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# A TEST OF THE GENERAL CWB-OCB EMOTION MODEL

A dissertation proposal submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Business at Virginia Commonwealth University.

By

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## Abstract

## A TEST OF THE GENERAL CWB-OCB EMOTION MODEL

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Virginia Commonwealth University, 2010

Director: Larry J. Williams, Professor, Department of Management

Discretionary behaviors such as counterproductive work behaviors (CWBs) and organizational citizenship behaviors (OCBs) exist outside of the job description, but these behaviors nevertheless have profound influence on the organization and its members. Using Spector and Fox's (2002) General OCB-CWB emotion centered model as the conceptual framework, I tested a specific model with personality, perceptions of the workplace, and emotional processes as antecedents of both OCB and CWB. The proposed model fit the data well and the results indicated that the emotional processes of burnout and engagement partially mediate the individual and organizational antecedents.



## Introduction

### *Discretionary behaviors in OBHR*

Rotundo and Sackett (2002) identify three components of job performance; task performance, citizenship behaviors, and counterproductive work behaviors. Task performance, or in-role behaviors, relates directly to the job description. Organizational citizenship behaviors (OCB) are prosocial behaviors that exceed the normative expectations of the organization (Organ, 1997). Counterproductive work behaviors are intentional behaviors that go against the legitimate interests of the organization (Dalal, 2005). Broadly, behaviors that affect the organization are either in-role behaviors (task performance) or what Bennett and Stamper (2002) refer to as discretionary behaviors (OCB and CWB).

There exists a tremendous amount of research identifying, predicting, and improving task performance and in-role behavior dating back to the OBHR pioneers (e.g. Taylor, 1911; Fayol, 1949), but research into discretionary behaviors is comparatively less. However, when supervisors rate overall job performance, discretionary behaviors contribute more to their ratings than in-role behaviors (Rotundo & Sackett, 2002). Substantial research supports the role that OCB and CWB play in both individual job performance and organizational health. Although one cannot negate the impact of in-role task performance, greater attention to discretionary behavior is warranted.

The importance of discretionary behaviors will increase in coming years for several reasons. First, the unambiguous, individualistic physical labor jobs of the 20<sup>th</sup> century that emphasized task performance above all else are decreasing at a rapid rate. As many industrialized countries move from a manufacturing economy to a knowledge

economy there will be more broadly defined, nebulous job descriptions and a greater need for employees to take initiative in accomplishing tasks (Kim & Mauborgne, 2003). With less clear in-role behaviors, discretionary behaviors become critical to this new economy. Second, employers increasingly recognize teamwork as an efficient and effective way to achieve goals (McClurg, 2001). Seventy-nine percent of Fortune 1000 companies report the utilization of teams in their day to day activities as well as in long term planning and strategy (Ledford, Lawler, & Mohrman, 1995) and it is predicted that half of the US workforce will be working in teams by the end of 2010 (Stewart, Manz, & Sims, 1999). More teamwork means more interactions with co-workers and greater opportunities to display interpersonal OCB and CWB. Third, emerging research demonstrates a key predictor of organization health is the quality of interpersonal relationships among the employees (Koys, 2001). Interpersonal relationships and encounter stressors are closely associated with discretionary behaviors, therefore improving the relationships among co-workers by reducing CWB and increasing OCB is one route to improving organizational health. Finally, increased research into discretionary behaviors is necessary to address the role that new technology plays in creating opportunities for both CWB (i.e. cyberloafing) and OCB (helping a less technologically inclined co-worker).

The increasing impact of discretionary behaviors on individual and firm performance has led many researchers to seek out the predictors of OCB (e.g. Dineen, Lewicki, & Tomlinson, 2006; Halbesleben, & Bowler, 2007; Aryee, Chen, Sun, & Debrah, 2007) and CWB (e.g. Frost, Ko, & James, 2007; Martinko, Gundlach, &

Douglas, 2002). Some have even proposed integrative models with both types of behaviors included (e.g. Lee & Allen, 2002; Spector & Fox, 2002). Although proposed models abound, empirical tests of these models are far less common. Much of what we understand about OCB and CWB in terms of predictors is based upon partial tests of theoretical models or meta-analytically derived bivariate relations (e.g. Berry, Ones, & Sackett, 2007; Organ & Ryan, 1995). The complexity of intent of engaging in either OCB or CWB is likely to go beyond the bivariate level (Griffin & Lopez, 2002). It would appear a gap in the literature exists between the proposing of these models and the testing of them.

*Generally, the current work aims to advance the knowledge of discretionary behaviors by:*

1. Exploring the relation between CWB and OCB.
2. Exploring the relations and predictive capabilities of constructs related to discretionary behaviors.
3. Developing and testing an integrative model of discretionary behaviors

*Specifically, the current work aims to:*

1. Assess the convergence and divergence of OCB and CWB using the most accurate methods
2. Test how engagement and burnout explain OCB and CWB
3. Empirically test a specific application of the CWB-OCB general emotion centered model proposed by Spector & Fox (2002)

*The Impact of Discretionary Behaviors on the Individual, the Team, and the Organization*

*CWB*

CWBs are a collection of deliberate behaviors that harm the organization or its members (Rotundo & Sackett, 2002). Much of the prior research on CWB focused on specific behaviors such as theft or aggression, but recent work treats the collection of negative behaviors as a single construct (Detert, Trevino, Burris, & Andiappan, 2007). There are several advantages to viewing CWBs as a unitary construct. By examining CWB broadly, researchers are better able to develop general theory about the antecedents and outcomes (Marcus & Schuler, 2004). From both a methodological and theoretical standpoint, treating CWB as a single construct addresses problems with low base rates of particular behaviors and better speaks to the motives and attitudes associated with CWB (Detert et al, 2007; Fishbein & Ajzen, 1975). For instance, a disgruntled employee seeking to hurt the company they work for may choose to do so by either stealing or sabotaging equipment. If theft deterrents are in place, they will likely choose to sabotage or if the individual does not possess the knowledge on how to sabotage equipment, they will likely choose to steal. In either case, the desire to harm the organization and engage in CWB is identical, but the specific behavior is the one where the desired effect is most likely, and the opportunity to avoid detection is greatest (Hollinger & Clark, 1983). Thus, the antecedents that create CWB are the same, but by aggregating CWBs, there is greater opportunity for detection through measurement. The final advantage of aggregating organization-harming behaviors is that despite the variety of CWBs, they likely share

many environmental and individual antecedents, once again allowing the researcher to better develop integrative models (Sackett & DeVore, 2001).

CWB is a broad construct and there are multiple terms in the literature to refer to subsets of CWB such as behaviors motivated through revenge and retribution (workplace aggression; Skarlacki & Folger, 1997), or behaviors that in addition to being deliberate and harmful also violate organizational norms (workplace deviance; Robinson & Bennett, 1995). CWB can also be delineated by those behaviors directed at the organization (theft, sabotage) or at individuals within the organization (bullying, insulting co-workers). These behaviors range in intensity from the rather tame (e.g. daydreaming) to the severe (e.g. violence). However, the common theme across definitions, types of CWB, and severity of behaviors is deliberate harm to the organization or its members. The following is a review of CWB's impact on each level of the organization, from the firm, to the team, to the individual.

Rotundo and Sackett (2002) demonstrated the impact of CWB on subjective ratings of job performance, however, research with objective measures of CWB help to emphasize their impact on organizations. CWB result in multibillion dollar annual losses (Buss, 1993). Employee theft alone costs retailers \$40.7 million a day (Hollinger & Davis, 2002) and half of fast food restaurant and convenience store employees admit to stealing cash and supplies (Wimbush & Dalton, 1997). In the supermarket industry, the average employee steals \$1,209 of cash and supplies every year (Jones, Slora, & Boye, 1990). Harris and Ogbonna (2002) interviewed workers in the hospitality industry and found 85% of them engaged in some form of sabotage against their employer and

customers on a weekly basis. Romano (1994) reported that more than 20% of HR managers dealt with reports of physical violence in the past three years. In our own field of academia, one in five women report receiving unwanted sexual attention from superiors (O'Connell & Korabik, 2000).

At the team level, CWB generally relates negatively to both objective and subjective ratings of job performance. Dunlop and Lee (2004) in a sample of fast food shift teams identified a negative relation between CWB and supervisor ratings of team performance ( $r = -.38$ ) and positive relation between CWB and objective measures of performance such as unexplained register losses ( $r = .38$ ) and service time ( $r = .62$ ). Likewise, Detert, et al. (2007) found CWB negatively related to restaurant performance even after controlling for turnover, training, and location. To date, much of the research on ineffective teams focuses on the group as a collective whole such as in the case of groupthink (Janis, 1972) and group paranoia (Kramer, 2001), or the group's influence on the individual such as the case of negative group norms (Bacharach, Bamberger, & Sonnenstuhl, 2002). However, there does appear to be a contagion or "bad apple" effect in CWB such that a single individual engaging in CWB can radically alter the behaviors of team members and overall team effectiveness (Keyton, 1999; Myatt & Wallace, 2008; Wetlaufer, 1994). When discussing team CWB, one should avoid the assumption that these dysfunctional teams are a collection of misfits and deviants. The more plausible scenario is that there are key toxic member(s) that drastically affect overall efficacy (Felps, Mitchell & Byington, 2006). Some evidence supports this proposition. Barrick, Stewart, Neubert, and Mount (1998) examined team efficacy as a function of members'

personalities and found that the top predictors of group cohesion and performance were the lowest team member's score for conscientiousness, agreeableness, and emotional stability.

CWB profoundly influences the organization and the team, but some of the strongest relations to performance are at the individual level. Certainly, when discussing extreme CWB like workplace violence, the effect on ratings of job performance suffers, but CWB need not be this extreme to negatively impact a worker's performance. If we take what many consider a relatively harmless CWB like cyberloafing (using the internet to browse non-work related sites, download media, check personal e-mail, and play games) and then evaluate its costs over time, the results are staggering (Lim, 2002). The average employee spends over three hours of their workweek cyberloafing (Greenfield & Davis, 2002). This constitutes nearly four weeks annually that productivity is zero. In addition, there are direct costs associated with cyberloafing such as bandwidth usage and hardware damage. Valli (2001) found that 62% of an academic department's bandwidth was deemed inappropriate. Furthermore, non-work related sites are more likely to contain viruses and spyware creating additional losses to the organization and security risks for confidential information such as customer records and accounts. Approximately 10% of employees admit to visiting pornographic websites while at work (Blanchard & Henle, 2008), thus introducing additional security risks as well as creating a potentially hostile environment resulting in sexual harassment litigation. Thus, so called "minor" CWB can have major effects on performance. It is clear that CWB influence the productivity of all levels of an organization.

## *OCB*

Not all discretionary behaviors hurt the organization or its members. Many behaviors not explicitly defined by the job description contribute to individual, team, and organizational success (i.e. OCB). Organ (1997) defines OCB as “contributions to the maintenance and enhancement of the social and psychological context that support task performance” (p. 91). Like CWB, the term OCB refers to a collection of behaviors outside of task performance, the difference being that OCB impact on the organization is positive. Also like CWB, the literature has a variety of terms to refer to OCB both broadly (e.g. prosocial behavior) and specifically to subsets of the behavior (e.g. interpersonal and organizational OCB; Williams & Anderson (1994); sportsmanship and altruism; Podsakoff et al. (2000)). Since its inception (Bateman & Organ, 1983; Smith, Organ, & Near, 1983), OCB has been one of the most researched areas in organizational behavior (Organ, Podsakoff, & MacKenzie, 2005) and no less than eight meta-analyses exist (Hoffman, Blair, Meriac, & Woehr, 2007; Ilies, Nahrgang, & Morgeson, 2007; LePine, Erez, & Johnson, 2002; Nielsen, Hrivnak, and Shaw, 2008; Organ & Ryan, 1995; Podsakoff, MacKenzie, & Bommer, 1996; Podsakoff, MacKenzie, Paine, & Bachrach, 2000; Podsakoff, Whiting, Podsakoff, & Blume, 2009) summarizing the relation of OCB to various antecedents and outcomes. Psychometric evaluations (e.g. Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) and dimensionality debates (e.g. Hoffman et al, 2007; LePine et al, 2002) flood the literature annually, but despite this scrutiny OCB has stood the test of time and among most scholars there is agreement that OCB is an



important construct to OBHR and relates to many key variables, most notably performance.

At the individual level, OCB plays an important role in job performance. Cropanzano, Rupp, and Byrne (2003) found moderate to strong relations between OCB and job performance with correlations ranging from .24 to .60. In some cases, OCB can play a larger role in supervisor evaluations than objective measures of performance (e.g. Avila, Fern, & Mann, 1988; MacKenzie, Podsakoff, & Fetter, 1991). Even after controlling for common method variance, MacKenzie, Podsakoff, and Fetter (1993) found that OCB was a stronger predictor of overall performance than objective sales. This trend is repeatedly found in different types of samples (e.g. MacKenzie, Podsakoff, & Paine, 1999; Lowery & Krilowicz, 1994). More recently, Yun, Takeuchi, and Liu (2007) found that interpersonal OCB (OCB-I) had a stronger relation to reward recommendation than task performance.

At the team level, OCB relates positively to overall efficacy and performance. Nielsen, et al. (2008) meta-analyzed the relation between group OCB and group performance and found a moderate relation between group OCB and team performance ( $\rho = .32$ ). Although the correlation between OCB and group performance was slightly lower after taking into account common source bias, the effect was still significant and positive for subjective ratings ( $\rho = .25$ ) and with objective measures of team performance ( $\rho = .20$ ). Dunlop and Lee (2002) studied OCB in fast food restaurants and found a positive relation between group level work team supervisor ratings and service time. It

does appear that the impact of OCB extends beyond the individual to affect group outcomes.

It is more difficult to estimate precisely the benefits of OCB on firm profitability. Unlike CWB, where the costs of lost inventory, stolen money, sabotaged machinery, and litigation can be easily summed, OCB is more nebulous. However, some evidence exists linking OCB and firm performance. Koy (2001) in a cross-lagged field study found that OCB at Time 1 was related to firm performance at Time 2, but firm performance at Time 1 does not have an effect on OCB at Time 2. Despite some evidence of the OCB-firm performance relation, the conclusion that OCB positively relates to organizational performance is largely theoretical and based on plausibility rather than empirical data (Podsakoff & MacKenzie, 1997). Podsakoff and MacKenzie (1997) outline the theoretical reasons to assume an OCB-firm performance relation. First, helping behaviors may be the mechanism by which best practices and prosocial norms spread to new workers. Second, co-worker OCB frees up management to spend more time on productive tasks and reduce time spent dealing with interpersonal conflicts. Essentially, OCB is a social lubricant that reduces friction due to encounter stressors and inter-office confrontations (Smith, Organ, & Near, 1983). Third, OCB increases the ability to attract and retain top candidates through good press (e.g. U.S. News, “100 Best Companies to Work for” annual review) and word of mouth advertising among current employees. Finally, OCB increase stability of organizational performance over time because employees are willing to compensate for absent employees or the learning curves of new employees.

As with CWB, there is debate about the dimensionality of OCB. Many (e.g. Organ, 1997; Podsakoff et al, 2000) have argued for OCB to be viewed as a multidimensional construct, but meta-analytic evidence provided by LePine et al. (2002) supported a unidimensional OCB construct based on strong interrelations between the different dimensions (e.g. altruism, courtesy, civic virtue, conscientiousness, and sportsmanship) and similar antecedents. Beyond the convergence of the OCB facets, LePine et al. (2002) also argues that the distinction between the targets of OCB, interpersonal (OCB-I) and organizational (OCB-O), is questionable as well based on common antecedents and high intercorrelations. Hoffman, et al. (2007) found similar results and concluded that OCB is a single factor.

### *Summary*

Both CWB and OCB can have profound impact on the performance of the individual, the team, and the organization. Both theoretical and empirical evidence indicates a positive relation between OCB and performance at each level of analysis and a negative relation of CWB and performance at each level of analysis. It is clear these two constructs hold great importance to OBHR researchers and understanding the antecedents and the theoretical framework of CWB and OCB has direct application to practitioners because these behaviors constitute a substantial portion of individual, team, and firm performance. Although the importance of these constructs cannot be denied, methodological and conceptual issues impede our understanding of these two constructs and further empirical evidence is needed to establish their true effects.

### *OCB-CWB distinction*

Thus far, OCB and CWB have been treated as separate constructs and indeed a great deal of the field has moved towards this distinction. However, the distinction may not be justified. Marsh, Craven, Hinkley, and Debus (2003) referred to *jingle-jangle* fallacies that often occur in the social sciences. The *jingle* fallacy is when researchers assume that scales with the same name measure the same thing such as assuming that the neuroticism scale of the NEO-PI-R (Costa & McCrae, 1992) taps the same construct as the neuroticism scale of the Eysenck Personality Questionnaire (Eysenck, 1994). The *jangle* fallacy occurs when researchers assume that because two measures (or in this case, constructs) are named different things they are in fact different. Bong (1996) accused many researchers of moving too quickly to invent their own labels for phenomena that already possess a label. Bong (1996) goes on to say that re-naming an existing construct, “creates ‘a conceptual mess’ for those who try to draw a coherent whole out of the relevant literature” (p. 151). There are several examples and reviews of the jingle-jangle fallacy such as learning motivation (Marsh, et al., 2003; Murphy & Alexander, 2000) and personality theory (Block, 1995).

Although OCB and CWB each have a distinct literature, name, and definition, some have called for a closer examination of the convergence of these two constructs (Batson & Powell, 2003), essentially proposing the existence of a jangle fallacy. Central to OCBs are behaviors not critical to task performance but that facilitate organizational functioning (Lee & Allen, 2002). What is central to CWB is voluntary behavior that

harms the legitimate interests of the organization. The similarity between these two definitions leads some to view OCB and CWB as opposite ends of a spectrum.

The literature splits on the distinction of OCB and CWB. Many researchers now treat the two constructs as distinct, but a significant proportion of the field contends OCB and CWB exist on a single continuum. Batson and Powell (2003) argued that theoretically, CWB equates to antisocial behaviors and OCB to prosocial behaviors and therefore the behaviors are simply opposites of one another. Drawing upon earlier work by Katz (1964), Brief and Motowidlo (1986) also argued for discretionary behaviors to be treated as one construct placed upon two axes; prosocial-antisocial and directed at the organization-directed at the individual.

Some empirical work exists positing that the two constructs are in fact one. Bennett and Stamper (2002) tested and found evidence for OCB and CWB being placed on a discretionary behavior continuum using a Q-sort task. Puffer (1987) in a sample of salespeople found such a strong negative correlation between the prosocial and antisocial behaviors that she concluded the constructs are likely opposite poles of one another. Recently, Dalal's (2005) meta-analysis showed that although OCB and CWB were not as strongly related as expected, the two constructs shared many antecedents and had relationships with common predictors that were similar in magnitude.

Although many retain the belief that discretionary behaviors are a single construct, a large contingent argues for the distinctiveness of OCB and CWB. Sackett et al. (2006) with a sample of over nine hundred participants used confirmatory factor analysis and found that the two-factor model (OCB and CWB) fit the data significantly

better than a single factor model. Sackett and colleagues also found different relations between the Five Factor Model (FFM) and OCB and CWB indicating that engagement in discretionary behaviors varies by pathology. Dalal's (2005) meta-analysis concluded that the relation between OCB and CWB ( $\rho = -.32$ ) was too low for the constructs to be treated as one.

However, there are some problems with this conclusion. Starting with Dalal (2005), the overall meta-correlation showed strong signs of moderation. Source of ratings and the inclusion of antithetical items (i.e., reversed coded items) were particularly powerful moderators. When supervisor rated, OCB and CWB were more strongly correlated ( $\rho = -.71$ ) and when antithetical items were included in OCB and CWB measures the relation was twice that of the overall correlation ( $\rho = -.66$ ). It would appear that low validity coefficients between the two types of discretionary behaviors might be an effect of using different measures and sources rather than the behaviors representing different constructs. When comparing OCB and CWB, little attention is paid to the measure and source. OCB is typically supervisor or peer rated, but CWB is typically self reported. Even when supervisor ratings of OCB and CWBs are used for discretionary behaviors, the desire to tout OCBs and conceal CWBs likely attenuates the observed relation. In general, OCB is openly displayed, but CWB behaviors are often concealed. Therefore, in order to make accurate judgments about the frequency of a worker's CWB, supervisors would need more interaction with the employee than the interaction needed to make accurate judgments about OCB.

### *Summary*

The field has not reached consensus on the distinctiveness of OCB and CWB and the evidence supporting either perspective is not conclusive. There are advantages and disadvantages to treating discretionary behaviors either as a continuum or as representing two constructs. The potential benefit of the two construct perspective is that research with CWB may yield new findings and insight in workers that a reversed scored OCB construct would not capture. The benefit of treating OCB and CWB along a continuum is the extensive prosocial behavior research that could be applied to the antisocial research. Alternatively, the cost of the two-construct perspective is that the field may artificially create a “new” construct that now directs resources to psychometric validation and theory that already exist in the OCB literature. In effect, the invention of a jangle construct resets existing knowledge to zero wasting both time and money and creating two distinct literatures where there should be one. I propose that the constructs of OCB and CWBs are in fact separate constructs.

*The theoretical frameworks and proposed models of CWB and OCB*

Because many researchers treat OCB and CWB as two separate constructs, models of discretionary behaviors are largely independent of one another as is the theoretical basis of these models. Generally, OCB models attribute behavior to perceptions of the social group and the environment while CWB models, although emphasizing certain perceptions, tend to focus on stable personality traits. Specifically, OCB models rely upon the norm of reciprocity (Gouldner, 1960) and social exchange (Blau, 1964) whereas CWB models usually center on equity (Adams, 1963; 1965) and personality. Much of the research on OCB attempts to identify characteristics and emotional states of the individual that affect their perceptions of the organization. CWB research using an equity or personality framework attempts to identify traits or perceptions of the individual that predispose the employee to CWB.

*CWB models*

As stated above, equity theory plays a large role in CWB research. Briefly, the basic tenets of equity theory state that a relationship exists between the organization and the worker where inputs (e.g. job effort, expertise) are exchanged for outcomes (e.g. pay, status, recognition). If the worker perceives inequity (over- or under-reward), they take steps to reestablish equity. In order to judge the adequacy or fairness of the input to outcome ratio, a worker compares their ratio to another source's perceived ratio. Adams (1965) called this comparison individual the *referent source*. If the worker perceives the referent source's input to outcome ratio as better or more equitable than their own, then they will take steps to increase their own outcomes or decrease their inputs (Adams,



1965). The implication of equity theory to discretionary behaviors is that sometimes these attempts to establish equity involve CWB in that an individual will withhold inputs (e.g., cyberloafing, extended breaks, daydreaming) or increase outcomes (e.g., theft, falsifying receipts) to achieve equity.

CWB researchers draw heavily from personality theory as well. Personality theory grows out of the psychological literature and posits that relatively stable individual differences affect judgments and behaviors (Hall & Lindzey, 1978). Substantial evidence suggests that at least some features of the personality such as conscientiousness and agreeableness affect workplace behaviors including CWB (Dalal, 2005). Berry, Ones, and Sackett (2007) meta-analyzed workplace deviance (a sub-facet of CWB) and found small to moderate relationships with neuroticism, conscientiousness, and agreeableness. Salgado (2002) and Mount, Ilies, and Johnson (2006) found similar results in their FFM-CWB studies with agreeableness and conscientiousness showing the largest effects. Besides large constructs subsumed in the FFM, narrow traits are also good predictors of CWB. One such narrow trait with a particularly strong relation to CWB is trait anger defined as the tendency to experience the emotional state of anger when encountering frustrating or annoying conditions (Spielberger, 1988; Spielberger and Sydeman, 1994). Fox and Spector (1999) found trait anger was the strongest predictor of CWB ( $r = .59$ ) among a set of personality traits and workplace features.

In terms of specific CWB models that incorporate equity and personality, three have come to dominate the literature. Martinko, et al's (2002) causal reasoning perspective, Fox and Spector's (1999) model of work frustration-aggression, and Frost, et

al's (2007) channeling hypothesis of aggressive behavior. The causal reasoning perspective (Martinko et al, 2002) posits that situational variables and individual differences affect cognitive processes (perceptions of disequilibria/attributions) which then lead to CWB as a means of re-establishing equity. This model is cognitively driven and may work well to explain certain CWB. For instance, an individual may engage in absenteeism as a way of lowering inputs or engage in theft as a way of increasing outcomes for the purpose of re-establishing equilibrium. However, because the model is cognitive, "hot" behaviors like aggression and violence do not fit neatly. The causal reasoning perspective implies that individuals consciously evaluate whether they are treated unfairly. If they deem themselves slighted they then determine who is at fault and engage in CWB against that target. However, in the case of physical violence or interpersonal aggression, emotion likely plays a larger role.

Fox and Spector's (1999) model of work frustration-aggression is at the other extreme of the cognitive-affective continuum. Here, a frustrating event leads to an affective reaction that then elicits a behavioral response. Cognition plays a minimal role in this causal sequence (stimulus-affective reaction-response). The affective reaction is moderated by the individual's disposition (i.e. locus of control, trait anger) and the behavioral response (i.e., CWB) is moderated by the likelihood of punishment such that increased likelihood of punishment results in CWB abatement. This model is adequate at explaining outbursts and other aggressive CWB, but CWB not motivated by aggression is absent from the model. Certain behaviors like absenteeism, disregard for the property of

others, and inefficiency towards work (e.g. daydreaming to excess, cyberloafing, unacceptably long breaks) are likely motivated by other factors than aggression.

The most recent model is Frost et al's (2007) channeling hypothesis of aggression which utilizes both implicit and explicit personality to explain aggressive acts of CWB. Like the model of work frustration-aggression, Frost et al. focused on aggressive CWB. In this model, the organization or its members slight the individual in some way. This incident triggers a conflict between the motive to aggress and the motive to retain a favorable view of oneself. If the individual reacts with CWB this creates cognitive dissonance (Festinger, 1957) between their antisocial behavior and desire to be prosocial. The cognitive dissonance triggers implicit defense justification mechanisms (e.g. hostile attribution bias, retribution bias) that alter explicit reasoning on the rationality of an aggressive response (James et al, 2005). Echoing recent advances in the psychology of ethics and morality theory (e.g. Haidt, 2007), cognitions in the channeling hypothesis serve only as post hoc justification for the emotionally driven behavior.

The CWB models reviewed contain unique elements that help to identify the causes of specific CWB as well as general CWB. Although all three models contain a plausible framework, it is unlikely that any model is definitive. The Martinko et al. (2002) fails to consider the role emotion plays and both the Fox and Spector model and Frost et al. (2007) model do not account for behaviors that fall outside the scope of aggressive reactions. Despite their shortcomings, all three contain elements necessary for any comprehensive model of CWB. What can be extracted from these models is the following; (1) employee perceptions affect CWB levels (2) both emotive and cognitive

processes take place in the engagement in CWB (3) dispositional characteristics predispose an individual to engage in CWB.

### *OCB models*

Research into the predictors of OCB continues to permeate OBHR journals and books. Common themes of OCB models emerge from this vast and varied research,. The preponderance of the research focuses on individual characteristics that influence propensity to behave in a prosocial way. These characteristics may be broad features of the individual such as personality (e.g. Ilies, Scott, & Judge, 2006) or demographics (e.g. Farh, Hackett, & Liang, 2007) or they may be more work-specific attitudes such as commitment (e.g. Yang, Mossholder, & Peng, 2007). In addition, most OCB research contains some feature of the work environment or typically perceptions of the work environment, such as the leadership style of the supervisor (e.g. Ilies et al, 2007) or organizational constraints (Peters & O'Connor, 1980). In much the same way as with CWB, affect and emotion has also grown in prominence in the OCB literature with constructs such as affective commitment (e.g. Shore & Wayne, 1993), emotional labor (Cheung, 2006), and work engagement (Saks, 2006) playing increasingly central roles in OCB models. Due to the multitude of OCB models found in the literature several attempts have been made to consolidate the findings into a more manageable understanding. Rather than evaluate and comment on each model proposed in the OCB literature, I rely on the substantial work of several key reviews over the past fifteen years to identify the various types of OCB predictors.

One of the earliest efforts to evaluate the antecedents of OCB was a meta-analysis conducted by Organ and Ryan (1995). This meta-analysis focused exclusively on employee attitudes and dispositions. Their findings support employee attitudes such as job satisfaction and commitment as predictors of OCB, but dispositional and demographic traits with the exception of conscientiousness had little to no utility in the prediction of OCB. Organ and Ryan's (1995) review was an important step in identifying the antecedents of OCB, but it did have the shortcoming of limiting the types of antecedents to attitudes, dispositions, and demographics. Future reviews expanded the number and types of antecedents to give a more complete picture of OCB.

The next prominent OCB review is that of Podsakoff, et al. (2000) who not only reviewed the OCB literature, but conducted a meta-analysis of OCB antecedents as well. The authors strongly endorsed the multidimensionality of OCB as a five facet construct with different antecedents with varying magnitudes to the five facets. That is, a facet such as sportsmanship possesses a very different nomological network of antecedents and consequences than other OCB facets such as altruism. The results for this claim were mixed and the low number of studies prevented more detailed analysis to determine if the observed differences were real or artifact. Putting aside this argument for now, they identified four categories of antecedents alleged to be common across dimensions. The first category of antecedents was individual characteristics such as work attitudes, dispositional traits, demographics, role perceptions, and KSAs. Second were characteristics of the task such as feedback and routinization studied in the literature. Third, they reviewed group characteristics such as group cohesion and organizational

support and the final category was characteristics of the leader (e.g. vision, transformational style, LMX). Podsakoff et al. (2000) concluded that the strongest predictors of OCBs are job perceptions such as justice perceptions, task characteristics, and leadership behaviors, while the only substantial dispositional predictor of OCB was conscientiousness. Podsakoff et al. (2000) point to a caveat concerning the mixed findings for organizational and task characteristics such as situational constraints. One can only meta-analyze what is available, and at the time of publication task and organizational characteristics were far less commonly studied than employee attitudes and dispositions.

Soon after the Podsakoff et al. (2000) review, Lepine, et al. (2002) conducted their own OCB review and meta-analysis. The purpose of this review was to evaluate Podsakoff et al's (2000) and others' (e.g. Organ, 1988) claim of OCB multidimensionality. As mentioned in the previous section, Lepine et al. (2002) using meta-analytically derived estimates concluded that OCB was a unidimensional construct and the various dimensions (e.g. altruism, sportsmanship) were so highly correlated and shared so many antecedents that they should be treated as imperfect indicators of an overarching construct. Specifically, corrected correlations between altruism, civic virtue, conscientiousness, courtesy, and sportsmanship ranged from .40 to .87 with a mean corrected correlation of the intercorrelations of .67. Lepine et al. (2002) evaluated five OCB antecedents spanning three of the four domains identified in Podsakoff et al. (2000). Satisfaction, commitment, conscientiousness, fairness, and leader support were all significantly related to OCB and no OCB antecedent incremented altruism in the

prediction of the antecedents. As with the Podsakoff meta-analysis, the majority of focus and included articles in the meta-analysis were employee attitudes.

The most recent meta-analytic review of the dimensionality and predictors of OCB is Hoffman, et al. (2007). As discussed above, the results of Hoffman et al. (2007) support the single factor model of OCB. With regard to antecedents, the authors only examined justice, commitment, and satisfaction as OCB antecedents and found support for their relation to OCB. It appears that despite evidence to the contrary and calls for a broader view of the OCB nomological network (e.g. Podsakoff et al, 2000), employee attitudes still monopolize much of the literature.

The most recent efforts to test OCB models rely on these prior meta-analyses and reviews to select antecedents. The focus on employee attitudes and dispositional variables limits our understanding of OCB. A review of two of the top OBHR journals (*Journal of Applied Psychology* and *Academy of Management Journal*) from 2006 to 2007 identified eighteen empirical studies predicting OCB. Of the 82 predictor variables found in these OCB studies, 34 (41%) were attitude variables such as job satisfaction or organizational support and another 25 (30%) of the predictors were dispositional traits and demographics. Attitudes and dispositions do play a role in someone's engagement in OCB, but such a heavy reliance on these types of variables places artificial constraints on the selection of predictors. OCB models that include other variables such as emotional processes may provide insight into what drives an individual to engage in prosocial behavior.

*Integrative models*

OCB and CWB literatures draw from different theories of motivation, but there are clear relations. When treated fairly, social exchange theory and the norm of reciprocity encourages individuals to reciprocate with OCB. When treated unfairly, equity theory argues that individuals will seek to restore justice both within as well as outside the organizational rules. Although the models vary slightly in their theoretical frameworks, both OCB and CWB researchers rely on some cognitive evaluation as the motivation to engage in discretionary behaviors. A significant amount of research also points towards affect in the prediction of both kinds of discretionary behavior. Although less prevalent in OCB models, both types of discretionary behaviors propose dispositional characteristics as antecedents. In response to the questions surrounding the distinction between OCB and CWB and the parallels between the motivations to engage in discretionary behavior there have been two attempts to incorporate both literatures into a single integrative model of discretionary behavior.

The two attempts to integrate OCB and CWB into a single framework treat OCB and CWB as distinct latent constructs. Lee and Allen (2002) proposed and found support for a model of discretionary behaviors predicted by general (positive and negative affect) and discrete (sadness, hostility) emotions, job cognitions (pay satisfaction, procedural justice), and demographics (age, education, tenure). Pay and justice cognitions best predicted the negative discretionary behaviors (workplace deviance) and OCB-O, but the general and discrete emotion best predicted OCB-I. The authors concluded that emotive and cognitive processes affect both OCB and CWB, but in varying amounts. Although the Lee and Allen (2002) model advances the knowledge of discretionary behaviors,



there are some limitations requiring consideration. First, many of the predictors showed extremely high intercorrelations ( $r > .80$ ) and this creates some potential multicollinearity problems when using regression as the authors did. Second, although the theoretical model proposes a simultaneous examination of OCB and CWB, the test of the model was conducted with separate regressions. The drawback of this is that the proposed model that integrates OCB and CWB cannot be tested through separate regression equations. Finally, despite including sixteen predictors in the OCB-I, OCB-O, and CWB models, the adjusted R-squares were small (.02, .09, and .04 respectively). This creates concerns about excluded variables, poor measurement of included variables, and/or a lack of statistical rigor.

The other attempt to create an integrative model of discretionary work behaviors was proposed by Spector and Fox (2002) and tested by Miles, Borman, Spector, and Fox (2002). As discussed earlier, the Spector and Fox (2002) emotion-centered model of extra-role behaviors proposes a general model of CWB and OCB where as the name suggests, emotions play a critical role. It is general because rather than identify specific variables in the model, the authors refer to types of variables that affect discretionary behaviors. For instance, “personality” is used in lieu of “conscientiousness” and “positive emotion” used in lieu of a more specific construct such as “work engagement.” The generalness of the model is also seen in the number of feedback loops that occur between the broad constructs. The model is shown in Figure 1. The outcomes, OCB and CWB, are distinct constructs with both shared and unique antecedents.

Moving from right to left in the model, OCB is first predicted by positive emotions and CWB is predicted by negative emotions. For OCB, the authors point to an extensive literature of positive mood associating with helping behaviors both within and outside the workplace (e.g. George, 1991; Kelley & Hoffman, 1997; Salovey, Mayer, & Rosenhan, 1991). For CWB, an extensive literature has developed pointing to several negative emotions as antecedents including frustration, anxiety, and anger. I concur with the included paths for positive and negative emotions, but I question the excluded paths. Positive emotionality should increase OCB, but I believe it should also decrease CWB. Likewise, negative emotionality should increase CWB, but also decrease OCB. Including these “cross paths” from negative emotions to OCB and positive emotions to CWB provides insight into whether they predict outcomes in the presence of their counterpart. In other words, do positive emotional states increment negative emotional states in the prediction of CWB and do negative emotional states increment positive emotional states in the prediction of OCB?

The remaining direct predictors, control perceptions and personality, links to both OCB and CWB. Spector and Fox define control perceptions as an evaluation of environmental conditions related to emotion and voluntary behavior. These control perceptions create negative or positive emotions that then influence levels of CWB and OCB. Next in the model are appraisals and interpretations. These are the attributions such as judgments of equity and justice and are colored by personality as well as coloring perceptions of control and emotional processes. Personality is the only variable from

which direct paths flow. Personality directly affects OCB and CWB as well as influencing cognitive appraisals of the situation.

Miles, et al. (2002) tested a version of the emotion-centered model. The tested model contained these predictors: organizational constraints, conflict, workload, positive and negative affectivity and trait anger. The Miles et al. model did not examine any of the mediators or bidirectional paths proposed in the original Spector and Fox model. Multiple regression was used to test the model and when compared to the Lee and Allen (2002) model the results were impressive. With only five variables included in the model compared to sixteen, the adjusted R-square was nearly five times larger for CWB (adjusted  $R^2 = .19$ ) and nearly twice the variance explained in OCB (adjusted  $R^2 = .24$ ). For OCB, workload, conflict, and positive emotion were statistically significant. For CWB, constraints, trait anger, and negative emotion were statistically significant.

Although the results are better, there is still considerable room for improvement in terms of variable choice, methodological design, and statistical analysis. The choice of positive and negative affectivity, fairly stable dispositional traits, as the emotional state variables is questionable. A more appropriate placement for affectivity would be under the personality part of the model. Second, all scales, including the OCB and CWB measures, were self-reported by the participant. Also concerning the choice of scales, significant changes were made to the instructions, order of items, and number of items. Great caution should be used when altering established scales as it alters the psychometric properties and makes it difficult to compare findings across studies. Finally when testing models with multiple outcomes (CWB and OCB) and variables known to

have measurement error the assumptions and limitations of ordinary least squares regression make analysis difficult and potentially biased.

### *Proposed model*

Fox and Spector's (2002) emotion centered model is a broad theoretical framework that includes positive and negative emotional states, individual differences, as well as perceptions of the organization. I contend that the Fox and Spector (2002) emotion centered model is the most comprehensive, integrative model proposed in the literature. I seek to test this model as well as the distinctiveness of several of the constructs contained within it. I include both personality traits and cognitive appraisals as antecedents to discretionary behaviors and also include the emotional processes of burnout and engagement as mediators of discretionary behaviors to the other more static predictors in the model. The proposed model is shown in Figure 2.

Comparing Figure 1 to Figure 2 there are some important differences. First, CWB and OCBs are distinct constructs, but unlike the Fox and Spector model, the two construct are related. Second, in the general model all arrows with the exception of personality are bidirectional indicating a non-causal or feedback relationship. Although suited for a general model, my specific model hypothesizes a left to right sequence with personality, cognitions, and control perceptions flowing both directly to discretionary behaviors as well as through the emotional processes of burnout and work engagement. These two emotional processes partially mediate the relation between the other variables in the model and discretionary behavior. The specific variables designed to capture the general appraisal/interpretation category are procedural, distributive, and interpersonal

justice. Organizational constraints are the specific form of control perceptions and I choose conscientiousness and trait anger as the two personality traits most relevant to the study of discretionary behaviors. The following is a review of the predictors included in the model and their relations to discretionary behaviors.

### *A Review of the Burnout and Engagement Literatures*

#### *Burnout*

Burnout is a multifaceted construct consisting of emotional exhaustion, depersonalization, and diminished personal accomplishment (Maslach & Jackson, 1984). The burnout process begins with emotional exhaustion and this is often considered the primary trait of burnout and is a result of depleted emotional resources due to interactions with others and negative perceptions of the environment (Cordes & Dougherty, 1993). Prior willingness to give care or due diligence to the job is replaced by feelings of being used up, irritability, and frustration (Maslach & Jackson, 1981). Emotional exhaustion is commonly attributed to emotionally charged interactions with supervisor, co-workers, and clients, resulting in “compassion fatigue” and feelings of frustration and tension (Zellars, Perrewe, & Hochwarter, 2000).

The second facet of burnout, depersonalization (sometimes referred to as cynicism) entails a distinctly negative view of others at work and a dehumanized approach to internal and external clients (Jackson, Turner, & Brief, 1987). Whereas emotional exhaustion is associated with frustration and anger, depersonalization is associated with a deadening of emotions, callousness towards clients, and cynicism towards the motives of the organization and those within it (Cordes & Dougherty, 1993). Individuals no longer take any pride in their work and attendance is in physical form only, with cynical employees going through the motions of a workday. The final component of burnout, diminished personal accomplishment entails reduced efficacy at work and an unwillingness to interact with clients or staff in a prosocial way. Beyond

emotional exhaustion and cynicism, which likely have their strongest effects on discretionary behaviors (excessive daydreaming, unwillingness to help others), diminished personal accomplishment can have direct effects on task performance.

Burnout has received increasing amounts of attention since it began to be studied in the late 1970s. A forthcoming meta-analysis of the nomological network of burnout (O'Boyle, Cole, Kim, & Walter) identified over 8,000 citations and at present over 27,000 effect sizes are coded. Our findings indicate that the bulk of research on burnout is on its antecedents, but there is a sizable body of research into the outcomes of burnout. Burnout is associated with turnover intentions (e.g., Elloy, Everett, & Flynn, 1991), innovation (e.g., Greiner, 1992; Pretty, McCarthy, Catano, 1992), and job performance (e.g., Fogarty, Singh, Rhoads, & Moore, 2000; Singh, Goolsby, & Rhoads, 1994; Wright & Cropanzano, 1998). Although more limited, research on burnout and discretionary behaviors exists and this stream of research is growing.

*Research linking burnout and discretionary behaviors.* Much of the research examining burnout and CWB operates under the theoretical assumption that burned out individuals engage in CWB as a means of partial withdrawal from the organization. For this reason, many of the CWB studied are passive ones such as absenteeism and tardiness (Hendrix & Spencer, 1989; Burke & Greenglass 1996; Firth, & Britton, 1989; Firth, McIntee, McKeown, & Britton, 1986). Besides these passive withdrawal behaviors, there is also some evidence of burnout relating to more active CWB. Jones (1981) found that among a small sample of nurses burnout correlated to employee theft ( $r = .43$ ). Likewise, Mulki, Jaramillo, and Locander (2008) found a positive relation ( $r = .29$ ) between

emotional exhaustion and organizational deviance. This link between burnout and CWB has been found across different samples including doctors (Blau & Andersson, 2005), flight attendants (Liang & Hsieh, 2007), manufacturing jobs (Parker & Farmer, 1990), and service workers (Cropanzano, Howes, Grandey, & Toth, 1997). It appears that the positive relation between burnout and CWB is robust to occupation.

For OCB, there is a general assumption that as workers burn out they reduce OCB. This reduction is a response to lost interest and enjoyment in the job, feelings of resentment towards co-workers, supervisors, and the organization itself. From an equity theory perspective, workers with high levels of burnout are no longer receiving key non-monetary outcomes such as job satisfaction (Bekker, Croon, & Bressers, 2005) and as a result, they begin to reduce inputs such as OCB.

The extant research tends to support this claim. Van Emmerik, Jawahar, and Stone (2005) examined white collar workers and found all three components of burnout significantly and negatively associated with OCB with the strongest relation between reduced personal accomplishment and OCB ( $r = -.46$ ). Wegge, Van Dick, Fisher, Wecking, and Moltzen (2006) found similar results with all three facets of burnout correlating negatively to OCB with reduced personal accomplishment once again the strongest predictor ( $r = -.38$ ). This negative relation is found throughout the literature with teachers (Bowling, Beehr, Johnson, & Semmer, 2004; Vigoda-Gadot, 2007), nurses (D'Amato & Zijlstra, 2008), and general staff (Cropanzano & Byrne, 2000; Cropanzano et al, 2003).



It appears that there is a substantial theoretical link between burnout and discretionary behaviors and this link is supported in the empirical literature. As burnout levels increase workers are less committed to their job (Jackson et al, 1987; Klein & Verbeke, 1999; Leiter, 1991), have reduced job satisfaction and justice perceptions (Moliner, Martínez-Tur, Peiró, & Ramos, 2005) and experience greater emotional labor in their work (Wharton & Erickson, 1995), all of which results in an unwillingness to engage in OCB. With regard to CWB, perceptions of injustice and organizational constraints lead to increased burnout levels and this burnout causes both passive and active CWB against the organization and its members. I propose that burnout plays an important role in the prediction of discretionary behaviors and provides a process by which personality traits and organizational characteristics lead to OCB and CWB.

### *Engagement*

Over the past decade, work engagement has stood out as one of the more prominent new constructs of the positive psychology movement. Whereas burnout is the process of increasing negative emotionality and decreasing positive emotionality towards work and the organization, engagement is characterized by feelings of energy, enthusiasm, and a general positive motivation to work (Macey & Schneider, 2008). Although alternative conceptualizations of engagement exist (e.g. engagement behavior; Dvir, Eden, Avolio, & Shamir, 2002), a literature review conducted by Macey and Schneider (2008) concluded that the far more commonly accepted view of engagement is as an internal motivation to engage in higher than necessary levels of activity that benefit the organization. Like burnout, engagement consists of three facets: *absorption*,

*dedication*, and *vigor*. These facets are pervasive and long-term, extending past momentary states or specific job aspects (Schaufeli, Bakker, & Salanova, 2006). But unlike positive or negative affect, engagement is a work related construct that ebbs and flows as a function of job experiences. The first facet, absorption, refers to complete concentration and contentment at work (Schaufeli, Salanova, Gonzalez-Romá, & Bakker, 2002). The second facet, dedication, involves a sense of accomplishment and pride in one's work and enthusiasm about one's work (Schaufeli, et al, 2006). The final facet, vigor, involves high levels of energy towards work and mental resilience to challenges that present themselves at work (Schaufeli, et al, 2006). Engaged individuals often lose track of time while working, stay late and arrive early out of a desire to work rather than a fear of negative work outcomes, and find the accomplishment of the work fulfilling regardless of the reward.

*Research linking engagement and discretionary behaviors.* Engagement is still a new construct with a limited literature of studies into its outcomes. Little research exists linking engagement to discretionary behaviors, but for many of the same reasons that burnout is believed to be negatively associated with OCB and positively associated with CWB, engagement should positively associate with OCB and negatively associate with CWB. Burned out individuals withdraw from the organization with passive CWB such as absenteeism and tardiness, but engaged individuals, specifically those high in vigor, actively seek out work and commit more of themselves than required. Beyond highly committing to one's work, engaged individuals are absorbed into their work and are better able to concentrate and stay focused on task completion, making them less likely to

engage in passive CWB such as excessive daydreaming. In terms of active CWB, I expect a strong negative relation to engagement. The dedication dimension of engagement consists of taking a great deal of pride in one's work and active CWB such as sabotaging a project, ignoring instruction, and deliberately doing task incorrectly are inconsistent with the emotions and cognitions of an engaged employee.

Although there have not been any empirical tests of the engagement-CWB relation, there are two examples of researchers testing the engagement-OCB relation. Xanthopoulou, Bakker, Heuven, Demerouti, & Schaufeli, (in press) using a small sample of flight attendants found a significant positive relation between overall engagement and OCB ( $r = .39$ ). Second, Saks (2006) using a new measure of engagement found significant positive relations to both OCB-I ( $r = .22$ ) and OCB-O ( $r = .46$ ). Based upon this evidence, albeit limited, and for theoretical reasons, I hypothesize that engagement negatively relates to CWB and positively relates to OCB.

### *The Burnout-Engagement Distinction*

Support has waxed and waned for the engagement construct with many arguing and providing some empirical support that engagement captures unique variance apart from burnout (Schaufeli, et al, 2006), but others claiming and providing their own empirical evidence of engagement's redundancy with burnout (Maslach & Leiter, 2008). It is easy to understand the comparison between the two constructs. Both burnout and engagement attempt to describe the process of work motivation, both contain three components, and both encapsulate largely affective and pervasive states that manifest in work behaviors. Empirical evidence also raises questions about the distinctiveness of the constructs. Cole, O'Boyle, & Walter (2010) meta-analyzed the relation between the facets of engagement and those of burnout and found substantial overlap. For each of the nine correlations linking the three dimensions of each (e.g. emotional exhaustion-vigor), we identified between 11 and 35 studies with a total  $n$  ranging from 9,295 to 30,892. After correcting for measurement error only, we found that reduced efficacy correlated to the three engagement components; vigor ( $\rho = -.83$ ), dedication ( $\rho = -.77$ ), and absorption ( $\rho = -.63$ ) strongly. Cynicism's relations to the three facets were also strong ( $\rho = -.63$ ,  $-.54$ , and  $-.66$ , respectively) and emotional exhaustion bore smaller, but still considerable effects ( $-.43$ ,  $-.32$ , and  $-.17$ , respectively).

Similar to OCB and CWB, there is a potential jangle fallacy occurring in the engagement and burnout literature. Because of the newness of engagement, these two literatures have yet to fully disconnect and often reference one another, but these two streams will diverge over time creating two separate banks of knowledge with limited

crossover. At present, some attempts have been made to establish the dimensionality of these emotional processes, but the debate continues and the literatures continue to diverge. Existing evidence has neither confirmed nor denied that engagement and burnout are at opposite ends of the same spectrum. If the constructs are in fact polar opposites, then a jangle fallacy is occurring within the literature creating two streams where there should be one. The same concerns associated with the OCB-CWB distinction apply to engagement and burnout. Much of the existing evidence supporting the distinction is factor analytic. Factor analysis provides some support for distinguishing the two constructs, but as Lepine et al. (2002) pointed out factor analysis is insufficient for establishing meaningful differences between constructs. There are more appropriate tests available to determine if the differences observed in a factor analysis have meaningful impacts in the prediction of OBHR outcomes. I seek to test the appropriateness of the distinction between engagement and burnout in the prediction of discretionary behaviors. I propose that although the constructs share a great deal in common, they are distinct in the prediction of OCB and CWB.

### *Individual and organizational predictors of discretionary behavior*

Although burnout and engagement are key processes by which individuals carry out OCB and CWB, the Spector and Fox general model of discretionary behaviors indicates that there are certain individual and organizational factors that predispose someone to burnout or engage and both directly and indirectly influence discretionary behaviors. Individual differences and features of the workplace still play a role and identifying which play the strongest roles in discretionary behavior is an important line of research. The proposed research identifies two personality traits (conscientiousness and trait anger) and two workplace variables (organizational constraints and justice perceptions) that predispose an individual to engaging in or refraining from discretionary behaviors. I review the antecedents and mediators as they appear in Figure 1.

### *Organizational justice*

For the appraisal/interpretation, I selected organizational justice. Justice is a socially constructed belief about the fairness of an action (Cropanzano & Greenberg, 1997). Growing out of equity theory, organizational justice has become one of the most frequently used constructs in OBHR (Colquitt, Conlon, Wesson, Porter, & Ng, 2001). Although Adams (1963; 1965) discusses the close relationship between injustice (specifically, distributive justice) and inequity, it is only in the past twenty five years that measures of justice and the empirical testing of this justice-behavior relation became prominent in OBHR. In the 1990s alone, Cohen-Charash and Spector (2001) identified over 100 theory papers and 400 empirical studies of organizational justice. With regard to the organization, Colquitt, et al. (2001) focuses on two specific social perceptions of

justice: (a) the perceived fairness of outcome allocations (distributive justice) and (b) the fairness of the procedures used to determine outcome allocation (procedural justice). In addition to procedural and distributive justice, Bies and Moag (1986) proposed an additional type of justice labeled interactional justice. This third type of justice captures employees' feelings about the fairness of their treatment in regards to dignity, respect, and the fairness of information dissemination. Interactional justice further divides into interpersonal and informational justice. Interpersonal justice focuses specifically on the how feelings of respect from supervisors and third parties when determining and distributing outcomes, while informational justice centers on the fairness of how information about the procedures and distribution is conveyed. The four types of justice correlate moderately to highly (.40 to .60) with each other, but three of the types of justice (distributive, procedural, and interpersonal) provides incremental validity in the prediction of job satisfaction, OCB, and turnover intentions as well as possessing different antecedents (Colquitt et al, 2001; Kernan & Hanges, 2002).

*Direct paths to OCB and CWB.* I propose that individuals believing they are treated unjustly seek to restore justice through both legitimate and illegitimate means. With regard to CWB, the restoration of justice can be achieved through theft and over-claiming expenses (increased inputs) or through deliberate work slowdowns and absenteeism (decreased inputs). It is important to note that despite the rather cold calculation of input to output ratios, justice perceptions do not require rationality. Individuals rarely sit down and empirically evaluate how much they need to steal in order to achieve justice; rather a worker may begin to steal as an emotional catharsis. For the

same reasons, workers experiencing injustice will reduce their OCB as a way of lowering inputs.

A substantial amount of research links justice perceptions to CWB. Frone (1998) found that distributive justice significantly predicted both CWB-O and CWB-I. Aquino, Lewis, and Bradfield (1999) tested how justice correlates with workplace deviance and found that increases in perceived injustice in the workplace led to deviant behaviors. The justice perception with the strongest relation to both CWB-O and CWB-I was interpersonal justice ( $r = .20, .24$ , respectively), but distributive and procedural justice also related negatively to CWB. In Cohen-Charash and Spector's (2001) meta-analysis, they observed three empirical studies between justice perceptions and CWB. The magnitude of the correlations ranged from  $-.12$  to  $-.53$ , with a mean weighted correlation of  $-.25$ .

Justice perceptions also relate to the specific, active forms of CWB. Ambrose, Seabright, and Schminke (2002) examined the relation between justice and workplace sabotage and found the type of injustice (distributive, procedural, and interactional) directly related to the goal, target, and severity of sabotage. Likewise, in Bensimon (1994) found that workers chose violence not because they were demoted, fired, or laid off, but due to the lack of procedural justice. Blau and Andersson (2005) studied doctors and reported that three types of justice (interactional, procedural, and distributive) correlated significantly and negatively to workplace incivility directed at peers and supervisors. One of the more prominent CWB, theft, has also been linked to justice perceptions. Greenberg (1990) and Greenberg and Scott (1996) found that employees



reacted to pay cuts that they perceived to be unfair by engaging in theft from the company. Similar results have been found for retaliatory behavior (Skarlicki, & Folger, 1997), revenge (Tripp, Bies, & Aquino, 2002), and aggression towards supervisors (Dupre, Inness, Connelly, Barling, & Hopton, 2006).

Justice perceptions also relate to the specific, *passive* forms of CWB. Lim (2002) framed cyberloafing as a mean to achieve justice by lowering inputs. Lim claimed that individuals justified their action through neutralization techniques defined as *a priori* rationalizations invoked to convince themselves and others that their deviant behaviors are justifiable and/or excusable. Lim's (2002) results found significant relations between justice (procedural, distributive, and interpersonal) and cyberloafing. Similar findings of a negative relation between CWB and justice perceptions have been found for absenteeism (Lam, Schaubroeck, & Aryee, 2002) and withdrawal behaviors (Colquitt et al, 2001).

Although there is an impressive amount of work linking CWB and justice, there is even a greater amount of research linking OCB to justice. The predominant belief on why a relation exists between justice perceptions and OCB is that the withholding of OCB is a way to reduce inputs and reclaim justice. Therefore, the expected relation between OCB and justice perceptions is positive. In addition, it is likely that perceptions of injustice are more closely related to OCB than task performance or CWB. The reason for a stronger relation between OCB and justice than CWB and justice is that OCB by definition are not a part of the job description and unlike CWB and task performance, they can be withheld without fear of termination or disciplinary action. There is a debate about which specific

forms of justice best predict OCB, but theoretical (e.g. Greenberg, 1993; Lind & Tyler, 1988) and empirical support (e.g. Colquitt et al, 2001) exists to demonstrate an overall small to moderate positive correlation between three forms of justice (distributive, procedural, interpersonal) and OCB.

Several meta-analyses report the relation between OCB and justice perceptions. One of the earliest efforts to identify the nomological network of OCB was a meta-analysis conducted by Organ and Ryan (1995). They examined two of the factors of OCB and found positive relations to fairness perceptions for both altruism ( $\rho = .24$ ) and general compliance ( $\rho = .27$ ). Colquitt et al. (2001) found significant positive relations between all four types of justice and OCB and went on to use meta-regression to calculate the collective effect of the four forms of justice in the prediction of OCB. They reported that the four types of justice account for 8% of the variance in OCB-O and 9% of the variance in OCB-I. In Cohen-Charash and Spector's (2001) meta-analysis, they found similar results with distributive and procedural justice correlating with OCB at .25 and .23 respectively. Viswesvaran and Ones (2002) looked exclusively at distributive and procedural justice and found a population correlation between procedural justice and OCB of .28 and a population correlation between distributive justice and OCB of .18. Based on this evidence, I diverge slightly from the Spector and Fox model and argue that organizational justice (appraisal/interpretation) has direct paths to discretionary behavior.

*Direct paths to burnout and engagement.* Although perceptions of fairness in the workplace do affect individuals' OCB and CWB, some of this effect may be a result of changes in burnout and engagement levels. Organizational justice increases burnout

levels because the inequity creates a negative emotional state that if persistent leads to emotional exhaustion and the disengagement from the job. Greenberg (2004) frames injustice as a stressor that provokes emotion and the saliency of the injustice is in direct proportion to the emotion felt. Therefore, both large and small stressors collect and over time create burnout. However, each form of justice may contribute uniquely to burnout. Tepper (2001) proposed that procedural justice is more closely associated with burnout compared to distributive justice because distributive injustice is more often an acute stressor arising from a single event (bonuses), while procedural injustice is a continual stressor. O'Driscoll and Cooper (1996) argued that reduced personal accomplishment and depersonalization (dimensions of burnout) are withdrawal strategy that attempt to minimize the salience of the injustice. For instance, an employee passed over for promotion may reply that, "I don't care, this job doesn't mean that much" or "I'm here for the paycheck, I would not want to do this for the rest of my life."

Some of the research into emotional labor and deep acting versus surface acting can be applied here as well. Deep acting is the actual experiencing of the emotions associated with the display rules and norms of the organization (e.g. be upbeat and smile when interacting with customers, be empathetic when treating patients), but surface acting entails displaying the appropriate behaviors while feeling something entirely different (Ashforth & Humphrey, 1991). Surface acting is more emotionally depleting than deep acting (Ashforth & Humphrey, 1991) and over an extended period likely leads to emotional exhaustion. When a worker in the service or helping professions feels distributive and procedural injustice, then they are likely to rely more on surface acting

because their opinions and feelings about the organization cannot be displayed to the customer or patient. They are not actually happy to help them. These are all fundamental to justice perceptions and possess strong relations with burnout.

Taris, Peeters, LeBlanc, Schreurs and Schaufeli (2001) found a moderate relation between inequity and the experience of employee burnout among a large sample of teachers. In their study, all three dimensions of burnout significantly related to inequity. Wesolowski and Mossholder (1997) tested the burnout and procedural justice relation and found a moderate to strong effect ( $r = -.44$ ) among service oriented employees. Li Chaoping (2003) using a sample of 524 flight attendants found that organizational justice was the most powerful predictor of job burnout and was still a significant predictor after controlling for demographics variables. The burnout-justice relation is not limited to frontline service positions. Janssen (2004) examined burnout levels in managers and procedural and distributive justice were two of the strongest predictors. ( $r = -.29, -.52$ , respectively). In addition, many others have found consistent support for the inequity-burnout relation (Bakker, Schaufeli, Sixma, Bosveld & van Dierendonck, 2000; Kwak, 2006; Truchot & Deregard, 2001; Van Dierendonck, Schaufeli & Buunk, 2001).

For engagement, I expect a positive relation to justice perceptions. The norm of reciprocity (Blau, 1964) states that individuals who receive help or benefit from another person or entity will respond in kind. Therefore, employees experiencing a fair workplace are more likely to reciprocate the fairness with engagement in their work more so than someone with lower justice perceptions. Tyler and Blader (2003) argued for a model of engagement where distributive and procedural justice creates identity and resource

judgments that directly influence engagement levels. Leiter and Maslach (2005) argued that engagement was a result of six areas of work life, one of which was fairness. They claimed that individuals perceiving a fair work environment would work harder and be more willing to cooperate than those in a pure tit-for-tat relationship with their employer.

Much of the work on the engagement-justice relation is theoretical, but some early efforts have been made into establishing this link empirically. Timms, Graham, and Cottrell (2007) found a significant relation between workers engagement level and their perceptions of fairness. Saks (2006) also found a significant and positive relation between engagement and distributive and procedural justice. However, besides these two studies, one of which (Timms et al) is a conference paper, there is little evidence to link these two constructs. The limited research that does exist proposes and finds the expected positive correlation between justice and engagement, but further validating the relation and identifying how engagement mediates justice perceptions and discretionary behavior are important next steps.

*Burnout and engagement as mediators.* Despite the presence of a significant relation between justice perceptions and discretionary behaviors, there is scant attention dedicated to the process by which perceptions of inequity manifest themselves into OCB and CWB. What factors and by what mechanism do individuals who perceived themselves as being treated unfairly engage in CWB or OCB? Burnout and engagement are two possible routes to discretionary behavior. I propose that perceptions of inequity create stress that if strong enough lead to burnout. Burned out employees are more likely to engage in CWB and less likely to engage in OCB. On the other hand, a favorable

perception of fairness and justice in the workplace leads to higher levels of engagement and engaged employees are less likely to exhibit CWB and more likely to exhibit OCB. Therefore, I propose that the relations between justice and discretionary behavior are mediated by engagement and burnout.

### *Conscientiousness*

The FFM trait, conscientiousness, describes the extent to which an individual possesses self-discipline, dependability, and a desire for achievement (Costa, McCrae, & Dye, 1991). In addition, individuals with high degrees of conscientiousness are goal oriented, persistent, and have a strong work ethic (McCrae & Costa, 1999). Conscientiousness predicts a variety of work outcomes such as overall performance (Barrick & Mount, 1991) and job satisfaction (Judge, Heller, & Mount, 2002). Of the FFM traits, conscientiousness is one of the more consistent traits. Typically, it positively relates to positive work outcomes (task performance, leadership, extra-role behaviors) and negatively relates to negative work outcomes such as abusive supervision (Tepper, Duffy, & Shaw, 2001), absenteeism (Judge, Thoresen, & Martocchio, 1997) and turnover (Barrick & Mount, 1996).

*Direct paths to OCB and CWB.* Consistent with the Spector and Fox (2002) model, I hypothesize direct relations from personality constructs to discretionary behavior. In addition, I also hypothesize that burnout and engagement partially transmit so of the effects of personality on OCB and CWB. Existing research relates conscientiousness to both the criterion variables and mediators in the proposed model. Beginning with discretionary behaviors, three meta-analyses support the negative relation

between CWB and conscientiousness. Dalal (2005) used a sample of thirteen studies ( $n = 6276$ ) and estimated the population effect to be small to moderate ( $\rho = -.26$ ). In Berry et al.'s (2007) meta-analysis of workplace deviance, they split the studies into interpersonal deviance and organizational deviance and found that conscientiousness was a significant predictor of both types of CWB, but its relation to organizational deviance ( $\rho = -.42$ ) was stronger than any demographic, justice dimension, or other FFM trait. The third meta-analysis, Salgado (2002), found similar results supporting the CWB-conscientiousness relation with conscientiousness once again being the strongest predictor of the FFM ( $\rho = -.26$ ). Along with empirical support, theoretical support for the relation is intuitive.

Individuals with a strong work ethic and self-discipline are less likely to engage in CWB like tardiness, absenteeism, and misuse of time. Likewise, the need for achievement and high goal orientation likely discourages individuals with high conscientiousness from engaging in CWB that could potentially affect their chances of promotion or termination.

Concerning positive discretionary behaviors, substantial empirical and theoretical support links conscientiousness to OCB. For many of the same reasons conscientiousness negatively associates with CWB, conscientiousness positively associates with OCB.

Punctuality, attendance, and rule compliance, all functions of trait conscientiousness, associate with many of the OCB directed at the organization (Organ, 1994). The desire for achievement and the persistence associated with high conscientiousness would suggest a willingness to engage in positive discretionary behaviors. Goal oriented individuals, especially when the goals include managerial aspirations, are more likely to take on mentoring roles or helping new employees. A strong work ethic encourages

individuals to spend more time at work and be more proactive in engagement in new tasks.

Beyond theoretical justification, there exists a large body of empirical work linking conscientiousness and OCB. Ladd and Henry (2000) found significantly positive relations to both OCB-I and OCB-O. Organ (1994) reviewing the literature on OCB, stated that conscientiousness was one of the best personality predictors of OCB available. Organ and Ryan (1995) meta-analyzed the relation between conscientiousness and two dimensions of OCB (altruism and compliance) and found significant relations to both ( $p = .22$  and  $.30$  respectively). In LePine and Van Dyne's (2001) study of individual differences (FFM and general mental ability) and voice and cooperative behaviors in the organization, conscientiousness was the second strongest predictor of both voice behaviors ( $r = .26$ ) and cooperative behaviors ( $r = .17$ ). Several other examples in literature support a link between trait conscientiousness and OCB (i.e. Hatstrup, O'Connell, & Wingate, 1998; Hogan, Rybicki, Motowidlo, & Borman, 1998; Konovsky & Organ, 1996; Miller, Griffin, & Hart, 1999; Neuman & Kickul, 1998).

*Direct paths to burnout and engagement.* In addition to direct paths to discretionary behaviors, I also hypothesize paths to burnout and engagement. Several studies have demonstrated a negative relation between conscientiousness and burnout. Witt, Andrews, and Carlson (2004) tested the link between emotional exhaustion and conscientiousness and found a significant correlation ( $r = -.40$ ), either indicating that individuals with lower conscientiousness are more likely to burnout or individuals with higher levels of emotional exhaustion report lower conscientiousness scores. Similar



negative findings between conscientiousness and burnout have been reported for a variety of professions including nurses (Zellars et al, 2000), teachers (Dormann & Kaiser, 2002), bank employees (Johnson & O'Leary-Kelly, 2003), and police (Mostert & Rothmann, 2006). Longitudinal research has also been applied to establishing the temporal sequence of conscientiousness preceding burnout (e.g. Deary, Watson, & Hogston, 2003; Piedmont, 1993).

Very little research exists between the FFM and work engagement. Research into engagement is still in its infancy compared to burnout and much of the engagement literature has focused on engagement as an antecedent of work behaviors. Personality research and engagement have largely grown in separate streams with the one exception being Mostert and Rothmann (2006), who did find a positive relation between conscientiousness and work engagement.

*Burnout and engagement as mediators.* Although some research linking conscientiousness to burnout and engagement exists, and ample research links conscientiousness to OCB and CWB, no study has yet to examine whether burnout mediates the conscientiousness-CWB relation or whether engagement mediates the conscientiousness-OCB relation. Due to the lack of empirical support, I justify these two mediated relations for theoretical reasons. The negative relation between conscientiousness and CWB and the positive relation between conscientiousness and OCB has to be mediated because it lacks a causal process. For example, a significant relation exists between conscientiousness and health outcomes (Martin & Friedman, 2000), but trait conscientiousness does not make people sick or die young. The causal

mechanism is likely risky health behaviors that individuals with lower conscientiousness are more likely to engage in (e.g. tobacco use, promiscuity, diet and activity patterns) and meta-analytic evidence supports this conclusion (Bogg & Roberts, 2004). I choose engagement and burnout as the mediators because conscientiousness does not cause people to act in a more prosocial way, rather conscientiousness positively relates to engagement and engaged employees are more likely act pro-socially. Likewise, conscientiousness negatively relates to burnout and burnout is the causal process of individuals acting in an antisocial way.

#### *Trait anger*

The proposed model includes an additional individual difference variable, trait anger. Trait anger is a stable personality trait (Speilberger, 1996) typified by responding aggressively to a wide range of situations and behaviors (Douglas & Martinko, 2001). Individuals high in trait anger reported more anger evoking events than less angry individuals (Deffenbacher et al., 1996). Trait anger is positively associated with role conflict and job tension (Houston & Kelly, 1989) and some negative health outcomes such as high blood pressure (Schum, Jorgensen, Verhaeghen, Sauro & Thibodeau, 2003) and elevated cortisol levels (Steptoe, Croyley, Griffith, & Kirschbaum, 2000). Trait anger and hostility have also been found to predict many life outcomes such as number of divorces ( $r = .18$ ; Rye, Folck, Heim, Olszewski, & Traina, 2004), road rage (physical fight with another driver) ( $r = .12$ ; Deffenbacher, Lynch, Oetting, & Yingling, 2001), criminal recidivism ( $r = .21$ ; Firestone, Nunes, Moulden, Broom, & Bradford, 2005), and life satisfaction ( $r = -.24$ ; Hong & Giannakopoulos, 1994). In the workplace, Glomb and

Liao (2003) found that both being the target of aggression and the mean level of aggression in a work group (absent the target individual) are predictors of employees' reports of engaging in aggression. Most employers view trait anger as a negative personality characteristic, but what role trait anger plays in discretionary behaviors is understudied.

*Direct paths to OCB and CWB.* As will be discussed later, many CWBs are planned, done covertly, and engaged in for the sake of justice restoration. Sometimes referred to as the metaphor of the ledger (Klockars, 1974), workers evaluate how much they deserve, deduct what they currently earn, and behave in a way to balance the ledger. Although this is certainly one route to CWB, many CWB do not fit into this paradigm. Some CWBs are impulsive (hitting a co-worker, screaming at a supervisor) and trait anger predisposes individuals to these types of behaviors. Beginning in the late 1990s, researchers began examining what role anger plays in various CWBs and a substantial amount of empirical research supports trait anger as a key predictor of CWB.

Brondolo et al. (1998) identified a high conflict profession (New York City traffic agents) and conducted a longitudinal study of how trait anger related to interpersonal conflict with co-workers, supervisors, and “customers.” Their results indicated that the intensity of their anger had a small to moderate correlation with conflict frequency at Time 1 ( $r = .25$ ), but the relation between anger and conflict frequency more than doubled when assessed at Time 2 four months later ( $r = .56$ ). Fox and Spector (1999) evaluated trait anger and several other personality and situational variables and found that trait anger was the top predictor of CWB. After dividing CWB into minor versus serious

and interpersonal versus organizational, trait anger still topped all other predictors (Fox & Spector, 1999). Trait anger was related to attitudes of revenge ( $r = .73$ ) and incidence of workplace aggression ( $r = .68$ ; Douglas & Martinko, 2001). Hershcovis et al. (2007) identified the top individual predictor of aggressive behavior among a model including both traits and situational variables as anger ( $r = .37$ ) and Fox, Spector, and Miles (2001) examining justice, anger, constraints and CWB found similar results with trait anger significantly correlating to a variety of CWB.

Regarding positive discretionary behaviors, the relation between trait anger and OCB is more of an unknown. The Spector and Fox (2002) model includes paths from personality to both CWB and OCB, but it is unclear if the path from personality to OCB and the path to CWB entail the same variables (i.e. conscientiousness, trait anger). The single instance identified in the literature that empirically tested the trait anger-OCB relation (O'Brien, 2004) did find a significant negative correlation ( $r = -.17$ ). The correlation is small by Cohen (1988) standards, but introduces evidence that trait anger does influence OCB. The strong relation between anger and aggression likely makes an individuals high in trait anger difficult to work with and less likely to be the target of OCBs. Based on the norm of reciprocity, individuals not receiving OCBs are less likely to express OCBs. I also expect that trait anger is negatively associated with OCB because the altruism, sportsmanship, and empathy associated with OCB conflicts with the highly competitive nature of elevated trait anger (Kassinove, Roth, Owens, & Fuller, 2002). For these reasons, I hypothesize a negative relation between OCB and trait anger.

*Direct paths to burnout and engagement.* Both burnout and engagement are emotional processes and trait anger is a tendency to respond to a wide variety of situations with negative emotionality (Spector & Fox, 2002). This negative emotionality over a worker's tenure at an organization should increase the incidence of burnout and decrease engagement levels. With regard to burnout, some evidence supports the link to trait anger. Brondolo et al. (1998) examining anger and burnout found a substantial correlation ( $r = .59$ ) between the two constructs. Likewise, Kwak (2006) divided burnout into its components and found significant relations between trait anger and all three components of burnout. There are two likely explanations for the close relationship between trait anger and burnout. First, individuals high in trait anger feel negative emotions (specifically anger) at work more often than those with low trait anger. As Maslach and Leiter (2008) point out, burnout is a cumulative process where both small and large irritants build up to eventually create a state of emotional exhaustion, cynicism, and reduced efficacy. Because individuals high on trait anger perceive both a greater number of irritants and these irritants generate greater negative emotionality (Iwanicki, 1983), they tend to burnout faster than their lower trait anger counterparts. An alternative, and likely complimentary, explanation to the burnout-anger relation is that those high in trait anger ruminate on unpleasant events (Sukhodolsky, Golub, & Cromwell, 2001) and are less likely to forgive the perceived transgressor (Barber, Maltby, & Macaskill, 2005). Therefore, those low in trait anger not only perceive fewer anger-inducing situations, they are more likely to forgive the actors in anger-inducing situations, thus reducing their incidence of burnout. An illustration of the burnout phenomena is to see burnout as a

bucket with holes in it. Negative emotional events pour into the bucket and over time leak out of the bucket as individuals forgive the offenders. For individuals high in trait anger, there are a greater number of negative emotion-eliciting events flowing into the bucket and because of their unwillingness to forgive, fewer holes leaking out of the bucket. The bucket of a high trait anger individual fills quickly.

The original Fox and Spector model did not include paths between personality traits and emotional processes. In addition, a search of the literature identified no studies including both work engagement and trait anger. Nevertheless, there are theoretical reasons I propose relations between trait anger and burnout and engagement. A key component of work engagement is the total concentration in one's work (absorption). However, increased trait anger is associated with loss of concentration (Dahlen, Martin, Ragan, & Kuhlman, 2005; Deffenbacher et al, 2001; Junge et al, 2000). High anger workers having difficulty concentrating have reduced absorption levels and ultimately reduced engagement levels. Engagement also possesses a vigor component that refers to the excitement and willingness to engage in new unfamiliar tasks and see challenges as opportunities (Langelaan, Bakker, van Doornenb, & Schaufeli, 2006). High anger individuals see challenges as threats (Papps & O'Carroll, 1998) and respond to these threats with anger. The vigor component of engagement should correlate negatively with trait anger. Based upon this, I hypothesize a negative relation between the two constructs and that the emotional processes partially transmit the effects of trait anger on both forms of discretionary behaviors.

*Organizational constraints*

A central component of the Spector and Fox (2002) model are control perceptions. Beliefs about the degree of control one has over their work environment not only directly lead to discretionary behavior, but they also influence one's appraisal and interpretation of the work environment (the antecedent of both emotional processes). I selected organizational constraints to represent this critical construct. Peters and O'Connor (1980) define organizational constraints as characteristics of the workplace that limit the abilities and motivation of workers to do their job. Peters and O'Connor (1980) identify eight types of organizational constraints. The constraints relate to a lack of needed information and services, inadequate task preparation and time availability, as well as to physical characteristics of the workplace (supplies, environment, budgetary support, and tools/equipment). Organizational constraints directly influence the job performance as needed information and support is unavailable. They also indirectly affect performance by creating feelings of frustration and animosity towards the organization. These negative emotions and cognitions decrease performance. Spector and Jex (1998) meta-analyzed the relation between constraints and several outcomes and concluded that increased constraints increase turnover intentions ( $k = 5, r = .46$ ) and frustration ( $k = 5, r = .47$ ) and decrease job satisfaction ( $k = 7, r = -.38$ ) and job performance ( $k = 3, r = -.11$ ). However, limited research exists linking organizational constraints to discretionary behaviors.

*Direct paths to OCB and CWB.* The current economic situation provides an excellent opportunity to evaluate the role organizational constraints play in the prediction of discretionary behaviors. As the economic woes continue in the US, organizational

constraints should increase. For example, reduced budgets limit the ability of sales people to treat existing clients to meals and stricter credit requirements limit the ability of sales people to acquire new clients. Belt-tightening strategies also increase organizational constraints in the form of repairing older equipment in lieu of upgrading to new equipment and decreasing internal services (i.e. employee help desks, IT support). These constraints lead to frustration and frustration leads to aggression (Penney & Spector, 2002). Resulting CWB from constraints is especially likely in pay for performance jobs. If a worker's bonuses, commissions, and other rewards are reduced due to perceived constraints the resulting frustration may manifest itself in direct action against the organization in the form of theft or sabotage, or in more passive ways such as slowing of work and withdrawal strategies such as absenteeism.

Although organizational constraints should increase CWB levels and especially CWB-O, I also expect constraints to increase the opportunity and prevalence of OCB. Increased organizational constraints will likely not be attributed to peers who presumably suffer under the same constraints. The negative emotions directed at the organization may foster a more positive view of co-workers and increase cohesion against what is perceived as a common enemy. Opportunity to exhibit OCB increases as the lack of adequate supplies and equipment require greater sharing and cooperation in accomplishing tasks. Likewise, a lack of formal support systems such as a technology help desk creates the need for informal support systems such as receiving help from a co-worker. Increased constraints resulting from smaller budgets reduce the likelihood of using temporary workers to fill in for permanent workers on leave. Workers returning



from leave likely find a buildup of work that is insurmountable without the assistance of co-workers. Finally, policies perceived as overly constraining encourage workers to find alternative routes to accomplishing tasks and many of these routes may include discretionary behaviors such as informal teams and assisting new employees.

Although sparse, some research does exist relating organizational constraints to discretionary behaviors. Hershcovis et al. (2007) found the relation between situational work constraints and aggressive behaviors to be .26. Penney and Spector (2002) found an even stronger relation ( $r = .48$ ) among a working sample of undergraduates. Fox and Spector (1999) identified situational constraints as a significant predictor of various forms of CWB. Spector (1975) using an organizational frustration scale found significant relations to CWB such as aggression against others ( $r = .26$ ), sabotage ( $r = .35$ ), deliberately wasted time and supplies ( $r = .22$ ), and interpersonal hostility ( $r = .70$ ). Miles et al, (2002) examined both CWB and OCB and found significant positive relations to organizational constraints.

*Direct paths to burnout and engagement.* Organizational constraints create negative emotions towards the organization (Peters & O'Connor, 1980). Specifically, constraints decrease a worker's expectancy of successful completion of a task. Decreased expectancy leads to decreased motivation (Vroom, 1964) and subsequent performance. Initial reactions to constraints may be frustration and anger, but prolonged exposure to constraints likely leads to emotional exhaustion and a disengagement from work. In cases where constraints are perceived to be exorbitantly high, workers may feel that effort towards work is pointless and the worker may eventually take on behaviors associated

with learned helplessness. The greater the perceived inhibitive force of the constraints, the greater the level of burnout and high levels of organizational constraints should decrease engagement levels.

Several models linking constraints to burnout have been proposed (e.g. Cordes & Dougherty, 1993; Leiter, 1991), but a search of the literature revealed only one empirical study tested the constraints-burnout relation. Best, Stapleton, and Downey (2005) using two different samples ( $n = 430, 429$ ) found that organizational constraints significantly and positively correlated to job burnout ( $r = .33, .31$ ). Although formal tests of the relation between organizational constraints and burnout are rare, support exists for specific aspects of burnout and constraints being related. For instance, Bourbonnais, Comeau, Vezina, and Dion (1998) in a longitudinal study of nurses found that decreased decision latitude did positively relate to emotional exhaustion even after controlling for several personality variables. Likewise, in three separate samples of teachers totaling over 3,000 participants, Byrne (1994) found a positive relation between work overload and burnout and between constrained decision making ability and burnout.

Perhaps because engagement is as a positive individual characteristic and constraints are negative organizational characteristics, the link between engagement and organizational constraints is rarely studied. Therefore, the link in the proposed model between these two variables is largely based on theoretical assumptions and proxy research with similar constructs. Organizational constraints stand as a barrier to employees fully engaging in their tasks. For example, writing a report on outdated equipment or with constant interruptions prevents a worker from entering a state of

absorption. Likewise, an employee with inadequate training or overly constraining organizational rules (both examples of organizational constraints) is less likely to be able to engage in their job. Engagement is typified by a high degree of motivation, so once again drawing on expectancy theory the introduction of organizational constraints lower one's belief that they are capable of completing a task, which decreases motivation and engagement levels. In terms of physical constraints such as poor equipment and inadequate training, equity theory (Adams, 1963; 1965) could also be applied. The introduction of constraints reduces outputs and overcoming constraints requires increased inputs. The inequity created reduces motivation and should decrease engagement levels.

Some empirical research is applicable to the constraints-engagement relation. Sonnetag (2003) examined situational constraints of the workplace and how these constraints affect worker's engagement levels. Her study found organizational constraints to be one of the best predictors of engagement. A component of organizational constraints is support and help from others and the competence of the supervisor in disseminating correct and timely information (Spector & Jex, 1998). Deci, et al. (2001) using two samples of workers found moderate positive correlations between support variables (supervisor, environment, and peer) and engagement. Similarly, Mauno, Kinnunen, and Ruokolainen (2007) using a diverse sample of workers from multiple industries examined how the lack of constraints operationalized as job control and management quality affected the three engagement dimensions. Their results found that both job control and management quality were positive and significantly correlated to all three engagement dimensions. Despite some evidence and research into how

organizational constraints affect motivational states, the lack of study into how these constraints predict burnout and engagement should be addressed with a direct test within a theoretical framework.

*Burnout and engagement as mediators.* The theoretical framework proposed by Fox and Spector (2002) and tested here, places burnout and engagement as partial mediators of organizational constraints. In much the same way as conscientiousness, organizational constraints cannot be the causal mechanism of OCB and CWB. The proposed cause of OCB and CWB is the decreased motivation of burnout and the increased motivation of engagement. For burnout, constraints increase burnout levels and this increases CWB and decreases OCB. The direct path from constraints to the outcome variables follow the same pattern with constraints negatively related to OCB and positively related to CWB. For engagement, organizational constraints lower engagement levels therefore decreasing OCB and increasing CWB, but the direct paths to OCB and CWB from organizational constraints are both positive. The positive relation to CWB is intuitive, but as described above the introduction of organizational constraints could increase OCB by giving employees a common enemy and creating cohesion among disgruntled workers. This negative cohesion or “dark matter” unites staff and increases both types of discretionary behavior as workers support and look out for one another (OCB), but justify and overlook peers engaging in CWB.

### *Synthesis*

In summary, as OBHR research has begun to realize the impact of discretionary behaviors to each level of the organization, research on the topic has exploded. However, artificial constraints permeate the study of discretionary behaviors such that most research investigates only certain types of discretionary behaviors, includes only one kind of antecedent, and relies exclusively on either an affective or a cognitive motivational framework. This has caused the literature to fractionalize with researchers studying OCB and ignoring CWB or vice versa. Allowing the literature to continue to grow in separate streams when the two constructs have a great deal in common in terms of antecedents and theoretical frameworks, stymies the advancement of the field. In terms of antecedents, the reliance on only one set of antecedents such as personality or work environment limits our understanding of how characteristics of the individual interact with characteristics of the environment to influence engagement in discretionary behaviors. Finally, creating models that rely only on either cognitive or affective processes likely excludes important determinants of OCB and CWB. The following proposal seeks to address each of these issues.

Using the Spector and Fox (2002) general OCB-CWB framework as a guide, I propose a model of discretionary behaviors predicted by one's personality, the environment they work in, and the emotional processes they experience at work. I include both positive and negative discretionary behaviors and test their dimensionality. I incorporate both trait and environmental antecedents common to both types of discretionary behaviors. Finally, the proposed model is more integrative than existing

models as it contains cognitive evaluations of the workplace as well as affective processes in the prediction of OCB and CWB. Specifically, Hypothesis 1 and 4 tests the dimensionality of two sets of related constructs, OCB and CWB and burnout and engagement. Although the research has shown a moderate relation between OCB and CWB (e.g., Dalal, 2005), there are still questions as to whether the strength of the relation is tapping into different constructs or whether the moderate relation is instead a function of how the two constructs are related. I propose that OCB and CWB are distinct constructs and not merely two extremes of the same construct. For engagement and burnout, there is a far greater concern of a jingle-jangle fallacy that these two construct are simply opposites of one another (Maslach & Leiter, 2008). Nevertheless, there is enough of a divergence in the two constructs nomological networks to suggest that their distinctiveness should not be assumed.

Hypothesis 2 and 3 argues that the emotional processes of burnout and engagement predict both kinds of discretionary behaviors. Following Spector and Fox's model of discretionary behavior, I propose that both negative and positive emotions play critical roles in the transmission of workplace perceptions into OCB and CWB. The Spector and Fox (2002) framework does not include paths between negative emotions to OCB or positive emotions to CWB. However, a review of the literature puts forth that this is a likely possibility and as a result, I include these paths in the proposed model in Figure 2.

Finally, Hypotheses 5 through 8 test how personality and perceptions of the workplace both directly predict discretionary behaviors. In addition to these hypotheses, I

put forth that the proposed model will fit the data well and support an emotion centered model of work behaviors where the personality and workplace perception variables directly and indirectly through engagement and burnout predict job performance.

*Summary of Hypotheses*

- H1. OCB and CWB are distinct constructs
- H2a. Burnout is negatively related to OCB
- H2b. Burnout is positively related to CWB
- H3a. Engagement is negatively related to CWB
- H3b. Engagement is positively related to OCB
- H4. Engagement and burnout are distinct constructs
- H5a. Conscientiousness is negatively related to CWB
- H5b. Conscientiousness is positively related to OCB
- H6a. Trait anger is positively related to CWB
- H6b. Trait anger is negatively related to OCB
- H7a. Organizational constraints is positively related to CWB
- H7b. Organizational constraints is negatively related to OCB
- H8a. Organizational justice is positively related to CWB
- H8b. Organizational justice is negatively related to OCB
- H9a. Skill variety is positively related to OCB
- H9b. Skill variety is negatively related to CWB
- H10a. Feedback is positively related to OCB
- H10b. Feedback is negatively related to CWB



### *Pilot Study*

A recurrent problem in the measure of CWB is that the construct is a collection of undesirable behaviors. This presents several methodological challenges. First, individuals tend to underreport these types of behaviors and this creates a need for less socially desirable responding on the participants' part as well as complimenting or verifying their responses with supervisor ratings. A further challenge with supervisor reporting is that the information is only accurate to the extent that they witness these undesirable behaviors, many of which are typically concealed. A final challenge arising in recent years is how much reliance we can place on technology in the data collection process, specifically the use of the internet. Most research on this topic indicates that data collected over the internet is similar to that collected through more traditional means (Stanton, 1998), but little research exists on whether reporting of discretionary behaviors differs when participants complete surveys online or in the lab. I addressed all three methodological challenges in this dissertation, but the pilot study sought to address the first and last concern.

I included three techniques to measure sensitive behaviors; self report, random response, and unmatched count. The first technique, self-report, is by far the most common in the measure of CWB. Individuals generally respond to a frequency Likert scale ranging from 'never' to 'almost daily' on items such as, "How often do you steal supplies from your workplace?" Self-report has the advantage that the respondent has firsthand knowledge of how often they engage in the behavior, but the technique also has the shortcoming of being susceptible to social desirability (Tracy & Fox, 1981).

The second technique is the random response technique (RRT; Warner, 1965). This technique was designed to reduce socially desirable responding. Here, a participant is given some randomizing device (a pair of dice or a coin) and presented with two frequency items, one sensitive (CWB) and the other harmless (e.g. driving a car). The participant then uses the randomizing device to select the item to which to respond. Because only the participant knows which item they are responding to, the pressure to respond in a socially desirable way is reduced. This technique has been successfully applied to many undesirable behaviors such as substance abuse (Goodstadt & Gruson, 1975) and theft (Dalton & Metzger, 1992).

The final technique, unmatched count technique (UCT; Dalton, Wimbush, & Daily, 1994), involves the presenting of sets of behaviors to two groups of respondents, one group is presented with three innocuous behaviors and asked how many of three behaviors they engage in over a specific time period (e.g. month, year). The second group of respondents is presented with four behaviors. The first three behaviors are identical to the first group, but the fourth item is a sensitive item. A sample item is presented below.

*"Of the following (3/4) behaviors, how many do you engage in at least once a week?"*

Group 1

talk on the phone

take a nap

go to class

Group 2

talk on the phone

take a nap

go to class

insult a coworker

With UCT it is impossible to know which items an individual is engaging in, thus reducing the anxiety a participant feels in admitting to CWB. The difference in scores between Group 1 and Group 2 establishes the base rate of the behavior. If the mean of Group 1 was 2.0 and the mean of Group 2 was 2.5 then the base rate of insulting a co-worker at least once a week is 50%. This technique has been shown to be effective in establishing base rates of employee theft (Dalton et al, 1994), but has yet to be applied to the CWB construct.

I sought to establish whether self report or the random response technique most accurately measures engagement in CWB. The degree that self report diverges from the UCT-derived base rate is error. Considerable underreporting of CWB would lead me to favor an approach with less social desirability. The RRT approach would be utilized if this were the case. If the RRT yields a similar pattern of results and adequate reliability despite the randomization process, then it would be favored for the primary data collection. I also seek to establish if CWB responses collected online significantly differ from responses collected in the lab.

### Methods

*Participants and procedure.* The sample consisted of working undergraduates recruited from the VCU School of Business. We collected data from seven classes in the business school. A power analysis was conducted to determine the appropriate sample size. Using G\*Power 3.0 (Faul, Erdfelder, Lang, & Buchner, 2007) and based on a medium between group difference ( $f = .25$ ), 80% probability of detection, and  $\alpha = .05$ , the sample size should be approximately 180 with 30 data points in each cell. However, to achieve the 30 data points in each UCT condition, I required 60 participants for each of the two UCT condition. This is because the UCT condition is calculated by subtracting Group 2 scores from Group 1. Below are listed the final sample sizes per condition.

	Lab	Online
UCT	55	64
RRT	31	25
self report	30	39

For the UCT condition, the group with the sensitive item included had UCT explained to them in the lab or in detail on the webpage. They then completed the UCT version of the CWB measure. In the first group, they received three innocuous items and asked to report their frequency of engaging in the behavior. The second group was presented with four behaviors and asked, "Of the following 4 behaviors, how many have you done in the last year?" (emphasis placed on frequency). They were then asked the same question with increasing frequency (e.g. in the last month).

For the RRT condition, the method was explained as well as the rationale for completing RRT versus standard self report. Participants received a die and completed the measure either in the class or at from a computer. Based on suggestions from the committee, we attempted to reduce the amount of error attributable to the randomization process by using a die and having the CWB item answered if a 1, 2, 3, or 4 was rolled, rather than use a coin flip. This would on average reduce the number of responses to innocuous items from 50 percent to 33 percent. Before each question pair they were prompted to roll the die and answer the appropriate question depending on their roll.

For the self-report condition, I used the participants in the UCT condition that did not answer the sensitive items. After they went through the non-sensitive items, they then completed the CWB measure.

*Measures.* For the pilot study, participants consented to the study (Appendix 1) and completed the 19 item Robinson and Bennett (2000) workplace deviance measure listed in Appendix 3 in their response condition. This measure assesses a variety of CWB along two dimensions, interpersonal deviance and organizational deviance. It should be noted, that workplace deviance (WPD) differs from CWB in that WPD must not only be a CWB but also must violate organizational norms. However, because norms are not assessed with this instrument, the WPD measure is more closely related to CWB than WPD. In recent years, Robinson and Bennett's (2000) measure has become the most commonly used CWB measure (Berry et al, 2007). It consists of frequency scales ranging from 0 (never) to 6 (daily). The measure has been well validated and both its popularity and psychometric properties indicate its appropriateness to measure CWB.

### *Results*

*Unmatched count technique.* For the first group, the 19 items of the WPD measure were embedded within the innocuous items and for the second group they received only the innocuous items. The UCT was then calculated by subtracting the mean of Group 1 from Group 2. Because participants were asked about their involvement for each CWB item at six time points (a few times a year to daily), there were 114 comparisons between groups. The comparisons yielded base rates for specific CWBs at specific frequencies of time. For example, the first CWB item, ‘worked on a personal matter instead of one for your employer’, had six base rates (one for daily, one for a few times a week, etc.).

Next, I sought to compare the online base rates to the paper and pencil base rates. Prior work by Dalton and colleagues used the UCT for a fixed time point or over a lifetime (e.g., have you ever taken property from work without permission?). To my knowledge, this is the first time that UCT has been combined with multiple frequencies of CWB. To compare online versus paper and pencil I chose to weight the base rate for each item by its frequency with greater frequencies (e.g., everyday) receiving more weight than lesser frequencies. The weights provided a way to preserve the rank order of frequency of CWB. For example, a 15 percent higher base rate for admitting to bullying everyday has a different meaning than a 15 percent higher base rate for admitting to bullying a few times a year.

I created weighted scores for each item of the online UCT and paper and pencil UCT. The level of analysis was the CWB item. I then conducted an independent groups t-

test to evaluate if the base rates varied between online and paper and pencil. Neither the weighted ( $t(18) = .78, p = ns$ ) or unweighted ( $t(18) = .80, p = ns$ )  $t$ -tests were statistically different. These results indicate that the administration of the UCT did not meaningfully impact the base rates of CWB.

*Self report.* Complete data on the self report CWB measure were obtained for 69 undergraduates. I sought to test if the format (online versus paper and pencil) altered the pattern of loadings. To test if format was altering the responses,  $t$ -tests were run to examine whether CWB-O, CWB-I, or total CWB varied by condition. The results indicated no significant differences between testing format for CWB-O ( $t(66) = .89, p = ns$ ), CWB-I ( $t(67) = .88, p = ns$ ), or CWB ( $t(66) = 1.15, p = ns$ ). With no significant differences between format, I ran a principal axis exploratory factor analysis with oblique rotation on the total sample. Five eigen values exceeded 1.0 but the bend in the scree plot clearly favored a two factor solution. The first factor (eigen = 6.60) explained 35% of the variance and the second factor (eigen = 2.00) explained an additional 11% of the variance. Despite the EFA resulting in a hypothesized two factor solution, the pattern matrix did not match the proposed interpersonal CWB and organizational CWB dimensions and 14 of the items showed crossloadings in excess of .30. The factor correlation was positive and moderate in strength (.461), but the EFA did not support the CWB-O and CWB-I dimensions. Although the reliability of the total scale was adequate ( $\alpha = .87$ ) as well as the proposed subscales of CWB-O ( $\alpha = .82$ ) and CWB-I ( $\alpha = .82$ ), there is doubt about the dimensionality of CWB.

*Random response technique.* The final measurement technique was RRT. Once again, data were collected both online and in the classroom. An independent *t*-test indicated that the two groups did not significantly differ in their mean levels of CWB ( $t(48) = -.07, p = ns$ ). Given that on average one of every three responses would be on a non-CWB topic, it is not surprising that the reliability was low ( $\alpha = .59$ ). Nevertheless, the technique did successfully transfer to an online setting and if self report became an unacceptable technique, then RRT was a potential alternative.

*Self report versus UCT.* The purpose of administering the UCT was to determine the degree of underreporting when a CWB measure is administered in a standard self report format. If considerable underreporting was found and the RRT displayed adequate psychometrics, then the self report would be abandoned in lieu of the RRT technique with less social desirability. I compared the weighted base rates of UCT and self report as well as across testing condition. Across both online and paper and pencil there was consistent underreporting in the self report condition as compared to the UCT. The difference between UCT and self report was marginally smaller in the online conditions (7.06%) than the paper and pencil conditions (9.45%). When the conditions were combined the degree of underreporting was 8.75% in the self report condition. The difference between UCT and self report was not statistically different from one another ( $t(18) = .65, p = ns$ ). Based on these results, I decided to use self report in the primary study as it will have better psychometrics and less cognitive and logistical demands (rolling the die, then choosing the question) than the RRT. Also based on these results, I



conclude that participants do not differ significantly when completing CWB surveys online versus paper and pencil.

### *Methods of Primary Study*

*Participants.* We collected data using a panel from the StudyResponse Project. The StudyResponse Project is based out of Syracuse University and contains individuals who have registered to participate in surveys administered over the Internet. Participants hail from a large variety of organizations and are invited to complete a particular survey when they meet the requirements of the study. Several published studies have used data collected from this source (e.g., Harris, Ansell, Lievens, 2008; Piccolo & Colquitt, 2006). The requirements of this survey were that the participants must be employed and both they and their supervisor had to have completed a prior survey for StudyResponse. For completing the survey, they received a direct payment of \$10 to both the supervisor and subordinate. In all, 242 dyads were invited to participate. Of this group, 203 subordinates (84% response rate) and 193 supervisors (80% response rate) completed the survey. Four subordinates and two supervisors had to be eliminated for extensive missing data, random responding, or matching IP address. I was able to match 154 of the 242 dyads (64%).

The sample of subordinates consisted of 81 females (53%) 71 males (47%), and 2 that did not indicate sex. Most of the subordinates were White (79%), followed by Asians (11%), Blacks (6%), Hispanics (3%), and Native Americans (2%). The largest industry represented was the corporate sector (34%), followed by manufacturing (26%), customer service (15%), sales (13%), and other (12%). The average worker had been employed for 17 years (SD = 10.4 years) over their lifespan. Their organizational tenure was 7.2 years (SD = 5.5 years) and their position tenure was 6.9 years (SD = 5.7 years).

#### *Handling of missing data*

Overall, there was less than one percent missing data and no single variable exceeded two percent. I imputed the missing values using fully conditional specification with multiple regression. I also included a stochastic substitution disturbance term, which adds a random value to the predicted result to help reduce overfitting. This technique combined with the small amount of missing data helps to allay the fear of overcorrection.

### *Measures*

*CWB*. I measured counterproductive work behaviors using the workplace deviance scale developed by Bennett and Robinson (2000). Both subordinates ( $\alpha = .95$ ) and supervisors ( $\alpha = .96$ ) completed the CWB measure. For the subordinate survey, the instructions asked the subordinates to self-disclose their CWB. For the supervisor survey, the instructions asked supervisors to “indicate how often the employee engages in the following behaviors” with both scales using a Likert scale ranging from ‘0 = never’ to ‘6 = daily’. Sample items included, “Taken property from work without permission,” “Littered the work environment,” and, “Left work early without permission.” The subordinates rated their own CWB to test the convergence between supervisor and subordinate ratings. I did this because some have argued that CWB is often conducted in a covert manner, and supervisors may be largely unaware of its occurrence (Dalal, 2005; Penney & Spector, 2002). A paired samples *t*-test confirmed that supervisors are slightly less aware of the frequency of engagement into CWB [mean difference = -2.16,  $t(153) = -3.13$ ,  $p < .01$ ]. Despite the difference in means, the correlation between the subordinate and supervisor CWB ratings was very strong ( $r = .82$ ,  $p < .001$ ) and based on this relation, I retained the CWB supervisor ratings for the final model.

*Organizational citizenship and in-role behavior.* Supervisors completed Williams and Anderson (1991) organizational citizenship and in-role behavior measure. In-role behavior (IRB) are those behaviors that directly relate to the job description. Although the focus of the dissertation is on discretionary behaviors, the inclusion of IRB helps to examine how the proposed model predicts discretionary behaviors in the broader context of job performance. There were several reverse coded items on the measure that I did not include in the analysis because of their overlap with the CWB measure. The five reverse coded items on the measure were removed because of their overlap with the CWB measure (e.g., takes undeserved work breaks, neglects aspects of the job he/she is obligated to perform). The fifth item of the IRB scale, “Engages in activities that will directly affect his/her performance evaluation” was also removed because it did not correlate well with the other IRB items, it possessed considerably more variance than the other items, and it showed a bimodal distribution. I believe that this is because the item is non-directional in that if a supervisor were considering CWB as affecting performance reviews, then a good employee would receive a low mark, but if they were considering OCB or IRB, then a good employee would receive a high mark. The dimensions of OCB showed acceptable reliabilities with OCB-O at .90 and OCB-I at .85 as did the IRB scale at .94.

*Burnout.* Burnout was measured with the Maslach Burnout Inventory General Survey (MBI-GS; Maslach, Jackson, & Leiter, 1996). The scale consists of 12 items covering the three aspects of burnout; emotional exhaustion ( $\alpha = .86$ ), cynicism ( $\alpha = .88$ ), and reduced efficacy ( $\alpha = .80$ ) with four items each. The reliability of the total scale was

.91. Participants answered the items on a 7-point frequency rating scale, ranging from 0 = *never* to 6 = *every day*. Sample items from the three dimensions are, “I feel drained when I finish work,” “I feel increasingly less involved in the work I do,” and “I don’t feel confident about accomplishing my work efficiently,” respectively.

*Work engagement.* Work engagement was measured with Schaufeli et al’s (2002) 17 item Utrecht Work Enthusiasm Scale (UWES). I used the overall composite work engagement scale including all items. These items cover three dimensions of work engagement; vigor ( $\alpha = .91$ ), dedication ( $\alpha = .91$ ), and absorption ( $\alpha = .89$ ). The reliability of the total scale was .96. Participants answered the items on the UWES with a 7-point frequency rating scale, ranging from 0 = *never* to 6 = *every day*. Sample items from the three dimensions are, “At my work, I feel bursting with energy,” “I find the work that I do full of meaning and purpose,” and, “Time flies when I am working,” respectively.

*Personality.* Conscientiousness was measured using the 10-item scale from the International Personality Item Pool (IPIP; Goldberg, 1999). Half the items are reverse coded. Participants indicate their agreement on a 1 (strongly disagree) to 5 (strongly agree) Likert scale. Sample items include, “Am always prepared,” and “Waste my time (reversed).” The coefficient alpha was .87. To measure trait anger, I used the State-Trait Anger Expression Inventory-Version 2 (STAXI-2) S-anger. This ten item scale is the predominate measure of anger and participants indicate their agreement on a 1 (strongly disagree) to 5 (strongly agree) Likert scale. The items are divided into Feeling Angry

(e.g., "I am furious") and Feeling Like Expressing Anger (e.g., "I feel like hitting someone"). The coefficient alpha for this scale was .90.

*Justice measures.* The procedural, interpersonal, and distributive justice measures were taken from Colquitt (2001). Colquitt (2001) drew items from previous measures (Leventhal, 1976; 1980, Thibaut & Walker, 1975, Bies & Moag, 1986) to create a seven item procedural justice scale and four items scales of distributive and interpersonal justice. For the analysis, I reduced the procedural justice scale to match the other four item scales. Procedural ( $\alpha = .85$ ), interpersonal ( $\alpha = .88$ ), and distributive justice ( $\alpha = .94$ ) were all found to be reliable as was a combined measure of all three dimensions ( $\alpha = .93$ ).

*Features of the workplace.* Organizational constraints were measured with the Organizational Constraints Scale (OCS; Spector & Jex, 1998) which is based on Peters and O'Connor (1980) taxonomy. This eleven item scale has participants report the frequency that various constraints interfere with their ability to do their job on a 1 to 5 Likert scale ranging from *less than once a month or never* to *several times a day*. A sample item is "How often do you find it difficult or impossible to do your job because of poor equipment or supplies." I also included two scales from the Job Diagnostic Survey (Hackman & Oldham, 1976), feedback and skill variety. These were introduced under the belief that certain types of jobs have inherent characteristics that are more likely to lead to burnout and CWB or engagement and OCB. Skill variety ( $\alpha = .71$ ) contains five items (i.e., the job is quite simple and repetitive) and the feedback scale ( $\alpha = .73$ ) contains six items (i.e., my manager provides me with constant feedback about how I am doing).

*Data Analysis*

### *Analysis plan*

I used structural equation modeling to test the remaining hypotheses and evaluate the proposed theory. The Anderson and Gerbing (1988) two-step approach was used to first establish the adequacy of the measurement model, followed by an analysis of the composite model that contains the hypothesized constraints. To assess model fit, I used the overall model chi-square measure, the comparative fit index (CFI; Bentler, 1990), the standardized root mean residual (SRMR; Bentler, 1995) and root-mean-square error of approximation (RMSEA; Steiger & Lind, 1980) and its 90 percent confidence interval. Following James, Mulaik, and Brett's (1982) model evaluation criteria, I evaluated the composite model by examining the strength and significance of the relations between constructs (condition 9). This evaluates the extent that the estimated paths should have been included. I also examined the overall fit as well as the fit of the path model using criteria put forth by O'Boyle and Williams (2010) to determine whether the constrained paths should remain omitted (condition 10). The results of the model evaluation will guide the decision to retain the fully mediated or partially mediated model.

## RESULTS

Descriptive statistics and zero-order correlations among the measures are presented in Table 1. The strongest predictors of CWB were organizational constraints ( $r = .50, p < .001$ ), conscientiousness ( $r = -.44, p < .001$ ), and burnout ( $r = .45, p < .001$ ). Citizenship behaviors showed strong correlations ( $> .32$ ) with all predictors, the strongest being conscientiousness ( $r = .64, p < .001$ ). In role behaviors correlated significantly with OCB ( $r = .43, p < .001$ ), but not CWB ( $r = -.13, p = ns$ ) and IRBs were correlated with the predictors, justice perceptions ( $r = .20, p < .05$ ), skill variety ( $r = .18, p < .05$ ), conscientiousness ( $r = .25, p < .01$ ), and engagement ( $r = .26, p < .01$ ).

### *Data aggregation*

In order to test the relations among constructs proposed in Figure 2, I first must ensure that my measures are performing adequately and that constructs that I have proposed as distinct (e.g., burnout and engagement, OCB and CWB) do in fact differ from one another. Therefore, the data aggregation process consisted of two steps. First, I established the dimensionality of my constructs (unidimensional or multidimensional) and whether the proposed constructs differ from one another (e.g., burnout and engagement). To examine the theorized dimensionality of my constructs I used combinations of exploratory and confirmatory factor analysis. Then, in the next stage, I created item parcels based on information from the previous step.

*Dimensionality of CWB.* Bennett and Robinson (2000) conceptualized deviance as consisting of two dimensions (interpersonal and organizational), but both their own research and more recent research has shown that the dimensions are very highly



correlated ( $r_c = .86$  in Bennett & Robinson, 2000;  $r_c = .96$  in Lee & Allen, 2002) and CWB may be unidimensional. To test the convergence of CWBI and CWBO, I conducted a confirmatory factor analysis in LISREL 8.80. Despite a statistically significant difference between the one and two factor model ( $\chi^2_{diff} = 5.99, p < .05$ ), the factor correlation between CWB-I and CWB-O was .97. As such, I concluded that CWB is a unidimensional construct and treated it as such in further analyses.

*Dimensionality of OCBI, OCBO, and IRB.* It has been proposed that IRB, and the two dimensions of OCB load onto distinct factors. To examine the extent that these dimensions diverge, I first ran a principal axis exploratory factor analyses (EFA) with oblique rotation. The EFA provided only two eigen values exceeding 1.0. The first factor (eigen = 8.51) explained 56.7 percent of the variance and the second factor (eigen = 1.47) explained an additional 9.8 percent of the variance (66.5 percent total). An examination of the pattern matrix (presented in Table 2) showed the IRB and OCBO items loaded onto the same factor and the second factor consisted the OCBI items. The two factors were correlated ( $r = .67$ ). Despite loading on the same factor, the OCBO items possessed substantially smaller loadings than the task performance, which indicated that although highly related they may still be distinct constructs. Nevertheless, this raised concerns about the divergence between citizenship behavior and in-role behavior.

To address the dimensionality of OCB and IRB, I ran a confirmatory factor analysis (CFA) to examine how the constructs relate to one another in their proposed form (OCBI, OCBO, and IRB) as well as several variations (i.e., one factor and two factor solutions). Table 3 presents the results of these comparisons. The proposed three

factor solution fit the data best (chi-square = 155.5, RMSEA = .08 (.06; .09), CFI = .99, SRMR = .04). The OCB dimensions correlated at .81. The factor correlation between IRB and OCB-I was .72 and the factor correlation between IRB and OCB-O was .91. I kept IRB as a separate construct and distinguished between the two dimensions of OCB when parceling the construct.

Another issue in the dimensionality of job performance is whether OCB and CWB are distinct constructs (H1). To test whether OCB and CWB are truly different constructs or just the two extremes of discretionary behavior, I ran a confirmatory factor analysis at the item level with the 19 CWB items and the 11 OCB items and examined the strength of the relation between the OCB and CWB constructs. The overall fit of the CFA was adequate ( $\chi^2 = 1172.0$ , RMSEA = .11 (.10; .12), CFI = .94, SRMR = .08) and significantly better ( $\chi^2_{diff} = 703.2$ ,  $p < .001$ ) than a one factor model ( $\chi^2 = 1875.2$ , RMSEA = .21 (.20; .21), CFI = .88, SRMR = .16). The factor correlation between CWB and OCB was moderate ( $r = -.35$ ,  $p < .001$ ), and only slightly higher than that reported in the Dalal (2005) meta-analysis ( $\rho = -.32$ ). I find support for Hypothesis 1 and conclude that OCB and CWB are distinct constructs.

*Dimensionality of burnout and engagement.* To test convergence of the burnout dimensions, I ran a CFA testing the proposed three factor solution to several alternatives. The results are presented in Table 4. The proposed three factor solution fit the data best ( $\chi^2 = 189.8$ , RMSEA = .14 (.12; .16), CFI = .94, SRMR = .08). The factor correlation was strongest between cynicism and inefficacy ( $r = .82$ ), followed by cynicism to exhaustion ( $r = .76$ ) and exhaustion to inefficacy ( $r = .62$ ). Based on this information, I conclude that

burnout is a multidimensional construct and that its parcels should reflect this multidimensionality. Unlike burnout, recent work has called into question the distinctiveness of the engagement dimensions (e.g., Cole et al, 2010). To test the dimensionality of engagement in this sample, I first ran an EFA, which converged on a single factor (eigen = 10.84) that explained 64 percent of the variance. The CFA results presented in Table 5 were similar with the three factor solution not being a better fit than the more parsimonious single factor and the engagement facets had very strongly factor correlations (vigor-dedication = .98, vigor-absorption = .98, dedication-absorption = .97).

The factor correlations between the engagement and exhaustion cynicism, and inefficacy were -.44, -.61, and -.42 respectively. The intercorrelations of the burnout dimensions were .78 between exhaustion and cynicism, .62 between exhaustion and inefficacy, and .81 between cynicism and inefficacy. I hypothesized that burnout and engagement are related, but distinct constructs. To test this, I once again used CFA, but because engagement is unidimensional and burnout is multidimensional, I chose to create a higher order burnout construct that would allow for a direct comparison between engagement and burnout while still retaining the multidimensionality of burnout. The 17 engagement items directly load onto the engagement latent variable and the burnout items directly load onto the three facets (i.e., exhaustion, cynicism, and inefficacy). Direct paths from a burnout higher order construct then go to the three facets. The model did converge and showed reasonable fit ( $\chi^2 = 1000.7$ , RMSEA = .11 (.10; .12), CFI = .95, SRMR = .08) and all primary factor loadings were significant. The three paths from burnout to exhaustion, cynicism, and inefficacy were significant with squared multiple correlations

of .69, .72, and .68, respectively. Engagement and burnout were significantly related with ( $r = -.59$ ), but in much the same way as OCB and CWB, the correlation was not strong enough to suggest that burnout and engagement are opposite ends of the same construct. Therefore, I used both emotional processes in the final model.

For the personality antecedents of the emotional processes and work outcomes, I ran both exploratory and confirmatory factor analyses to evaluate their proposed factor structure and identify especially bad fitting items. The STAXI-2 reports that trait anger items represent fall along two dimensions (a feeling angry dimension and a wishing to express anger dimension). The EFA supported this two factor solution with two eigen values exceeding 1.0 and a scree plot that placed the bend at the third factor. The first factor (eigen = 5.30) contained the feeling angry items and accounted for 53.0 percent of the variance, and the second factor (eigen = 1.66) contained the wishing to express anger items and accounted for 16.6 percent of the variance. The correlation between the two factors was .43. A confirmatory factor analysis showed poor fit for the single factor solution  $\chi^2(35)=208.85$ , CFI = .89, RMSEA = .20 (.17; .22), SRMR = .12) and significantly better fit for the two factor solution  $\chi^2(34)=100.32$ , CFI = .96, RMSEA = .10 (.08; .13), SRMR = .08). The factor correlation was .59.

Next, I examined the conscientiousness items. The IPIP scale was proposed as unidimensional, but an EFA of the items converged on a two factor solution with the reverse coded items loading on a separate factor. I then proceeded to the CFA to model both the one and two factor solutions and found a poor fit for the single factor solution  $\chi^2(35)=141.28$ , CFI = .91, RMSEA = .16 (.14; .18), SRMR = .08) and a significantly

better fit for the two factor solution ( $\chi^2(34)=65.49$ , CFI = .97, RMSEA = .08 (.05; .11), SRMR = .06). The factor correlation was .68. I treated both trait anger and conscientiousness as multidimensional constructs when parceling.

Justice perceptions were measured with four items scales tapping into distributive justice, interpersonal justice, and procedural justice. To evaluate whether the justice perceptions are unidimensional or multidimensional, I first ran an EFA on the 12 items. The EFA converged on a two factor solution with two eigen values exceeding 1.0 and a scree plot that placed the bend at the third factor. The first factor (eigen = 6.65) contained the procedural and distributive justice items and accounted for 55.4 percent of the variance, and the second factor (eigen = 1.80) contained the interpersonal justice items and accounted for 15.0 percent of the variance. The correlation between the two factors was .53. I next ran a series of confirmatory factor analyses to determine the best fitting structure of justice. These models are presented in Table 6. The two factor model found in the EFA was bested by the the proposed three factor model of justice ( $\chi^2(51)=135.73$ , CFI = .97, RMSEA = .10 (.08; .13), SRMR = .05). Thus, I conclude that justice perceptions are multidimensional and this dimensionality will be retained in the parceling process.

The remaining predictors are features of the work or the workplace. An EFA of the skill variety items converged on two factors with the first eigen value of 2.34 accounting for 46.7 percent of the variance and the second eigen value of 1.28 accounting for an additional 25.6 percent of the variance. The first factor was the positive coded items and the two items on the second factor were the reverse coded items. Similarly, an

EFA of the feedback items converged on a two factor solution of positive and negative worded items. The positively coded items loaded on the first factor and with an eigen value of 2.89 accounted for 48.3 percent of the variance. The negatively worded items loaded on the second factor and with an eigen value of 1.23 accounted for an additional 20.6 percent of the variance. Even though the dimensions are methodological or grounded in the valence of wording, I conclude that that both skill variety and feedback are multidimensional. The final feature of the workplace was organizational constraints. An EFA of the 11 items converged on a single factor with an eigen value of 6.17 that accounted for 56.1 percent of the explained variance. Organizational constraints was treated as a unidimensional construct.

*Parceling of items.* Although the first CFA provides information about each item, my primary interest is in the relations between constructs, therefore I parcelled the items to provide more normal and reliable indicators and to reduce the parameter to sample ratio (Little, Cunningham, Shahar, & Widaman (2002). Parceling was carried out using steps outlined in Williams and O'Boyle (2008). For the unidimensional constructs of IRB, CWB, engagement, and organizational constraints. I assigned the items to their parcels based on their loadings with the highest loading items each being assigned to a separate parcel. This is followed by the next highest loadings assigned to the parcels in reverse order. This continued until all items are exhausted. For the multidimensional constructs of OCB, burnout, anger, conscientiousness, skill variety, feedback, and justice, I used the domain representative approach. This approach assigns items to parcels based on their theorized dimension as well as their loadings. The domain representative

approach results in parcels that reflect the entire construct rather than only a single dimension as the internal consistency approach does. All constructs were represented with three parcels except for skill variety and feedback, which were represented with two parcels each. The mean, standard deviation, and skewness of each parcel are presented in Table 7 as is the reliability of the parceled scales. With the exception of skill variety ( $\alpha = .76$ ), all parceled scales had reliabilities in excess of .85. Appendix 13 contains the covariance matrix of the parcels. This allows for replication of results.

#### *Model tests*

With the measures established and the parcels created, I then followed Anderson and Gerbing's (1988) two-step approach by first testing the fit of the measurement model. The measurement model showed good fit ( $\chi^2(379) = 552.56$ , RMSEA = .051 (.04; .06), CFI = .99, SRMR = .05). All parcels loaded significantly onto their constructs. Table 8 reports the factor correlations between the latent constructs. The stem-leaf plot of the residuals showed a symmetrical distribution with a median value of .00. This indicates a balanced (mis)specification with a roughly equivalent number of underfitted paths (positive residuals) as overfitted paths (negative residuals) (Diamantopoulos & Sigauw, 2000). An examination of the standardized residual matrix identified no extreme values or "pockets" of misspecification where one set indicators were especially problematic.

I then moved on to testing the structural model. I began with a partially mediated model with direct paths from the antecedents to both the mediators (burnout and engagement) as well as to the three outcomes (IRB, CWB, OCB). I estimated the paths

between the error covariances of the mediators as well as the three error covariances of the outcomes.

Table 9 presents the results of the nested model comparisons. I chose alternative models based on how they were grouped in the original Fox and Spector (2002) conceptualization. The first alternative model freed the features and perceptions of the environment (i.e., feedback, skill variety, justice, constraints) to the discretionary behavior. The second model freed justice and personality constructs. The third model constrained all antecedents to the discretionary behaviors except for the workplace features of feedback, skill variety and organizational constraints and the fourth model constrained all antecedents to the discretionary behaviors except for the two personality constructs. The final model was fully mediated. All five of the alternative models significantly worsened fit, thus I retained the partially mediated model shown in Figure 3. For the partially mediated model, I once again examined the stem-leaf plot of the residuals and found a symmetrical distribution with a median value of .00 and the standardized residual matrix identified no extreme areas of misspecification. The  $Q$ -plot of the residuals did not deviate significantly from a normal distribution.

I next examined the variance explained in both my mediators and outcomes. These results were encouraging as more than half (57%) of the variance in engagement and two-thirds (67%) of the variance in burnout were explained by the six predictors. The partially mediated model also explained a substantial portion of the variance in CWB (47%), OCB (49%), and IRB (52%). An examination of the mediator paths showed that burnout was a significant predictor of CWB ( $t = 2.10, p < .05$ ), but not IRB ( $t = 1.40, p =$



ns) or OCB ( $t = 1.01, p = ns$ ). The other proposed mediator, engagement, was a significant predictor of IRB ( $t = 2.19, p < .05$ ), but not OCB ( $t = 1.04, p = ns$ ) or CWB ( $t = 1.33, p = ns$ ). Thus I found support for H2b, but not H2a and I did not support H3.

Among the personality and perception variables, conscientiousness was significantly related to all three outcomes and engagement. The other personality predictor, trait anger, did not perform well with the only notable path going to burnout ( $t = 1.72, p < .10$ ). Justice perceptions significantly predicted engagement ( $t = 2.55, p < .05$ ). The workplace features fared well with organizational constraints predicting CWB ( $t = 3.83, p < .001$ ) and burnout ( $t = 5.16, p < .001$ ). Increased skill variety led to higher levels of engagement ( $t = 2.82, p < .01$ ), and increased feedback reduced burnout ( $t = -2.01, p < .05$ ) and increased OCB ( $t = 2.49, p < .05$ ). Interestingly, feedback positively predicted CWB at the .10 level ( $t = 1.74, p < .10$ ). It is unlikely that receiving more feedback increases one's CWB. A more likely explanation is that increased supervisor feedback coincides with closer monitoring and a greater number of interactions with an employee increases the likelihood of observing their CWB. With the exception of this finding, all significant paths were in the predicted direction.

I next moved on to determining the indirect and total effects of my predictors. I used techniques presented in Bollen (1987) and calculated within LISREL 8.80. Direct effects are those transmitted through the path from the predictor to the outcome (e.g., the path from feedback to OCB) and indirect effects are the influences transmitted through the two mediators. The summation of these two effects is the total effect. The results of

these analyses are presented in Table 10. Only one of the indirect effects (OCS to CWB through burnout and engagement) was statistically significant ( $t = 2.07, p < .05$ ).

## Discussion

The former CEO of Siemens, Heinrich von Pierer, once said, “Whether a company measures its workforce in hundreds or hundreds of thousands, its success relies solely on individual performance.” Job performance is the most central construct in organizational behavior, human resources, and I-O psychology and since the field’s inception, a tremendous amount of research has gone into understanding and predicting what makes workers perform their tasks at optimal levels. However, the performance of a firm, work group, or individual is not the sum of their performance of the prescribed duties. Rather, individual performance also includes all those discretionary behaviors that although not directly included in the job description still have a profound influence overall performance.

These discretionary behaviors either reduce job performance (CWB) or enhance it (OCB), but only after considering these behaviors does a complete picture of an individual’s contribution emerge. The extent to which these discretionary behaviors contribute to overall job performance is still being realized, but research indicates that the effect is substantial (Blanchard & Henle, 2008; Podsakoff et al, 2000). The extensive damage that counterproductive behaviors create in the workplace extends to all levels of the organization from the individual (e.g., Ambrose et al, 2002; Thoms et al, 2001), to the group level (e.g., Myatt & Wallace, 2008), to even the firm (e.g., Dunlop & Lee, 2004) and costs of individual CWB extend into the billions (Hollinger & Davis, 2002). Although more difficult to monetize, theory suggests OCBs have the same spanning

influence to each level of the organization and presumably benefit the organization in a number of ways (Podsakoff et al, 2000).

Because of the profound impact of these discretionary behaviors, an extensive body of research has developed around the antecedents of discretionary behavior and a great deal has been learned about traits and perceptions of the workplace that enhance or inhibit OCB and CWB. Despite a great deal of understanding of what predisposes someone to engage in discretionary behavior, much of the extant research has focused on stable individual traits or workplace perceptions that influence discretionary behavior. The extensive interest on trait and perception antecedents has led to a neglect of the processes that occur that motivate the behaviors themselves. Thus, what is lacking is an explanatory framework of discretionary behaviors where traits of the individual and traits of the workplace activate processes that then leads to engagement in OCB and CWB. I attempted to fill this gap in the literature with an empirical test of Spector and Fox's (2002) proposed emotion centered model. In doing so, I also addressed several methodological questions concerning the distinctiveness of the two types of discretionary behavior as well as the distinctiveness of the emotional process antecedents (engagement and burnout).

I tested 18 hypotheses in this dissertation as well as testing the proposed model. Beginning with the hypotheses, burnout was significantly and positively correlated to CWB (H2a) and significantly and negatively correlated to OCB (H2b). A reverse pattern of relations was found with engagement being significantly and negative correlated to CWB (H3a) and significantly and positively correlated to OCB (H3b). All hypotheses

regarding relations between the exogenous variables (organizational justice, skill variety, feedback, organizational constraints, trait anger, and conscientiousness) and the discretionary behaviors (OCB and CWB) were supported with the exception of H8a that did not find a significant relation between organizational justice and CWB. Trait anger and organizational constraints both positively correlated to OCB (H6a, H7a) and negatively correlated to CWB (H6b, H7b). Conscientiousness and organizational justice both correlated positively with OCB (H5a, H8a) and conscientiousness negatively correlated with CWB (H5a). In sum, 17 of the 18 hypotheses were supported.

However, the purpose of the dissertation was to extend past bivariate relation and test a model of discretionary behaviors. Before doing so, several methodological considerations needed to be made and in some cases, these were individual contributions.

### *Contributions*

This dissertation makes four significant contributions to the study of discretionary behaviors. First, I tested and supported OCB and CWB as two related, but distinct constructs. Second, I distinguished between the two emotional processes that drive OCB and CWB and found support that engagement and burnout are two different constructs. Third, and the final methodological contribution, I examined the convergence of self-reported CWB and supervisor-reported CWB and found that although supervisor ratings are lower than self-reported ratings, the correlation between them is strong. By ensuring the distinctiveness of the proposed constructs, establishing their dimensionality, and testing the adequacy of supervisor ratings of CWB, I was then able to make the primary contribution, an empirical test of an emotion-centered model of job performance. Beyond

the first test of Spector and Fox's (2002) model, this is one of the first empirical tests that include all three dimensions of job performance (in-role behavior, OCB, CWB) with supervisor ratings. The partially mediated model supported here showed that the effects of individual traits and workplace perceptions flow in part through the emotional processes of burnout and engagement. I also supported direct paths of several of these individual traits and workplace perceptions to all three dimensions of job performance.

These results also have applications for both practitioners and researchers. Emotional processes play a significant role in explaining how individual traits and perceptions of the work environment influence work behaviors. Much of the previous literature on burnout and engagement has focused on work perceptions and in-role behaviors, but these results suggest that the effect of emotional processes (specifically burnout) extend to negative work behaviors. Whereas many employers may believe that the worst consequence of burnout is employee turnover, we found that CWB is an additional and potentially greater concern. In addition, the specific antecedents that affect the emotional processes differ as do the effects of the emotional processes on work outcomes. These results partially alleviate concerns of a *jangle* fallacy in the job performance and emotional process literatures that two different sounding constructs are in fact the same. OCB and CWB appear to be distinct constructs with different antecedents. This allows the opportunity to continue to seek out antecedents and outcomes CWB that differ in significance and magnitude from OCB. Similarly, engagement had a different pattern of relation to both outcomes and the proposed antecedents, allowing for the same opportunity.

### *Strengths and Limitations*

This dissertation had several strengths that bolster its contribution to the literature. The inclusion of all three components of job performance allowed for the examination of how the predictors in this model operated in the presence of in-role behavior. The use of supervisor ratings for job performance, including the CWB component help to relieve concerns that many of the antecedents of CWB found in other studies are biased by common method variance and social desirability. Our results add to the growing literature on the effects of situational perceptions and personality traits on job performance and how they operate through emotional processes. In addition, rather than relying on a shotgun approach to I selected only those personality traits and situational perceptions that were theoretically related to the outcomes and fit within the emotion centered model of discretionary behavior. This was evidenced in the large magnitudes of the R-square values and the relative parsimony of the model. A final strength not yet reviewed is the use of structural equation modeling to examine simultaneously the theoretical model. This is a significant contribution over past work on discretionary behaviors that only looked at CWB and OCB in isolated regressions.

These strengths must be tempered with some limitations of the current work. First, the study was cross-sectional and non-experimental therefore issues like causality and temporal sequence are difficult or impossible to infer. For example, it is possible that as emotional processes change, perceptions of justice and organizational constraints alter as well. Thus, downwardly or upwardly spiraling relations between perceptions and emotions were not captured. Second, the sample used consisted on individuals that knew

their supervisors and agreed to participate in a survey of job performance. Workers with bad relationships or new relationships with their supervisors may not be willing to participate in the study. This creates a systematic bias in the form of range restriction where workers high on CWB or low on IRB and OCB may not participate. Future research and the potential for a meta-analysis would allow for the examination of mean CWB differences across samples. Even if range restriction was present in this sample, then the result would have been the attenuation of effect sizes. Given the large number of significant predictors and the magnitudes of the variance accounted, the collection of data without range restriction should result in higher effect sizes than those found here.

An additional limitation is the findings here may not apply to certain populations of workers. The use of the StudyResponse Project was in part motivated by the desire to generalize to all workers, but there may be important differences for populations that did not participate such as military personnel or those without internet access. Future research would be well served not only to generalize the specific model tested here, but determine the appropriateness of the items that make up the discretionary behavior measures. For example, CWB items such as, “littered your work environment” or “taken property from work” may not apply to telecommuters. Similarly, certain discretionary behaviors may become obsolete and certain new ones may emerge especially as the developed countries continue to develop into knowledge economies (Powell and Snellman, 2004).

A final limitation is that I conducted the study at a single level of analysis. Future research is needed that examines the role that higher order variables (e.g., group norms,



workplace incivility) play in influencing discretionary behavior as well as how discretionary behavior influence higher order variables. This could entail social network analysis to identify how individuals within these groups engage or refrain from discretionary behavior as a result of network position. This could also entail multilevel modeling or a combination of the two techniques.

### *Conclusion*

This dissertation provides a first attempt to understand the joint effects of individual differences and perceptions of the work environment on job performance both directly and indirectly through emotional processes. I first empirically supported the differentiation of CWB from OCB and empirically supported the differentiation of work engagement from job burnout. I then found that the theorized personality and perception variables significantly related to job performance and that the three components of job performance and the emotional processes possessed different antecedents. Specifically, organizational constraints, trait anger, and feedback were all found to predict burnout. Conscientiousness, skill variety, and justice perceptions predicted engagement. OCB was predicted by conscientiousness and feedback and IRB was predicted by conscientiousness and engagement. CWB contained the most significant predictors among the endogenous variables with statistically significant paths from conscientiousness, organizational constraints, feedback, and burnout. This demonstrates that personality traits and workplace perceptions and features both directly and indirectly predict job performance and some of these effects are transmitted through the emotional processes of engagement and burnout. Future research should examine the emotion centered model longitudinally

to establish the temporal precedence of the constructs as well as examine discretionary behaviors from a multilevel perspective. Through continued research on discretionary behavior we can develop more complete knowledge both in its prediction and alteration.

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Figure 1. Spector and Fox (2002) General OCB-CWB model emotion model

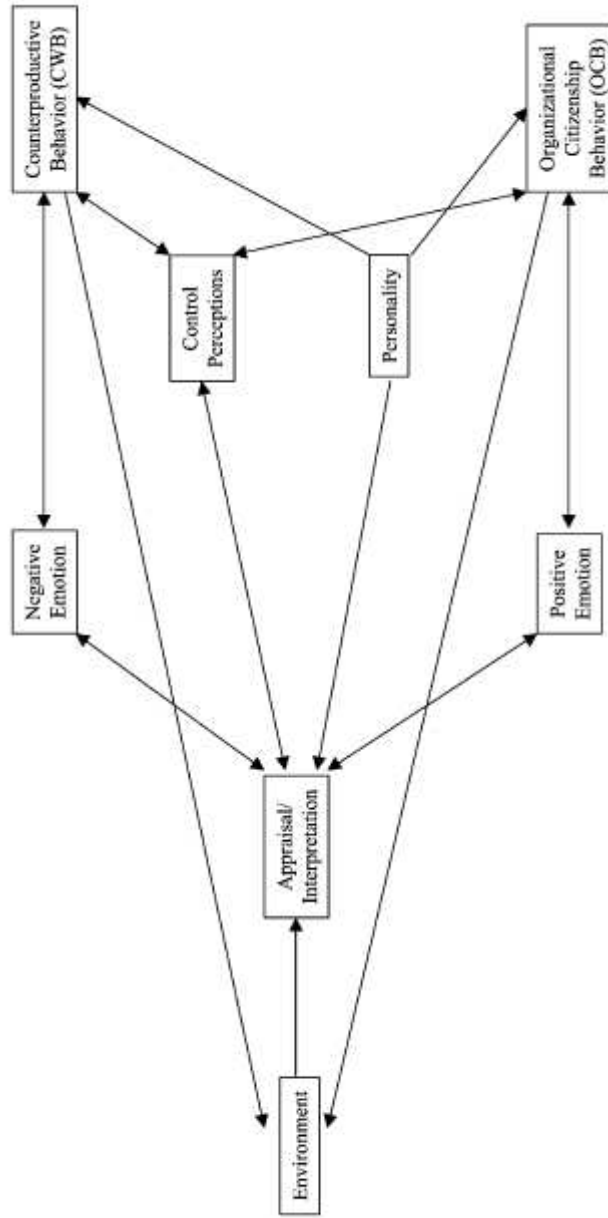


Figure 2. Proposed model

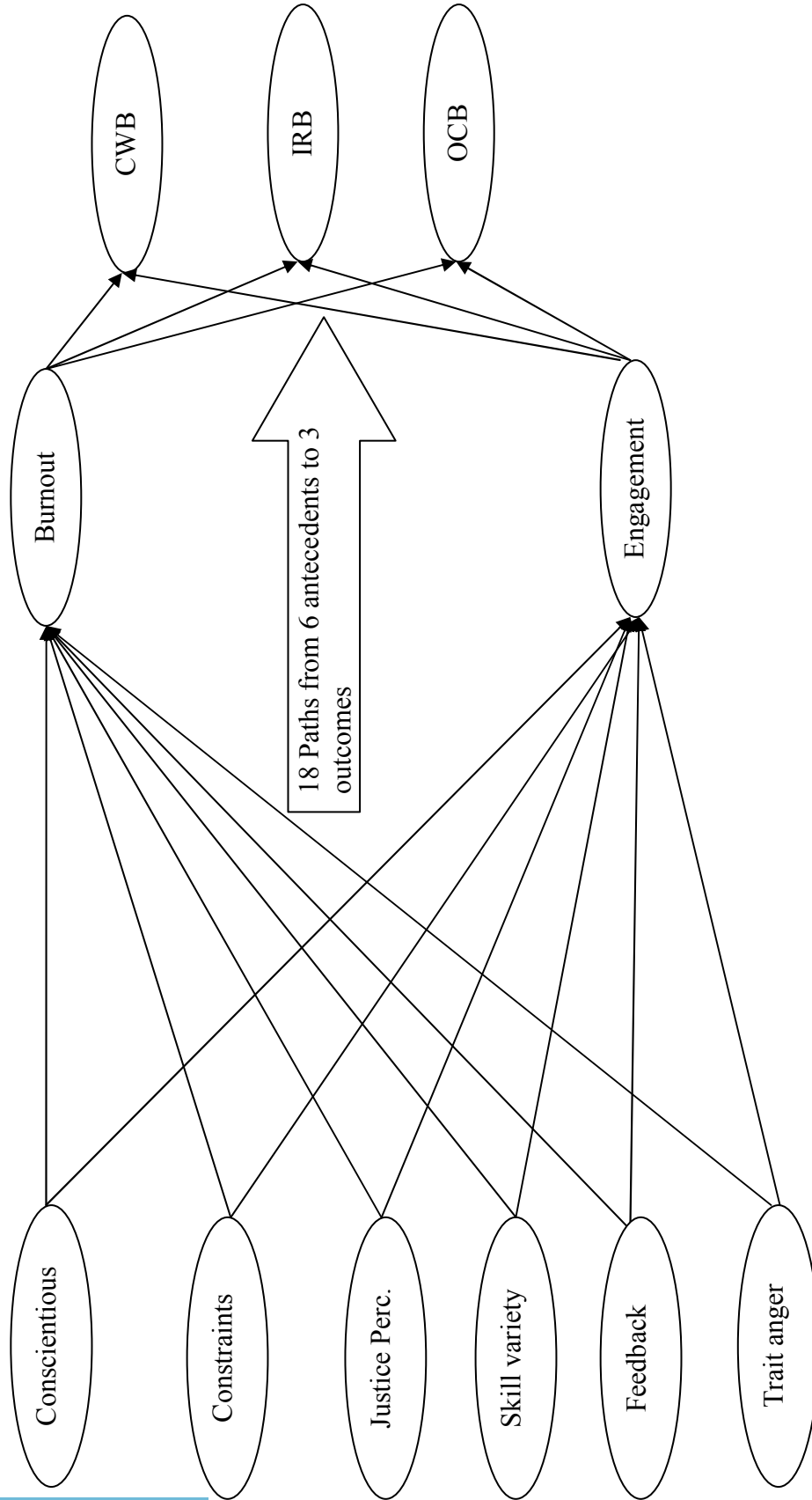
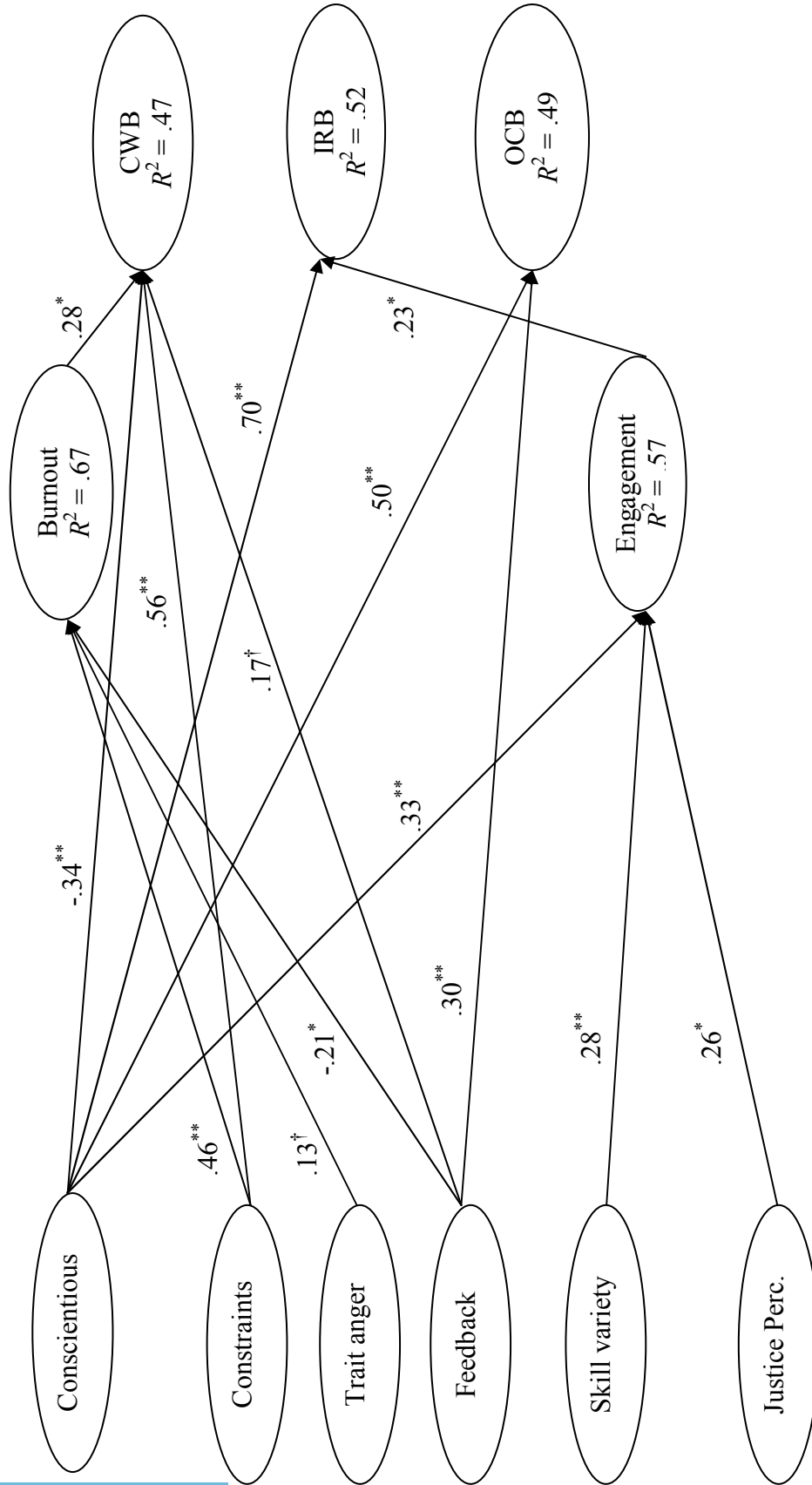


Figure 3. Partially mediated model (all paths included in analysis, but only significant paths shown)



Model fit =  $\chi^2(379) = 552.56$ , RMSEA = .051 (.04; .06), CFI = .99, SRMR = .05,  $^\dagger p < .10$ , \*  $p < .05$ , \*\*  $p < .01$



Table 1. Means, standard deviations, reliabilities, and correlations of scales for study variables.

	M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. justice	43.52	9.53	(.93)										
2. skill variety	14.91	2.89	.42 <sup>***</sup>	(.71)									
3. feedback	21.47	4.22	.65 <sup>***</sup>	.54 <sup>***</sup>	(.73)								
4. org. constraints	2.21	8.25	-.46 <sup>***</sup>	-.44 <sup>***</sup>	-.50 <sup>***</sup>	(.92)							
5. conscientiousness	38.70	6.45	.38 <sup>***</sup>	.51 <sup>***</sup>	.41 <sup>***</sup>	-.42 <sup>***</sup>	(.87)						
6. trait anger	25.47	8.06	-.32 <sup>***</sup>	-.32 <sup>***</sup>	-.29 <sup>***</sup>	.29 <sup>***</sup>	-.41 <sup>***</sup>	(.90)					
7. engagement	66.66	25.64	.57 <sup>***</sup>	.56 <sup>***</sup>	.50 <sup>***</sup>	-.41 <sup>***</sup>	.55 <sup>***</sup>	-.33 <sup>***</sup>	(.96)				
8. burnout	19.92	14.04	-.50 <sup>***</sup>	-.44 <sup>***</sup>	-.54 <sup>***</sup>	.65 <sup>***</sup>	-.47 <sup>***</sup>	.38 <sup>***</sup>	-.49 <sup>***</sup>	(.91)			
9. IRB	27.30	4.57	.20 <sup>*</sup>	.18 <sup>*</sup>	.11	-.03	.25 <sup>**</sup>	-.10	.26 <sup>**</sup>	-.07	(.84)		
10. OCB	62.29	12.70	.32 <sup>***</sup>	.49 <sup>***</sup>	.40 <sup>***</sup>	-.45 <sup>***</sup>	.64 <sup>***</sup>	-.39 <sup>***</sup>	.47 <sup>***</sup>	-.42 <sup>***</sup>	.43 <sup>***</sup>	(.92)	
11. CWB	9.88	14.50	-.11	-.22 <sup>**</sup>	-.20 <sup>*</sup>	.50 <sup>***</sup>	-.44 <sup>***</sup>	.24 <sup>**</sup>	-.19 <sup>*</sup>	.45 <sup>***</sup>	-.13	-.50 <sup>***</sup>	(.96)

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 2. Pattern matrix of OCB and IRB items

Item	Factors <sup>a</sup>	
	1	2
task #1	<b>.889</b>	
task #2	<b>.895</b>	
task #3	<b>.989</b>	
task #4	<b>.905</b>	
OCB-I #1	.212	<b>.583</b>
OCB-I #2		<b>.629</b>
OCB-I #3		<b>.648</b>
OCB-I #4		<b>.676</b>
OCB-I #5		<b>.830</b>
OCB-I #6		<b>.759</b>
OCB-I #7		<b>.758</b>
OCB-O #1	<b>.649</b>	
OCB-O #2	<b>.445</b>	.275
OCB-O #3	<b>.603</b>	
OCB-O #4	<b>.641</b>	

<sup>a</sup> crossloadings less than .20 omitted

Table 3. Evaluation of IRB and OCB dimensionality

Model	$\chi^2$	df	RMSEA	90% CI	CFI	SRMR	$\chi^2$ difference from proposed model
proposed 3 factor model	155.5	87	.08	(.06; .09)	.99	.04	--
OCBI & IRB/OCBO	189.4	89	.09	(.08; .11)	.98	.05	33.9*
OCBO & IRB/OCBI	362.1	89	.18	(.17; .19)	.94	.08	206.6*
OCB and IRB	250.3	89	.12	(.11; .14)	.97	.07	94.8*
single factor model	373.82	90	.18	(.17; .19)	.94	.08	218.3*

\* $p < .001$

Table 4. Evaluation of burnout dimensionality

Model	$\chi^2$	df	RMSEA	90% CI	CFI	SRMR	$\chi^2$ difference from proposed model
proposed 3 factor model/higher order model	189.8	51	.14	(.12; .16)	.94	.08	--
exhaustion-cynicism & inefficacy	256.1	53	.18	(.16; .20)	.91	.09	66.3*
exhaustion-inefficacy & cynicism	288.1	53	.21	(.19; .23)	.90	.10	98.3*
exhaustion & inefficacy-cynicism	226.4	53	.15	(.13; .17)	.92	.09	36.6*
single factor model	408.8	54	.21	(.19; .23)	.89	.10	219.0*

\* $p < .001$

Table 5. Evaluation of engagement dimensionality

Model	$\chi^2$	df	RMSEA	90% CI	CFI	SRMR	$\chi^2$ difference from proposed model
proposed 3 factor model	390.8	116	.13	(.12; .14)	.96	.05	--
vigor-dedication & absorption	392.7	118	.13	(.12; .14)	.96	.05	1.9
vigor-absorption & dedication	392.6	118	.13	(.12; .14)	.96	.05	1.8
vigor & absorption-dedication	392.0	118	.13	(.12; .14)	.96	.05	1.2
single factor model	393.9	119	.13	(.12; .14)	.96	.05	3.1

Table 6. Evaluation of justice dimensionality

Model	$\chi^2$	df	RMSEA	90% CI	CFI	SRMR	$\chi^2$ difference from proposed model
proposed 3 factor model	135.73	51	.10	(.08; .13)	.97	.05	--
proc/distrib & interpersonal	199.56	53	.13	(.11; .15)	.95	.07	63.8*
proc/inter & distributive	315.44	53	.22	(.20; .24)	.91	.11	179.7*
distrib/inter & procedural	405.82	53	.23	(.22; .25)	.87	.13	270.1*
single factor model	446.07	54	.24	(.23; .26)	.86	.13	310.3*

Table 7. Descriptives of parcels

Parcels	Mean	SD	Skewness	Reliability
IRB_P1	9.97	1.97	-1.25	
IRB_P2	5.04	1.04	-1.21	
IRB_P3	4.97	1.08	-1.15	<u>0.89</u>
CWB_P1	4.46	5.82	2.15	
CWB_P2	4.17	4.87	2.35	
CWB_P3	3.40	4.68	2.41	<u>0.94</u>
OCB_P1	12.97	3.13	-.24	
OCB_P2	18.19	3.96	-.50	
OCB_P3	18.25	4.01	-.67	<u>0.90</u>
BURN_P1	4.94	3.81	.86	
BURN_P2	5.83	4.43	.73	
BURN_P3	4.49	3.60	.58	<u>0.86</u>
ENGAG_P1	20.49	8.07	-.77	
ENGAG_P2	22.70	9.18	-.67	
ENGAG_P3	23.48	9.25	-.58	<u>0.96</u>
ANGER_P1	7.51	2.74	.34	
ANGER_P2	7.60	2.44	.38	
ANGER_P3	10.35	3.49	.10	<u>0.91</u>
CONSCIENT_P1	11.57	2.26	-.03	
CONSCIENT_P2	15.54	2.72	-.05	
CONSCIENT_P3	11.59	2.21	-.23	<u>0.87</u>
JUSTICE_P1	14.75	3.02	-.15	
JUSTICE_P2	14.50	3.40	-.54	
JUSTICE_P3	14.28	3.55	-.47	<u>0.95</u>
CONSTRAINTS_P1	5.26	2.43	1.10	
CONSTRAINTS_P2	7.48	3.22	.88	
CONSTRAINTS_P3	7.47	3.28	.87	<u>0.91</u>
SKILL_VAR_P1	6.70	1.48	-.04	
SKILL_VAR_P2	6.90	1.74	-.08	<u>0.76</u>
FEEDBACK_P1	7.50	1.87	-.61	
FEEDBACK_P2	7.66	1.66	-.86	<u>0.89</u>

Table 8. Factor correlations

	1	2	3	4	5	6	7	8	9	10
1. IRB										
2. CWB	-.51									
3. OCB	.84	-.39								
4. Burnout	-.26	.47	-.41							
5. Engagement	.44	-.20	.51	-.56						
6. Justice perceptions	.18	-.12	.35	-.59	.60					
7. Constraints	-.33	.56	-.42	.73	-.43	-.49				
8. Skill variety	.29	-.28	.46	-.58	.62	.49	-.46			
9. Trait anger	-.37	.25	-.37	.43	-.35	-.35	.33	-.43		
10. Conscientiousness	.68	-.48	.65	-.51	.60	.41	-.48	.54	-.46	
11. Feedback	.14	-.10	.44	-.60	.56	.74	-.48	.52	-.19	.36



Table 9. Results of nested model comparison

Model	$\chi^2$	df	RMSEA	90% CI	CFI	SRMR	$\chi^2$ difference from partial mediation model
Partial mediation model	552.56	379	.051	(.04; .06)	.99	.05	--
direct paths from workplace/justice to outcomes	600.40	385	.057	(.05; .07)	.98	.07	47.84**
direct paths from personality/justice to outcomes	589.04	388	.054	(.04; .06)	.98	.05	36.48**
direct paths from workplace to outcomes	596.20	388	.056	(.05; .07)	.98	.05	43.64**
direct paths from personality to outcomes	598.10	391	.055	(.05; .06)	.98	.05	45.54**
Fully mediated model	802.92	400	.081	(.07; .09)	.97	.11	250.36**

Table 10. Direct and indirect effects of variables

Variable	CWB			OCB			IRB		
	Direct Effects	Indirect Effects	Total Effects	Direct Effects	Indirect Effects	Total Effects	Direct Effects	Indirect Effects	Total Effects
Justice perceptions	.16***	.02	.18***	-.18	.02	-.16	-.14	.05	-.09
Organizational constraints	.43***	.14*	.56***	-.12	.07	-.05	-.17	.10	-.08
Skill variety	.00	.00	-.01	.03	.01	.05	-.14	.04	-.10
Trait anger	-.04	.04	.00	-.12	.02	-.10	-.13	.03	-.10
Conscientiousness	-.38***	.03	-.34***	.47***	.03	.50***	.64***	.07	.70***
Feedback	.21 <sup>†</sup>	-.04	.17	.32*	-.01	.30*	-.05	-.01	-.06
Burnout	.28*	--	.28*	.14	--	.14	.19	--	.19
Engagement	.14	--	.14	.11	--	.11	.23*	--	.23*

## Appendix 1. Consent form for pilot study

### **RESEARCH SUBJECT INFORMATION AND CONSENT FORM**

**TITLE: A study of counterproductive work behaviors**

**VCU IRB NO.:**

This consent form may contain words that you do not understand. Please ask the study staff to explain any words that you do not clearly understand. You may take home an unsigned copy of this consent form to think about or discuss with family or friends before making your decision.

#### **PURPOSE OF THE STUDY**

The purpose of this research study is to find out the best way to measure certain workplace behaviors that can harm companies. We refer to these behaviors as counterproductive work behaviors. You are being asked to participate in this study because you are employed.

#### **DESCRIPTION OF THE STUDY AND YOUR INVOLVEMENT**

If you decide to be in this research study, you will be asked to sign this consent form after you have had all your questions answered and understand what will happen to you will be randomly assigned to one of three experimental conditions. You will be asked to complete a survey about counterproductive work behaviors. You will then be asked about whether you engage in these behaviors and if so, how often. Each condition will be clearly explained and feel free to ask any questions during the process.

#### **RISKS AND DISCOMFORTS**

Sometimes thinking about these subjects causes people to become upset. Several questions will ask about unpleasant things in the workplace. You do not have to answer any questions about any subjects you do not want to talk about, and you may leave the study at any time. If you become upset, the study staff will give you names of counselors to contact so you can get help in dealing with these issues.

#### **BENEFITS TO YOU AND OTHERS**

You may not get any direct benefit from this study, but, the information we learn from people in this study may help us better understand how people behave on the job.

#### **COSTS**

There are no costs for participating in this study other than the time you will spend in the groups and filling out questionnaires.

#### **ALTERNATIVES**

The alternative is not to participate in the study.

### ***CONFIDENTIALITY***

Potentially identifiable information about you will consist of the sign in sheet and your name and signature on this form. No other identifying information will be included. Data is being collected only for research purposes. Your data will be identified by ID numbers only and stored separately from any other records (including this form) in a locked research area. All personal identifying information will be kept in password protected files and these files will be deleted within 10 days of study completion. Other records will be kept in a locked file cabinet for up to three years after the study ends and will be destroyed at that time. Only the unidentifiable electronic data will be kept indefinitely. Access to all data will be limited to study personnel. A data and safety monitoring plan is established.

We will not tell anyone the answers you give us; however, information from the study and the consent form signed by you may be looked at or copied for research or legal purposes by Virginia Commonwealth University.

What we find from this study may be presented at meetings or published in papers, but your name will not ever be used in these presentations or papers.

### ***VOLUNTARY PARTICIPATION AND WITHDRAWAL***

You do not have to participate in this study. If you choose to participate, you may stop at any time without any penalty. You may also choose not to answer particular questions that are asked in the study.

Your participation in this study may be stopped at any time by the study staff without your consent. The reasons might include:

- the study staff thinks it necessary for your health or safety;
- you have not followed study instructions;
- the sponsor has stopped the study; or
- administrative reasons require your withdrawal.

### ***QUESTIONS***

*In the future, you may have questions about your participation in this study. If you have any questions, complaints, or concerns about the research, contact:*

Larry J Williams  
 Professor of Management  
 Virginia Commonwealth University  
 (804) 828-6468  
 ljwilli1@vcu.edu

If you have any questions about your rights as a participant in this study, you may contact:

Office for Research  
Virginia Commonwealth University  
800 East Leigh Street, Suite 113  
P.O. Box 980568  
Richmond, VA 23298  
Telephone: 804-827-2157

You may also contact this number for general questions, concerns or complaints about the research. Please call this number if you cannot reach the research team or wish to talk to someone else. Additional information about participation in research studies can be found at <http://www.research.vcu.edu/irb/volunteers.htm>.

### **CONSENT**

*I have been given the chance to read this consent form. I understand the information about this study. Questions that I wanted to ask about the study have been answered. My signature says that I am willing to participate in this study. I will receive a copy of the consent form once I have agreed to participate.*

Participant name printed	Participant signature	Date
Name of Person Conducting Informed Consent Discussion / Witness (Printed)		
Signature of Person Conducting Informed Consent Discussion / Witness		Date
Principal Investigator Signature (if different from above)		Date

## Appendix 2. Bennett and Robinson (2000) Workplace Deviance (WPD) Scale

Never <b>0</b> Never	Almost Never <b>1</b> A few times a year or less	Rarely <b>2</b> Once a month or less	Sometimes <b>3</b> A few times a month	Often <b>4</b> Once a week	Very Often <b>5</b> A few times a week	Always <b>6</b> Every day
----------------------------	--	---	---	----------------------------------	---	---------------------------------

1. Taken property from work without permission
2. Spent too much time fantasizing or daydreaming instead of working
3. Made fun of someone at work
4. Falsified a receipt to get reimbursed for more money than you spent on business expenses
5. Said something hurtful to someone at work
6. Taken an additional or a longer break than is acceptable in your workplace
7. Made an ethnic, religious, or racial remark or joke at work
8. Come in late to work without permission
9. Littered you work environment
10. Cursed at someone at work
11. Neglected to follow your boss's instructions
12. Intentionally worked slower than you could have worked
13. Discussed confidential company information with an unauthorized person
14. Played a mean prank on someone at work
15. Acted rudely toward someone at work
16. Used an illegal drug or consumed alcohol on the job
17. Put little effort into your work
18. Publicly embarrassed someone at work
19. Dragged out work in order to get overtime.

### Appendix 3. Williams and Anderson (1991) OCB-I, IRB, and OCB-O measure

The following 14 behaviors have to do with aspects of your work. Please read each statement carefully and decide how often you do that behavior at work. If you have never done the behavior, mark the "0" (zero) in the space after the statement. If you ever done that behavior, indicate how often you have by marking the number (from 1 to 6) that best describes how frequently you do it.

Never <b>0</b>	Almost Never <b>1</b>	Rarely <b>2</b>	Sometimes <b>3</b>	Often <b>4</b>	Very Often <b>5</b>	Always <b>6</b>
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

#### In-role behaviors

- Adequately completes assigned duties. \_\_\_\_\_
- Fulfills responsibilities specified in job description. \_\_\_\_\_
- Performs tasks that are expected of him/her. \_\_\_\_\_
- Meets formal performance requirements on the job. \_\_\_\_\_
- Engages in activities that will directly affect his/her performance evaluation. \_\_\_\_\_
- Neglects aspects of the job he/she is obligated to perform. \_\_\_\_\_
- Fails to perform essential duties. \_\_\_\_\_

#### OCB-I

- Helps others who have been absent. \_\_\_\_\_
- Helps others who have heavy workloads. \_\_\_\_\_
- Assists supervisor with his/her work (when not asked). \_\_\_\_\_
- Takes time to listen to co-workers problems and worries. \_\_\_\_\_
- Goes out of the way to help new employees \_\_\_\_\_
- Takes a personal interest in other employees \_\_\_\_\_
- Passes along information to co-workers \_\_\_\_\_

#### OCB-O

- Attendance at work is above the norm. \_\_\_\_\_
- Gives advance notice when unable to come to work. \_\_\_\_\_
- Takes undeserved work breaks. (R) \_\_\_\_\_
- Great deal of time spent with personal phone conversations. (R) \_\_\_\_\_
- Complains about insignificant things at work. (R) \_\_\_\_\_
- Conserves and protects organizational property. \_\_\_\_\_
- Adheres to informal rules devised to maintain order. \_\_\_\_\_

Appendix 4: Maslach Burnout Inventory–General Scale (MBI–GS; Schaufeli, Leiter, Maslach, & Jackson, 1996)

The following 12 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, mark the “0” (zero) in the space after the statement. If you have had this feeling, indicate how often you felt it by marking the number (from 1 to 6) that best describes how frequently you feel that way.

	Almost					
Never	Never	Rarely	Sometimes	Often	Very Often	Always
<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

Exhaustion

1. I find it hard to relax after a day’s work. \_\_\_\_\_
2. I feel drained when I finish work. \_\_\_\_\_
3. When I finish work I feel so tired I can’t do anything else \_\_\_\_\_
4. It’s getting increasingly difficult for me to get up for work in the morning \_\_\_\_\_

Cynicism

1. I have become less interested and enthusiastic about my job I have become less enthusiastic about my studies \_\_\_\_\_
2. I feel increasingly less involved in the work I do \_\_\_\_\_
3. I doubt the significance of my work. \_\_\_\_\_
4. I can’t really see the value and importance of my work \_\_\_\_\_

Inefficacy

1. At work, I think I’m inefficient when it comes to solving problems. \_\_\_\_\_
2. In my opinion, I’m inefficient in my job \_\_\_\_\_
3. Other people say I’m inefficient in my work. \_\_\_\_\_
4. I don’t feel confident about accomplishing my work efficiently. \_\_\_\_\_



Appendix 5: Utrecht Work Enthusiasm Survey (UWES; Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002)

The following 17 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, mark the “0” (zero) in the space after the statement. If you have had this feeling, indicate how often you felt it by marking the number (from 1 to 6) that best describes how frequently you feel that way.

Never <b>0</b>	Almost Never <b>1</b>	Rarely <b>2</b>	Sometimes <b>3</b>	Often <b>4</b>	Very Often <b>5</b>	Always <b>6</b>
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

- \_\_\_\_\_ 1. At my work, I feel bursting with energy. (VI1)
- \_\_\_\_\_ 2. I find the work that I do full of meaning and purpose. (DE1)
- \_\_\_\_\_ 3. Time flies when I am working. (AB1)
- \_\_\_\_\_ 4. At my job, I feel strong and vigorous. (VI2)
- \_\_\_\_\_ 5. I am enthusiastic about my job. (DE2)
- \_\_\_\_\_ 6. When I am working, I forget everything else around me. (AB2)
- \_\_\_\_\_ 7. My job inspires me. (DE3)
- \_\_\_\_\_ 8. When I get up in the morning, I feel like going to work. (VI3)
- \_\_\_\_\_ 9. I feel happy when I am working intensely. (AB3)
- \_\_\_\_\_ 10. I am proud of the work that I do. (DE4)
- \_\_\_\_\_ 11. I am immersed in my work. (AB4)
- \_\_\_\_\_ 12. I can continue working for very long periods at a time. (VI4)
- \_\_\_\_\_ 13. To me, my job is challenging. (DE5)
- \_\_\_\_\_ 14. I get carried away when I am working. (AB5)
- \_\_\_\_\_ 15. At my job, I am very resilient, mentally. (VI5)
- \_\_\_\_\_ 16. It is difficult to detach myself from my job. (AB6)
- \_\_\_\_\_ 17. At my work, I always persevere, even when things do not go well. (VI6)

Appendix 6: International Pool of Personality Items-Conscientiousness (IPIP-C;  
Goldberg et al, 2006)

*Please use the following scale to rate how much you agree with each statement.*

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

+ keyed

- \_\_\_\_\_ 1. Am always prepared.
- \_\_\_\_\_ 2. Pay attention to details.
- \_\_\_\_\_ 3. Get chores done right away.
- \_\_\_\_\_ 4. Carry out my plans.
- \_\_\_\_\_ 5. Make plans and stick to them.

– keyed

- \_\_\_\_\_ 6. Waste my time.
- \_\_\_\_\_ 7. Find it difficult to get down to work.
- \_\_\_\_\_ 8. Do just enough work to get by.
- \_\_\_\_\_ 9. Don't see things through.
- \_\_\_\_\_ 10. Shirk my duties.

### Appendix 7: State Trait Anger Expression Inventory-Version 2 (STAXI-2)

*Read each of the following statements that people have used to describe themselves, then write in the number that indicates how much you generally feel or react. There are no right or wrong answers. Do not spend too much time on any one statement. Mark the answer that best describes how you generally feel or react.*

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

- \_\_\_\_\_ 1. I am quick-tempered
- \_\_\_\_\_ 2. I have a fiery temper
- \_\_\_\_\_ 3. I am a hot-headed person
- \_\_\_\_\_ 4. I get angry when I'm slowed down by others. Mistakes
- \_\_\_\_\_ 5. I feel annoyed when I am not given recognition for doing good work
- \_\_\_\_\_ 6. I fly off the handle
- \_\_\_\_\_ 7. When I get mad, I say nasty things
- \_\_\_\_\_ 8. It makes me furious when I am criticized in front of others
- \_\_\_\_\_ 9. When I get frustrated, I feel like hitting someone
- \_\_\_\_\_ 10. I feel infuriated when I do a good job and get a poor evaluation

## Appendix 8: Organizational Constraints Scale (OCS; Spector and Jex, 1998)

How often do you find it difficult or impossible to do your job because of ... ?	Less than once per month or never	Once or twice per month	Once or twice per week	Once or twice per day	Several times per day
1. Poor equipment or supplies.					
2. Organizational rules and procedures.					
3. Other employees.					
4. Your supervisor.					
5. Lack of equipment or supplies.					
6. Inadequate training.					
7. Interruptions by other people.					
8. Lack of necessary information about what to do or how to do it.					
9. Conflicting job demands.					
10. Inadequate help from others.					
11. Incorrect instructions.					

## Appendix 9: Organizational justice measures (Colquitt, 2001)

Please use the following scale to rate how much you agree with each statement.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

### *Procedural justice*

The following items refer to the procedures used to arrive at your (outcome).

To what extent:

- 1. Have you been able to express your views and feelings during those procedures?
- 2. Have you had influence over the (outcome) arrived at by those procedures?
- 3. Have those procedures been applied consistently?
- 4. Have those procedures been free of bias?
- 5. Have those procedures been based on accurate information?
- 6. Have you been able to appeal the (outcome) arrived at by those procedures?
- 7. Have those procedures upheld ethical and moral standards?

### *Distributive justice*

The following items refer to your (outcome).

To what extent:

- 1. Does your (outcome) reflect the effort you have put into your work?
- 2. Is your (outcome) appropriate for the work you have completed?
- 3. Does your (outcome) reflect what you have contributed to the organization?
- 4. Is your (outcome) justified, given your performance?

### *Interpersonal justice*

The following items refer to your supervisor.

To what extent:

- 1. Has (he/she) treated you in a polite manner?
- 2. Has (he/she) treated you with dignity?
- 3. Has (he/she) treated you with respect?
- 4. Has (he/she) refrained from improper remarks or comments?

## Appendix 10: Demographics

*Thank you for completing the questionnaires. Please take a moment to complete the following personal information:*

Sex: Male Female (circle)

Age \_\_\_\_\_

What is your racial/ethnic heritage?

- a. Asian, Asian American, Pacific Islander
- b. Black/African American
- c. Hispanic/Latino(a)
- d. Native American
- e. White/Anglo or European American
- f. Bi-racial or multi-racial
- g. Other

What industry do you work in?

Corporate sector (e.g. banking, white collar)

Manufacturing/repair (e.g. auto service)

Restaurant/food service

Sales

Other: \_\_\_\_\_

How long have you been working at this position? \_\_\_\_\_

How long have you been working at this organization? \_\_\_\_\_

I would estimate that \_\_\_\_\_% of the people I work with are the same gender as I am.

0%-20%      21%-40%      41%-60%      61%-80%      81%-100%

I would estimate that \_\_\_\_\_% of the people I work with are around the same age as I am.

0%-20%      21%-40%      41%-60%      61%-80%      81%-100%

I would estimate that \_\_\_\_\_% of the people I work with are the same race as I am.

0%-20%      21%-40%      41%-60%      61%-80%      81%-100%

### Appendix 11: Task Variety, Autonomy, Feedback Scales

Use the scales below to indicate whether each statement is an accurate or inadequate description of your present or most recent job.

- 5 = strongly agree  
 4 = agree  
 3 = neither agree nor disagree  
 2 = disagree  
 1 = strongly disagree

- \_\_\_\_\_ 1. I have almost complete responsibility for deciding how and when the work is to be done.
- \_\_\_\_\_ 2. I have a chance to do a number of different tasks, using a wide variety of different skills and talents.
- \_\_\_\_\_ 3. My manager provides me with constant feedback about how I am doing.
- \_\_\_\_\_ 4. The work itself provides me with information about how well I am doing.
- \_\_\_\_\_ 5. I get to use a number of complex skills on this job.
- \_\_\_\_\_ 6. I have very little freedom in deciding how the work is to be done.
- \_\_\_\_\_ 7. Just doing the work provides me with opportunities to figure out how well I am doing.
- \_\_\_\_\_ 8. The job is quite simple and repetitive.
- \_\_\_\_\_ 9. My supervisors or coworkers rarely give me feedback on how well I am doing the job.
- \_\_\_\_\_ 10. My job involves doing a number of different tasks.
- \_\_\_\_\_ 11. Supervisors let us know how well they think we are doing.
- \_\_\_\_\_ 12. My job does not allow me an opportunity to use discretion or participate in decision making.
- \_\_\_\_\_ 13. The demands of my job are highly routine and predictable.
- \_\_\_\_\_ 14. My job provides few clues about whether I'm performing adequately.
- \_\_\_\_\_ 15. My job gives me considerable freedom in doing the work.

## Appendix 12: Institutional Review Board (IRB) debrief form

Dear participant,

The study that you just completed looked at how personality, emotional states, and aspects of the work environment influence then engagement in certain work behaviors.

We hope that our research will add to our knowledge about why and when individuals engage in good and bad work behaviors.

If you have any questions or concerns, please feel free to contact Ernest O'Boyle at [oboyleeh@vcu.edu](mailto:oboyleeh@vcu.edu) or Dr. Larry Williams at [ljwilli1@vcu.edu](mailto:ljwilli1@vcu.edu).

Thank you for your cooperation and participation.



## Appendix 13. Covariances of all parceled items

	IRB_P1	IRB_P2	IRB_P3	CWB_P1	CWB_P2	CWB_P3	BO_P1	BO_P2	BO_P3
IRB4_P1	3.869								
IRB4_P2	1.753	1.083							
IRB4_P3	1.787	0.898	1.156						
CWB_P1	-4.554	-2.598	-2.815	30.585					
CWB_P2	-4.099	-2.355	-2.467	25.796	26.624				
CWB_P3	-3.829	-2.093	-2.379	21.495	19.973	18.504			
BURN_P1	-1.766	-1.135	-1.223	7.856	8.617	6.451	14.539		
BURN_P2	-1.637	-0.825	-0.63	7.261	7.369	6.327	10.97	19.595	
BURN_P3	-1.432	-0.745	-0.984	7.822	8.078	6.93	8.683	12.22	12.971
ENGAG_P1	6.43	3.639	3.184	-11.18	-9.125	-9.405	-11.5	-18.68	-16.13
ENGAG_P2	5.872	3.384	2.564	-7.558	-4.73	-6.407	-9.251	-18.58	-15.67
ENGAG_P3	7.364	4.152	3.514	-8.394	-6.099	-7.59	-10.76	-17.74	-15.73
OCB_P1	3.518	1.758	1.684	-3.179	-2.748	-2.735	-3.049	-4.358	-3.57
OCB_P2	5.507	2.784	2.814	-8.166	-7.496	-6.656	-5.346	-6.052	-5.336
OCB_P3	6.029	2.973	3.06	-7.537	-6.998	-6.179	-4.03	-4.803	-4.15
JUST_P1	0.945	0.693	0.537	-1.374	-1.85	-1.995	-3.941	-6.755	-5.738
JUST_P2	1.139	0.74	0.508	-1.417	-1.881	-2.208	-2.958	-6.911	-5.826
JUST_P3	0.713	0.551	0.386	-1.078	-1.171	-1.919	-3.683	-8.207	-6.594
OCS_P1	-1.31	-0.812	-0.87	7.032	6.512	5.774	4.782	6.007	5.157
OCS_P2	-1.372	-0.739	-0.918	6.376	6.131	5.763	6.053	7.894	6.495
OCS_P3	-1.589	-0.96	-0.867	8.484	7.564	6.73	5.151	8.093	6.692
sv_P1	0.492	0.226	0.207	-1.811	-1.503	-1.573	-1.158	-3.019	-2.524
sv_P2	1.045	0.575	0.522	-1.952	-1.428	-1.612	-1.252	-2.38	-2.774
fb_P1	0.591	0.379	0.235	-1.501	-1.603	-1.449	-2.361	-3.688	-3.216
fb_P2	0.351	0.189	0.166	-0.446	-0.484	-0.612	-2.301	-3.816	-3.015
ang_P1	-1.535	-0.739	-0.756	2.864	2.403	2.81	2.831	4.593	4.186
ang_P2	-1.6	-0.712	-0.861	3.018	2.217	2.417	1.887	2.771	3.051
ang_P3	-2.533	-1.115	-1.093	4.598	3.715	3.574	2.062	4.945	3.945
c_P1	2.565	1.314	1.379	-4.335	-4.383	-3.714	-2.798	-3.27	-3.067
c_P2	2.946	1.611	1.582	-6.152	-5.953	-5.246	-4.016	-4.697	-4.303
c_P3	1.831	1.023	1.032	-3.923	-3.898	-3.114	-2.6	-2.974	-2.716

	ENG_P1	ENG_P2	ENG_P3	OCB_P1	OCB_P2	OCB_P3	JUST_P1	JUST_P2
ENGAG_P1	65.186							
ENGAG_P2	65.34	84.317						
ENGAG_P3	69.145	76.757	85.605					
OCB_P1	10.592	12.14	13.034	9.787				
OCB_P2	14.398	14.297	16.732	9.276	15.712			
OCB_P3	13.772	13.428	15.825	9.4	12.527	16.101		
JUST_P1	13.477	14.382	15.461	3.378	4.191	2.921	9.101	
JUST_P2	15.351	16.77	17.779	3.661	5.072	3.62	8.9	11.532
JUST_P3	15.15	15.118	16.49	3.354	4.35	2.577	9.417	10.481
OCS_P1	-8.517	-7.524	-7.354	-2.214	-3.785	-3.03	-3.003	-3.176
OCS_P2	-9.703	-9.54	-8.843	-2.647	-4.302	-3.237	-3.746	-4.075
OCS_P3	-12.53	-11.9	-11.45	-3.493	-5.147	-4.211	-3.985	-4.392
sv_P1	5.843	6.11	6.556	1.348	1.818	1.906	1.661	2.202
sv_P2	6.679	6.618	8.012	1.909	2.408	2.513	1.638	2.102
fb_P1	6.921	7.399	8.096	2.324	2.695	2.224	3.283	4.014
fb_P2	6.886	7.69	7.904	2.404	2.441	1.995	3.259	3.715
ang_P1	-8.289	-8.46	-7.482	-2.101	-3.396	-3.43	-2.769	-2.776
ang_P2	-6.184	-6.144	-6.171	-1.523	-3.002	-2.806	-2.282	-2.622
ang_P3	-8.892	-7.593	-8.299	-2.443	-4.501	-4.724	-2.401	-3.096
c_P1	8.865	7.788	9.42	2.887	5.157	5.201	2.112	2.35
c_P2	12.319	11.776	13.467	3.212	5.216	5.821	3.054	3.045
c_P3	8.584	8.599	9.981	2.74	3.8	3.656	2.604	2.344

	JUST_P3	OCS_P1	OCS_P2	OCS_P3	sv_P1	sv_P2	fb_P1	fb_P2
JUST_P3	12.571							
OCS_P1	-3.776	5.905						
OCS_P2	-4.931	6.212	10.357					
OCS_P3	-5.05	6.249	8.081	10.761				
sv_P1	1.933	-1.091	-1.373	-1.861	2.197			
sv_P2	1.92	-1.544	-1.5	-2.153	1.616	3.025		
fb_P1	3.8	-1.764	-2.032	-2.479	1.271	1.247	3.48	
fb_P2	3.852	-1.577	-2.181	-2.257	0.982	0.926	2.49	2.749
ang_P1	-3.254	2.283	2.518	2.731	-1.359	-1.485	-0.714	-0.909
ang_P2	-2.493	1.601	1.587	1.538	-0.979	-1.357	-0.691	-0.682
ang_P3	-2.58	1.828	2.432	2.66	-1.735	-1.631	-0.354	-0.619
c_P1	2.019	-2.18	-2.682	-2.657	1.255	1.731	0.882	0.868
c_P2	3.067	-2.658	-3.216	-3.171	1.42	1.899	1.456	1.523
c_P3	2.567	-1.718	-2.051	-2.108	0.941	1.426	0.991	1.108

	ang_P1	ang_P2	ang_P3	c_P1	c_P2	c_P3
ang_P1	7.498					
ang_P2	5.409	5.935				
ang_P3	7.529	6.708	12.214			
c_P1	-2.536	-2.345	-3.362	5.128		
c_P2	-2.728	-2.232	-3.269	4.537	7.404	
c_P3	-1.836	-1.493	-1.671	3.229	4.304	4.868

**Vita**  
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**GRANTS & SCHOLARSHIPS**

Family Owned Business Institute Grant Proposal (submitted) Does increased family involvement improve firm performance. Requested amount \$5000.

Phi Kappa Phi Honor Society scholarship (April, 2008). Award amount \$2,500.

1<sup>st</sup> Annual Virginia Department of Corrections Technology Initiatives Grant (September, 2006) Award amount \$4105 for Mplus and CMA statistical software.

**PUBLICATIONS**

Williams, L. J. & O'Boyle Jr., E. H. (2008). Parceling strategies in structural equation modeling. *Human Resource Management Review*, 18, 233-242.

Forsyth, D. R., O'Boyle Jr., E. H., & McDaniel, M. A. (2008). East meets West: A meta-analytic investigation of cultural variations in idealism and relativism. *Journal of Business Ethics*, 83, 813-833.

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Forsyth, D. R., Story, P. A., and O'Boyle Jr., E. H., (2006). *Instructor's resource manual for group dynamics* (4th ed.). Belmont, CA: Thomson Wadsworth.

**MANUSCRIPTS IN PREPARATION**

O'Boyle Jr., E. H., Humphrey, R., Pollack, J. M., Hawver, T. H., & Story, P. A. (**conditional acceptance**). Emotional intelligence and job performance: A meta-analysis. *Journal of Organizational Behavior*

- O'Boyle Jr., E. H., Pollack, J. M., Rutherford, M. W. (**conditional acceptance**). Tapping the essence of familiness? An exploration of the relationship between ethical focus and financial performance in family-owned firms. *Family Business Review*.
- Forsyth, D. R. & O'Boyle Jr., E. H. (**revise and resubmit, manuscript re-submitted**). Rules, standards, and ethics: Relativism predicts cross-national differences in the codification of moral standards. *International Business Review*
- O'Boyle Jr., E. H. & Williams, L. J. (**revise and resubmit, manuscript re-submitted**). Decomposing model fit: Measurement versus theory in organizational research using latent variables. *Journal of Applied Psychology*.
- O'Boyle Jr., E. H., Forsyth, D. R., O'Boyle, A. S. (**revise and resubmit, manuscript re-submitted**). Bad apples or bad barrels: An examination of group and organizational level effects in the study of individual counterproductive work behavior. *Group and Organizational Management*.
- Williams, L. J. & O'Boyle Jr., E. H. (**revise and resubmit**). SEM global fit indices: Everything, something, and nothing about theoretical models. *Organizational Research Methods*.
- O'Boyle Jr., E. H., Pollack, J. M., & Rutherford, M. W. (**revise and resubmit**). "Cheaper" by the Dozen or "Weaker" by the Dozen? A Competing Theories Examination of the Relation Between Family Involvement and Firm Performance. *Journal of Business Venturing*.
- Taxman, F., Cropsey, K., & O'Boyle Jr., E. H. (**revise and resubmit 2<sup>nd</sup> round**). Outpatient treatment for drug involved offenders: A meta-analysis. *Journal of Experimental Criminology*.
- Williams, L. J. & O'Boyle Jr., E. H. (**proposal accepted**). A review of structural equation practices and recommendations. *Journal of Business and Psychology*.
- Cole, M. S., O'Boyle Jr., E. H., & Walter, F. *Work Engagement: A case of putting the cart before the horse?*
- O'Boyle Jr., E. H. & Aguinis, H. *The Best and the rest: The distribution of individual performance*.
- Maynard, M. T., Mathieu, J. E., Gilson, L. L., O'Boyle, E., & Cigularov, K. P. *Rethinking the team empowerment nomological network: Review, meta-analysis, and future directions*.
- Williams, L. J. & O'Boyle Jr., E. H. *An analytic investigation of the CFA marker technique comparing ideal and non-ideal marker variables*
- Cole, M. S., O'Boyle Jr., E. H., Kim, N. Y., & Walter, F. *Burnout: An updated meta-analysis and extension*.
- O'Boyle Jr., E. H., Forsyth, D. R., Kim, N. Y. & McDaniel, M. A. *A comparison of the nomological networks of The Dark Triad: A meta-analysis*.

### **CONFERENCE PAPERS AND PRESENTATIONS**

- Cole, M. S., O'Boyle Jr., E. H., & Walter, F. (August, 2010). *Work Engagement: A case of putting the cart before the horse?* Paper to be presented at the Academy of Management, Toronto, CA.
- Williams, L. J. & O'Boyle Jr., E. H. (April, 2010). Guidelines for the Analysis of Residuals in Latent Variable Models. Symposium at 25<sup>th</sup> Annual Society for Industrial and Organizational Psychology Conference, Atlanta, GA.
- Humphrey, R. & O'Boyle Jr., E. H. (April, 2010). The three streams of EI research: Implications for selection, training, performance, and leadership. Symposium at 25<sup>th</sup> Annual Society for Industrial and Organizational Psychology Conference, Atlanta, GA.
- Williams, L. J., O'Boyle Jr., E. H., Edwards, J. R., Vandenberg, R. J. (August, 2009). Structural equation modeling in management research: Suggestions for improved analysis (Symposium). *Academy of Management*, Chicago, IL.
- Williams, L. J. & O'Boyle Jr., E. H. (August, 2009). Linking latent variables and indicators. Professional development workshop (PDW) conducted at the *Academy of Management*, Chicago, IL.
- O'Boyle Jr., E. H., Pollack, J. M., Rutherford, M. W. (August, 2009). Tapping the essence of familiness? An exploration of the relationship between ethical focus and financial performance in family-owned firms. *Academy of Management*, Chicago, IL.
- Story, P. A. & O'Boyle Jr., E. H. (May, 2009). The impact of business related objects on performance and persistence. *American Psychological Society*, San Francisco, CA.
- Kaplan, B., Haynes, S., Humphrey, R., Anastakis, D., & O'Boyle Jr., E. H. (April, 2009). Emotional intelligence among a sample of surgeons. Paper presented at the Virginia Surgical Meeting. Virginia Beach, VA.
- O'Boyle Jr., E. H., Pollack, J. M., Rutherford, M. W. (November, 2008). Does it pay to be ethical? An exploration of the relationship between ethicality and financial performance in family-owned firms. *Southern Management Association Conference*, St. Pete Beach, FL.
- O'Boyle Jr., E. H., Pollack, J. M., & Hawver, T. H. (November, 2008). The predictive validity of emotional intelligence: A meta-analysis. *Southern Management Association Conference*, St. Pete Beach, FL.
- Story, P. A. & O'Boyle Jr., E. H. (September, 2008). Implications of implicit and explicit motivations at job interviews. Presented at *American Psychological Society*, Chicago, IL.

- O'Boyle Jr., E. H. (August, 2008). Facilitator/Presenter to Current Issues with Latent Variables and Organizational Research Symposium. *Academy of Management*, Anaheim, CA.
- O'Boyle Jr., E. H. (August, 2008). Linking latent variables and indicators. Professional development workshop conducted at *Academy of Management*, Anaheim, CA.
- Pollack, J. M., O'Boyle Jr., E. H., & Hawver, T. H. (August, 2008). Strategic planning and firm performance in small firms: An updated meta-analysis. *Academy of Management*, Anaheim, CA.
- Pollack, J. M., Rutherford, M. W., & O'Boyle Jr., E. H. (August, 2008). Family involvement and firm performance: a meta-analysis. *Academy of Management*, Anaheim, CA.
- O'Boyle, Jr. E. H., Rutherford, M. W. & Pollack, J. M. (April, 2008). A 10 Year Assessment of Family Ownership and Firm Performance: A Repeated Survey Design. *Family Enterprise Research Conference*, Milwaukee, WI.
- O'Boyle Jr., E. H., & Williams, L. J. (November, 2007). Evaluating causal models in organizational research: A review with recommendations for improving analysis. Conference Proceedings *Southern Management Association*, Nashville, TN.
- Taxman, F., Cropsey, K., O'Boyle Jr., E. H., Phillips, N., Gallant, A., & Dimenna, M. (April, 2007). Outpatient Treatment for Drug Involved Offenders. Presentation for the *7th Annual Jerry Lee Crime Prevention Symposium*, Washington D.C.
- Williams, L. J. & O'Boyle Jr., E. H. (April, 2007). Evaluating causal models in organizational research. Presentation for Stevens College, Hoboken, NJ.
- Williams, L. J. & O'Boyle Jr., E. H. (April, 2007). Structural equation modeling. Presentation for the *Center for the Advancement of Research Methods and Analysis (CARMA)*, Richmond, VA.
- Williams, L. J. & O'Boyle, E. (March, 2007). Evaluating causal models in organizational research: A review with recommendations for improving analysis. Paper presented at *28<sup>th</sup> Annual Industrial Organization/Organizational Behavior Graduate Student Conference*, Indianapolis, Indiana.
- Forsyth, D. R. & O'Boyle, E. (March, 2007). The Moral Mind. Paper presented at *University of Richmond Leadership and the Mind Forum*, Richmond, VA.
- O'Boyle, E. (November, 2006). Trials and Tribulations of Conducting Meta-Analyses. Presentation for the *Center for the Advancement of Research Methods and Analysis (CARMA)*, Richmond, VA.
- Forsyth, D. R. & O'Boyle, E. (October, 2006). Individual Differences in Ethical Ideology: Reactions to Leaders' Indiscretions and Achievements. Paper presented at the *79<sup>th</sup> Annual Convention of the Midwestern Psychological Association*, Chicago, IL.



### **MEMBERSHIPS AND SERVICE IN PROFESSIONAL ORGANIZATIONS**

- Academy of Management
- Southern Management Association
- Center for the Advancement of Research Methods and Analysis (CARMA)
- Society for Industrial and Organizational Psychology

### **TEACHING EXPERIENCE**

Summer, 2010	Business Statistics (MGMT 301), VCU, Instructor, 2 sections
Spring, 2010	Research Methods (LDST 249), University of Richmond, Instructor (2 sections) Graduate Statistics (PADM 624), VCU, Instructor Managerial Skills (MGMT 389), VCU, Instructor
Fall, 2009	Managerial Skills (MGMT 389), VCU, Instructor
Summer, 2009	Business Statistics (MGMT 301), VCU, Instructor
Summer, 2009	CARMA (MGMT 703), VCU, Lab instructor
Spring, 2009	Managerial Skills (MGMT 389), VCU, Instructor
Fall, 2008	Managerial Skills (MGMT 389), VCU, Instructor
Summer, 2008	CARMA (MGMT 703), VCU, Teaching Assistant
Fall, 2007	Organizational Behavior (MGMT 319), VCU, Instructor
Summer, 2007	CARMA (MGMT 703), VCU, Lab Assistant
Summer, 2006	CARMA (MGMT 703), VCU, Lab Assistant