been described as supportive of overall job performance (Bergeron, Shipp, Rosen, & Furst, 2012; Nielsen, Bachrach, Sundstrom, & Halfhill, 2012; Organ, 1988; Organ, 1997; Rubin, Dierdorff, & Bachrach, 2013).

Citizenship behaviors are conceptualized as social and psychological behaviors that support the critical task performance domain of overall job performance (Organ, 1997).

Broad categories of citizenship behavior include actively assisting others in the organization known as helping behavior, demonstrating concern for the overall vitality of the work group and organization referred to as civic virtue, and sportsmanship which is tolerating poor circumstances without complaining (Podsakoff, Ahearne, & MacKenzie, 1997). Additionally, citizenship behaviors have been noted as a necessary component of the technical core of the organization (Borman & Motowidlo, 1993; Motowidlo, 2000). It appears that citizenship behaviors tend to be associated with promoting a positive, healthy work environment in organizations.

Past empirical research has supported the notion that task performance and citizenship behavior show a positive, linear relationship and that contributes to overall job performance. However, more recent research has begun to cast doubt on the assumption that the relationship between citizenship behavior and task performance is monotonic, and job context has been shown to affect the relationship (Rubin et al. 2013). Citizenship behaviors are more efficacious in groups with interdependent tasks than in groups with independent tasks or with independent employees (Nielsen et al. 2012).

Additionally, findings from Bergeron et al. (2012) demonstrated that citizenship behaviors have more utility in behavior-based control systems than they do in outcome-based control systems because behavior-based systems evaluate a wide range of behaviors (e.g., assisting coworkers and securing contracts from clients) for performance whereas outcome-based systems only evaluate those behaviors which directly contribute to an employee's own performance. Furthermore, Rubin et al.'s (2013) research found a statistically significant curvilinear relation between citizenship behaviors and task performance such that at higher levels of citizenship behaviors, there were diminishing returns on task performance. Notably, the point at which citizenship behaviors became a detriment to overall job performance occurred not only at high levels, but also at moderate levels. Their results suggest that the point of diminishing returns fluctuates between various job contexts, and this raises a particularly important unanswered question: In what instances are citizenship behaviors more supportive of task performance (e.g., in a particular context or given specific employee characteristics)? The following study will focus on the potential effects of agreeableness, conscientiousness, job satisfaction, and their interaction on the aforementioned relationship.

The current paper is organized in the following manner. First, I provide the theoretical foundation for the current study. This includes role theory and resource allocation theory. Second, the conceptualization of citizenship behavior into the two categories of individually focused citizenship (OCB-I) and organizationally focused citizenship (OCB-O) is described. Third, curvilinearity and interactions in regression models are discussed. Fourth, I present a facet level conceptualization of the moderating

pathways of agreeableness and conscientiousness. Fifth, facets of job satisfaction as mediators are discussed. Sixth, participants and measures are discussed. Finally, results and discussions of findings, limitations, and future research are covered.

Allocation of Employee Resources

As the theoretical basis for the current study's hypotheses, I draw on several theories including role theory, resource allocation theory, and attentional capacity theory. Role theory dictates that employees must allocate various resources to fulfill the requirements of their various workplace roles including their social demands (Katz & Kahn, 1978). This assertion is universal across all organizational domains, but the balance between the appropriate levels of each performance domain will vary by job (Biddle, 1979; Graen, 1976). It is in the category of social demands that citizenship behaviors are typically performed. With this in mind, resource allocation theory posits that resources are finite and limited (Becker, 1965). Additionally, attentional capacity posits that employees are unable to simultaneously focus resources on more than one job demand (Kahneman, 1973). These theories argue that an employee must choose whether to direct their resources more toward either citizenship behaviors or task performance behaviors and implies that there will be a tradeoff between the two.

Research has highlighted this tradeoff between performance behaviors. For example, Nielsen et al. (2012) showed that task interdependence moderates the relationship between citizenship behaviors and task performance. Bergeron et al. (2012) suggest that citizenship behaviors are more efficacious in behavior-based control systems and with subjective career outcomes such as performance evaluations. This is in contrast

to outcome-based control systems and objective career outcomes such as salary increases and promotions due to the increased importance of task performance behaviors for these distinctions. It is seen from their results that context is important for determining the strength of citizenship behavior's diminishing returns on task performance.

Additionally, job accountability and job autonomy were shown to be important contextual moderators based on a sample of business graduate students employed in a variety of organizations (Rubin et al. 2013). Their results showed that individually focused citizenship behaviors are more beneficial, and that jobs with a high degree of autonomy tend to be more efficacious for task performance. In contrast, jobs with a high degree of accountability show less utility of citizenship behaviors since they begin to detract from task performance at a faster rate than low accountability jobs (Rubin et al. 2013). Their results show that context is important in fully understanding this relationship and highlights the necessity of examining other potential moderators. Notably, the diminishing returns in their model were found to occur not only at high levels of citizenship behaviors, but also at more moderate levels. Resource allocation theory suggests that this would occur at high levels, but their findings highlight the necessity for conducting further research into the nature of the diminishing returns.

OCB-I and OCB-O

Although citizenship behaviors have been described in a variety of ways, they are generally conceptualized as volitional behaviors that are not explicitly defined in an employee's job role (Organ, 1997), thus, distinguishing it from task performance. A commonly used conceptualization divides citizenship behaviors into five categories—

sportsmanship, civic virtue, altruism, conscientiousness, and courtesy (Organ, 1988). In contrast, citizenship behaviors have also been defined by the target of the behavior. Ilies, Fulmer, Spitzmuller, and Johnson (2009), for example, use two categories—individual focused citizenship and organization focused citizenship. This posits that citizenship behaviors are distinctly different depending on whom the behavior is intended to benefit and leads to the notion that certain contexts and characteristics will benefit one more than the other. The five behavioral categories described by Organ (1988) can also fit into the individual or organizationally focused behaviors. For example, altruism and courtesy are reflective of individually focused citizenship behaviors. Conversely, civic virtue, conscientiousness, and sportsmanship are generally organizationally focused citizenship behaviors (Williams & Anderson, 1991). It is important to note that in this taxonomy conscientiousness is a behavior description and not a direct reference to the Big Five personality dimension.

Meta-analytic results from Ilies et al. (2009) showed that agreeableness and conscientiousness contribute differentially to either component directly and indirectly through the mediating effect of job satisfaction. Specifically, agreeableness is more closely related to OCB-I, while conscientiousness is more closely related to OCB-O. Since the personality constructs mediate through job satisfaction, it is prudent to examine how all three contribute to citizenship behaviors. This is supported by Organ and Ryan (1995) who showed that dispositional characteristics are only supportive of citizenship behaviors to the extent that they affect thoughts and feelings about the job. Employees high in conscientiousness and agreeableness will engage in personality reflective

behaviors that increase job satisfaction and subsequently show a reciprocation of this by engaging in more citizenship behaviors. Agreeableness is more closely related to OCB-I because these individuals value healthy interpersonal environments and will therefore strive to engender harmonious relationships with those around them because this creates a more satisfying personal work environment (Judge, Heller, & Mount, 2002). In contrast, conscientiousness aligns closer with OCB-O because these individuals exhibit persistence towards achievement oriented and goal directed behaviors that are beneficial to their organization. They derive satisfaction from this process because they strive to be recognized and valued for their contributions to the organization (Judge et al. 2002; Organ & Lingl, 1995).

Statistical Theory

Diminishing Returns. As demonstrated by Rubin et al. (2013), it is expected that citizenship behavior will show diminishing returns on task performance. This concept is described as citizenship behavior's tendency to initially support task performance, but then to take away from task performance as levels of citizenship behavior increase. This is due to the resource drain on employees that is consistent with the assertions of resource allocation theory. The central idea for this study is that the varying levels of agreeableness and conscientiousness will allow employees to allocate resources to citizenship behaviors in either a more efficient or less efficient manner. The employees that are able to achieve a balance between citizenship behavior and task performance resources will have diminishing returns that occur at higher levels and are less drastic.

The point of diminishing returns in the regression curve is denoted by the inflection point. The inflection point on a concave downward curve is the maximum value of the dependent variable. This point is calculated using the following equation where B_1 is the linear effect and B_2 is the quadratic effect (Aiken & West, 1996; Rubin et al. 2013):

$$X_{inflection} = -B_1/2B_2$$

Beyond this point in the proposed models, task performance will begin to decrease, and the rate of reduction will increase as citizenship behavior continues to rise. This conceptualization is important for how the moderators will affect the curve. An amplifying effect is one that decreases the value of the inflection point, and an attenuating effect is one that increases the value of the inflection point (see Figure 1). In order to test the moderated curves, the baseline citizenship behavior-task performance curve must be established in this study.

Hypothesis 1: There is a curvilinear relationship between citizenship and task performance that is initially positive but eventually diminishes as citizenship increases.

Interaction and Curvilinearity. Two data simulation studies have demonstrated the importance and inherent difficulty of appropriately testing interactive and quadratic effects. MacCallum and Mar (1995) demonstrated that interactive regression models may account for effects that are actually quadratic. They warn that observed interactive effects may be spurious and instead be better explained as a quadratic effect. These findings are important because selection of one model over the other will lead to different interpretations of the predictor variables and their effect on the criterion. They

recommend a procedure of examining effect sizes of both the interactive and quadratic models to see which one produces the greatest increase in effect size over the basic additive model. Three assumptions are required for this to be effective. First, multicollinearity between predictors is recommended to be below 0.40. Second, reliability of the predictor measures should be greater than 0.70, and lastly, there must be a sufficiently large sample size. Meta-analytic correlates between the study personality variables and the two dimensions of citizenship behavior have been shown to be sufficiently low. Agreeableness correlates with OCB-I at 0.20 and at 0.19 with OCB-O. Conscientiousness correlates with OCB-I at 0.25 and at 0.20 with OCB-O (Chiaburu, Oh, Berry, Li, & Gardner, 2011). Additionally, agreeableness correlates with conscientiousness at 0.24 (Costa & McCrae, 1992). From these correlates, the first assumption is met. Reliability coefficients are covered in the methods, and while three personality facets are slightly below 0.70, the facets of agreeableness and conscientiousness will be scored together, and the increase in number of items should help improve reliability.

Empirically, it is expected that interactive and quadratic effects will both be present in the model. In Rubin et al. (2013), accountability and autonomy were shown to have significant interactive effects with both the linear and quadratic citizenship predictor. It is expected that the personality variables will have similar effects in regard to amplification and attenuation of the citizenship behavior-task performance curve. Beyond the demonstration of two-way interactions, this study will be testing three-way interactions between citizenship behavior and the personality variables. Ganzach (1997)

reported important implications for the simultaneous testing of interactive and quadratic terms. MacCallum and Mar (1995) suggest a conservative approach of adding quadratic terms before interactive terms, but Ganzach (1997) notes that this may result in a loss of power and unstable regression coefficients.

Ganzach's (1997) results showed that without proper quadratic terms, observed interactive effects on the dependent variable could be opposite of the true interactive effects. The opposite of this is also true. That is, without proper interactive terms, observed curvilinear effects could be opposite to that of the true relationship between the independent variables and dependent variables. More importantly, his results showed that if the interactive and curvilinear terms are not examined simultaneously, observed interactive and curvilinear effects may be nonsignificant, when in actuality, there are true interactive or curvilinear relationships. These findings demonstrate the importance of simultaneous examination, so this study's hypotheses will align with his findings, and the analytic procedures will follow Ganzach (1997) and MacCallum and Mar's (1995) recommendations in order to ensure accurate results.

Moderating Pathways

Agreeableness. Agreeable individuals place emphasis on healthy interpersonal environments. They tend to be inherently altruistic to some degree and are much more cooperative than they are competitive (Costa & McCrae, 1992). Beyond its' interpersonal definition, it is also important in shaping the self-image and social attitudes of an individual (Costa, McCrae, & Dye, 1991). It is in this way that it provides an important relation to citizenship behavior. Agreeableness impacts an employee's perception of

others, and agreeable employees tend to expect some degree of reciprocity for their behaviors. This expectation encourages them to engage in citizenship behaviors because they see them as mechanisms for forming stronger interpersonal bonds with those in their work environment, and if these behaviors are reciprocated, engagement in citizenship behaviors will benefit the work group. The reciprocation of citizenship behaviors is supported by interdependent exchange reciprocity as outlined by social exchange theory. Social exchange theory stipulates that these types of exchanges do not contain explicit bargaining and that each exchange creates a self-reinforcing cycle (Cropanzano & Mitchell, 2005). Citizenship behaviors align with these characteristics because of their voluntary nature and that they are behaviors by which the implicit social exchange network can form. Agreeable individuals expect others to offer assistance in return, and citizenship behaviors are important for creating a satisfying work environment (Ilies et al. 2009). Therefore, engaging in citizenship behaviors can form a reciprocity network between employees. It is for these reasons that an agreeable employee may view citizenship behaviors as equally important to task performance behaviors. This can affect where they see the appropriate balance for resource allocation.

Costa and McCrae (1992) identified the six facets of agreeableness as straightforwardness, altruism, compliance, trust, modesty, and tender-mindedness. This study will focus on a facet level examination of agreeableness and will only include straightforwardness, altruism, and compliance when referring to agreeableness as a whole. Straightforwardness is thought to be important to citizenship behaviors because these individuals tend to be frank and genuine concerning their interactions with others.

They will ask for what they want, and their actions towards their coworkers will not be laced with ulterior motives. It is in this way that the facet contributes to the reciprocity network of citizenship behavior that was previously described. The straightforward individual is upfront about their expectations of others, but not in a way that is coercive. Costa et al. (1991) note that the opposite pole of straightforwardness is Machiavellianism. Machiavellian individuals tend to be deceptive and will use any means necessary to achieve their ends (Geis & Moon, 1981). They are more likely to view others as tools and assets rather than as equals. In this way, a lack of straightforwardness represents a breakdown in the reciprocity network of citizenship behavior.

The next facet of interest, altruism, is characterized as a genuine concern for the needs of others. It is important to note that although altruistic behaviors are often viewed as self-sacrificing and devoid of return expectations, the facet measure is more concerned with general courtesy and consideration for others (Costa et al. 1991). This distinction is important because without it, the tendency for agreeable individuals to expect helpful behavior in return would be contradictory to the conceptualization of the facet. Altruism provides an important component to the reciprocity network of citizenship behavior. Altruistic individuals tend to be in tune to the needs of others and will engage in citizenship behaviors as a way to assist their coworkers since they are genuinely concerned for the well-being of others. It is this concern for other employees that makes altruism a critical component of the reciprocity network. Ideally, this is a mutual concern among employees, and citizenship behaviors will be more beneficial to the individual's performance to the extent that citizenship behaviors are a mutual practice within the work

group. Individuals that are low in altruism tend to be self-serving and are unlikely to be concerned with the performance of others and as a consequence, will remove themselves from the reciprocity network.

Compliance, the last component, is reflected in workplace behavior as a willingness to cooperate rather than compete. Compliant individuals are more likely to defer to the needs of others and will avoid direct interpersonal conflict in order to maintain the social harmony of the work group (Costa et al. 1991). Citizenship behaviors are a mechanism by which this social harmony can be managed. Not only are compliant employees more likely to cooperate, but they also expect cooperation from others and place value on these types of environments (Barrick, Stewart, & Piotrowski, 2002). It is in this way that compliance contributes to the strengthening of the reciprocity network. In contrast, noncompliant employees are more likely to be competitive with others and may feel that citizenship behaviors will work against them rather than for them. Furthermore, noncompliant individuals often show little reluctance in expressing anger. They may lash out in the face of conflict and will often assert themselves over others without concern. These examples demonstrate the necessity of compliance because its' presence encourages citizenship behaviors, and its' absence is harmful to the reciprocity network.

Straightforwardness, altruism, and compliance all jointly contribute to the utility of the reciprocity network of citizenship behavior. In contrast, trust, modesty, and tender-mindedness appear to lie outside of this distinction. Trust characterizes an employee's willingness to accept others words and actions as honest and well-intentioned. Although this viewpoint may reflect how an employee interprets the motives of a coworker's

citizenship behaviors, it does not necessarily predict that employees will return the favor. It is the lack of reciprocation that excludes it from this study's conceptualization of agreeableness. Modesty is a self-image descriptor, and these individuals tend to be humble with an accurate view of themselves. The opposite is arrogance that comes with an inflated self-image. While important to the concept of agreeableness, modesty is not as impactful for one's behavior towards others. Since it is not likely to be predictive of citizenship behavior, it has been excluded from this study. Tender-mindedness represents sympathy for others. Although related to altruism, more emphasis is placed on empathizing with others rather than active helping behaviors. It is important for maintaining social harmony but is unlikely to facilitate citizenship behaviors. Therefore, tender-mindedness is not a theorized component of the reciprocity network.

Combing these facets as they interact with OCB-I is likely to have an amplification effect on the citizenship-task performance curve. Straightforwardness will lead employees to be direct and upfront with others thus encouraging citizenship and subsequent reciprocation. Altruism will enforce an employee's desire to assist others in the form of citizenship behaviors, and compliance will lead employees to conform to the needs of others as well as the social exchange norm of interdependent reciprocation. These actions will then shift the individual citizenship-task performance curve in favor of citizenship.

Hypothesis 2: High agreeableness will amplify the diminishing returns of individual citizenship on task performance.

Conscientiousness. Conscientious employees tend to be goal-directed and persistent in the pursuit of their goals. It comprises a diverse set of traits including dependability, will to achieve, self-control, prudence, and constraint. It is often typified as two categories of proactive behavior and inhibition (Costa & McCrae, 1992). These categories provide important implications for setting the balance between citizenship behavior and task performance. The proactive set implies that these individuals will actively work towards their personal goals as well as the goals for the organization. Typically, they engage in citizenship behaviors because they help to foster their sense of achievement within the organization (Ilies et al. 2009). The inhibitive set ensures that these employees remain directed toward their goals for the organization. They desire self-improvement and advancement, and this is most readily accomplished through effective task performance. They recognize that citizenship behaviors are supportive of task performance and not an equal contributor. Therefore, conscientious employees are likely to find an appropriate balance concerning the types and how often they engage in citizenship behaviors.

The six facets of conscientiousness were identified as competence, achievement striving, self-discipline, order, dutifulness, and deliberation (Costa & McCrae, 1992). This study will focus on competence, achievement striving, and self-discipline due to their relation to task performance and maintaining focus on predetermined goals. Competence describes an employee's belief that they are capable in their skills and abilities. It has important implications for one's self-esteem (Costa & McCrae, 1991) and can be a determiner for one's sense of belonging in an organization. The benefits of a

high sense of competence are largely reflected in the task performance dimension. A competent employee will see their task directed behaviors as valuable, and this can provide a sense of motivation if they feel as if what they do actually matters to the organization. In contrast, an employee low in competence is unlikely to see the benefits of continued directed action towards their job tasks. This could then shift the balance between citizenship and task performance behaviors. They may engage in a greater amount of citizenship behavior as a way to compensate for their believed lack of valuable task performance. It is competence's purposed ability to shift the resource allocation between citizenship and task performance behaviors that make it a necessary component of the study's model.

Achievement striving reflects an employee's desire for personal growth and organizational advancement. These individuals display high levels of diligence, purpose, and persistence in working towards their goals (Costa & McCrae, 1992). Achievement striving's ability to shift the balance between citizenship and task performance behaviors stems from the desire for accomplishment and recognition within the organization. An employee that is high in this facet would recognize that the most efficient method for advancement is effective completion of job tasks. Task performance objectives provide more tangible rewards than citizenship behaviors, so there is likely to be an emphasis towards that performance domain. However, this is not to say that citizenship behaviors are not important to these types of employees. They are likely to have a greater focus towards organizationally focused citizenship behaviors than individually focused because they see these as a mechanism for advancement. They are likely to be concerned with the

vitality of the organization since their place in it depends on the life of the organization. The citizenship behaviors that they engage in would likely include civic virtue and sportsmanship type actions. Furthermore, these types of citizenship behaviors are more likely to be recognized by supervisors, and as was previously stated, personal recognition is an important component of this facet. Employees who are low in achievement striving are likely to not be as concerned with advancement and recognition. An important characteristic of the low achievement employee is that they are perfectly content with their low standards (Costa & McCrae, 1992). They may be lackadaisical and aimless within the organization and as a result, not place an appropriate balance between citizenship and task performance behaviors. Similarly to competence, it is achievement striving's ability to shift the resource allocation between performance domains that make it a critical component.

Self-discipline is a critical component because it describes an employee's ability to remain focused in the face of distraction or obstacles. The disciplined employee has focus towards long term achievement, and this characteristic enables them to persevere through the momentary boredom of everyday tasks (Costa & McCrae, 1992). An employee's task performance objectives are typically comprised of several components towards an eventual objective. Often times some components can be boring, mundane, or repetitive, but self-discipline helps the employee to stay the course without excessive procrastination. A highly disciplined employee may even view engaging in citizenship behaviors as a form of procrastination. While they may assist the organization, they are a distraction from the employee's job tasks, so they are likely to place their emphasis on

task performance behaviors. A lack of self-discipline often contributes to an employee's reluctance to complete undesirable components of their job. Costa and McCrae (1992) note that these individuals are unable to force themselves to engage in tasks that they want to do. They may have some desire to do well at their job, but procrastination wins out. Their reluctance to complete boring job tasks will likely lead them fill their time with other behaviors, and they may compensate for their lack of task performance by engaging in citizenship behaviors. Again, it is self-discipline's ability to shift the resource allocation between citizenship behaviors and task performance that make it a crucial factor in this study's conceptualization of conscientiousness.

Competence, achievement striving, and self-discipline are all important factors because of how they can affect the resource allocation between citizenship behaviors and task performance behaviors. Order, dutifulness, and deliberation have been excluded because they are unlikely to shift an employee's resources. Order describes one's desire to be well-organized and to keep things in their proper place. This has little reflection on which work behaviors an employee will engage in, so it has been excluded from this study. Dutifulness reflects an individual's sense of moral and ethical obligation. While this may ensure that dutiful employees will only engage in acceptable work behaviors, it does not affect choice between citizenship or task performance behaviors. Deliberation describes the amount of time one requires to make decisions. These decisions could equally be for citizenship behaviors or task performance behaviors, so it has been excluded from this study.

The conscientious employee's emphasis on their explicit job role is likely to produce an attenuation effect on the citizenship behavior-task performance curve. Competence will reinforce to the employee that their completion of job tasks is valuable, achievement striving attitudes will drive the employee to allocate resources towards behaviors that are more likely to be explicitly rewarded and recognized, and self-discipline will ensure that the employee stays the course with their tasks. These actions will then shift the organizational citizenship-task performance curve in favor of task performance.

Hypothesis 3: High conscientiousness will attenuate the diminishing returns of organizational citizenship on task performance.

Interaction of Agreeableness and Conscientiousness. Beyond their unique influence, there is evidence to suggest that agreeableness and conscientiousness interact with one another as they affect citizenship behavior and task performance (Guay, Oh, Choi, Mitchell, Mount, & Shin, 2013; Jiang, Wang, & Zhou, 2009; Robie & Ryan 1999; Shih & Chuang, 2013). Using self-consistency theory, Shih and Chuang (2013) argued that high self-esteem would be predictive of citizenship behaviors through a mechanism of lower psychological contract breaches and that agreeableness and conscientiousness would produce an indirect effect on this relationship. Self-consistency theory posits that individuals interpret information and feedback in ways that helps them maintain a consistent cognitive self-image. Since individuals high in self-esteem and equity sensitivity perceive less psychological contract breach, they are more willing to exhibit extra-role behaviors such as citizenship behaviors. Their results suggested that high levels

of agreeableness and conscientiousness amplify the magnitude of the negative relationship between low psychological contract breach and increased occurrence of citizenship behaviors.

Jiang et al. (2009) explored the relationship of conscientiousness and agreeableness on task performance and contextual performance. They argued that increases in conscientiousness would produce a positive effect on task performance, and their results supported this. Interestingly though, they found that agreeableness had a negative effect on task performance while showing no relationship to contextual performance. This may be due to the rigidity that supervisors in collectivist work environments are expected to display, and that they only used a single kindness measure for citizenship behavior. Guay et al. (2013) examined whether or not agreeableness moderates the relationship between conscientiousness and task performance as well as conscientiousness and citizenship behaviors. Their sample was drawn from subordinate level bank tellers in South Korea, and they found that while conscientiousness was not directly related to citizenship behaviors, employees who were high in agreeableness did show a positive relationship between conscientiousness and behaviors. They also found that agreeableness was not predictive of task performance, but employees who were high in agreeableness showed a stronger positive relationship between conscientiousness and behaviors than those employees who were low in agreeableness. Findings from Robie and Ryan (1999) found a linear relationship between conscientiousness and overall job performance, but their design did not separate the dimensions of job performance. These

differential and inconsistent findings highlight the need for additional research of this area.

The preceding evidence supports the notion that agreeableness and conscientiousness are likely to have interactive effects on the citizenship-task performance curve. Since agreeableness produces amplification and conscientiousness produces attenuation, adding the third variable to the interaction in hypotheses 2 and 3 are likely to adjust the curve in the direction of the added variable. Specifically, adding conscientiousness to the interaction of agreeableness and OCB-I will attenuate the curve, and adding agreeableness to the interaction of conscientiousness and OCB-O will amplify the curve.

Hypothesis 4: The interaction of agreeableness and OCB-I moderated by conscientiousness will attenuate the individual citizenship-task performance curve in comparison to the curve with only agreeableness and OCB-I.

Hypothesis 5: The interaction of conscientiousness and OCB-O moderated by agreeableness will amplify the organizational citizenship-task performance curve in comparison to the curve with only conscientiousness and OCB-O.

Mediating Pathways

Job Satisfaction. Recall that Ilies et al. (2009) showed job satisfaction to be a significant mediator between personality and citizenship behavior. Their results showed that agreeableness exhibits direct and indirect effects on OCB-I while conscientiousness is fully mediated through job satisfaction. Conversely, conscientiousness showed direct and indirect effects on OCB-O while agreeableness was fully mediated through job

satisfaction. Additional research has shown overall job satisfaction to be equally predictive of contextual and task performance (Ang, Dyne, & Begley, 2003; Edwards, Bell, Arthur, & Decuir, 2008). Edwards et al. (2008) examined job satisfaction at the facet level as differential predictors. Their results showed that satisfaction with work was a significant predictor of task performance and that satisfaction with supervisors was a significant predictor of contextual performance. However, contrary to their hypotheses, satisfaction with promotion was negatively related to task performance and satisfaction with coworkers was negatively related to task performance. These findings highlight the necessity of examining job satisfaction at the facet level since differential relationships were found.

Edwards et al. (2008) noted that there is limited research on the relationship of job satisfaction to task and contextual performance; examination of this relationship at the facet level is even scarcer. One study did find a relationship between satisfaction with coworkers and OCB-I (Bolon, 1997), but the same study's measure of overall job satisfaction was not related to OCB-I. In an attempt to further understand this area, this study will conduct mediation analyses using the job satisfaction facets of work, supervisor, and coworker. Additionally, a full integration of the model from personality to job satisfaction to contextual performance to task performance will be examined. This complete integration is justified by job satisfaction being related to performance (Ang et al. 2003; Edwards et al. 2008) and by contextual performance being related to task performance (Rubin et al. 2013), but other than Ilies et al. (2009) that showed overall job satisfaction to be a significant mediator between personality and contextual performance,

there is no *a priori* theoretical basis for the purposed mediation, so these analyses will be conducted for exploratory purposes.

Research Question 1: Do the job satisfaction facets of work, supervisor, and coworker exhibit mediation effects between personality and citizenship behavior?

Research Question 2: Do the job satisfaction facets of work, supervisor, and coworker exhibit direct and indirect effects on task performance through contextual performance?

Chapter II

Method

Participants

Participants were recruited from a large public university in the United States. University faculty and staff were emailed asking that they complete an online survey. Additionally, they were asked to forward the request to their immediate supervisor so that the supervisor can complete the task performance measure for their employee. Preliminary power analyses showed that for the two-way interaction models, a sample size of about 180 would be preferable to find a single unique effect; this projection approaches 300 with the inclusion of the three-way interactions. Also, obtaining a representative task performance measure was difficult due to the requirement of the participant's supervisor completing the measure. The total observed n was 71. This sample was too small to examine the hypothesized relationships, so additional cases were simulated. This process is described in the Results section.

Measures

Agreeableness. Agreeableness was measured using the twenty-four items for the facet scales of straightforwardness, altruism, and compliance from the NEO-PI (Costa & McCrae, 1992). Cronbach's alpha for straightforwardness, altruism, and compliance is 0.71, 0.75, and 0.59, respectively (Costa et al. 1991). A sample straightforwardness item is "*I'm not crafty or sly,*" a sample altruism item is "*I try to be courteous to everyone I meet,*" and a sample compliance item is "*I would rather cooperate with others than compete with them.*" Items are scored on a seven-point scale (1 = *strongly disagree*, 2 =

disagree, 3 = *slightly disagree*, 4 = *neither agree nor disagree*, 5 = *slightly agree*, 6 = *agree*, 7 = *strongly agree*). The three facets were summed to form the agreeableness score for participants. Estimated Cronbach's alpha for agreeableness was 0.679.

Conscientiousness. Conscientiousness was measured using the twenty-four items for the facet scales of competence, achievement striving, and self-discipline from the NEO-PI (Costa & McCrae, 1992). Cronbach's alpha for competence, achievement striving, and self-discipline was 0.67, 0.67, and 0.75, respectively (Costa et al. 1991). A sample competence item is "*I'm known for my prudence and common sense,*" a sample achievement striving item is "*I work hard to accomplish my goals,*" and a sample self-discipline item is "*I'm a productive person who always gets the job done.*" Items are scored on the same scale as agreeableness, and the facets were summed to form the composite score. Estimated Cronbach's alpha for conscientiousness was 0.916.

Job Satisfaction. Job satisfaction was measured using the facet scales of nature of work, supervision, and coworker from the Job Satisfaction Survey (Spector, 1985). The Cronbach's alpha for nature of work, supervision, and coworkers is 0.78, 0.82, and 0.60 respectively. A sample nature of work item is "*I sometimes feel my job is meaningless,*" a sample supervision item is "*My supervisor is quite competent in doing his/her job,*" and a sample coworker item is "*I like the people I work with.*" These facets are scored on the same scale as the personality measures and will be summated to form an overall job satisfaction score. Estimated Cronbach's alpha for job satisfaction was 0.877.

Citizenship Behaviors. Overall citizenship was measured using three items each for individual, organizational, and job focused citizenship (Coleman & Borman, 2000).

Items begin with the prompt “How *often* do you engage in each behavior as part of your job?” and are rated on a seven-point scale (1 = *never*, 2 = *rarely*, 3 = *occasionally*, 4 = *sometimes*, 5 = *frequently*, 6 = *usually*, 7 = *always*). A sample individual focused item is “*engage in group activities responsibly and effectively*,” a sample organization focused item is “*engage in behavior that benefits the organization as a whole*,” and a sample job focused item is “*show strong dedication toward your work*.” The overall measure is for hypothesis 1, the individual focused dimension is for hypotheses 2 and 4, and the organizational focused dimension is for hypotheses 3 and 5. The Cronbach’s alphas for the overall measure, individual focused, and organizational focused were 0.908, 0.822, and 0.797 respectively. A fourth OCB measure of how often employees perceive others engaging in OCBs towards them was also collected. This dimension was measured with the OCB-I items and the prompt “*How often do your coworkers engage in the following behaviors either directed towards you or those around you?*”. Estimated Cronbach’s alpha for this measure was 0.952.

Task Performance. Task performance measures were completed by the participant’s immediate supervisor using a seven-point scale (1 = *definitely not descriptive*, 2 = *not descriptive*, 3 = *slightly nondescript*, 4 = *neutral*, 5 = *slightly descriptive*, 6 = *descriptive*, 7 = *very descriptive*). Supervisors rated the faculty member on three items including “*demonstrates effectiveness in accomplishing major work goals*.” Estimated Cronbach’s alpha was 0.875.

Chapter III

Results

Data Simulation

Initial data screening was found to be problematic because only a limited n of 71 participants was collected. A scatterplot of average OCB scores and average task performance scores (Figure 2) revealed a weak correlation – it is possible that a curvilinear relationship also existed between these two variables, since task performance scores appeared to decrease as OCB increased. Because a primary concern with the empirical data was the small sample size, a simulated dataset was generated in R that was consistent with the characteristics of the sample. Creating a dataset of $n = 100,000$ effectively reduced sampling error to a negligible amount. The simulated data reflected the observed relationships between study variables because it was based on the empirical means and covariance matrix of the observed sample data. In creating the simulated dataset, the distribution of observed variables was not restricted, and a large portion of scores were outside the empirical scale of one to seven. Cases with values greater than seven were excluded, resulting in a total n of 56,198. Truncating the distributions at seven resulted in some of the performance measures, conscientiousness, and job satisfaction being negatively skewed. However, this skew reflected the observed variable distributions more closely. Means, standard deviations, and correlations of the empirical data are shown in Table 1, and R code for the simulation can be found in Appendix B.

Hypothesis Testing

In order to test the hypotheses, all variables, except task performance, were mean centered. H1, the curvilinear relationship between OCB and task performance, was tested by regressing task performance on OCB and OCB^2 . OCB was shown to have a positive effect of $B = 0.066$ ($t(56,196) = 17.426, p < .01$) and OCB^2 had a negative effect of $B = -0.018$ ($t(56,196) = -4.328, p < .01$). The predictors accounted for 0.7% of the variance in task performance. Regression parameters are shown in Table 2. The significant negative effect of the quadratic term provides support for H1 since this produced a curve of task performance initially increasing and then decreasing as higher levels of OCB are reached.

H2, the interaction of agreeableness and OCB-I, was tested by regressing task performance on OCB-I and agreeableness. Regression parameters are shown in Table 3. Agreeableness showed a negative effect of $B = -0.157$ ($t(56,192) = -20.954, p < .01$) on task performance. The interaction between $OCB-I^2$ and agreeableness was marginally significant. The interaction had a negative effect of $B = -0.017$ ($t(56,192) = -1.933, p < .1$) on task performance. Curves of OCB-I predicting task performance at varying levels of agreeableness are shown in Figure 3. The graph suggests that at high levels of agreeableness the curve decreases at a faster rate than it does at low levels of agreeableness. Under low agreeableness the quadratic effect of OCB-I was -0.007, and under high agreeableness the quadratic effect of OCB-I was -0.024, therefore, the rate of decrease was stronger under high agreeableness. The significant interaction, coupled with the greater negative effect for high agreeableness, provides support for H2. The predictors accounted for 1.8% of the variance in task performance.

H3 was tested by regressing task performance on OCB-O and conscientiousness. Neither the interaction between linear OCB-O and conscientiousness nor quadratic OCB-O and conscientiousness were significant; thus, H3 was not supported. Regression parameters for H3 are shown in Table 4. H4 was tested by regressing task performance on OCB-I, agreeableness, and conscientiousness. Neither the linear nor quadratic three-way interaction between OCB-I, agreeableness, and conscientiousness were significant. Thus, H4 was not supported. Regression parameters for H4 are shown in Table 5. H5, the interaction between agreeableness, conscientiousness, and OCB-O, was tested by regressing task performance on OCB-O, conscientiousness, and agreeableness. The linear interaction between OCB-O, conscientiousness, and agreeableness was marginally significant. This interaction exhibited a positive relationship with task performance, $B = 0.002$, ($t(56,189) = 1.677, p < .1$). Regression parameters are shown in Table 6. The predictor variables accounted for 4.4% of the variance in task performance. Another regression was conducted with the data file split between high and low agreeableness so that inflection points for high and low agreeableness could be calculated. These regression parameters are shown in Table 7. The points of inflection for the high and low agreeableness regression analyses were calculated from the separate curves and are shown in Table 8. Although the interaction is significant, graphs of the curves (Figure 4) show a relationship that is opposite of what was predicted.

RQ1 and RQ2 were tested with three path mediation from personality to job satisfaction to OCB to task performance. Two separate mediation analyses were performed. In the first causal chain, agreeableness served as the first predictor, and in the

second, conscientiousness served as the first predictor. Effects of the mediation paths are shown in Table 9.

Concerning the first mediation analysis, agreeableness had a direct negative effect on task performance of $B = -0.2167$ ($t(56,193) = -30.894, p < .01$). The total mediation effect was 0.0171. Job satisfaction mediated the relationship between agreeableness and task performance with an effect of 0.0102. OCB mediated the relationship between agreeableness and task performance with an effect of 0.0044. Three-path mediation of job satisfaction and OCB between agreeableness and task performance was significant with an effect of 0.0025. These results suggest that job satisfaction and OCB partially mediate the relationship between agreeableness and task performance.

For the second mediation analysis, conscientiousness had a direct effect of $B = 0.0894$ ($t(56,193) = 16.317, p < .01$) on task performance. The total mediation effect was 0.0263. Job satisfaction mediated the relationship between conscientiousness and task performance with an effect of -0.0048. OCB mediated the relationship between conscientiousness and task performance with an effect of 0.0323. The three-path mediation of job satisfaction and OCB between conscientiousness and task performance was significant with an effect of -0.0014. These results suggest that job satisfaction and OCB partially mediate the relationship between conscientiousness and task performance.

Chapter IV

General Discussion

The purpose of this study was to further investigate the relationship between OCB and task performance. The hypotheses sought to determine if varying levels of personality affect how efficacious OCBs are in supporting task performance. The results showed that agreeableness had a negative effect on task performance, suggesting that employees higher on agreeableness may perform at a lower level than employees average on agreeableness. This is likely because higher levels of agreeableness are related to a higher frequency of OCB-I's, which then restricts time available for engaging in task performance behaviors. This is shown in Figure 3. The other relationship that was found was when agreeableness interacted with conscientiousness and OCB-O. Contrary to what was predicted in H5, agreeableness attenuated the OCB-O – task performance curve. Employees that displayed moderate to high levels of agreeableness and conscientiousness displayed slower diminishing returns on task performance when engaging in OCB-O type behaviors. Furthermore, employees high in agreeableness and conscientiousness showed a linear relationship between OCB-O and task performance (Figure 4). It appears that when agreeableness and conscientiousness are considered together, they have a stabilizing effect on the relationship between OCB-O and task performance.

Extant literature suggests that OCB-O behaviors are better for supporting task performance, whereas OCB-I behaviors may be more likely to support the performance of others, but not an employee's personal task performance (Rubin et al., 2013). The interaction between both personality constructs suggests that it is to an employee's

benefit to display agreeableness and conscientiousness when engaging in organizational OCBs. Without agreeableness accounted for, there was no significant interaction between OCB-O and conscientiousness, therefore, it is important to consider both personality constructs when determining the appropriateness of increasing time allocation to OCBs.

Furthermore, an employee's job satisfaction was shown to be important when explaining the relationship between an employee's personality traits and task performance. Agreeableness had a negative direct effect on task performance, but the indirect effects that mediated through job satisfaction and OCB were positive. This suggests that increases in job satisfaction and OCBs buffer the negative effect of agreeableness on task performance. An offer of explanation for the previously mentioned finding concerns how agreeable employees may seek to establish social networks in their workplaces, in an attempt to make their jobs more satisfying. When an agreeable employee's job satisfaction increases, OCBs and task performance likely increase as well (Edwards et al. 2008). Conscientiousness was shown to have a positive direct effect on task performance, as well as a positive indirect effect through OCB. However, the results indicated that when the mediation paths included job satisfaction, the effect on task performance was negative. This may be because of the multifaceted nature of job satisfaction. Research has shown that satisfaction with promotions and coworkers is negatively related to task performance (Edwards et al. 2008). Employees may be lax on their performance when they are not as eager to advance in the organization, and employees likely spend more time interacting with coworkers when they are satisfied with those relationships. Despite the negative effect of job satisfaction, conscientiousness

was still beneficial for task performance because it increased the likelihood of OCBs, which benefit overall job performance.

The results of this study suggest that there is a point at which OCBs become detrimental to task performance; however, OCBs are a necessary component of a workforce and without them working relationships between employees would fall apart. Without employees assisting their coworkers and displaying concern for the organization beyond their own objectives, task performance would be hampered. Personality was shown to have an impact on the relationship between different types of performance behaviors, and it seems that moderate to high levels of agreeableness and high levels of conscientiousness are a winning combination for increasing OCBs and task performance.

Limitations

Sampling Issues. This study had several limitations; the first involved a smaller than desired participant sample size. Collecting task performance information proved difficult because employees were not always able to have their supervisors complete the task performance measure. Although the total sample size for the empirical sample was 82, eleven respondents did not have matching task performance data from their supervisors. According to a power analysis, this sample size would not have been sufficient to detect hypothesized relationships, even in the absence of missing data. Simulating additional cases helped to alleviate this problem. However, simulating additional cases could not correct for other issues, such as range restriction and an extreme negative skewness of the performance measures.

One possible method for increasing sample size in future studies could involve reaching out to a wider range of participants with a diverse set of jobs. These participants may comprise the local community and technical colleges, because many of the individuals embedded within the local community or attending technical colleges are likely to hold part-time or full-time positions. Thus, increasing diversity in the sampling pool will likely allow for greater diversity of jobs sampled. For example, of the 71 respondents that completed the survey, only three were faculty members; the rest were staff employees. Staff employees comprising different departments within the university are likely to share similar characteristics because they are still part of the same university. Having a diverse sample would have been beneficial because it would have allowed for increased variability in the measures. As many of the university staff were rated as high performers, the observed curvilinear relationship between OCB and task performance was likely less accurate than it would have been if low and average indicators had been included.

Accordingly, having a more diverse sample would increase the external validity of the hypotheses. For this study, the relationships found may only be true for university staff, and without additional samples from other types of industry, claims about the performance relationship in American workers would be limited. Having a larger sample size would also help to increase the statistical validity of the results. The power analyses suggested a size of 300 would be a minimum, so exceeding this recommendation would allow the hypotheses to be tested without simulating additional samples. The simulated samples were created from observed relationships, but this does not ensure an accurate

representation of the population. If additional hundreds of employees were sampled, they may display different relationships between personality and performance that of the 71 that were observed.

Measurement Issues. The task performance and OCB measures were highly negatively skewed. Task performance was measured on a one to seven scale and the average score was 6.484. A histogram of the measure (Figure 5) showed that only three respondents had average scores below 5.5. Because the simulated dataset was consistent with the characteristics of the original sample of data, the task performance measure was sampled from a highly negatively skewed distribution. The R code corrected for this by sampling beyond seven as it produced scores as high as eleven, but as was previously described, all cases with values above seven were excluded, and the simulation did not produce any values below one. It seems that for the performance measures there was a positive bias. The task performance measure may have been biased because supervisors were reluctant to rate their employees poorly. This may have been exacerbated by including names on the survey. Had the response matching been performed with an anonymous code, supervisors may have been more willing to rate their employees as average or underperforming. The average OCB scores also suffered from this same negative skewness, though its skew was not as drastic as that of task performance. Additionally, the OCB scores were self-report, so respondents may have indicated that they engaged in OCBs more often than they actually did (only one respondent had an average score below four). A histogram of the OCB scores is shown in Figure 6. In addition to the performance measures, job satisfaction was also negatively skewed. The

personality measures were more normally distributed, but they and job satisfaction also had scores beyond seven in the simulated dataset.

Another limitation relates to the measurement of performance. Although the quadratic relationships between OCB and task performance were significant, many of the hypothesized interactions were not. OCBs were measured as a frequency of how often the employee engages in OCB type behaviors. However, task performance was measured as whether or not the employee can be described as low, average, or high performing. The study could have benefitted from measuring task performance as a frequency measure rather than a descriptive measure. Measuring task performance as a frequency of behaviors would make the measure more objective and possibly less prone to a positive bias. Additionally, task performance could have been assessed as a self-report along with supervisor ratings since the employee is likely to be less biased when describing frequency of behavior.

When considering refinement of the performance measures one possible method of collecting frequency of behaviors would be through a forced distribution of percentages for daily work behaviors. Specifically, employees could be asked to rate what percentage of their day is spent on OCB-I, OCB-O, task performance, and non-work (e.g., trips to the water cooler or taking personal calls) behaviors. The employee would be provided with a list of typical OCB and task performance behaviors and select percentages for each category that add up to 100%. In this way, the measurement of performance would reflect the resource allocation theory (Becker, 1965) that provides the foundation for choosing between OCB and task performance behaviors. Employees'

supervisors could also complete this process, so that multiple methods are used for collecting performance data. This type of measure would work well for university faculty and staff as well as other types of industry workers because the lists of typical behaviors could be tailored to specific jobs.

In addition to a frequency measure of task performance, objective production measures could have been gathered to help further inform the task performance of employees. For the faculty employees, number of publications, average yearly publications, and *h* factors could have been collected. For staff employees, yearly performance evaluation reports could have been collected. These measures could have been used as a supplement to the descriptive or frequency measure of task performance. It is likely that this would have provided a more accurate measure of task performance since objective measures would not be as prone to employees' positive biases. Although task performance is inherently negatively skewed since organizations do not continue to employ low performing individuals, it is unlikely that an organization is completely populated by such high performers that the average score on the task performance measure was relatively high (6.484).

Future Research and Alternative Designs

The main takeaway from this study is that while personality is important for predicting task performance, its effects are not so specific that interactions between personality and OCBs account for substantial changes in task performance. Agreeableness was shown to increase the rate at which OCB-I's reduce task performance, but it also decreased this rate for OCB-Os and task performance when accounting for an

employee's conscientiousness. Furthermore, these interaction effects were small and did not account for any additional variance in task performance. The interactions were also only significant at $p < .1$. With this in mind, future research into the OCB – task performance relationship could benefit from focusing on job characteristics rather than personality. While the main effects of personality were important for predicting task performance, they barely accounted for any trade-off between OCBs and task performance.

One area that could be explored is the nature of the OCB – task performance relationships in team-oriented jobs. This study added further support to the idea that too many OCBs can be detrimental to task performance, and that OCB-I behaviors are more detrimental than OCB-O behaviors since OCB-I's usually improve the task performance of others rather than that of the employee performing the OCB-I. However, in team-oriented jobs the distinction between OCB and task performance behaviors is less clear, and an employee's individual task performance is contingent upon that of the group. In team scenarios, engaging in OCB-Is could have a positive effect on an employee's task performance since assisting group members increases task performance for all group members involved. It is possible that agreeableness could then have an attenuating effect on the OCB-task performance curve since agreeableness increases the likelihood of OCB-Is.

A follow-up study could be designed that incorporates the sampling and measurement refinements that were previously described. Reaching out to organizations in which employees work in small groups to complete projects would a possible

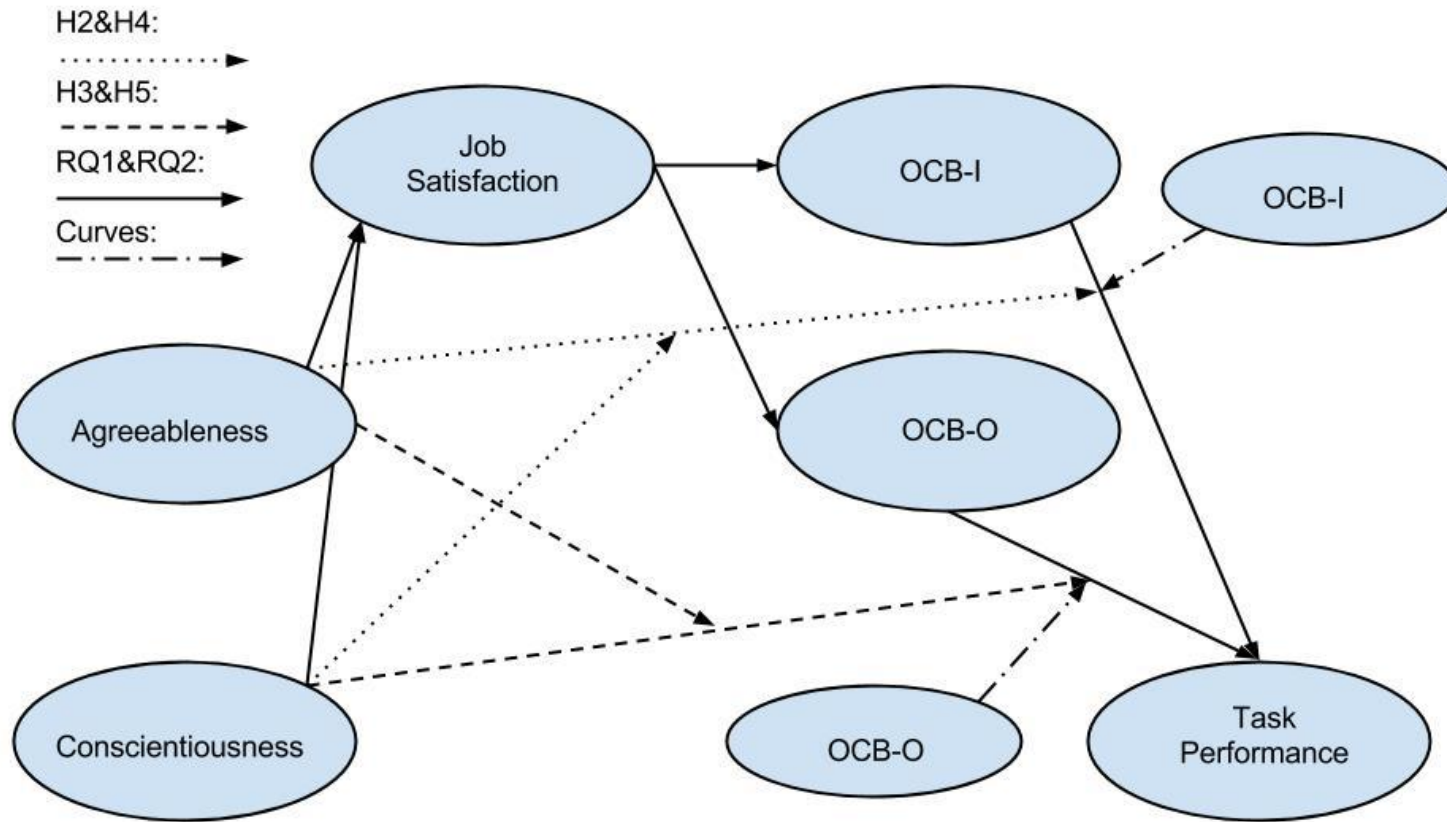
candidate for a sample. Performance could then be rated with various situational prompts using the forced distribution method previously described. The prompts would be a scenario in which the employee works individually for the day and one in which the employee is working on a team project. The forced distribution method would result in a more accurate picture of an employee's daily work activities since employees would be forced to balance the time spent engaging in different types of behaviors, and having an individual and team scenario would allow for differences between the work settings to be examined. OCB-I's would likely be more beneficial to task performance in the team scenario than in individual scenarios, so it is important understand this differing relationship between job contexts.

Practically, the results of this study suggest that organizations should select for employees that are high in conscientiousness and above average in agreeableness. These characteristics are important because they increase an employee's motivation to engage in OCBs, which are important for healthy working relationships. Organizations should also encourage employees to engage in OCBs since they support the focal task performance objectives of organizations. However, management would need to ensure that employees spend a smaller amount of their time on OCBs than they do on task performance behaviors since study results showed that an excessive amount of OCBs are detrimental to overall job performance. In conclusion, agreeableness and conscientiousness are important for determining job performance, so organizations would benefit from having employees that have internal drives for forming relationships with their coworkers and helping their coworkers reach their goals as well as their own goals.

Appendices

Appendix A

Study Model



Appendix B

Table 1. Means, Standard Deviations, and Correlations

Variable	<i>M</i>	<i>SD</i>	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Agree	5.242	.400	.679								
2. Consci	5.895	.564	.573***	.916							
3. Job Sat	5.893	.889	.113	.024	.877						
4. OCB-I	6.114	.871	.386***	.445***	.195	.822					
5. OCB-O	6.094	.946	.312***	.350***	.352***	.836***	.797				
6. OCB-Dev	5.969	.914	.243***	.515***	.182	.706***	.672***	.741			
7. OCB Total	6.056	.827	.344***	.479***	.270**	.930***	.923***	.873***	.908		
8. OCB from Others	5.667	1.133	.161	.049	.724***	.391***	.390***	.352***	.416***	.952	
9. Task Perf	6.484	.718	-.079	.112	.183	.248	.360**	.087	.271	.089	.875

Note. Reliabilities on main diagonal, **, = $p < .05$, *** = $p < .01$, Agree = Agreeableness, Consci = Conscientiousness, Job Sat = Job Satisfaction, OCB = Organizational Citizenship Behaviors, OCB-I = Individually focused OCBs, OCB-O = Organizationally focused OCBs, OCB-Dev = Developmental OCBs, Task Perf = Task Performance

Table 2. Task Performance Regressed on OCB

Predictor	<i>B</i>	<i>t</i>	<i>R</i> ² (ΔR^2)
Step One			
OCB	.072***	20.311	.007(.007)
Step Two			
OCB	.066***	17.426	.007(.000)
OCB ²	-.018***	-4.328	

Note. *** $p < .01$, OCB = Organizational Citizenship Behaviors

Table 3. Task Performance Regressed on OCB-I and Agreeableness

Predictor	<i>B</i>	<i>t</i>	<i>R</i> ² (ΔR^2)
Step One			
OCB-I	.086***	22.697	.018(.018)
Agree	-.157***	-20.954	
Step Two			
OCB-I	.085***	22.850	.018(.000)
Agree	-.165***	-26.593	
OCB-I x Agree	-.001	-.088	
OCB-I ²	-.016***	-3.824	
Step Three			
OCB-I	.086***	22.697	.018(.000)
Agree	-.157***	-20.954	
OCB-I x Agree	-.001	-.088	
OCB-I ²	-.016***	-3.824	
OCB-I ² x Agree	-.017*	-1.933	

Note. * $p < .01$ *** $p < .01$, Agree = Agreeableness, OCB-I = Individually focused Organizational Citizenship Behaviors

Table 4. Task Performance Regressed on OCB-O and Conscientiousness

Predictor	<i>B</i>	<i>t</i>	<i>R</i> ² (ΔR^2)
Step One			
OCB-O	.118***	37.024	.025(.025)
Conscientiousness	-.005	-1.072	
Step Two			
OCB-O	.115***	34.044	.025(.000)
Conscientiousness	-.005	-1.088	
OCB-O x Consci	.009	1.460	
OCB-O ²	-.009**	-2.758	
Step Three			
OCB-O	.115***	33.307	.025(.000)
Conscientiousness	-.007	-1.207	
OCB-O x Consci	.010	1.559	
OCB-O ²	-.009**	-2.525	
OCB-O ² x Consci	.003	.548	

Note. ** $p < .05$, *** $p < .01$, Consci = Conscientiousness, OCB-O = Organizationally focused Organizational Citizenship Behaviors

Table 5. Task Performance Regressed on OCB-I, Agreeableness, and Conscientiousness

Predictor	<i>B</i>	<i>t</i>	<i>R</i> ² (ΔR^2)
Step One			
OCB-I	.075***	21.012	.023(.023)
Agreeableness	-.222***	-31.465	
Conscientiousness	.089***	16.853	
Step Two			
OCB-I	.071***	18.663	.023(.000)
Agreeableness	-.222***	-31.452	
Conscientiousness	.089***	16.815	
OCB-I x Agree	.008	.838	
OCB-I ²	-.013***	-3.322	
Step Three			
OCB-I	.058*	1.778	.023(.000)
Agreeableness	-.230***	-6.188	
Conscientiousness	.075**	2.307	
OCB-I x A	-.003	-.228	
OCB-I ²	-.015***	-3.665	
OCB-I x A x C	.000	.423	
OCB-I ² x A	-.015*	-1.485	
Step Four			
OCB-I	.058	1.567	.023(.000)
Agreeableness	-.231***	-5.666	
Conscientiousness	.074**	2.013	
OCB-I x A	-.004	-.233	
OCB-I ²	-.015**	-3.617	
OCB-I x A x C	.000	.399	
OCB-I ² x A	.016	-1.485	
OCB-I ² x A x C	-.001	-.051	

Note. ** $p < .05$, *** $p < .01$, OCB-I = Individually focused Organizational Citizenship Behaviors, A = Agreeableness, C = Conscientiousness

Table 6. Task Performance Regressed on OCB-O, Agreeableness, and Conscientiousness

Predictor	<i>B</i>	<i>t</i>	<i>R</i> ² (ΔR^2)
Step One			
OCB-O	.131***	41.305	.044(.000)
Agreeableness	-.235***	-33.807	
Conscientiousness	.083***	16.157	
Step Two			
OCB-O	.128***	38.017	.044(.000)
Agreeableness	-.235***	-33.826	
Conscientiousness	.083***	16.125	
OCB-O x Consci	.008	1.346	
OCB-O ²	-.010***	-3.016	
Step Three			
OCB-O	.065*	1.915	.044(.000)
Agreeableness	-.303***	-8.029	
Conscientiousness	.022	.650	
OCB-O x Consci	-.008	-.749	
OCB-O ²	-.010***	-3.019	
OCB-O x A x C	.002*	1.831	
OCB-O ² x C	.001	.155	
Step Four			
OCB-O	.063	1.603	.044(.000)
Agreeableness	-.307***	-7.072	
Conscientiousness	.019	.506	
OCB-O x Consci	-.009	-.764	
OCB-O ²	-.010***	-2.927	
OCB-O x A x C	.002*	1.677	
OCB-O ² x C	.000	.062	
OCB-O ² x A x C	-.002	-.159	

Note. ** $p < .01$, OCB-O = Organizationally focused Organizational Citizenship Behaviors, A = Agreeableness, C = Conscientiousness

Table 7. Task Performance Regressed on OCB-O and Conscientiousness when split by Agreeableness

Agreeableness Level	Predictor	<i>B</i>	<i>t</i>	<i>R</i> ² (ΔR^2)
Low Agreeableness	Step One			
	OCB-O	.120***	28.724	.034(.034)
	Conscientiousness	.038***	5.725	
	Step Two			
	OCB-O	.118***	23.207	.034(.000)
	Conscientiousness	.035***	2.892	
	OCB-O x Consci	.018*	1.505	
	OCB-O ²	-.010**	-2.281	
	Step Three			
	OCB-O	.118***	23.196	.034(.000)
	Conscientiousness	.035***	4.447	
	OCB-O x Consci	.018*	1.826	
OCB-O ²	-.007	-1.395		
OCB-O ² x Consci	.008	1.039		
High Agreeableness	Step One			
	OCB-O	.130***	26.938	.030(.030)
	Conscientiousness	.052***	7.201	
	Step Two			
	OCB-O	.131***	25.184	.030(.000)
	Conscientiousness	.052***	7.130	
	OCB-O x Consci	-.009	-.811	
	OCB-O ²	-.013**	-2.324	
	Step Three			
	OCB-O	.131***	24.532	.030(.000)
	Conscientiousness	.054***	5.809	
	OCB-O x Consci	-.009	-.848	
OCB-O ²	-.012***	-2.179		
OCB-O ² x Consci	-.004	-.316		

Note. ** $p < .01$, OCB-O = Organizationally focused Organizational Citizenship Behaviors

Table 8. Points of Inflection for Hypotheses 2 and 5

Hypothesis	Moderator Level	Predictor	Linear <i>B</i>	Quadratic <i>B</i>	Point of Inflection
Task Performance on OCB-I and A	Low Agreeableness	OCB-I	.081	-.098	.415
	High Agreeableness	OCB-I	.080	-.111	.363
Task Performance on OCB-O, A, and C	Low A, Low C	OCB-O	.218	.037	-2.913
	Low A, High C	OCB-O	.228	.041	-2.759
	High A, Low C	OCB-O	.081	.010	1.184
	High A, Low A	OCB-O	.073	-.038	.963

Note. OCB-I = Individually focused Organizational Citizenship Behaviors, A = Agreeableness, OCB-O = Organizationally focused Organizational Citizenship Behaviors, C = Conscientiousness

Table 9. Mediation Effects of Job Satisfaction and OCB

Predictor	Path	Effect	<i>t</i>	95% Lower	95% Upper
Agreeableness	Agree > Task	-.2167***	-30.894		
	Total	.0171		.0150	.0195
	Agree > Job Sat > Task	.0102		.0084	.0118
	Agree > OCB > Task	.0044		.0034	.0056
	Agree > Job Sat > OCB > Task	.0025		.0022	.0030
	Conscientiousness	Consci > Task	.0894***	16.317	
Total		.0263		.0225	.0303
Consci > Job Sat > Task		-.0048		-.0058	-.0040
Consci > OCB > Task		.0323		.0287	.0360
Consci > Job Sat > OCB > Task		-.0012		-.0014	-.0010

Note. *** $p < .001$, Agree = Agreeableness, Job Sat = Job Satisfaction, OCB = Organizational Citizenship Behaviors, Consci = Conscientiousness

Figure 1. Curve Demonstration

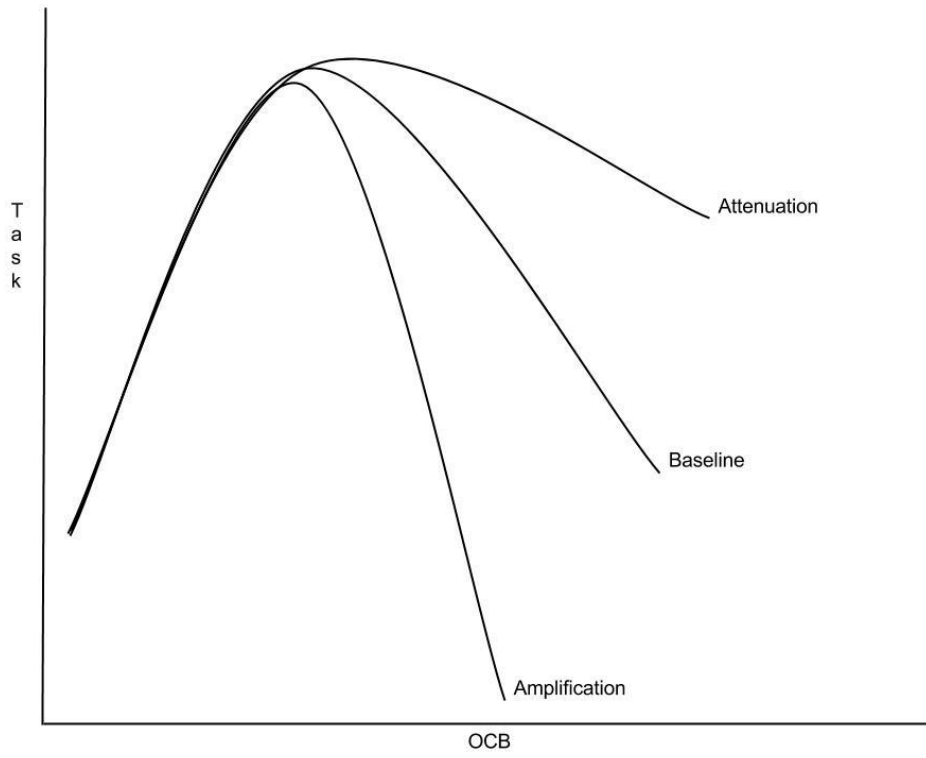


Figure 2. Scatterplot of OCB and Task Performance with Empirical Data

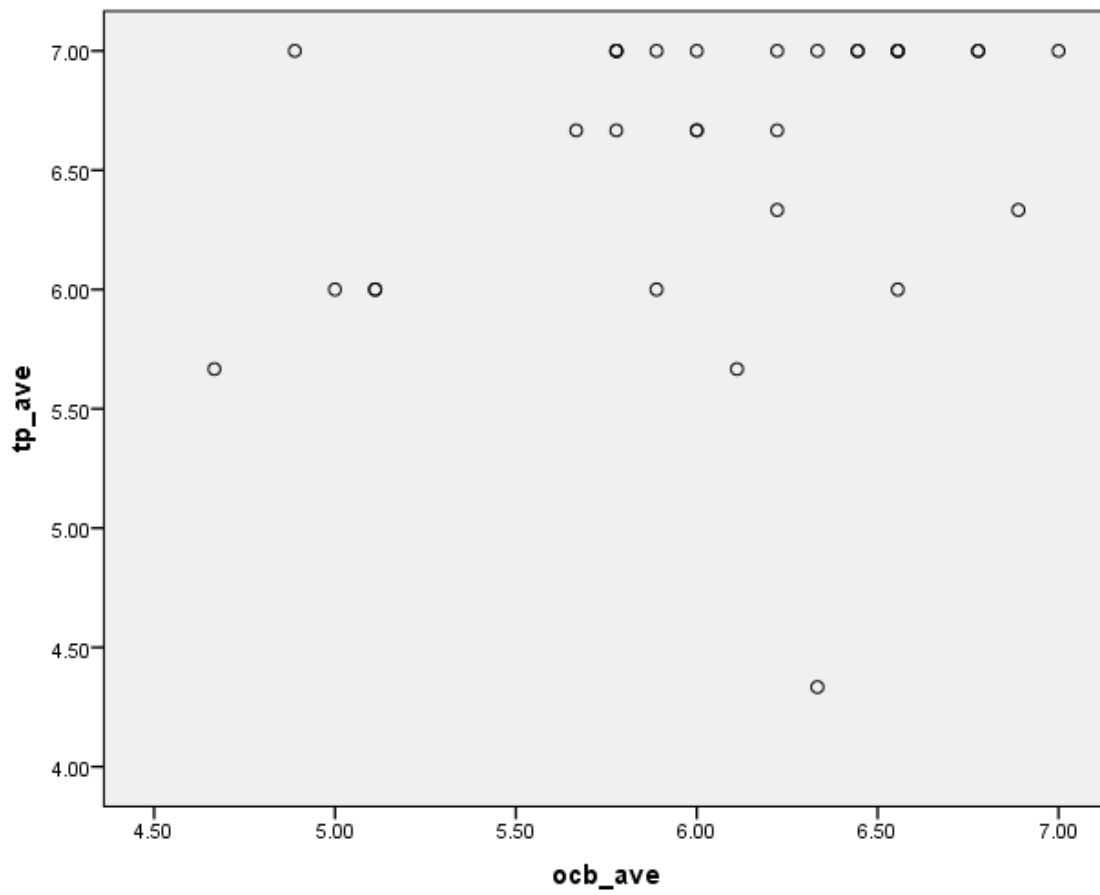
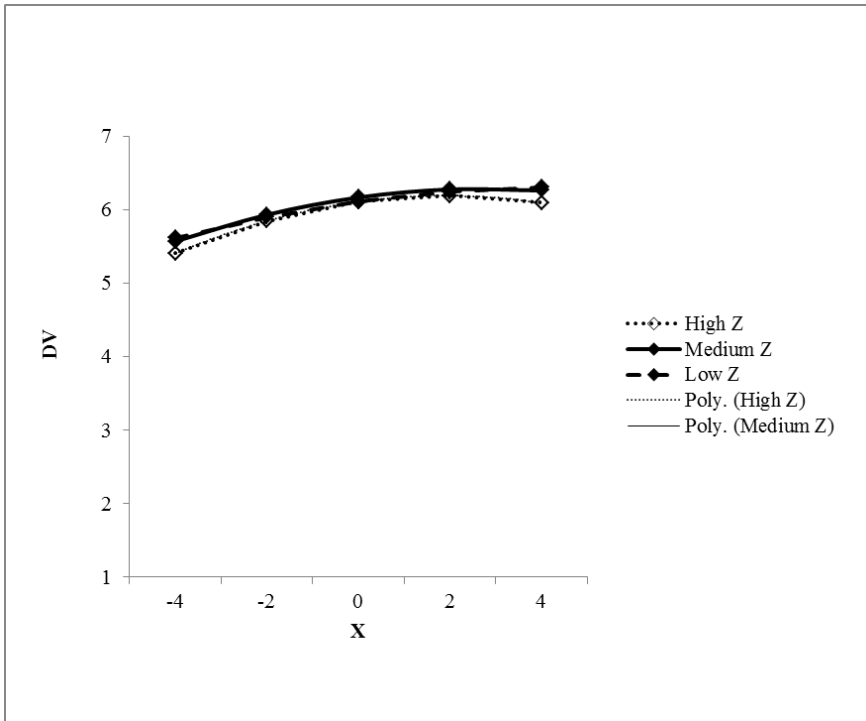


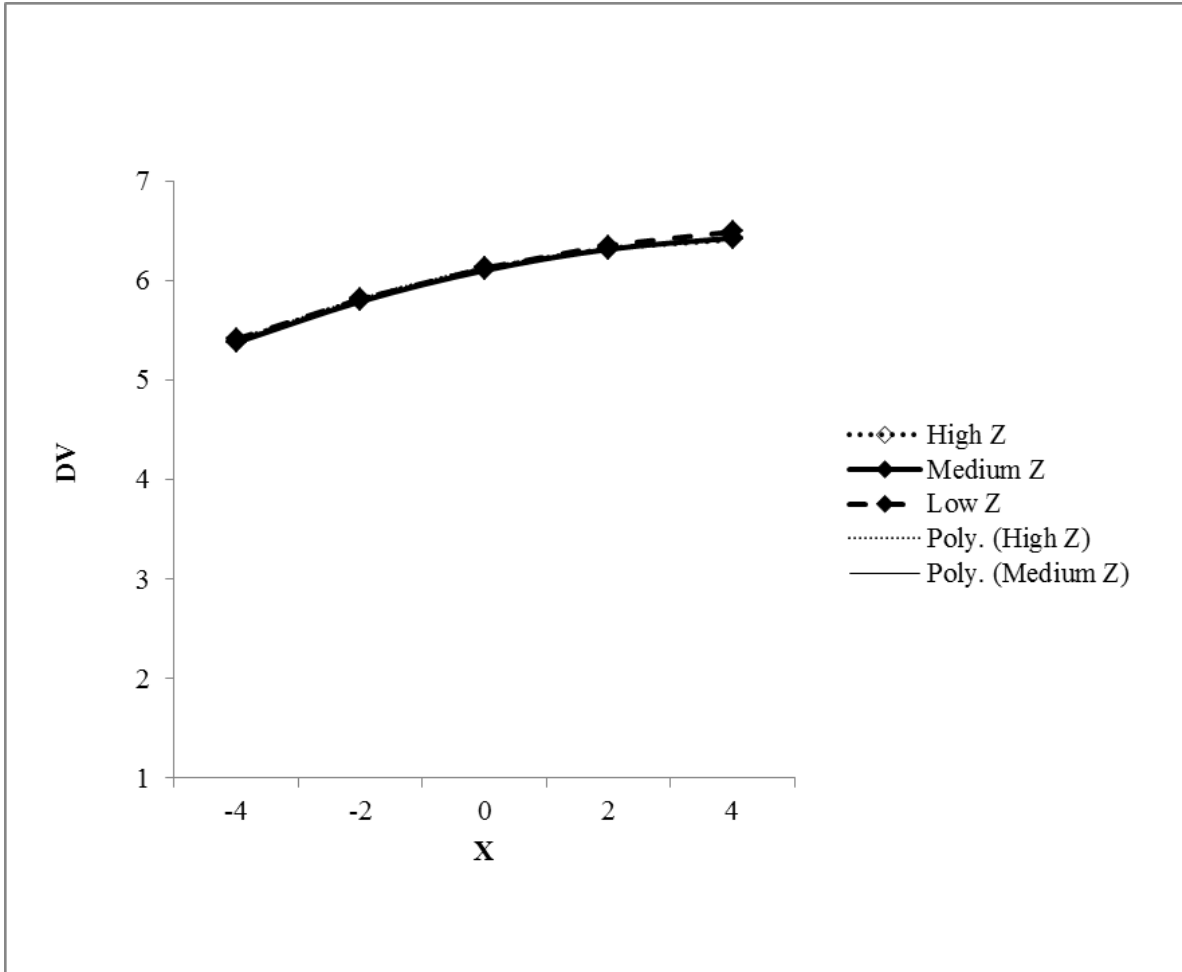
Figure 3. Simple Curves at High and Low Values of Agreeableness for OCB-I predicting Task Performance



Note. Z = agreeableness

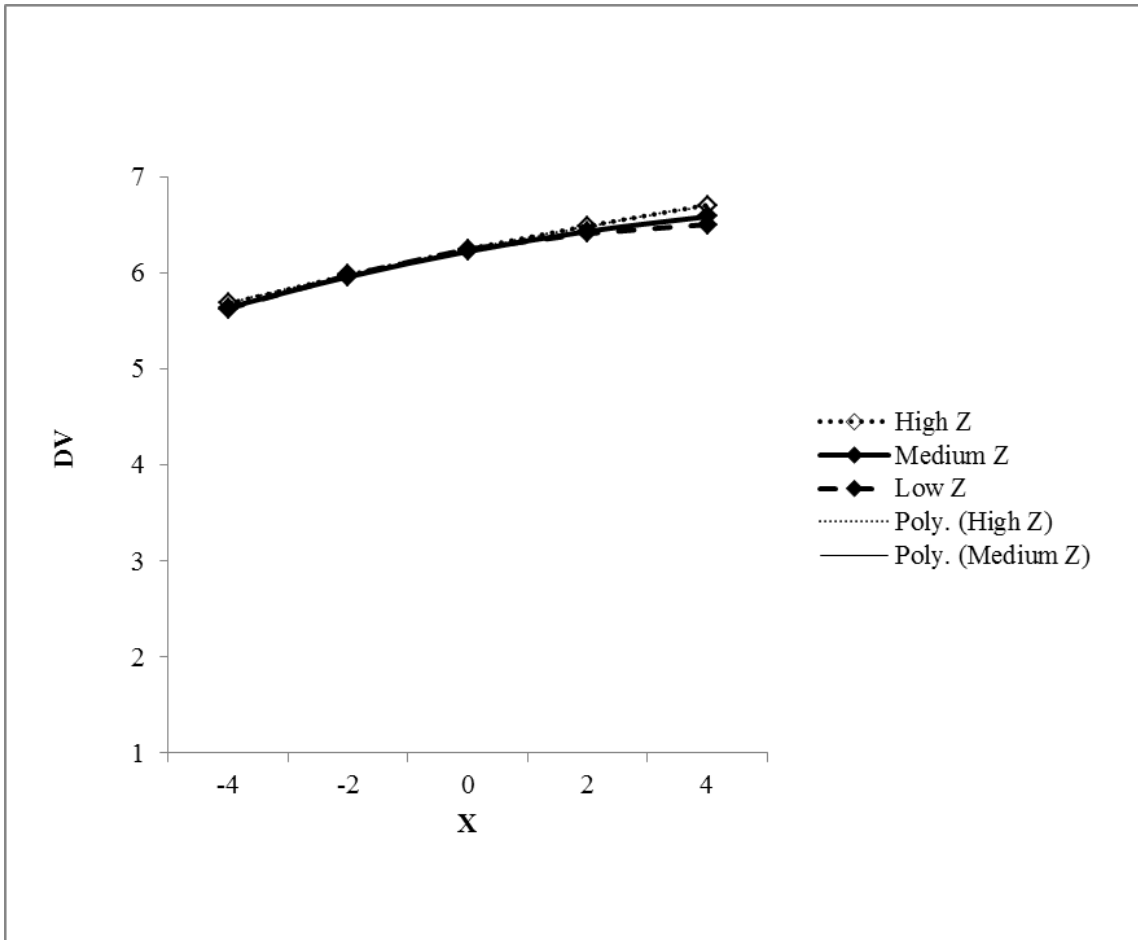
Figure 4. Curves of OCB-O and Conscientiousness on Task Performance for High and Low Agreeableness.

Low Agreeableness



Note. Z = conscientiousness

High Agreeableness



Note. Z = conscientiousness

Figure 5. Histogram of Empirical Task Performance

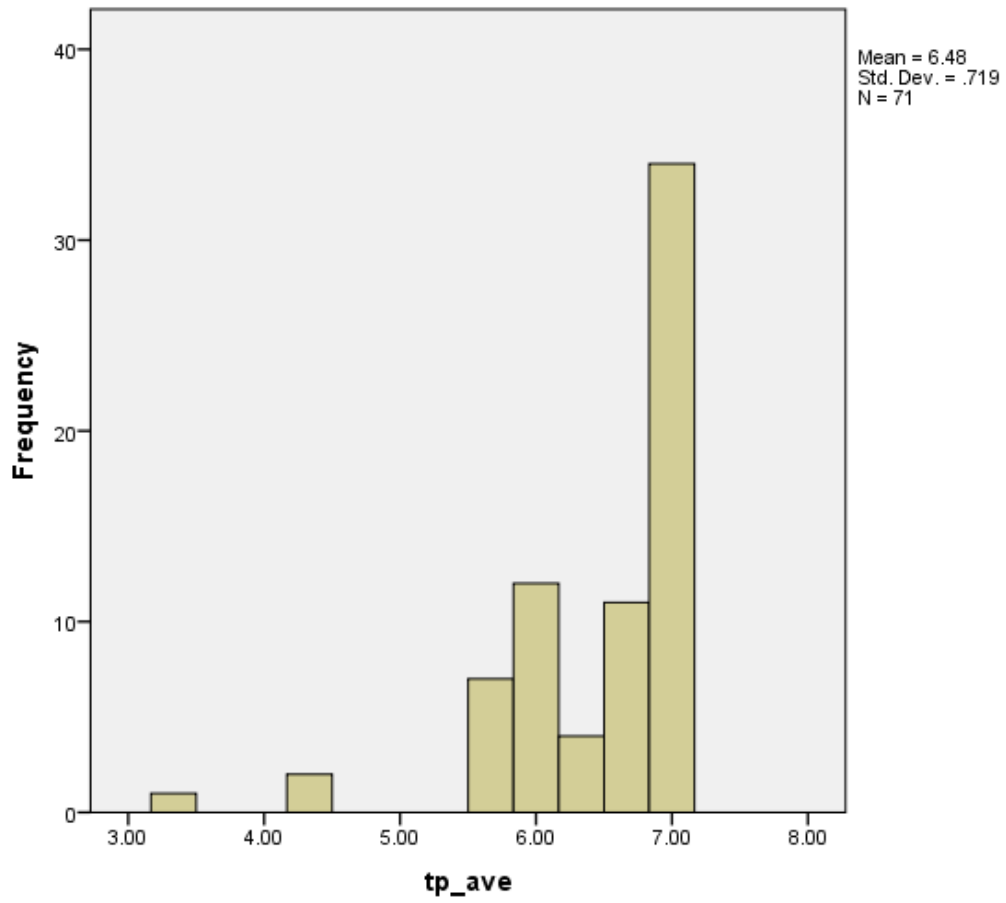
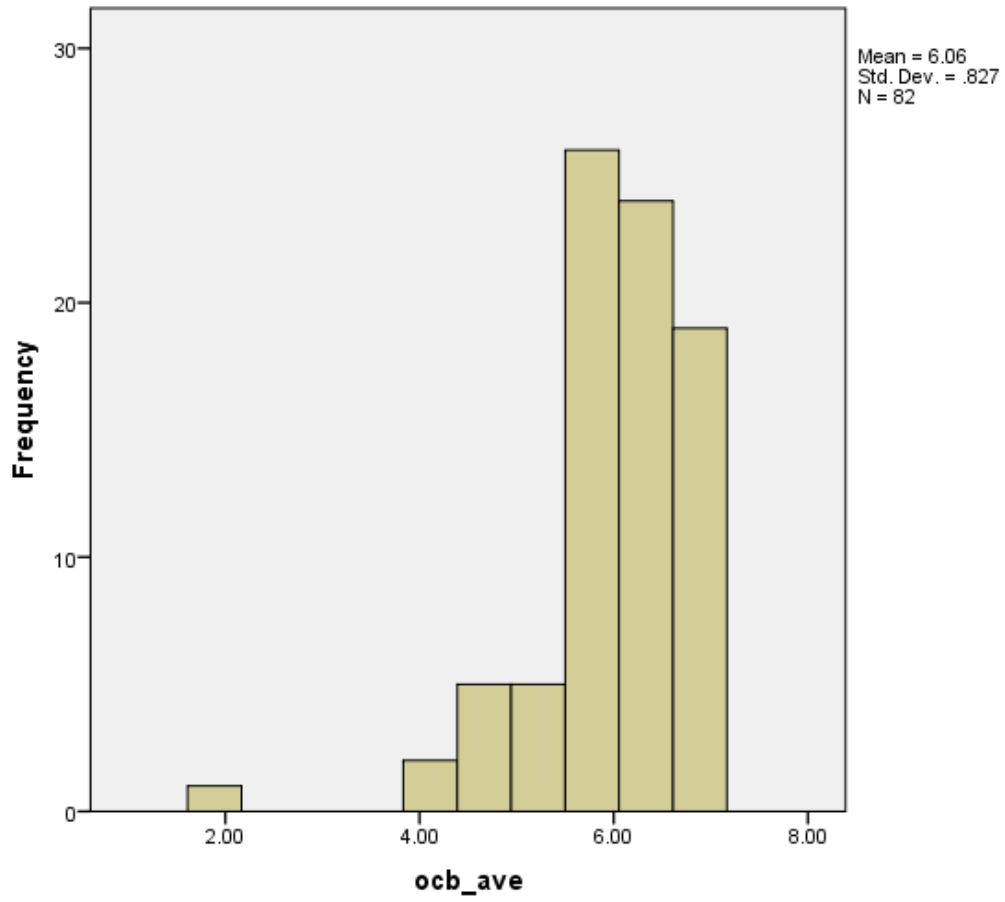


Figure 6. Histogram of Empirical OCB



Appendix C

R code for data simulation

```
#Creates 17x17 covariance matrix
covmat <- matrix(c(.160,.129,.134,.118,.089,.114,.073,-
.020,1.646,1.572,1.351,14.447,12.690,113.003,104.025,1.318,.129,.318,.012,.218,.187,.265,.223,.
031,.035,2.443,2.554,2.139,18.365,24.324,173.815,156.762,2.608,.040,.012,.791,.151,.296,.148,.
198,.730,.074,.263,1.495,3.057,8.794,17.856,46.530,101.916,2.029,.134,.218,.151,.758,.689,.562,
.669,.385,.097,1.938,8.179,7.180,47.474,49.606,319.840,287.444,7.023,.118,.187,.296,.689,.895,.
581,.722,.418,.169,1.654,7.276,9.556,41.959,62.290,279.670,349.934,7.615,
.089,.265,.148,.562,.581,.835,.659,.365,.036,1.936,5.853,6.069,33.969,45.347,253.789,258.787,6.
913,
.114,.223,.198,.669,.722,.659,.684,.390,.101,1.843,7.102,7.602,41.134,52.414,284.433,298.722,7.
184,
.073,.031,.730,.385,.418,.365,.390,1.284,.047,.595,3.911,4.116,23.079,24.905,137.859,149.518,3.
825,-
.020,.035,.074,.097,.169,.036,.101,.047,.517,.063,1.115,1.979,5.251,12.965,37.030,64.306,1.157,
1.646,2.443,.263,1.938,1.654,1.936,1.843,.595,.063,22.819,22.706,18.994,183.259,202.346,1597.
097,1446.212,21.487,
1.572,2.554,1.495,8.179,7.276,5.853,7.102,3.911,1.115,22.706,90.491,77.610,530.687,546.325,3
613.989,3199.311,76.562,
1.351,2.139,3.057,7.180,9.556,6.069,7.602,4.116,1.979,18.994,77.610,104.243,452.987,686.387,
3060.347,3882.112,82.238,
14.447,18.365,8.794,47.474,41.959,33.969,41.134,23.079,5.251,183.259,530.687,452.987,3330.0
41,3327.568,23319.217,20741.966,448.946,
12.690,24.324,17.856,49.606,62.290,45.347,52.414,24.905,12.965,202.346,546.325,686.387,332
7.568,4936.663,24460.161,28742.704,577.619,
113.003,173.815,46.530,319.840,279.670,253.789,284.433,137.859,37.030,1597.097,3613.989,3
060.347,23319.217,24460.161,173726.813,154556.688,3155.905,
104.025,156.762,101.916,287.444,349.934,258.787,298.722,149.518,64.306,1446.212,3199.311,
3882.112,20741.966,28742.704,154556.688,175369.709,3321.098,
1.318,2.608,2.029,7.023,7.615,6.913,7.184,3.825,1.157,21.487,76.562,82.238,448.946,577.619,3
155.905,3321.098,77.726),17,17)

#Creates vector with all population means
popmean <-
c(5.242,5.895,5.893,6.114,6.094,5.969,6.056,5.667,6.484,31.032,38.127,38.015,201.427,226.219
,1205.577,1198.421,37.345)

#Creates 100,000 cases sampled from a multivariate distribution
library(MASS)
finaldata <- mvrnorm(n=100000, mu=popmean, covmat)
```

References

- Aiken, L. S., & West, S. G. (1996). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.
- Ang, S., Van Dyne, L., & Begley, T. M. (2003). The employment relationships of foreign workers versus local employees: A field study of organizational justice, job satisfaction, performance, and OCB. *Journal of Organizational Behavior, 24*, 561–583.
- Bachrach, D. G., Powell, B. C., Collins, B. J., & Richey, R. G. (2006). Effects of task interdependence on the relationship between helping behavior and group performance. *Journal of Applied Psychology, 91*, 1396-1405.
- Becker, G. S. (1965). A theory of the allocation of time. *The Economic Journal, 75*, 493–517.
- Barrick, M. R., Stewart, G. L., & Piotrowski, M. (2002). Personality and job performance: Test of the mediating effects of motivation among sales representatives. *Journal of Applied Psychology, 87*, 43–51.
- Bergeron, D. M., Shipp, A. J., Rosen, B., & Furst, S. A. (2013). Organizational citizenship behavior and career outcomes: The cost of being a good citizen. *Journal of Management, 39*(4), 958-984. doi:10.1177/0149206311407508
- Biddle, B. J. (1979). *Role theory: Expectation, identities, and behaviors*. New York, NY: Academic Press.

- Bolon, D. S. (1996). Organizational citizenship behavior among hospital employees: a multidimensional analysis involving job satisfaction and organizational commitment. *Hospital & Health Services Administration, 42*(2), 221-241.
- Borman, W. C., & Motowidlo S. J. (1993). Expanding the criterion domain to include elements of contextual performance. In N. Schmitt & W. C. Borman (Eds.), *Personnel selection* (pp. 71-98). San Francisco, CA: Jossey-Bass.
- Bouckenooghe, D., Raja, U., & Butt, A. N. (2013). Combined effects of positive and negative affectivity and job satisfaction on job performance and turnover intentions. *Journal of Psychology: Interdisciplinary and Applied, 147*(2), 105-123. doi:10.1080/00223980.2012.678411.
- Chiaburu, D. S. Oh, I., Berry, C. M., Li, N., & Gardner, R. G. (2011). The five-factor model of personality traits and organizational citizenship behaviors: A meta-analysis. *Journal of Applied Psychology, 96*, 1140-1166.
- Coleman, V. I., & Borman, W. C. (2000). Investigating the underlying structure of the citizenship performance domain. *Human Resource Management Review, 10*, 25-44.
- Costa, P. T., McCrae, R. R., & Dye, D. A. (1991). Facet scales for agreeableness and conscientiousness: A revision of the NEO personality inventory. *Personality and Individual Differences, 12*, 887-898.
- Costa, P. T., & McCrae, R. R. (1992). *NEO-PI professional manual*. Psychological Assessment Resources, Inc.

- Edwards, B. D., Bell, S. T., Arthur, W. J., & Decuir, A. D. (2008). Relationships between facets of job satisfaction and task and contextual performance. *Applied Psychology: An International Review*, 57(3), 441-465. doi:10.1111/j.1464-0597.2008.00328.x
- Ganzach, Y. (1997). Misleading interaction and curvilinear terms. *Psychological Methods*, 2(3), 235-247. doi:10.1037/1082-989X.2.3.235
- Geis, F. L., & Moon, T. H. (1981). Machiavellianism and deception. *Journal of Personality and Social Psychology*, 41(4), 766-755.
- Graen, G. B. (1976). Role making processes within complex organizations. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1201–1245). Chicago, IL: Rand McNally.
- Guay, R. P., Oh, I., Choi, D., Mitchell, M. S., Mount, M. K., & Shin, K. (2013). The interactive effect of conscientiousness and agreeableness on job performance dimensions in South Korea. *International Journal of Selection and Assessment*, 21(2), 233-238. doi:10.1111/ijsa.12033
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis*. New York: Guilford Press.
- Hayes, A. F., & Preacher, K. J. (2010). Quantifying and testing indirect effects in simple mediation models when the constituent paths are nonlinear. *Multivariate Behavioral Research*, 45, 627-660.

- Hosie, P., Willemyns, M., & Sevastos, P. (2012). The impact of happiness on managers' contextual and task performance. *Asia Pacific Journal of Human Resources, 50*(3), 268-287. doi:10.1111/j.1744-7941.2012.00029.x
- Ilies, R., Fulmer, I. S., Spitzmuller, M., & Johnson, M. D. (2009). Personality and citizenship behavior: The mediating role of job satisfaction. *Journal of Applied Psychology, 94*(4), 945-959. doi:10.1037/a0013329
- Jiang, C., Wang, D., & Zhou, F. (2009). Personality traits and job performance in local government organizations in China. *Social Behavior and Personality, 37*(4), 451-458. doi:10.2224/sbp.2009.37.4.451
- Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction. *Journal of Applied Psychology, 87*, 530-541.
- Kahneman, D. (1973). *Attention and effort*. Englewood Cliffs, NJ: Prentice Hall.
- Katz, D., & Kahn, R. (1978). *The social psychology of organizations* (2nd ed.). New York: John Wiley & Sons.
- Le, H., Oh, I-S., Robbins, S. B., Ilies, R., Holland, E., & Westrick, P. (2011). Too much of a good thing: Curvilinear relationships between personality and job performance. *Journal of Applied Psychology, 96*, 113-133.
- MacCallum, R. C., & Mar, C.M. (1995). Distinguishing between moderator and quadratic effect in multiple regression. *Psychological Bulletin, 118*, 405-421.
- Motowidlo, S. J. (2000). Some basic issues related to contextual performance and organizational citizenship behavior in human resource management. *Human Resource Management Review, 10*, 115-126.

- Nielsen, T. M., Bachrach, D. G., Sundstrom, E., & Halfhill, T. R. (2012). Utility of OCB: Organizational citizenship behavior and group performance in a resource allocation framework. *Journal of Management*, 38(2), 668-694.
doi:10.1177/0149206309356326
- Podsakoff, P. M., Ahearne, M., & MacKenzie, S. B. (1997). Organizational citizenship behavior and the quantity and quality of work group performance. *Journal of Applied Psychology*, 82, 262-270.
- Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington, MA: Lexington Books.
- Organ, D. W. (1997). Organizational citizenship behavior: It's construct clean-up time. *Human Performance*, 10, 85-97.
- Organ, D. W., & Lingl, A. (1995). Personality, satisfaction, and organizational citizenship behavior. *Journal of Social Psychology*, 135, 339-350.
- Organ, D. W., & Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior. *Personnel Psychology*, 48, 755-802.
- Robie, C., & Ryan, A. M. (1999). Effects of nonlinearity and heteroscedasticity on the validity of conscientiousness in predicting overall job performance. *International Journal of Selection and Assessment*, 7(3), 157-169. doi:10.1111/1468-2389.00115

- Rubin, R. S., Dierdorff, E. C., & Bachrach, D. G. (2013). Boundaries of citizenship behavior: Curvilinearity and context in the citizenship and task performance relationship. *Personnel Psychology, 66*(2), 377-406. doi:10.1111/peps.12018
- Shih, C., & Chuang, C. (2013). Individual differences, psychological contract breach, and organizational citizenship behavior: A moderated mediation study. *Asia Pacific Journal of Management, 30*(1), 191-210. doi:10.1007/s10490-012-929.
- Spector, P. E. (1985). Measurement of Human Service Staff Satisfaction. *American Journal of Community Psychology, 13*(6), 693-713.
- Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management, 17*, 601-617.