

MCGREGOR'S THEORIES 50 YEARS LATER:
VALID CONSTRUCTS OR POP PSYCHOLOGY?

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ABSTRACT

MCGREGOR'S THEORIES 50 YEARS LATER: VALID CONSTRUCTS OR POP PSYCHOLOGY?

by Eric M. O'Rourke

McGregor (1960) introduced Theory X and Theory Y as ways of classifying the implicit theories managers and leaders have about their subordinates. Theory X is the belief that employees are generally lazy and need to be coerced to complete work, but Theory Y is the belief that employees are inherently self-motivated and enjoy work. The current study used an archival dataset of 209 supervisor-subordinate dyads from an online panel to test a theoretical model in which a supervisor's Theory X attitudes about employees in general had a negative relationship with a subordinate's organizational citizenship behavior, mediated by the subordinate Theory X attitudes about his or her supervisor. This mediation was further moderated by the workplace stressors of organizational injustice and workplace aggression, such that in a high-stress work environment (high organizational injustice or high workplace aggression), the indirect effect of supervisor Theory X attitudes on organizational citizenship behavior was nullified. Using the statistical technique of conditional process modeling, the hypothesized model was validated in this sample.

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Introduction

Organizations must make careful decisions when deciding which employees to promote into management-level positions (Gatewood, Feild, & Barrick, 2010). Individuals who hold managerial roles may be perfectly capable of performing the primary duties and responsibilities of a manager, yet struggle in engaging in behaviors and holding attitudes that are typical of an effective leader: being innovative, influential, champions of change (Meyer, 1983; Sarkesian, 1985; Schein, 1987); having clarity of vision, need for achievement, and being integrators (Ravichadran & Nagabrahmam, 2000). Furthermore, effective leaders tend to hold implicit theories that subordinates are self-motivated and enjoy work (Theory Y; McGregor, 1960), as opposed to holding implicit theories that subordinates are lazy and need to be coerced to do work (Theory X; McGregor, 1960).

Management has an influence on important workplace behaviors, including organizational citizenship behavior. Organizational citizenship behaviors (OCB) are actions that benefit the organization in some way but are not typically tied to the organization's formal reward system (Organ, Podsakoff, & MacKenzie, 2006). Although organizations discipline or terminate employees who do not perform well based on the primary roles and responsibilities of the job, OCBs are typically less monitored and evaluated than traditional task performance (Organ, 1985). Therefore, it is important to consider predictors and correlates of these positive work behaviors. One such correlate is leadership.

An empirical link of leadership attitudes and behaviors with OCB has been well-established through a variety of mechanisms. The relationship between positive leadership behaviors (e.g., transformational leadership behaviors) and OCB has been studied by investigating various mediators and moderators, such as subordinate trust in the leader

(Podsakoff, MacKenzie, Moorman, & Fetter, 1990; Rubin, Bommer, & Bachrach, 2010), subordinate organizational identification (Schuh, Zhang, Egold, Graf, & Pandey, 2012), and personality traits (e.g., leader agreeableness and extraversion, Hunter et al., 2013; subordinate idiocentrism and allocentrism, Nahum-Shani & Somech, 2011). However, the majority of the leadership-OCB research has focused on subordinate characteristics directly or how a leader's *behaviors* can affect a subordinate's attitudes and behaviors. Little research has investigated the impact of a leader's implicit *attitudes* about subordinates on subordinate behavior and attitudes about leaders. Thus, the academic community can gain a better understanding of the complex mechanisms through which leadership attitudes and behaviors affect subordinate OCB if leader Theory X is incorporated into the study of OCB.

The current study investigates Theory X in a sample of supervisor-subordinate dyads. I test a theoretical model, using a social exchange perspective (Blau, 1964), in which supervisors' Theory X attitudes indirectly affect subordinates' OCB through the subordinates' Theory X attitudes about their supervisor. Additionally, I expect that this model is then further moderated by both organizational justice and workplace aggression, such that when there is a high-stress workplace environment of organizational injustice or high workplace aggression, the previous indirect effect is lost. The addition of workplace stressors to the model is critical because it will demonstrate the necessity to consider the workplace environment present in supervisor-subordinate interactions. Although the dyadic relationship between a supervisor and subordinate is crucial in determining the portrayal of positive work behaviors by subordinates, I hypothesize that in a negative, high-stress work environment, any positive effect of having a supervisor with low Theory X attitudes will be nullified by the high-stress work environment associated with organizational injustice or workplace aggression.

Theory X and Theory Y

Some traditional views of management and leadership in organizations were based on what McGregor called Theory X. Theory X is based on three core assumptions. First, the average person inherently dislikes work and would prefer not to work if given the opportunity. Second, because of this inherent personal characteristic, people must be controlled and threatened with punishment in order for them to behave in accordance with an organization's goals. Lastly, the average person actually prefers to be directed and prefers to avoid responsibility, rather than being given autonomy and empowerment in the workplace (McGregor, 1960). These assumptions place boundaries on management because they imply that humans have certain limits that are beyond managerial control (McGregor & Cutcher-Gershenfeld, 2006).

On the other hand, the assumptions of Theory Y reflect upon the idea that individuals grow and develop in the workplace and have endless potential to perform well if properly managed. Specifically, McGregor (1960) spells out six assumptions. First, individuals enjoy expending mental and physical effort at work. Second, employees will conduct self-guided and self-controlled behaviors at work without the threat of punishment and coercion. Third, individuals are motivated to achieve organizational objectives with appropriate reward; the most significant of these rewards involve self-actualization needs (Maslow, 1943). Fourth, the average individual can learn to accept and seek out responsibility. Fifth, a wide range (rather than a narrow range) of individuals possess an active imagination, have ingenuity, and can use creativity in solving organizational issues. McGregor's last assumption of Theory Y is that in the current organizational cultures at the time (1960), the intellectual potential of employees is only partially realized.

Theory X and Theory Y – Empirical Research Literature Review

Despite the prominence and cultural relevance of McGregor's ideas about managerial attitudes and behavior, a paucity of empirical research exists today testing McGregor's original assumptions (Khatri, 2002; Miner, 2003). Although a relatively recent review of 73 organizational behavior theories ranked McGregor's assumptions as the second most recognized, Theory X and Theory Y only ranked 33rd in terms of importance to the literature and the field (Miner, 2003). This gap is possibly due to the absence of any valid measure of his theories for much of their existence. Rather puzzlingly, no construct valid measure of McGregor's proposal existed in the academic literature until 2008, save for one measure included in a study by Fiman (1973), which was published without the items included. Furthermore, Neuliep, in two studies (1987, 1996) investigated the relationships among Theory X, Theory Y, various compliance-gaining strategies, and ethical behaviors in organizations. Although the items, which were adapted from a paper from Michaelsen (1973), were published in the manuscript, no construct validity evidence was presented. Additionally, a Theory X-Y scale was developed by Jones and Pfeiffer (1972), but again, the authors presented no reliability or validity evidence. Kopelman, Prottas, and Davis (2008) listed additional scales in the literature (Baron and Paulus, 1991; Chapman, 2005; Costley & Todd, 1987; Gordon, 1999; Greenberg, 1999; Miles, 1964; Osland, Kolb, & Rubin, 2001; Swenson, n.d.; Teleometrics International, 1995) purporting to assess Theory X/Y behaviors and/or attitudes all without sufficient reliability and/or validity evidence. Therefore, this lack of a validated measure is one of the likely contributions to the small amount of existing empirical literature testing his theory.

In 2008, two separate articles were published detailing the creation of a construct-valid Theory X and Theory Y measure. Kopelman et al. (2008) validated a 17-item measure of Theory

X (13 items) and Theory Y (four items) attitudes and assumptions, drawing items from two public domain measures. The scale showed acceptable reliability and substantial convergent validity with a “faith in people” measure as well as divergent validity with four unrelated constructs. Sager (2008) also detailed the validity of a 17-item measure of Theory X (11 items) and Theory Y (six items) attitudes. The scale showed strong factorial validity across the Theory X and Theory Y items and appropriate convergent validity with various communication styles. Interestingly, the Theory X and Theory Y scales showed differential patterns of relationships with the various communication styles. For example, the Theory X scale was significantly related to the dominant scale, but showed null relationships with the supportive, anxious, and nonverbally expressive scales. The opposite pattern was found with the Theory Y scale: a null relationship with the dominant scale, but significant relationships with the supportive, nonverbally expressive, and anxious (negative) scales. Thus, this Sager (2008) scale, although providing less relevant convergent validation evidence compared to the Kopelman et al. (2008) scale, provides evidence that McGregor’s Theory X and Theory Y should not be considered opposite ends of the same spectrum and should in fact be considered separately, consistent with McGregor’s initial claims (Bowlby, McDermott, & Obar, 2011).

However, very few peer-reviewed journal articles have been published employing one of these scales. Two studies by Russ (2011; 2013) have demonstrated the utility of the Sager (2008) scale. Russ (2011) surveyed managers on their Theory X and Theory Y assumptions as well as their propensity for participative decision making. He found that Theory Y assumptions were positively related to both the organizational effectiveness dimension and the impact on power dimension of participative decision making. Theory X assumptions were only negatively related to the impact on power dimension. Russ (2013) also used the Sager (2008) Theory X/Y

scale in his study of the relationship between Theory X/Y and communication apprehension. He found that Theory Y assumptions were negatively related to trait communication apprehension as well as context-related communication apprehension in groups, interpersonal situations, and meetings. However, Theory X assumptions were not related to trait or context-related communication apprehension, providing more evidence that Theory X assumptions and Theory Y assumptions should not be considered opposite ends of the same spectrum.

Sahin (2012) administered an adapted version of Kopelman et al.'s (2008) scale to a sample of supervisors as well as a leader-member exchange (LMX) measure and affective commitment measure to subordinates. This research showed a positive relationship between Theory Y and LMX in addition to a positive relationship between Theory Y and affective commitment, but null relationships between Theory X and LMX and affective commitment. Additionally, LMX was shown to partially mediate the positive relationship between Theory Y and affective commitment. Therefore, the Sahin (2012) study provides reliability and validity evidence for the Kopelman et al. (2008) scale in a research setting with an applied sample.

In the current study, I will focus solely on Theory X orientation. In organizations in the US, managers and leaders seem to have more pronounced biases that are related to a Theory X orientation. Individuals with a Theory X orientation hold an extrinsic motivation bias about other individuals (DeVoe & Iyengar, 2004). In other words, when asked to identify what motivates individuals at work, managers tend to identify factors that are extrinsically motivating (e.g., pay, promotion; Heath, 1999). Thus, focusing the current study efforts on Theory X is appropriate.

Leader Implicit Followership Theories

McGregor's Theory X and Theory Y fall under the umbrella of a recent strand of research involving leader implicit followership theories (LIFTs; Whiteley, Sy, & Johnson, 2012). The literature on LIFTs extends the more robust literature on implicit leadership theories (Eden & Leviathan, 1975) to a leader's automatic and implicit association of how followers should act. LIFTs are, "...individuals' personal assumptions about the traits and behaviors that characterize followers" (Sy, 2010, p. 74).

LIFT's (and implicit leadership theory's) core theoretical background stems from categorization theory (Rosch, 1977, 1978). Categorization theory is characterized by the conception that individuals develop schemas as sensemaking functions (Weick, 1995) of their surroundings. Schemas are cognitive "shortcuts" designed to expedite the cognitive processing of an individual's environment. Rather than evaluating the entirety of available information about an individual, people make a short, initial judgment which allows them to classify an individual into a schema. These schemas are typically created through experience with similar others (Shondrick & Lord, 2010) and are generally represented by a prototype (e.g., Osherson & Smith, 1981), or a group's best exemplar. A leader's LIFT is developed over time, often through salient episodic memories of experiences with followers (Shondrick & Lord, 2010) or the leader's own experience with a different leader as a follower himself or herself (Ritter & Lord, 2007). Although the literature is still young on LIFTs, it is important to consider them here because of the clear overlap between Theory X/Y and LIFTs.

Organizational Citizenship Behavior

A supervisor with Theory X-oriented attitudes should negatively impact his or her subordinate's use of organizational citizenship behavior, or OCB. OCB is a non-task behavior,

and is defined as “individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organization.” (Organ, Podsakoff, & MacKenzie, 2006, p. 3). Although this definition of OCB includes the requirement of behavior not included in performance management systems, a recent meta-analysis has shown the large degree of statistical overlap between OCB and formal job performance ratings ($r_c = .60$; Podsakoff, Blume, Whiting, & Podsakoff, 2009). These behaviors, which extend beyond an individual’s prescribed role duties, must ultimately benefit the organization (Organ, 1990). Smith, Organ, and Near’s (1983) initial proposal established two factors (altruism and generalized compliance), and Organ’s (1988) revised proposal included five distinct dimensions of OCB: altruism, courtesy, conscientiousness, sportsmanship, and civic virtue. However, a two-factor solution, defined by target of the behavior, has received recent attention.

OCB statistically reduces to two distinct factors with unique sets of predictors (Ilies, Fulmer, Spitzmuller, & Johnson, 2009), although not with complete consensus (e.g., Hoffman, Blair, Merriac, & Woehr, 2007; LePine, Erez, & Johnson, 2002; O’Brien & Allen, 2008). Specifically, OCBs can be targeted at other individuals within an organization (e.g., staying late to assist a coworker; OCB-Individual; OCB-I), or at the organization as a whole (e.g., promoting the organization to enhance its reputation; OCB-Organizational; OCB-O). Unique sets of predictors have been found between OCB-I and OCB-O, encouraging the separate inclusion of OCB-I and OCB-O rather than the combining of OCB into a composite measure (e.g., Williams & Anderson, 1991).

OCB is generally studied from a social exchange theory perspective (Organ, 1988; Organ et al., 2006). Social exchange theory (Blau, 1964), which is considered in more detail later in the

manuscript, predominately deals with the concept of reciprocity (Gouldner, 1960). In alignment with Organ's (1990) proposal, subordinates engage in OCBs as a way to both repay coworkers for being recipients of previous OCBs or with the expectation of a future OCB in return (Rapp, Bachrach, & Rapp, 2013). However, there is no formal agreement in a social exchange, as opposed to economic exchanges that typically take place in a work setting (i.e., task performance for compensation; Cardona, Lawrence, & Bentler, 2004). Because, by definition, OCBs cannot be a result of a formal agreement and organizations cannot force employees to conduct OCBs, this is consistent with the implicit agreements established in social exchange theory.

Although OCB has been studied in regards to social exchange theory, there is a paucity of research investigating a possible link between Theory X/Y attitudes and OCB. However, I am able to structure my study on Theory X/Y attitudes to some degree borrowing from research on transformational leadership behaviors. For example, one element of transformational leadership behaviors is intellectual stimulation (Avolio & Bass, 2002). Intellectual stimulation involves inspiring and supporting subordinates to develop creative and innovative products, services, and solutions (Bass & Avolio, 1995). Similarly, McGregor's fifth assumption of Theory Y-oriented managers states that their subordinates have the ability to use imagination, creativity, and ingenuity to solve organizational issues (McGregor, 1960). Furthermore, another element of transformational leadership behaviors is individualized consideration, which refers to the leader's ability to cultivate potential in his or her subordinates (Bass & Avolio, 1995). Analogously, McGregor's (1960) sixth assumption revolves around the idea that subordinates' full potentials were not realized under organizational cultures in the first half of the 20th century, largely due to the organizational leadership styles used during this time.

Although it is important to recognize the difference between attitudes and behaviors, I expect that because of the conceptual overlap between Theory X attitudes and transformational leadership behaviors, there may be some degree of convergent validity evidence (Campbell & Fiske, 1959); that is, a similar pattern of relationships should appear between Theory X attitudes and certain outcomes that also appear between transformational leadership behaviors and those same outcomes, but the reverse direction. For example, a consistent positive relationship between transformational leadership behaviors and OCB has been shown both empirically (e.g., Asgari, Silong, Ahmad, & Samah, 2008; Johnson, 2008; Podsakoff et al., 1990; Wang, Law, Hackett, Wang, & Chen, 2005) and recently meta-analytically (Wang, Oh, Courtright, & Colbert, 2011). Therefore, it follows that a direct relationship should exist between Theory X attitudes and OCB in the opposite direction as the direct relationship between transformational leadership behaviors and OCB. This empirical support, coupled with the theoretical research showing that people who are treated with more respect are more likely to reciprocate that by acting in a beneficial way towards the organization (e.g., Blau, 1964) leads me to hypothesize the following:

Hypothesis 1a. Supervisor Theory X attitudes will have a negative relationship with OCB-I.

Hypothesis 1b. Supervisor Theory X attitudes will have a negative relationship with OCB-O.

Social Exchange Theory

Social exchange theory can be traced back to works of Homans (1961), Blau (1964), Thibault and Kelley (1959) and Emerson (1962). Emerson (1976) describes social exchange as less of a theory and more of a frame of reference within which micro theories and macro theories can speak to one another. The theory has been studied in many scientific fields (e.g., economics,

anthropology, sociology; Cropanzano & Mitchell, 2005). Social exchange theory states, “Rules of exchange form a normative definition of the situation that forms among or is adopted by the participants in an exchange relation” (Emerson, 1976, p. 351).

Blau’s (1964) social exchange framework specifies that unspecified obligations arise within social interactions, which form the basis for exchange. Reciprocity is one of the most commonly studied forms of exchange rule (Gouldner, 1960) and this reciprocity can result from interdependent exchange, folk belief, or norm (Cropanzano & Mitchell, 2005). The reciprocity norm has been applied to various organizational phenomena (e.g., justice, trust, leader-member exchange; Cropanzano & Mitchell, 2005) and has been theorized to be universally accepted from a cultural perspective (Gouldner, 1960) although the degree to which it is accepted varies by culture (Parker, 1998; Shore & Coyle-Shapiro, 2003).

Reciprocity as interdependent exchange, within the bounds of social exchange theory, has been commonly applied to supervisor-subordinate relationships (e.g., Liden, Sparrowe, & Wayne, 1997). In supervisor-subordinate relationships, social exchange is set within a status differential. The supervisor, due to his or her higher status, has power to create team climate norms which are ingrained and reciprocated by subordinates. Supervisors’ attitudes/beliefs (e.g., Theory X) create a norm that influences subordinate attitudes and beliefs making them reciprocate and reflect the supervisor’s attitudes. Therefore, I hypothesize:

Hypothesis 2. There will be a positive relationship between Theory X attitudes as rated by the supervisor about subordinates and Theory X attitudes as rated by the subordinate about their supervisor.

Social exchange theory explains possible criteria of the relationship established in Hypothesis 2. If supervisors hold Theory X views about subordinates, subordinates will hold

Theory X views about the supervisor. In accordance with social exchange theory, subordinates will then reciprocate this negative experience of perceiving to have a lazy and unmotivated supervisor by exhibiting fewer OCBs. In applied settings with well-established interpersonal relationships (e.g., supervisor-subordinate relationships), the causal direction of the social exchange-social relationship paradigm is that an established relationship causes further social exchange (Bishop, Scott, & Burroughs, 2000; Cropanzano & Mitchell, 2005; Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001). Conversely, an experimentally-manipulated relationship in a laboratory setting is only created once social exchange occurs (Molm, 2003). Thus, because the current study concerns well-established work relationships between supervisors and subordinates, I hypothesize:

Hypothesis 3a. There will be a significant indirect relationship between supervisor Theory X attitudes and subordinates' OCB-I, such that the relationship between supervisor Theory X attitudes and subordinates' OCB-I will be mediated by subordinate Theory X attitudes.

Hypothesis 3b. There will be a significant indirect relationship between supervisor Theory X attitudes and subordinates' OCB-O, such that the relationship between supervisor Theory X attitudes and subordinates' OCB-O will be mediated by subordinate Theory X attitudes.

Job Stressors as Moderators

In order to further investigate the relationship between Theory X attitudes and OCB, it is important to consider psychological constructs that can either exacerbate or reduce the proposed negative effect of supervisor Theory X attitudes. Although I am proposing direct and indirect relationships between supervisor Theory X attitudes and OCB, it remains important to determine

situational factors that can lessen the effectiveness of this type of leadership attitude. One situational factor that may reduce the effectiveness is a job stressor.

Job stressors are events or conditions that cause job-related strain (Kahn & Byosiere, 1992). Eight categories of stressors have been identified: physical stressors, task-related job stressors, role stressors, social stressors, work-schedule-related stressors, career-related stressors, stressful change processes, and traumatic events (Sonnentag & Frese, 2013). When an individual is negatively affected by a stressor, his or her reaction is referred to as strain. Strains can be physiological (e.g., increased cortisol excretion; Aronsson & Rissler, 1998), affective (e.g., burnout; Maslach & Jackson, 1981), and behavioral (e.g., reduced performance accuracy; Searle, Bright, & Bochner, 1999) in nature.

Central to the theory that job stressors will lessen the relationship between Theory X attitudes and positive work behaviors like OCB is the conception that negative events elicit stronger affective, cognitive, behavioral, and physiological responses than neutral or positive events (Taylor, 1991). The negative events, which could have already occurred or be perceived as potentially threatening (Lazarus & Folkman, 1984), seem to require more cognitive information processing resources than positive events, and thus, cancel out any positive effect of an event with a positive valence. This effect, known as the positive-negative asymmetry effect (e.g., Anderson, 1965; Skowronski & Carlston, 1989), has consistently been recognized in nearly all psychological research domains (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). For example, in the social support literature (of which coworkers and supervisors can provide; LaRocco & Jones, 1978), negative social interactions (e.g., social undermining, interpersonal conflict) consistently predict negative outcomes much more strongly than positive social interactions promote positive outcomes (e.g., Okun, Melichar, & Hill, 1990; Vinokur & van Ryn,

1993). I propose that various job stressors, typically perceived as negative events, will reduce the beneficial effects of low Theory X attitudes on positive outcomes. I discuss two job stressors below: organizational justice and workplace aggression. Organizational justice has shown consistent positive relationships with OCB in past meta-analyses (Dalal, 2005; LePine et al., 2002), and various workplace aggression constructs (e.g., interpersonal conflict) have also shown consistent relationships with OCB (Miles, Borman, Spector, & Fox, 2002; Spector, Bauer, & Fox, 2010).

Organizational justice. The construct of organizational justice is defined as the socially-constructed perception of an employee about the amount of fair treatment he or she receives within his or her organization (Judge & Colquitt, 2004). It is generally delineated into three distinct constructs. The first construct, distributive justice, refers to the amount of fairness the employee perceives in the rewards received for his or her work. Its roots stem from Adams (1965), when he discussed perceptions of inequality of rewards at work using a backdrop known as equity theory (Colquitt, Greenberg, and Zapata-Phelan, 2005); that is, motivation to behave is based on the individual comparing his or her outputs to what he or she receives in return. The second construct, procedural justice, refers to the degree of fairness in the process used to determine the rewards, rather than the absolute level of the rewards themselves. Initially, procedural justice was applied only to a legal setting to explain judge/jury decision making (Thibault & Walker, 1975), until it later was extended to the workplace (Leventhal, 1980).

The third facet of organizational justice, interactional justice, was introduced to the literature by Bies and Moag (1986). The factorial validity of interactional justice has been debated since its introduction. For example, one of the seminal authors later recanted his original proposal and argued it is simply an interpersonal form of procedural justice (Tyler &

Bies, 1990). Furthermore, two subfacets of interactional justice were initially proposed (interpersonal and informational justice; Greenberg, 1990) and the factor structure was later supported in a meta-analysis (Colquitt et al., 2001). The current study, however, focuses on the higher order construct of interactional justice, in accordance with recent literature (e.g., Ambrose, Schminke, & Mayer, 2013). It is defined as the degree to which employees feel they are treated well by a supervisor or company.

Low organizational justice can be considered a stressor, though it is rarely studied as such (Judge & Colquitt, 2004). For example, workplace aggression, a social stressor, (see below; Hershcovis, 2011) contains some construct overlap with interactional justice (Judge & Colquitt, 2004), and other models of stress include managers' lack of delegation ability and poor participation as stressors (Marshall & Cooper, 1979), which contain construct overlap with procedural justice (Judge & Colquitt, 2004). Empirically, a small strand of research exists which investigates organizational injustice as a stressor. One study has shown support for injustice as a stressor by showing that, using the job demands-resources model of burnout as a backdrop (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), the relationship between justice and turnover intentions is mediated by various facets of burnout, which is a common strain due to job stressors (Tayfur, Bayhan Karapinar, & Metin Camgoz, 2013). Additionally, another study, using the job demand-control model (Karasek, 1979) as the foundation, found that, in addition to a direct negative relationship between justice (procedural and interpersonal) and occupational strain, justice mediates the relationship between job control and occupational strain (Elovainio, Kivimaki, & Helkama, 2001).

Thus, following the logic of the positive-negative asymmetry effect, it would be expected that the stressful and negative experience of low organizational justice (distributive, procedural,

and interactional) would overpower an employee's cognitive and affective resources, nullifying the beneficial effects of having a supervisor with a low Theory X orientation, resulting in a null relationship between a subordinate's Theory X attitudes and his or her OCBs, but maintaining the mediation when organizational justice is average or high. Figure 1 presents a graphical representation of this model.

Hypothesis 4a. In the mediated relationship between supervisor Theory X attitudes and OCB-I (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-I will be moderated by distributive justice, such that there will be no mediation when distributive justice is low but remain significant when distributive justice is average or high.

Hypothesis 4b. In the mediated relationship between supervisor Theory X attitudes and OCB-O (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-O will be moderated by distributive justice, such that there will be no mediation when distributive justice is low but remain significant when distributive justice is average or high.

Hypothesis 4c. In the mediated relationship between supervisor Theory X attitudes and OCB-I (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-I will be moderated by procedural justice, such that there will be no mediation when procedural justice is low but remain significant when procedural justice is average or high.

Hypothesis 4d. In the mediated relationship between supervisor Theory X attitudes and OCB-O (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-O will be moderated by procedural justice, such that there will be

no mediation when procedural justice is low but remain significant when procedural justice is average or high.

Hypothesis 4e. In the mediated relationship between supervisor Theory X attitudes and OCB-I (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-I will be moderated by interactional justice, such that there will be no mediation when interactional justice is low but remain significant when interactional justice is average or high.

Hypothesis 4f. In the mediated relationship between supervisor Theory X attitudes and OCB-O (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-O will be moderated by interactional justice, such that there will be no mediation when interactional justice is low but remain significant when interactional justice is average or high.

Workplace aggression. Another possible moderator of the mediated relationship between supervisor Theory X attitudes and OCB is the construct of workplace aggression. Workplace aggression (Hershcovis, 2011), which has also been conceptualized with minor variations in definitions as social undermining (Duffy, Ganster, & Pagon, 2002), incivility (Andersson & Pearson, 1999), bullying (Einarsen, 2000), and interpersonal conflict (Spector & Jex, 1998), is considered a job-related social stressor, just like low organizational justice (Sonnentag & Frese, 2013). Workplace aggression refers to any form of mistreatment at work either once or extended over some period of time (Hershcovis, 2011). Although the previously stated variations do have minor differences in definitions, researchers have argued that all of the variants refer to the same overall construct of workplace aggression (Hershcovis, 2011; Lapierre, Spector, & Leck, 2005).

In the current study, I focus on two conceptualizations of workplace aggression: interpersonal conflict (Spector & Jex, 1998) and incivility (Andersson & Pearson, 1999). Interpersonal conflict has been defined as an interpersonal stressor involving a disagreement between employees (Spector & Jex, 1998). It is unique from other workplace aggression measures in that it does not explicitly indicate any level of intensity of the behavior or intent (Hershcovis, 2011). Incivility in the workplace involves “acting rudely or discourteously, without regard for others, in violation of norms for respect in social interactions” in the workplace (Andersson & Pearson, 1999, p. 455). It is specifically characterized by low-intensity deviant behavior with an ambiguous intent to harm the recipient of the uncivil behavior (Herchcovis, 2011). Additionally, incivility, although considered low intensity, is conceptualized as creating a downward spiral effect with the possibility of leading into more severe deviant behaviors, like a threat of physical attack (Andersson & Pearson, 1999)

Due to the aforementioned construct overlap among various workplace aggression constructs (Hershcovis, 2011), I propose a very similar pattern of results between these two measures of workplace aggression. Furthermore, due to a similar argument as low organizational justice, social stressors like workplace aggression are considered negative events. This can be confirmed as victims of workplace aggression have shown various negative outcomes, such as psychological and physical health problems (e.g., Bowling & Beehr, 2006; Mikkelsen & Einarsen, 2001). Therefore, due to the positive-negative asymmetry effect, the negative event of a social stressor like workplace aggression will nullify the beneficial effects of having a non-Theory X-oriented supervisor, but the benefits will still be present when workplace aggression is average or low. Figure 1 presents a graphical representation of the model.

Hypothesis 5a. In the mediated relationship between supervisor Theory X attitudes and OCB-I (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-I will be moderated by interpersonal conflict, such that there will be no mediation when interpersonal conflict is high but remain significant when interpersonal conflict is average or low.

Hypothesis 5b. In the mediated relationship between supervisor Theory X attitudes and OCB-O (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-O will be moderated by interpersonal conflict, such that there will be no mediation when interpersonal conflict is high but remain significant when interpersonal conflict is average or low.

Hypothesis 5c. In the mediated relationship between supervisor Theory X attitudes and OCB-I (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-I will be moderated by incivility, such that there will be no mediation when incivility is high but remain significant when incivility is average or low.

Hypothesis 5d. In the mediated relationship between supervisor Theory X attitudes and OCB-O (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-O will be moderated by incivility, such that there will be no mediation when incivility is high but remain significant when incivility is average or low.

Present Study

In the present study, I hypothesize that the negative relationship between supervisor Theory X attitudes and OCB is mediated by subordinate Theory X attitudes. This mediated model is then further moderated by organizational justice and workplace aggression, such that the relationship between subordinate Theory X attitudes and OCB will become null only when

stressors are high (low organizational justice and high workplace aggression), but remain significant when stress is average or low (average/high organizational justice and average/low workplace aggression). Figure 1 presents a graphical representation of the model.

Method

Participants and Procedure

The archival data were collected using the Syracuse University Study Response Project (Stanton, 1998). This organization links researchers to participants to complete surveys online in exchange for financial compensation. This process was chosen based on its use in previous research (e.g., Richards & Schat, 2011) and prior validity and reliability evidence using online samples (e.g., Frame & Beaty, 2000; Stanton, 1998; Yost & Homer, 1998). Subordinates were paid \$30 for completing the multi-wave survey, and supervisors were paid \$10.

Subordinate data were collected in three time waves as part of a larger study. The present study will not make use of data at Time 1. At Time 2, the mediator (subordinate Theory X attitudes) and moderators (organizational justice and workplace aggression) were gathered. Eight weeks later, OCB data were assessed at Time 3. Because of the difficulty of collecting data at multiple time points from supervisors, supervisor Theory X attitudes and supervisor-rated OCB were collected at the same time period.

At Time 2, 357 subordinates completed the survey. Eight weeks later, 312 subordinates completed the Time 3 survey. At the same time, 276 supervisors completed the questionnaire. After data cleaning (see Missing Data Replacement and Data Cleaning below) and removing unmatched supervisor-subordinate pairs, 209 supervisor-subordinate dyads remained for analysis. Of the subordinates who reported their demographic information, 48.3% were female ($n = 101$), 77.5% were White/Anglo or European American ($n = 162$), and were on average 39.2

years old ($SD = 9.99$). Of the supervisors who reported their demographic information, 35.2% were female ($n = 74$), 83.3% were White/Anglo or European American ($n = 175$), and were on average 44.60 years old ($SD = 10.27$).

Measures

Supervisor-rated Theory X. Supervisor-rated Theory X (Supervisor Theory X attitudes) was measured using the Theory X-oriented items from Kopelman, Protzas, and Davis's (2008) Theory X/Y attitude scale. The 13-item scale ($\alpha = .91$; Appendix A) asks supervisors to rate their assumptions about typical employee work behaviors (e.g., "Most employees will try to do as little work as possible," "Most employees have little ambition") to assess their attitudes about Theory X (1 = strongly disagree; 7 = strongly agree). Items were averaged to form a composite.

In order to confirm the factorial structure of supervisor Theory X and Theory Y attitudes, the entire 17-item Theory X/Y attitude scale was administered to supervisors, which included four Theory Y-oriented items. Table 1 presents the results of the exploratory factor analysis, using principal axis factoring with direct oblimin oblique rotation. The rotated solution explained 42.61% of the variance in the items, in which two factors were extracted (Theory X and Theory Y). Eleven of the 13 items correctly loaded onto the Theory X factor, and the remaining two items (items 13 and 14) had relatively high loadings on the Theory X factor even though the loadings were higher on the Theory Y factor. Thus, I will use the original 13-item Theory X scale for the remainder of the analyses.

Subordinate-rated Theory X. Subordinate-rated Theory X (subordinate Theory X attitudes) was measured using an adaptation of the Theory X-oriented items from Kopelman, Protzas, and Davis's (2008) Theory X/Y attitude scale. The adaptation of the 13-item scale ($\alpha =$

.95; Appendix B) is identical to the supervisor Theory X attitudes scale, but references to “most employees” were changed to “my manager” (e.g., “My manager will try to do as little work as possible”, “My manager has little ambition”). Subordinates rated each statement on a 1 (*strongly disagree*) to 7 (*strongly agree*) Likert scale. Items were averaged to form a composite.

Table 2 presents the results of the exploratory factor analysis for the subordinate Theory X/Y scale, using principal axis factoring with direct oblimin oblique rotation. The rotated solution explained 53.62% of the variance in the items, in which two factors were extracted (Theory X and Theory Y). All 13 Theory X items correctly loaded onto the same Theory X factor.

Distributive justice. Distributive justice was measured using the five-item scale originally developed by Price and Mueller (1986) as a six-item scale, but reduced to five items by Moorman (1991). Sample items for the measure ($\alpha = .96$; Appendix B) include, “Fairly rewarded considering the responsibilities” and “Fairly rewarded for the amount of effort you put forth.” Subordinates rated each statement on a 1 (*never*) to 7 (*always*) frequency scale.

Procedural justice. Procedural justice was measured using a seven-item scale (Moorman, 1991). Sample items for the measure ($\alpha = .93$; Appendix B) include, “Collect accurate information necessary for making decisions” and “Provide opportunities to appeal or challenge the decision.” Subordinates rated each statement on a 1 (*never*) to 7 (*always*) frequency scale.

Interactional justice. Interactional justice was measured using a six-item scale (Moorman, 1991). Sample items include, “Your supervisor considered your viewpoint” and “Your supervisor treated you with kindness and consideration.” Subordinates rated each statement on a 1 (*never*) to 7 (*always*) frequency scale ($\alpha = .93$; Appendix B).

Interpersonal conflict. Interpersonal conflict was assessed using the four-item Interpersonal Conflict at Work Scale (Spector & Jex, 1998). Sample items for the measure ($\alpha = .87$; Appendix B) include, “How often do you get into arguments with others at work?” and “How often do other people yell at you at work?” Subordinates rated each statement on a 1 (*less than once per month or never*) to 5 (*several times per day*) frequency scale.

Incivility. Incivility was assessed using the 22-item Negative Acts Questionnaire – Revised (NAQ-R; Einarsen, Hoel, & Notelaers, 2009). Sample items for the scale ($\alpha = .98$; Appendix B) include, “Someone withholding information which affects your performance” and “Being ordered to do work below your level of competence.” Subordinates rated each statement on a 1 (*never*) to 7 (*always*) frequency scale.

Organizational citizenship behavior. Organizational citizenship behavior (OCB) was measured using an adaptation of Williams and Anderson’s (1991) OCB scale. Four separate measures of this construct were collected. Supervisors rated subordinates on individually-targeted OCB ($\alpha = .92$; seven items; Appendix A) and organizationally-targeted OCB ($\alpha = .93$; seven items; Appendix A). Sample items are “My employee helps others who are absent” for OCB-I supervisor-reported and “My employee does not take undeserved work breaks” for OCB-O supervisor-reported. Subordinates also completed self-ratings for OCB-I ($\alpha = .92$; seven items; Appendix C) and OCB-O ($\alpha = .91$; seven items; Appendix C). Sample items are “I help others who have heavy workloads” for OCB-I subordinate-reported and “I conserve and protect organizational property” for OCB-O subordinate-reported. The corresponding scales were identical across raters, but instructions were altered to instruct participants to rate the subordinate (self or other ratings). Participants rated each statement on a 1 (*never*) to 7 (*every day*) frequency scale.

In order to investigate the factorial structure of the scales, an exploratory factor analysis was conducted on the overall OCB scale for both subordinate-rated OCB and supervisor-rated OCB. Principal axis factoring with direct oblimin oblique rotation was used. Table 3 presents the results of the factor analysis for subordinate-rated OCB. The rotated solution explained 62.58% of the variance in the items, in which two factors were extracted (OCB-I and OCB-O). Two items that were theoretically linked to OCB-O had slightly higher factor loadings on the OCB-I factor (.516 versus .372 for #8; .502 versus .323 for #9); however, because the loadings were relatively high on the OCB-O factor as well and above a typical rule of thumb of .30 for a variable to load onto a factor (e.g., Fabrigar, Wegener, MacCallum, & Strahan, 1999), it was acceptable to group the items with the remaining theoretical OCB-O items when forming the composite (Ford, MacCallum, & Tait, 1986).

Table 4 presents the results of the factor analysis for supervisor-rated OCB. The rotated solution explained 65.06% of the variance in the items, in which two factors were extracted (OCB-I and OCB-O). One item that was theoretically linked to OCB-O had a slightly higher loading on the OCB-I factor (.464 versus -.370 for #8); however, since the loading was relatively high on the OCB-O factor as well, it was also acceptable in this case to group the item with the remaining OCB-O items when forming the composite (Ford, MacCallum, & Tait, 1986).

Missing Data Replacement and Data Cleaning

Little's (1988) missing completely at random (MCAR) procedure was used to identify random missing data from the dataset. Data identified as MCAR were then replaced with the scale mean for the participant. To impute non-random missing data, Rubin's (1987) multiple imputation procedure was conducted, in which multiple data points were created for each of the

missing data points using a Monte Carlo simulation technique. These data points were then combined to create the replacement values.

Participants were removed from analysis based on two criteria. First, participants who completed at least one survey wave in less than six minutes were removed. Second, participants were also removed if they chose one response for an entire scale or did not appropriately vary their responses for reverse-coded items, both indicative of nonpurposeful responding.

Results

Data Analysis Methodology

The data were analyzed using SPSS. More specifically, Hypothesis 1a and Hypothesis 1b were analyzed by calculating the Pearson product-moment correlation coefficient between supervisor Theory X attitudes and OCB-I/OCB-O. A positive and significant correlation would indicate support for the hypotheses. Hypothesis 2 was analyzed by calculating the Pearson product-moment correlation coefficient between supervisor Theory X attitudes and subordinate Theory X attitudes. Again, a positive and significant correlation would indicate support for the hypothesis.

To test Hypotheses 3a-b, 4a-f, and 5a-d, PROCESS (Hayes, 2013), a versatile add-on tool designed for SPSS, was used. Hypothesis 3a and Hypothesis 3b were tested by analyzing the relationship between supervisor Theory X attitudes and OCB, mediated by subordinate Theory X attitudes. Specifically, the indirect effect of supervisor Theory X attitudes on OCB, through subordinate Theory X attitudes, was analyzed using bootstrapped Sobel tests. The Sobel test (Sobel, 1982; 1986) has traditionally been used as a supplement to the now antiquated causal steps approach to mediation (Baron & Kenny, 1986; Hyman, 1955, Judd & Kenny, 1981). The causal steps approach involves three steps necessary to demonstrate mediation: (1) the predictor

must be related to the mediating variable; (2) the mediating variable must be related to the criterion; and (3) when controlling for the mediator, a previously significant relationship must no longer be significant (for full mediation) or, for partial mediation, have a reduced relationship (Baron & Kenny, 1986). However, reliance on significance can lead to undesirable conclusions. For example, since any drop from significance to nonsignificance indicates mediation, a Type I error could occur if a small drop occurs in the magnitude of the relationship which causes the relationship to go from significant to nonsignificant (Holmbeck, 2002), even though the absolute difference is miniscule. Additionally, the reverse could be true: a Type II error could occur if a large drop in the absolute magnitude of the relationship is not considered mediation because the level of significance did not change (Preacher & Hayes, 2008). Lastly, because the size of the indirect effect is not calculated, no confidence intervals can be obtained and thus the significance of the indirect effect cannot be directly assessed (Pituch, Whittaker, & Stapleton, 2005).

The Sobel test creates a test statistic for hypothesis testing by calculating the ratio of the product of the regression coefficient between the mediator and the predictor (“a”) and the coefficient of the criterion on the mediator (“b”) with the standard error of this product term. However, the Sobel test makes the generally flawed assumption of a normal sampling distribution of the indirect effect, because the sampling distribution tends to be skewed and asymmetric (Bollen & Stine, 1990; Stone & Sobel, 1990). To correct this, researchers conduct bootstrapping analyses with the data (Hayes, 2009). Bootstrapping is conducted by creating new samples comprised of randomly sampled cases from the original dataset, with replacement. Once n observations are sampled (n represents the sample size of the actual dataset), the test statistic is calculated. In this study, this process was conducted 5,000 times as recommended by Hayes (2009). The resulting test statistics are used to create a new sampling distribution, and

from this distribution, the researcher can create confidence intervals. If the confidence interval does not include zero, the null hypothesis is rejected.

Hypotheses 4a-f and 5a-d were analyzed by employing conditional process modeling (Edwards & Lambert, 2007), a form of which is moderated mediation. Specifically, it was determined if the mediated relationship tested in Hypothesis 3a and Hypothesis 3b is weaker or nonexistent at low levels of organizational justice (Hypotheses 4a-f) and high levels of workplace aggression (Hypothesis 5a-d) but remain significant at average or high levels of organizational justice and average or low levels of workplace aggression. Support for these hypotheses was determined with a two-step approach. First, OCB (the criterion) was regressed on supervisor Theory X attitudes (predictor), subordinate Theory X attitudes (the mediator), organizational justice or workplace aggression (interpersonal conflict or incivility; the moderator), and the interaction term between the subordinate Theory X attitudes and each moderator. In order to probe deeper into this interaction by conducting conditional process modeling, the regression coefficient of the interaction term must be significant, which indicates the presence of moderated mediation (Preacher, Rucker, & Hayes, 2007).

If moderated mediation is found, conditional process modeling can be conducted on the model in question to determine the nature of the moderated mediation (Preacher, Rucker, & Hayes, 2007). Using PROCESS, I tested the statistical significance of conditional indirect effects of the mediated model (supervisor Theory X attitudes to OCB mediated by subordinate Theory X attitudes). Specifically, I tested the conditional indirect effect of supervisor Theory X attitudes on OCB through subordinate Theory X attitudes at -1 standard deviation (low levels), the mean, and +1 standard deviation (high levels) of the moderator. Using bootstrapping with 5000 iterations, I created 95% confidence intervals (CIs) for the magnitude of the indirect effect

at each of the three levels. A moderated mediation in support of the hypothesis will be present if at low levels of organizational justice (Hypotheses 4a-f) or high levels of workplace aggression (Hypotheses 5a-d) the confidence interval includes zero, but at the mean and high levels of organizational justice and at the mean and low levels of workplace aggression, the confidence interval does not include zero (indicating a mediation at these levels of the moderator). This indicates that the mediated relationship between supervisor Theory X attitudes and OCB is null when the subordinate perceives that organizational justice is low or workplace aggression is high, yet the mediated relationship is present at other levels of these moderators.

Hypothesis Tests

As seen in Table 5, Hypothesis 1 was fully supported. There were negative significant relationships between supervisor Theory X attitudes and subordinate-reported OCB (OCB-I: $r = -.14, p < .05$; OCB-O: $r = -.26, p < .001$) as well as supervisor Theory X attitudes and supervisor-reported OCB (OCB-I: $r = -.32, p < .001$; OCB-O: $r = -.37, p < .001$). Hypothesis 2 was also supported. There was a significant positive correlation between supervisor Theory X attitudes and subordinate Theory X attitudes ($r = .48, p < .001$).

As seen in Table 6, Hypothesis 3 was fully supported. Supporting Hypothesis 3a, the indirect effect of supervisor Theory X attitudes through subordinate Theory X attitudes was significant for OCB-I subordinate-reported ($b = -.15, p < .001$) and OCB-I supervisor-reported ($b = -.16, p < .001$). Supporting Hypothesis 3b, the indirect effect of supervisor Theory X attitudes through subordinate Theory X attitudes was also significant for OCB-O subordinate-reported ($b = -.17, p < .001$) and OCB-O supervisor-reported ($b = -.20, p < .001$).

Moderated Mediation Analysis

Tables 7-11 present the results of the moderated regressions that were used to test the presence of moderated mediation, which then allows for probing into the conditional indirect effects to test Hypotheses 4a-f and Hypotheses 5a-d. Predictor variables were standardized to reduce multicollinearity and increase meaningful interpretation (Aiken & West, 1991). As seen in Table 7, distributive justice moderated the relationship between subordinate Theory X attitudes and OCB-I subordinate-reported ($b = -.11, p < .01$) but not supervisor-reported OCB-I ($b = -.05, p > .10$). This moderation was also present for procedural justice for OCB-O subordinate-reported as the criterion ($b = -.11, p < .01$) but not for OCB-O supervisor-reported ($b = -.02, p > .10$). As seen in Table 8, procedural justice moderated the relationship between subordinate Theory X attitudes and OCB-I subordinate-reported ($b = -.18, p < .01$) but not for OCB-I supervisor-reported ($b = -.08, p > .10$). The moderation was marginally met for procedural justice for OCB-O subordinate-reported ($b = -.10, p < .10$) but not for OCB-O supervisor-reported ($b = -.03, p > .10$). As seen in Table 9, interactional justice moderated the relationship between subordinate Theory X attitudes for both OCB-I subordinate-reported ($b = -.19, p < .001$) and OCB-I supervisor-reported ($b = -.10, p < .05$). The moderation was also met for interactional justice for OCB-O subordinate-reported ($b = -.18, p < .001$) but not for OCB-O supervisor-reported ($b = -.05, p > .10$).

As seen in Table 10, interpersonal conflict marginally moderated the relationship between subordinate Theory X attitudes and OCB-I subordinate-reported ($b = .158, p < .10$) and moderated the relationship between subordinate Theory X attitudes and OCB-I supervisor-reported ($b = .163, p < .05$). Interpersonal conflict did not moderate the relationship between subordinate Theory X attitudes and OCB-O subordinate-reported ($b = .13, p > .10$) but it did

moderate the relationship between subordinate Theory X attitudes and OCB-O supervisor-reported ($b = .23, p > .01$). Lastly, as seen in Table 11, incivility moderated both the relationship between subordinate Theory X attitudes and OCB-I subordinate-reported ($b = .13, p < .05$) and between subordinate Theory X attitudes and OCB-I supervisor-reported ($b = .11, p < .05$). Incivility did not moderate the relationship between subordinate Theory X attitudes and OCB-O subordinate-reported ($b = .07, p > .10$) but it did moderate the relationship between subordinate Theory X attitudes and OCB-O supervisor-reported ($b = .12, p < .05$).

Moderated Mediation Probing Analysis

Conditional process models (see Table 12) were then created to probe the conditional indirect effects of supervisor Theory X attitudes on OCB through subordinate Theory X attitudes at different moderator levels ($-1 SD$, mean, $+1 SD$). As seen in Figure 2, Hypothesis 4a was partially supported as the bootstrapped CI for the effect of low distributive justice on OCB-I subordinate-reported included zero ($b = -.02, 95\% CI [-.14, .10]$), but the CI for the mean ($b = -.13, 95\% CI [-.22, -.05]$) and high distributive justice ($b = -.24, 95\% CI [-.36, -.14]$) did not include zero (the interaction term was nonsignificant for OCB-I supervisor-reported). Hypothesis 4b was partially supported as the confidence interval for the effect of low distributive justice on OCB-O subordinate-reported included zero ($b = -.06, 95\% CI [-.17, .05]$), but the CI for the mean ($b = -.16, 95\% CI [-.26, -.08]$) and high distributive justice ($b = -.26, 95\% CI [-.40, -.15]$) did not include zero (the interaction term was nonsignificant for OCB-O supervisor-reported). As seen in Figure 3, Hypothesis 4c was partially supported as the CI for the effect of low procedural justice on OCB-I subordinate-reported ($b = .02, 95\% CI [-.10, .14]$) included zero, but the CI for the mean ($b = -.11, 95\% CI [-.19, -.03]$) and high procedural justice ($b = -.23, 95\% CI [-.37, -.12]$) did not include zero (the interaction term was nonsignificant for OCB-I

supervisor-reported). Hypothesis 4d was partially supported as the confidence interval for the effect of low procedural justice on OCB-O subordinate-reported included zero ($b = -.08$, 95% CI $[-.20, .04]$), but the CI for the mean ($b = -.14$, 95% CI $[-.24, -.06]$) and high procedural justice ($b = -.21$, 95% CI $[-.34, -.10]$) did not include zero (the interaction term was nonsignificant for OCB-O supervisor-reported). As seen in Figure 4, Hypothesis 4e was fully supported as the confidence intervals for the effect of low interactional justice on OCB-I subordinate-reported ($b = .04$, 95% CI $[-.07, .16]$) and OCB-I supervisor-reported ($b = -.03$, 95% CI $[-.15, .09]$) included zero, but the CI (for OCB-I subordinate-reported) for the mean ($b = -.10$, 95% CI $[-.19, -.02]$) and high interactional justice ($b = -.24$, $[-.38, -.14]$) did not include zero and the CI (for OCB-I supervisor-reported) for the mean ($b = -.10$, 95% CI $[-.19, -.02]$) and high interactional justice ($b = -.17$, 95% CI $[-.29, -.07]$) did not include zero. Hypothesis 4f was partially supported as the confidence interval for low interactional justice on OCB-O subordinate-reported included zero ($b = .00$, 95% CI $[-.13, .12]$), but the CI for the mean ($b = -.13$, 95% CI $[-.24, -.05]$) and high interactional justice ($b = -.26$, 95% CI $[-.41, -.16]$) did not include zero (the interaction term was nonsignificant for OCB-O supervisor-reported).

As seen in Figure 5, Hypothesis 5a was fully supported as the confidence intervals for the effect of high interpersonal conflict on OCB-I subordinate-reported ($b = -.06$, 95% CI $[-.21, .06]$) and OCB-I supervisor-reported ($b = -.06$, 95% CI $[-.19, .06]$) included zero, but the CI (for OCB-I subordinate-reported) for the mean ($b = -.14$, 95% CI $[-.25, -.04]$) and low interpersonal conflict ($b = -.21$, 95% CI $[-.38, -.08]$) did not include zero and the CI (for OCB-I supervisor-reported) for the mean ($b = -.13$, 95% CI $[-.24, -.05]$) and low interpersonal conflict ($b = -.21$, $[-.35, -.10]$) did not include zero. Hypothesis 5b was partially supported as the confidence interval for high interpersonal conflict on OCB-O supervisor-reported included zero ($b = -.05$, 95% CI $[-.18,$

.09]), but the CI for the mean ($b = -.15$, 95% CI [-.27, -.07]) and low interpersonal conflict ($b = -.26$, 95% CI [-.42, -.14]) did not include zero (the interaction term was nonsignificant for OCB-I subordinate-reported). As seen in Figure 6, Hypothesis 5c was fully supported as the confidence intervals for the effect of high incivility on OCB-I subordinate-reported ($b = -.07$, 95% CI [-.22, .06]) and OCB-I supervisor-reported ($b = -.04$, 95% CI [-.18, .08]) included zero, but the CI (for OCB-I subordinate-reported) for the mean ($b = -.15$, 95% CI [-.27, -.05]) and low incivility ($b = -.24$, 95% CI [-.40, -.11]) did not include zero and the CI (for OCB-I supervisor-reported) for the mean ($b = -.12$, 95% CI [-.22, -.03]) and low incivility ($b = -.19$, 95% CI [-.32, -.08]) did not include zero. Hypothesis 5d was partially supported as the confidence interval for high incivility on OCB-O supervisor-reported included zero ($b = -.04$, 95% CI [-.06, .07]), but the CI for the mean ($b = -.12$, 95% CI [-.23, -.05]) and low incivility ($b = -.20$, 95% CI [-.35, -.10]) did not include zero (the interaction term was nonsignificant for OCB-O subordinate-reported). In summary, all moderating hypotheses were supported for either OCB subordinate-reported or OCB supervisor-reported. Table 13 provides a summary of the results of the hypotheses.

Discussion

The disparity between a manager and a leader has important consequences for an organization. Individuals in managerial roles without leadership skills may perform well enough to maintain their positions in the organization, but the organization will miss out on the benefits of having a leader in a managerial position: innovation, influence, change champions (Meyer, 1983; Sarkesian, 1985; Schein, 1987); clarity of vision, need for achievement, and integrators (Ravichadran & Nagabrahmam, 2000).

Theory X and Theory Y (McGregor, 1960) are attitudes that managers and leaders hold about their subordinates. An individual having a Theory X orientation sees the general employee

population as lazy and unmotivated at work. An individual having a Theory Y orientation at work believes that employees enjoy work and are inherently self-motivated at work. Despite the prominence and cultural relevance of McGregor's ideas about managerial attitudes and behavior, a paucity of empirical research exists today testing McGregor's original assumptions (Khatri, 2002; Miner, 2003).

Recent developments in the academic literature regarding Theory X and Theory Y have provided opportunity for further study into these leadership theories. The creation of two psychometrically sound scales (specifically, the Kopelman, Prottas, and Davis, 2008 scale in the current study) allowed for further investigation into the reliability of the theories and utility for use in research. However, little research has been conducted using these scales.

The aim of the current study was to empirically validate McGregor's (1960) theories in the current organizational context, 50 years post conception. It was hypothesized that supervisors with Theory X attitudes about employees would negatively affect a subordinate's propensity to exhibit organizational citizenship behavior, mediated by the subordinate's Theory X attitudes about his or her supervisor. This mediation would further be moderated by the workplace stressors of organizational injustice and workplace aggression, such that in a high-stress work environment (high organizational injustice or high workplace aggression), the indirect effect of supervisor Theory X attitudes on organizational citizenship behavior would be nullified.

Using social exchange theory as a backdrop, I have demonstrated in the current study that supervisors who hold Theory X attitudes about their subordinates tend to have subordinates that perform fewer OCBs. Employees in the current study performed fewer OCBs directed at both individuals and the organization when having a supervisor with a higher Theory X orientation.

Furthermore, this relationship was present in ratings of subordinate OCB by both subordinates and supervisors. Thus, holding other variables constant, when supervisors hold negative implicit attitudes about their employees, a debilitating effect occurs on their subordinates, such that subordinates feel no need to reciprocate with positive non-task behaviors like OCB. Therefore, this demonstrates the importance of determining a manager's implicit attitudes about subordinates in general when making decisions about managerial selection in an organization.

The nature of this relationship has further been brought to light: not only do these supervisors' Theory X attitudes directly affect their subordinates' OCBs; a mediating relationship has also been established through subordinate Theory X attitudes about their supervisor. In the current study, I found that this effect may occur through transference of the supervisor's implicit attitudes about subordinates to the subordinates themselves. This materializes as an implicit attitude within the subordinate about his or her supervisor. Thus, if a supervisor holds a low Theory X orientation about his or her subordinates, this attitude is transferred to these subordinates and they begin having a low Theory X orientation about the supervisor. Then, in a form of social exchange, the subordinate will conduct more OCBs in return for viewing his or her supervisor as inherently self-motivated and enjoying work.

Moderating Hypotheses

Both organizations and researchers must consider the workplace environment when evaluating the effectiveness of a leader. Although the current study has shown that individual supervisor and subordinate attitudes such as Theory X are important predictors of subordinate behavior, the current study has also shown the importance of an employee's immediate work environment as related to his or her propensity to exhibit OCB. The benefits of having a leader with a low Theory X-orientation appears to be reduced, if not completely nullified, when the

subordinate is placed in a high-stress environment of organizational injustice or high workplace aggression. I purport that the reasoning behind this outcome is due to the positive-negative asymmetry effect; that the negative event of the high-stress environment is more salient than the positive event of having a low Theory X-oriented supervisor.

Organizational justice. The current study has contributed to the literature demonstrating the importance of organizational justice in the workplace. When various forms of organizational justice are low, the influence that a supervisor has on a subordinate's OCB that is due to his or her (low) Theory X orientation is nullified. For example, organizations must take careful considerations when designing reward distribution systems, such as compensation structures. If subordinates perceive a lack of distributive justice associated with their organization's compensation structure, a manager's beneficial influence on his or her subordinates' behaviors from having a low Theory X orientation is reduced. In the current study, this effect was seen with regards to both OCB-I and OCB-O when rated by subordinates, but not when rated by supervisors.

Organizations must also pay careful attention to the processes used to determine reward allocation and distribution. For example, it is pertinent to do more than simply design an appropriate compensation structure; an organization must also provide appropriate levels of clarity and consistency when setting processes used to allocate reward. If subordinates do not perceive an appropriate level of procedural justice, they will not be affected by their manager's implicit attitudes about employees, in terms of their likelihood of conducting both OCB-I and OCB-O. Again, in the current study, this effect was only seen when OCB was rated by subordinates, but not supervisors.

This study also illuminates the necessity for organizations to train their managers in the appropriate way to deliver information concerning various decisions that are made. When individuals are placed in a high-stress environment of low interactional justice, the effectiveness of a leader is reduced with regards to his or her ability to affect his or her subordinates' likelihood to exhibit both OCB-I and OCB-O. In the current study, this relationship was demonstrated for subordinate-rated OCB-I and OCB-O as well as supervisor-rated OCB-I.

Workplace aggression. In addition to organizational injustice, the current study provided further evidence of the importance of limiting the likelihood of workplace aggression within an organization. When employees experience high levels of strain due to the presence of workplace aggression in the environment, they may forgo their inherent social exchange rules that would be activated when a supervisor has a low Theory X orientation, reducing their propensity for conducting OCB. Interestingly, this relationship was present for both OCB-I and OCB-O for supervisor-reported OCB, but was only present for OCB-I for subordinate-reported OCB. Thus, this relationship requires further research because workplace aggression did affect the relationship when supervisor-reported OCB-O was used as the criterion. One reason for this finding may be that supervisors often are unable to distinguish between OCB-I and OCB-O when rating subordinates and instead suffer from a halo effect (e.g., Dalal, 2005).

Of additional interest in the current study was the conceptual overlap among various workplace aggression measures. Herscovis (2011) argued that the plethora of measures in the workplace aggression literature are all measuring the same higher-order construct she called workplace aggression, and Bowling and Beehr (2006) consolidated the various constructs when conducting a meta-analysis. Thus, in the current study, I included two measures of workplace aggression (interpersonal conflict and incivility), but I did not hypothesize any unique

hypotheses dependent on the measure being analyzed. Confirming this belief, I did not find any difference in the pattern of relationships between interpersonal conflict and incivility. Thus, this study provides further evidence regarding the conceptual overlap among various measures of workplace aggression.

Strengths of Current Study

Many typical limitations with survey research were mitigated with this research design: multiple raters reduced various concerns with self-report data and multiple time points reduced concerns with cross-sectional data. Specifically, individuals providing self-ratings on surveys can artificially inflate or deflate responses because of social desirability (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Podsakoff, MacKenzie, & Podsakoff, 2012); in the current study, self-reported OCB may have been affected by social desirability; thus, I also included supervisor-reported OCB in the analyses to minimize this potential confound. There was a somewhat divergent pattern of relationships between OCB subordinate-reported and OCB supervisor-reported; this is not surprising because past research has found more theoretically-consistent relationships between self-rated OCB and predictors than supervisor-rated OCB and predictors (Vandenberg, Lance, & Taylor, 2005). Thus, to balance these two points (limiting social desirability and more relationships consistent with theory), it is important for future research using OCB to include both self- and supervisor-rated OCB.

An additional source of artificial covariation among study variables occurs when all data are collected during the same survey administration, referred to as measurement context effects (Podsakoff et al., 2003). Because the current study used data across multiple time points, this source of variation was minimized. Furthermore, the sample was relatively heterogeneous in terms of gender, ethnicity, and age, increasing the generalizability of the results.

Limitations of Current Study

Because the data were collected via online survey, the data cannot be verified for accuracy. That being said, careful steps were taken to remove non-purposeful responding. If appropriate steps are taken to assure high data quality in online samples, data characteristics are comparable between online samples and other traditional samples used in psychological research (e.g., applicant samples, college student samples; Barger & Sinar, 2011). These steps, which include eliminating individuals who complete the survey in a very short period of time and removing individuals with unlikely response patterns (Behrend, Sharek, & Sinar, 2011), were followed in the current study.

Additionally, subordinate data were only included if participants responded to all survey waves. If there are systematic differences between individuals that respond to all waves and those that do not (e.g., conscientious or agreeable individuals are more likely to respond to all waves; Rogelberg et al., 2003; Rogelberg, Spitzmüller, Little, & Reeve, 2006), study results may have been different if these confounds had been removed.

Future Directions

In the current study, I separated OCB into its two theoretical factors: OCB-I and OCB-O. Although I did not make any unique hypotheses between the two constructs, this decision was made based on past research that has demonstrated empirical reasons for the two-factor model; unique sets of predictors are present between OCB-I and OCB-O (Ilies, Fulmer, Spitzmüller, & Johnson, 2009). However, a variety of evidence in the current study leads to the conclusion that OCB may be better studied as a single construct if there is no theoretical reason to separate it into OCB-I and OCB-O. In the current study, the 14 items on the OCB scale did not cleanly reduce to two factors: two theoretical OCB-O items loaded onto the OCB-I factor for OCB subordinate-

reported and one theoretical OCB-O item loaded onto the OCB-I factor for OCB supervisor-reported. Although the correlation between OCB-I and OCB-O for subordinate-reported data was $r = .59$ (a high correlation but likely not indicative of two measures of the same latent construct), there was a correlation of $r = .73$ between OCB-I and OCB-O for supervisor-reported data. This finding is consistent with past research that suggested the presence of a halo effect when supervisors are asked to rate subordinates on OCB (Dalal, 2005; O'Brien & Allen, 2008) and are not able to delineate their ratings of the two factors. Lastly, of the 14 possible comparisons between OCB-I and OCB-O in the current study, only three had a different conclusion between OCB-I and OCB-O. Based on this last finding, it seems more likely for the factorial equivalence of the two factors rather than factorial inequivalence. That being said, future research using OCB as a criterion should continue to use theory to guide the decision of whether or not to create separate hypotheses for OCB-I and OCB-O. If no theory supports the division of OCB, the researcher should not make separate hypotheses for OCB-I and OCB-O.

Similarly to the dimensionality of OCB, I proposed an identical pattern of relationships for the moderating hypotheses involving organizational justice variables. Although the organizational justice literature commonly recommends to separate organizational justice into its three (e.g., Ambrose, Schminke, & Mayer, 2013) or four dimensions (e.g., Judge & Colquitt, 2004), results of the current study provide evidence of the unidimensionality of the construct. Correlations among the three dimensions ranged from $r = .69$ to $r = .81$, all of which are within a commonly accepted range of acceptable internal consistency estimates (Nunnally, 1978). Furthermore, only one of the hypothesized moderated mediations differed across justice dimensions for either OCB subordinate-reported or OCB supervisor-rated (interactional justice, but not distributive or procedural justice, moderated the relationship between subordinate Theory

X attitudes and OCB-I supervisor-reported). Thus, without appropriate theory supporting the division of organizational justice, the researcher should not make separate hypotheses for distributive justice, procedural justice, and interactional justice.

Future studies could also benefit from including a measure of LIFTs (Sy, 2010) in conjunction with a measure of Theory X (and/or Theory Y) to determine the overlap between the two constructs. Sy (2010) found that a two-factor solution of followership prototype and followership antiprototype has acceptable factorial validity for his measure of LIFTs. The followership prototype, which includes industry, enthusiasm, and good citizen, may overlap with Theory Y; and the followership antiprototype, which includes conformity, insubordination, and incompetence, may overlap with Theory X. As the literature on LIFTs continues to flourish, this potential construct overlap will need addressing.

In summary, the current study makes several contributions to the literature. It adds construct validity evidence to Kopelman, Prottas, and Davis's (2008) Theory X attitude scale by demonstrating a relationship to OCB. It confirms a theoretical moderated mediation model linking supervisor Theory X attitudes to subordinate OCB through subordinate Theory X attitudes, moderated by organizational justice and workplace aggression. Furthermore, this study demonstrated the importance of considering workplace stressors in the study of LIFTs, one of which is Theory X. Additionally, this study extends social exchange theory beyond behavior to attitudes in an applied setting. Finally, this study is unique in that it employed a strong research design with multiple data sources (supervisors and subordinates), multiple time points (mitigating potential threats to internal validity), and advanced statistical procedures.

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Table 1

Exploratory Factor Analysis of Supervisor-rated Theory X/Y Attitudes using Direct Oblimin Rotation (Pattern Matrix)

Supervisor-rated Theory X/Y attitudes	Factors	
	Theory X	Theory Y
Eigenvalue	5.99	1.25
Percentage Variance	35.25	7.36
Items	Factor Loadings	
1. Most people will try to do as little work as possible.	.718*	.047
2. For most people, work is as natural as play or recreation.	-.064	-.129*
3. Most employees must be closely supervised to get them to perform up to expectations.	.635*	.011
4. Most employees actually prefer to be told exactly what to do rather than having to figure it out for themselves.	.375*	.285
5. Most employees do not care much about the organization's goals.	.721*	.050
6. Most employees would prefer increased responsibility to increased job security.	.278	.083*
7. Most people will not use their own initiative or do things that they have not been specifically assigned to do.	.666*	.087
8. Employees generally do not have much to contribute when asked to participate in making decisions or solving problems.	.824*	-.119
9. It is just basic human nature — people just naturally dislike work.	.772*	-.104
10. Most employees will not exercise self-control and self-motivation — managers must do this for them.	.858*	-.200
11. Most employees have little ambition.	.727*	.085
12. Most employees do want responsibility.	-.100	.388*
13. Most employees prefer to have someone else set their goals and objectives.	.436*	.608
14. Most people work to eat and pay their bills rather than because they need to solve problems and be creative.	.234*	.685
15. Most employees prefer supervising themselves rather than close supervision.	-.202	.357*
16. Most people are lazy and don't want to work.	.718*	-.002
17. Most employees can't be trusted.	.632*	-.114

Note. Bolded factor loadings indicate the factor on which the item loaded higher. Starred items indicate theoretical factor for each item.

Table 2

Exploratory Factor Analysis of Subordinate-rated Theory X/Y Attitudes using Direct Oblimin Rotation (Pattern Matrix)

Subordinate-rated Theory X-Y attitudes	Factors	
	Theory X	Theory Y
Eigenvalue	7.84	1.27
Percentage Variance	46.14	7.48
Items	Factor Loadings	
1. My manager will try to do as little work as possible.	.789*	-.067
2. For my manager, work is as natural as play or recreation.	-.201	.374*
3. My manager must be closely supervised to get them to perform up to expectations.	.793*	.220
4. My manager actually prefers to be told exactly what to do rather than having to figure it out for himself/herself.	.687*	.208
5. My manager does not care much about the organization's goals.	.759*	-.040
6. My manager would prefer increased responsibility to increased job security.	.239	.575*
7. My manager will not use his/her own initiative or do things that he/she have not been specifically assigned to do.	.681*	.114
8. My manager generally does not have much to contribute when asked to participate in making decisions or solving problems.	.827*	-.037
9. It is just his/her basic human nature — my manager just naturally dislikes work.	.873*	-.069
10. My manager will not exercise self-control and self-motivation — his/her superiors must do this for him/her.	.824*	-.054
11. My manager has little ambition.	.779*	-.107
12. My manager wants increased responsibility.	-.293	.590*
13. My manager prefers to have someone else set their goals and objectives.	.769*	.139
14. My manager works to eat and pay his/her bills rather than because he/she needs to solve problems and be creative.	.726*	.046
15. My manager prefers supervising himself/herself rather than close supervision.	.206	.278*
16. My manager is lazy and doesn't want to work.	.743*	-.305
17. My manager can't be trusted.	.638*	-.389

Note. Bolded factor loadings indicate the factor on which the item loaded higher. Starred items indicate theoretical factor.

Table 3

Exploratory Factor Analysis of Subordinate-rated Organizational Citizenship Behavior using Direct Oblimin Rotation (Pattern Matrix)

Subordinate-rated Organizational Citizenship Behavior	Factors	
	OCB-I	OCB-O
Eigenvalue	7.00	1.77
Percentage Variance	49.97	12.61
Items	Factor Loadings	
1. I help others who have been absent.	.868*	-.038
2. I help others who have heavy workloads.	.924*	-.058
3. I assist my supervisor with his/her work (when not asked).	.655*	.066
4. I take time to listen to my coworkers' problems and worries.	.813*	-.023
5. I go out of my way to help new employees.	.697*	.157
6. I take a personal interest in other employees.	.860*	-.173
7. I pass along information to coworkers.	.678*	.089
8. My attendance at work is above the norm.	.516	.372*
9. I give advance notice when I am unable to come to work.	.502	.323*
10. I do not take undeserved work breaks.	.029	.805*
11. I do not spend a great deal of time with personal phone conversations.	-.074	.857*
12. I do not complain about insignificant things at work.	-.104	.849*
13. I conserve and protect organizational property.	.150	.674*
14. I adhere to informal rules devised to maintain order.	.268	.650*

Note. Bolded factor loadings indicate the factor on which the item loaded higher. Starred items indicate theoretical factor and the factor used in the current study.

Table 4

Exploratory Factor Analysis of Supervisor-rated Organizational Citizenship Behavior using Direct Oblimin Rotation (Pattern Matrix)

Supervisor-rated Organizational Citizenship Behavior	Factors	
	OCB-I	OCB-O
Eigenvalue	8.02	1.09
Percentage Variance	57.30	7.76
Items	Factor Loadings	
1. My employee helps others who have been absent.	.780*	-.088
2. My employee helps others who have heavy workloads.	.801*	-.074
3. My employee assists me with my work (when not asked).	.646*	-.105
4. My employee takes time to listen to his/her coworkers' problems and worries.	.803*	.039
5. My employee goes out of his/her way to help new employees.	.793*	-.116
6. My employee takes a personal interest in other employees.	.855*	.162
7. My employee passes along information to coworkers.	.543*	-.262
8. My employee's attendance at work is above the norm.	.464	-.370*
9. My employee gives advance notice when he/she is unable to come to work.	.160	-.642*
10. My employee does not take undeserved work breaks.	.067	-.760*
11. My employee does not spend a great deal of time with personal phone conversations.	-.079	-.919*
12. My employee does not complain about insignificant things at work.	-.035	-.875*
13. My employee conserves and protects organizational property.	-.016	-.834*
14. My employee adheres to informal rules devised to maintain order.	.144	-.711*

Note. Bolded factor loadings indicate the factor on which the item loaded higher. Starred items indicate theoretical factor.

Table 5

Descriptive Statistics and Alpha Coefficients of Major Variables, and Intercorrelations Among Variables

#	Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1	Sup. TX attitudes	3.62	1.07	(.91)										
2	Sub. TX attitudes	2.88	1.39	.48	(.95)									
3	WA – Interpersonal conflict	1.59	.76	.48	.58	(.87)								
4	WA – Incivility	2.03	1.08	.52	.61	.79	(.98)							
5	Interpersonal justice	5.29	1.18	-.38	-.47	-.35	-.40	(.93)						
6	Procedural justice	5.26	1.07	-.32	-.38	-.32	-.37	.80	(.93)					
7	Distributive justice	4.87	1.53	-.23	-.24	-.15	-.20	.69	.71	(.96)				
8	OCB-I (Subordinate-rated)	4.98	1.15	-.14	-.29	-.18	-.16	.23	.24	.11	(.92)			
9	OCB-O (Subordinate-rated)	5.41	1.19	-.26	-.37	-.31	-.32	.25	.26	.08	.59	(.91)		
10	OCB-I (Supervisor-rated)	4.95	1.12	-.32	-.40	-.33	-.38	.39	.32	.14	.62	.45	(.92)	
11	OCB-O (Supervisor-rated)	5.37	1.18	-.37	-.47	-.43	-.51	.41	.37	.18	.38	.57	.73	(.93)

Note. $N = 207-209$; WA = Workplace aggression. OCB = Organizational citizenship behavior. I = individual. O =

organizational. All items were on a 7-point Likert scale, except WA – Interpersonal conflict, which was on a 5-point scale.

Coefficient alphas are presented along the diagonal. Correlations greater than .23 are significant at the $p < .001$ level.

Correlations between .18 and .23 are significant at the $p < .01$ level. Correlations between .14 and .17 are significant at the $p < .05$ level.

Table 6

Unstandardized Indirect Effects of Subordinate Theory X Attitudes Mediating Supervisor Theory X Attitudes to OCB

Criterion	Predictors	<i>b</i>	<i>R</i> ²	ΔR^2	Sobel test		Bootstrapping BC 95% CI			
					<i>SE</i>	<i>Z</i>	<i>SE</i>	LB	UB	
OCB – I (SB-R)	Step 1	SP-TX	-.15*	.02*	-	-	.07	-.29	-.00	
	Step 2	SP-TX	.00	.08***	.06***	-	-	.08	-.16	.16
		SB-TX	-.24**			-	-	.06	-.36	-.11
		Indirect effect	-.15***	-	-	.04	-3.37***	.04	-.24	-.07
OCB – O (SB-R)	Step 1	SP-TX	-.29***	.07***	-	-	.07	-.44	-.14	
	Step 2	SP-TX	-.12	.15***	.08***	-	-	.08	-.28	.04
		SB-TX	-.27***			-	-	.06	-.40	-.15
		Indirect effect	-.17***	-	-	.04	-3.79***	.05	-.27	-.09
OCB – I (SP-R)	Step 1	SP-TX	-.33***	.10***	-	-	.07	-.47	-.20	
	Step 2	SP-TX	-.18*	.18***	.08***	-	-	.07	-.32	-.03
		SB-TX	-.26***			-	-	.06	-.37	-.14
		Indirect effect	-.16***	-	-	.04	-3.82***	.04	-.25	-.08
OCB – O (SP-R)	Step 1	SP-TX	-.40***	.13***	-	-	.07	-.54	-.26	
	Step 2	SP-TX	-.20**	.25***	.12***	-	-	.08	-.35	-.05
		SB-TX	-.33***			-	-	.06	-.45	-.21
		Indirect effect	-.20***	-	-	.04	-4.53***	.05	-.30	-.12

Note. *N*=209. BC= Bias-corrected. CI= Confidence interval. *SE* = standard error. LB = lower-bound.

UB = upper-bound. OCB = organizational citizenship behavior. SB-R = subordinate-rated. SP-R = supervisor-rated. TX = Theory X attitudes

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 7

Subordinate Theory X Attitudes Mediating Supervisor Theory X Attitudes to OCB, Moderated
by Distributive Justice

Criterion		Predictors	<i>b</i>	<i>R</i> ²
OCB – I (SB-R)	Step 2	SP-TX	.01	.13***
		SB-TX	-.21**	
		DJ	.03	
		SB-TX X DJ	-.11**	
OCB – O (SB-R)	Step 2	SP-TX	-.12	.18***
		SB-TX	-.26***	
		DJ	-.02	
		SB-TX X DJ	-.11**	
OCB – I (SP-R)	Step 2	SP-TX	-.17*	.19***
		SB-TX	-.24***	
		DJ	.02	
		SB-TX X DJ	-.05	
OCB – O (SP-R)	Step 2	SP-TX	-.19*	.25***
		SB-TX	-.32***	
		DJ	.04	
		SB-TX X DJ	-.02	

Note. *N* = 209. OCB = organizational citizenship behavior. SB-R = subordinate-rated. SP-R = supervisor-rated. DJ = distributive justice.

* *p* < .05; ** *p* < .01; *** *p* < .001

Table 8

Subordinate Theory X Attitudes Mediating Supervisor Theory X Attitudes to OCB, Moderated by Procedural Justice

Criterion		Predictors	<i>b</i>	<i>R</i> ²
OCB – I (SB-R)	Step 2	SP-TX	.02	.14***
		SB-TX	-.17**	
		PJ	.13	
		SB-TX X PJ	-.18**	
OCB – O (SB-R)	Step 2	SP-TX	-.10	.17***
		SB-TX	-.23***	
		PJ	.12	
		SB-TX X PJ	-.10 [^]	
OCB – I (SP-R)	Step 2	SP-TX	-.15	.22***
		SB-TX	-.20***	
		PJ	.18*	
		SB-TX X PJ	-.08	
OCB – O (SP-R)	Step 2	SP-TX	-.16*	.28***
		SB-TX	-.28***	
		PJ	.21**	
		SB-TX X PJ	-.03	

Note. *N* = 209. OCB = organizational citizenship behavior. SB-R = subordinate-rated. SP-R = supervisor-rated. PJ = procedural justice.

[^] *p* < .10, * *p* < .05; ** *p* < .01; *** *p* < .001

Table 9

Subordinate Theory X Attitudes Mediating Supervisor Theory X Attitudes to OCB, Moderated by Interactional Justice

Criterion		Predictors	<i>B</i>	<i>R</i> ²
OCB – I (SB-R)	Step 2	SP-TX	.04	.16***
		SB-TX	-.16*	
		IJ	.17*	
		SB-TX X IJ	-.19***	
OCB – O (SB-R)	Step 2	SP-TX	-.09	.20***
		SB-TX	-.22**	
		IJ	.13	
		SB-TX X IJ	-.18***	
OCB – I (SP-R)	Step 2	SP-TX	-.12	.24***
		SB-TX	-.17**	
		IJ	.25***	
		SB-TX X IJ	-.10*	
OCB – O (SP-R)	Step 2	SP-TX	-.15*	.29***
		SB-TX	-.25***	
		IJ	.23**	
		SB-TX X IJ	-.05	

Note. *N* = 209. OCB = organizational citizenship behavior. SB-R = subordinate-rated. SP-R = supervisor-rated. IJ = interactional justice.

* *p* < .05; ** *p* < .01; *** *p* < .001

Table 10

Subordinate Theory X Attitudes Mediating Supervisor Theory X Attitudes to OCB, Moderated by Workplace Aggression - Interpersonal Conflict

Criterion		Predictors	<i>b</i>	<i>R</i> ²
OCB – I (SB-R)	Step 2	SP-TX	.03	.10***
		SB-TX	-.22**	
		IC	-.19	
		SB-TX X IC	.16 [^]	
OCB – O (SB-R)	Step 2	SP-TX	-.07	.17***
		SB-TX	-.23**	
		IC	-.30*	
		SB-TX X IC	.13	
OCB – I (SP-R)	Step 2	SP-TX	-.13	.20***
		SB-TX	-.22**	
		IC	-.29*	
		SB-TX X IC	.16*	
OCB – O (SP-R)	Step 2	SP-TX	-.11	.30***
		SB-TX	-.25***	
		IC	-.50***	
		SB-TX X IC	.23**	

Note. *N* = 209. OCB = organizational citizenship behavior. SB-R = subordinate-rated. SP-R = supervisor-rated. IC = interpersonal conflict.

[^] *p* < .10, * *p* < .05; ** *p* < .01; *** *p* < .001

Table 11

Subordinate Theory X Attitudes Mediating Supervisor Theory X Attitudes to OCB, Moderated
by Workplace Aggression - Incivility

Criterion		Predictors	<i>b</i>	<i>R</i> ²
OCB – I (SB-R)	Step 2	SP-TX	.02	.11***
		SB-TX	-.25***	
		Incivility	-.07	
		SB-TX X Incivility	.13*	
OCB – O (SB-R)	Step 2	SP-TX	-.07	.16***
		SB-TX	-.23**	
		Incivility	-.18	
		SB-TX X Incivility	.07	
OCB – I (SP-R)	Step 2	SP-TX	-.10	.22***
		SB-TX	-.19**	
		Incivility	-.26**	
		SB-TX X Incivility	.11*	
OCB – O (SP-R)	Step 2	SP-TX	-.07	.33***
		SB-TX	-.20**	
		Incivility	-.44***	
		SB-TX X Incivility	.12*	

Note. *N* = 209. OCB = organizational citizenship behavior. SB-R = subordinate-rated. SP-R = supervisor-rated.

* *p* < .05; ** *p* < .01; *** *p* < .001

Table 12

Conditional Indirect Effects of Supervisor Theory X Attitudes on OCB

Moderator	Point	OCB-I (SB-R)				OCB-O (SB-R)				OCB-I (SP-R)				OCB-O (SP-R)			
		<i>b</i>	<i>SE</i>	LB	UB												
Distributive Justice	-1 <i>SD</i>	-.02	.06	-.14	.10	-.06	.06	-.17	.05	-	-	-	-	-	-	-	-
	<i>M</i>	-.13*	.04	-.22	-.05	-.16*	.05	-.26	-.08	-	-	-	-	-	-	-	-
	+1 <i>SD</i>	-.24*	.06	-.36	-.14	-.26*	.06	-.40	-.15	-	-	-	-	-	-	-	-
Procedural Justice	-1 <i>SD</i>	.02	.06	-.10	.14	-.08	.06	-.20	.04	-	-	-	-	-	-	-	-
	<i>M</i>	-.11*	.04	-.19	-.03	-.14*	.05	-.24	-.06	-	-	-	-	-	-	-	-
	+1 <i>SD</i>	-.23*	.06	-.37	-.12	-.21*	.06	-.34	-.10	-	-	-	-	-	-	-	-
Interactional Justice	-1 <i>SD</i>	.04	.06	-.07	.16	.00	.06	-.13	.12	-.03	.06	-.15	.09	-	-	-	-
	<i>M</i>	-.10*	.04	-.19	-.02	-.13*	.05	-.24	-.05	-.10*	.04	-.19	-.02	-	-	-	-
	+1 <i>SD</i>	-.24*	.06	-.38	-.14	-.26*	.06	-.41	-.16	-.17*	.06	-.29	-.07	-	-	-	-
WA - Interpersonal Conflict	-1 <i>SD</i>	-.21*	.07	-.38	-.08	-	-	-	-	-.21*	.06	-.35	-.10	-.26*	.07	-.42	-.14
	<i>M</i>	-.14*	.05	-.25	-.04	-	-	-	-	-.13*	.05	-.24	-.05	-.15*	.05	-.27	-.07
	+1 <i>SD</i>	-.06	.07	-.21	.06	-	-	-	-	-.06	.06	-.19	.06	-.05	.07	-.18	.09
WA - Incivility	-1 <i>SD</i>	-.24*	.07	-.40	-.11	-	-	-	-	-.19*	.06	-.32	-.08	-.20*	.06	-.35	-.10
	<i>M</i>	-.15*	.06	-.27	-.05	-	-	-	-	-.12*	.05	-.22	-.03	-.12*	.05	-.23	-.05
	+1 <i>SD</i>	-.07	.07	-.22	.06	-	-	-	-	-.04	.06	-.18	.08	-.04	.06	-.06	.07

Note. $N = 209$. OCB = organizational citizenship behavior. I = individual. O = organizational. SB-R = subordinate-rated. SP-R = supervisor-rated. *SE* = standard error. LB = lower-bound. UB = upper-bound. WA = workplace aggression.

* confidence interval does not include zero; - moderation was nonsignificant and conditional indirect effects were not probed.

Table 13

Summary of Hypothesis Outcomes

Hypothesis	Supported?	
	SB-R OCB	SP-R OCB
1a. Supervisor Theory X attitudes will have a negative relationship with OCB-I.	Yes	Yes
1b. Supervisor Theory X attitudes will have a negative relationship with OCB-O.	Yes	Yes
2. Supervisor Theory X attitudes will have a positive relationship with subordinate Theory X attitudes. (supported)	N/A	
3a. There will be an indirect relationship between supervisor Theory X attitudes and subordinates' OCB-I, such that the relationship between supervisor Theory X attitudes and subordinates' OCB-I will be fully mediated by subordinate Theory X attitudes.	Yes	Yes
3b. There will be a significant indirect relationship between supervisor Theory X attitudes and OCB-O, such that the relationship between supervisor Theory X attitudes and OCB-O will be fully mediated by subordinate Theory X attitudes.	Yes	Yes
4a. In the mediated relationship between supervisor Theory X attitudes and OCB-I (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-I will be moderated by distributive justice, such that there will be no mediation when distributive justice is low but remain significant when distributive justice is average or high.	Yes	No
4b. In the mediated relationship between supervisor Theory X attitudes and OCB-O (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-O will be moderated by distributive justice, such that there will be no mediation when distributive justice is low but remain significant when distributive justice is average or high.	Yes	No
4c. In the mediated relationship between supervisor Theory X attitudes and OCB-I (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-I will be moderated by procedural justice, such that there will be no mediation when procedural justice is low but remain significant when procedural justice is average or high.	Yes	No
4d. In the mediated relationship between supervisor Theory X attitudes and OCB-O (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-O will be moderated by procedural justice, such that there will be no mediation when procedural justice is low but remain significant when procedural justice is average or high.	Yes	No
4e. In the mediated relationship between supervisor Theory X attitudes and OCB-I (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-I will be moderated by interactional justice, such that there will be no mediation when interactional justice is low but remain significant when interactional justice is average or high.	Yes	Yes
4f. In the mediated relationship between supervisor Theory X attitudes and OCB-O (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-O will be moderated by interactional justice, such that there will be no mediation when interactional justice is low but remain significant when interactional justice is average or high.	Yes	No
5a. In the mediated relationship between supervisor Theory X attitudes and OCB-I (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-I will be moderated by interpersonal conflict, such that there will be no mediation when interpersonal conflict is high but remain significant when interpersonal conflict is average or low.	Yes	Yes
5b. In the mediated relationship between supervisor Theory X attitudes and OCB-O (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-O will be moderated by interpersonal conflict, such that there will be no mediation when interpersonal conflict is high but remain significant when interpersonal conflict is average or low.	No	Yes
5c. In the mediated relationship between supervisor Theory X attitudes and OCB-I (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-I will be moderated by incivility, such that there will be no mediation when incivility is high but remain significant when incivility is average or low.	Yes	Yes
5d. In the mediated relationship between supervisor Theory X attitudes and OCB-O (mediated by subordinate Theory X attitudes), the relationship between subordinate Theory X attitudes and OCB-O will be moderated by incivility, such that there will be no mediation when incivility is high but remain significant when incivility is average or low.	No	Yes

Note. SB-R OCB = subordinate-rated organizational citizenship behavior. SP-R OCB = supervisor-rated organizational citizenship behavior.

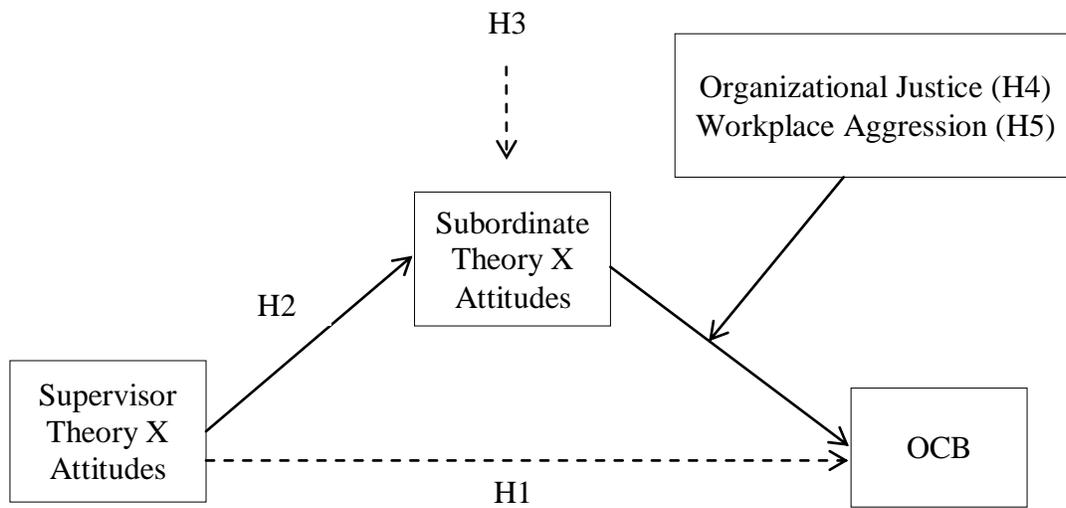


Figure 1. Hypothesized model of the moderated mediation between supervisor Theory X attitudes and OCB.

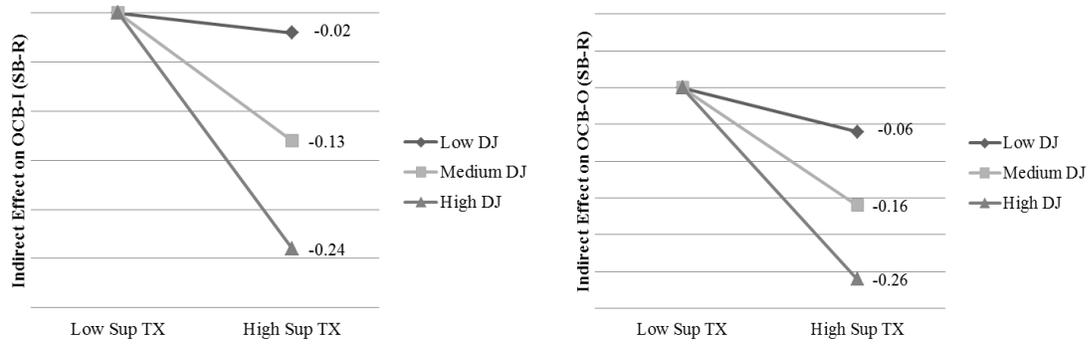


Figure 2. Visualization of conditional indirect effects of supervisor Theory X attitudes through subordinate Theory X attitudes on OCB at different levels of distributive justice.

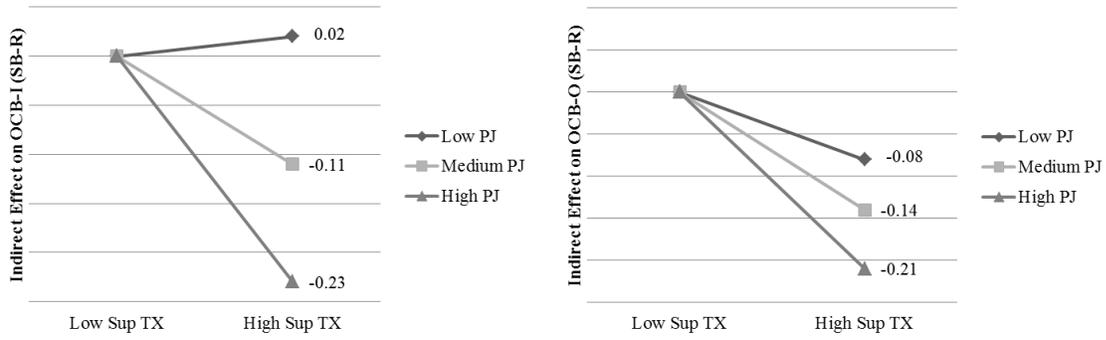


Figure 3. Visualization of conditional indirect effects of supervisor Theory X attitudes through subordinate Theory X attitudes on OCB at different levels of procedural justice.

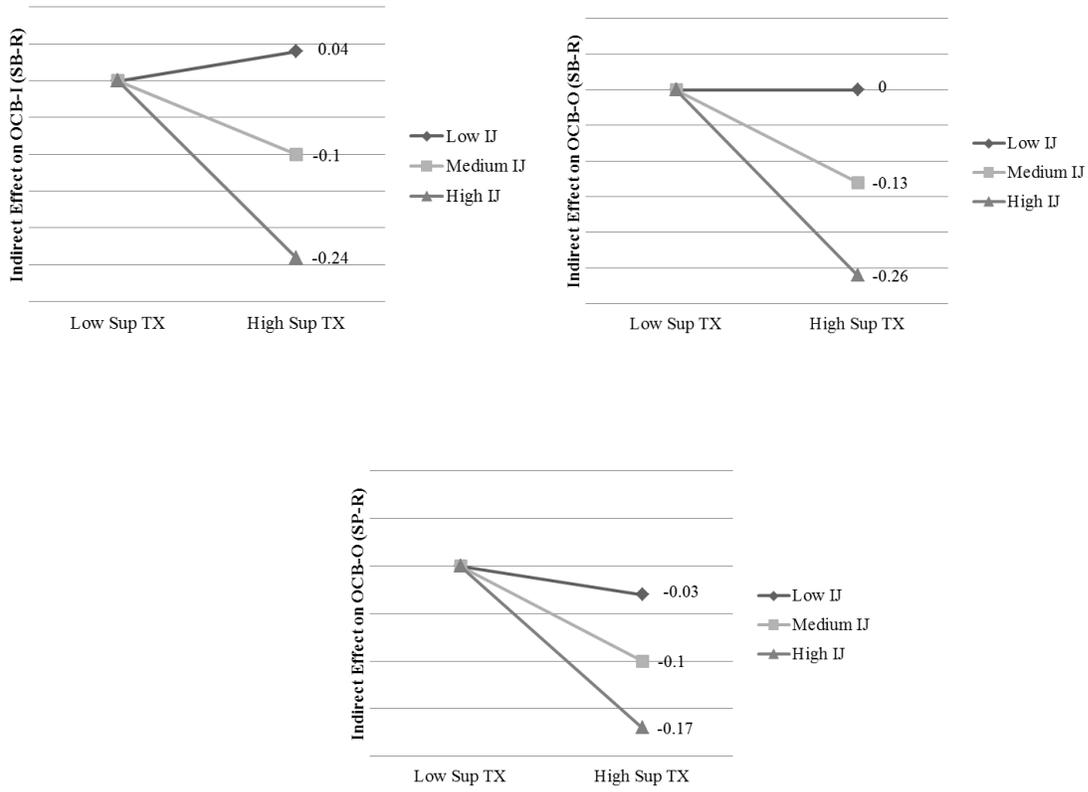


Figure 4. Visualization of conditional indirect effects of supervisor Theory X attitudes through subordinate Theory X attitudes on OCB at different levels of interactional justice.

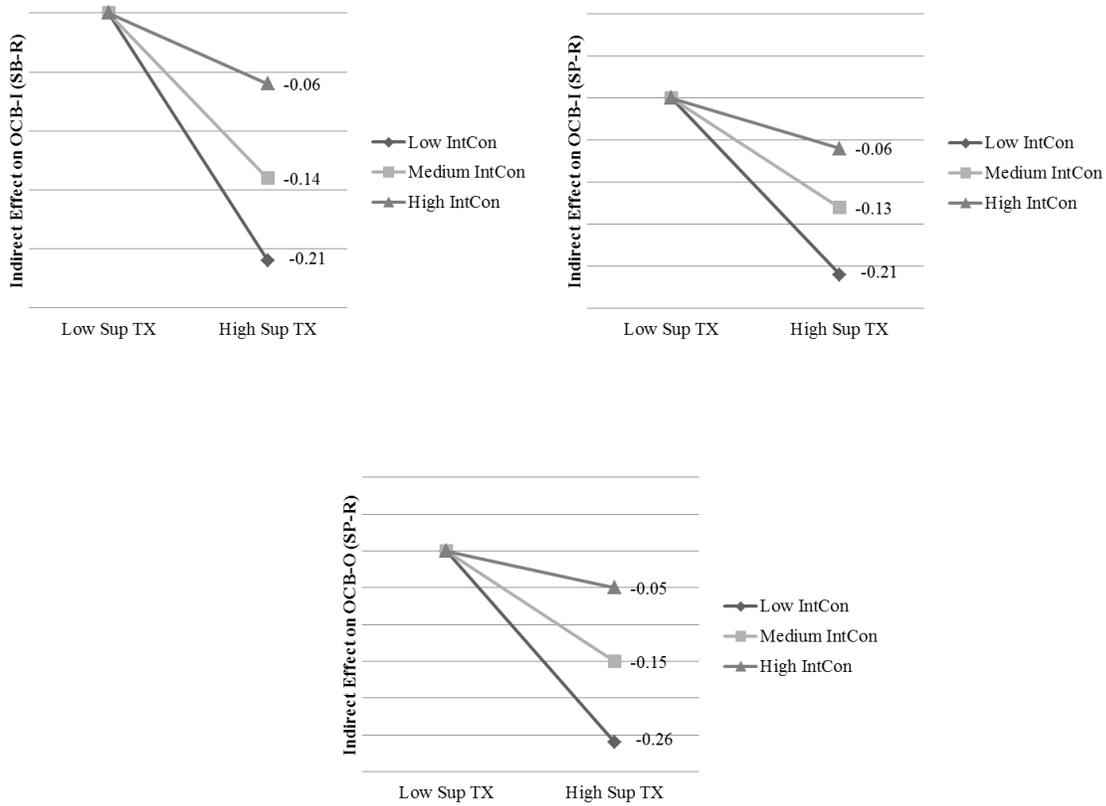


Figure 5. Visualization of conditional indirect effects of supervisor Theory X attitudes through subordinate Theory X attitudes on OCB at different levels of interpersonal conflict.

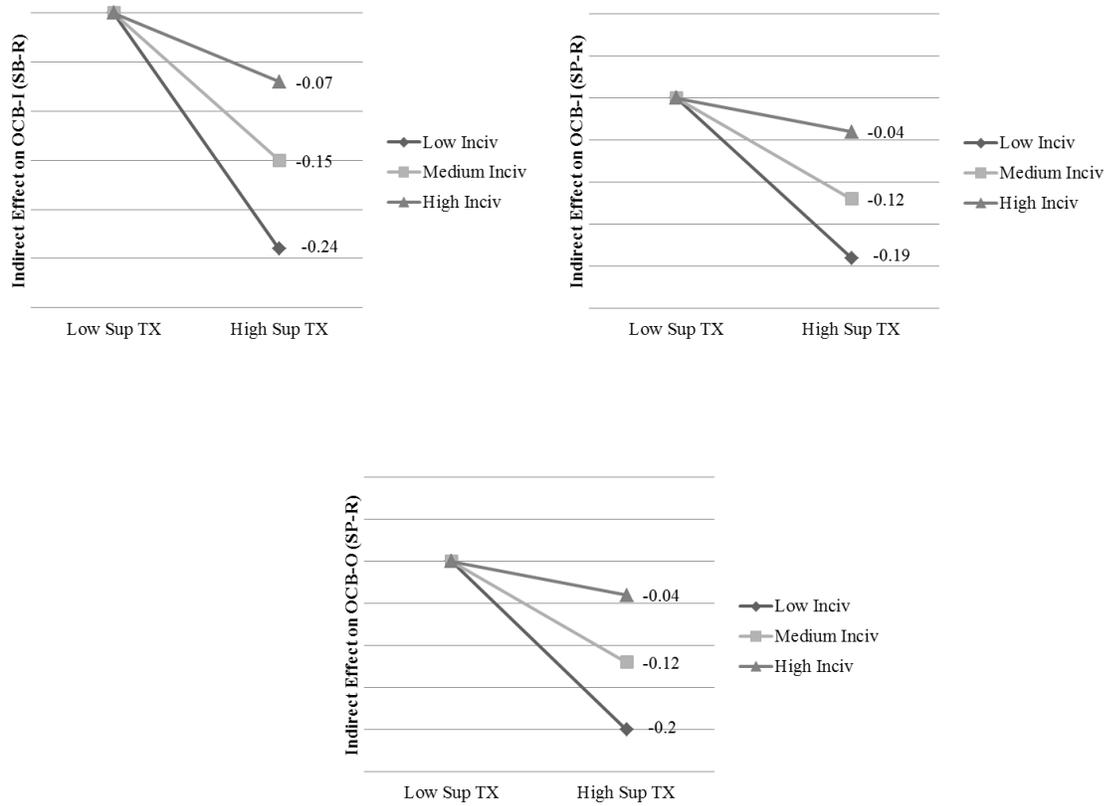


Figure 6. Visualization of conditional indirect effects of supervisor Theory X attitudes through subordinate Theory X attitudes on OCB at different levels of incivility.

APPENDIX A

ITEMS ON SUPERVISOR SURVEY

Supervisor-rated Theory X Attitudes

1. Most people will try to do as little work as possible.
2. Most employees must be closely supervised to get them to perform up to expectations.
3. Most employees actually prefer to be told exactly what to do rather than having to figure it out for themselves.
4. Most employees do not care much about the organization's goals.
5. Most people will not use their own initiative or do things that they have not been specifically assigned to do.
6. Employees generally do not have much to contribute when asked to participate in making decisions or solving problems.
7. It is just basic human nature — people just naturally dislike work.
8. Most employees will not exercise self-control and self-motivation — managers must do this for them.
9. Most employees have little ambition.
10. Most employees prefer to have someone else set their goals and objectives.
11. Most people work to eat and pay their bills rather than because they need to solve problems and be creative.
12. Most people are lazy and don't want to work.
13. Most employees can't be trusted.

Supervisor-rated Theory Y Attitudes

1. For most people, work is as natural as play or recreation.
2. Most employees would prefer increased responsibility to increase job security.
3. Most employees do want responsibility.
4. Most employees prefer supervising themselves rather than close supervision.

Supervisor-rated Organizational Citizenship Behavior – Individual

1. My employee helps others who have been absent.
2. My employee helps others who have heavy workloads.
3. My employee assists me with my work, even when not asked.
4. My employee takes time to listen to co-workers' problems and worries.
5. My employee goes out of his/her way to help new employees.
6. My employee takes a personal interest in other employees.
7. My employee passes along information to co-workers.

Supervisor-rated Organizational Citizenship Behavior – Organizational

1. My employee's attendance at work is above the norm.
2. My employee gives advance notice when unable to come to work.
3. My employee does not take undeserved work breaks.
4. My employee does not spend a great deal of time with personal phone conversations.
5. My employee does not complain about insignificant things at work.
6. My employee conserves and protects organizational property.
7. My employee adheres to informal rules devised to maintain order at work.

APPENDIX B

ITEMS ON SUBORDINATE SURVEY – TIME 2

Subordinate-rated Theory X Attitudes

1. My manager will try to do as little work as possible.
2. My manager must be closely supervised to get him/her to perform up to expectations.
3. My manager actually prefers to be told exactly what to do rather than having to figure it out for himself/herself.
4. My manager does not care much about the organization's goals.
5. My manager will not use his/her own initiative or do things that he/she has not been specifically assigned to do.
6. My manager generally does not have much to contribute when asked to participate in making decisions or solving problems.
7. It is just his/her basic nature — my manager just naturally dislikes work.
8. My manager will not exercise self-control and self-motivation — his/her superiors must do this for him/her.
9. My manager has little ambition.
10. My manager prefers to have someone else set his/her goals and objectives.
11. My manager works to eat and pay his/her bills rather than because he/she needs to solve problems and be creative.
12. My manager is lazy and doesn't want to work.
13. My manager can't be trusted.

Subordinate-rated Theory Y Attitudes

1. For my manager, work is as natural as play or recreation.
2. My manager would prefer increased responsibility to increased job security.
3. My manager does want responsibility.
4. My manager prefers supervising himself/herself rather than close supervision.

Distributive Justice

1. Fairly rewarded considering the responsibilities.
2. Fairly rewarded in view of the amount of experience you have.
3. Fairly rewarded for the amount of effort you put forth.
4. Fairly rewarded for the work you have done well.
5. Fairly rewarded for the stresses and strains of your job.

Procedural Justice

1. Collect accurate information necessary for making decisions.
2. Provide opportunities to appeal or challenge the decision.
3. Have all sides affected by the decision represented.
4. Generate standards so that decisions could be made with consistency.
5. Hear the concerns of all those affected by the decision.
6. Provide useful feedback regarding the decision and its implementation.
7. Allow for requests for clarification or additional information about the decision.

Interactional Justice

1. Your supervisor considered your viewpoint.
2. Your supervisor was able to suppress personal biases.
3. Your supervisor provided you with timely feedback about the decision and its implications.
4. Your supervisor treated you with kindness and consideration.
5. Your supervisor showed concern for your rights as an employee.
6. Your supervisor took steps to deal with you in a truthful manner.

Interpersonal Conflict

1. How often do you get into arguments with others at work?
2. How often do other people yell at you at work?
3. How often are people rude to you at work?
4. How often do other people do nasty things to you at work?

Incivility

1. Someone withholding information which affects your performance.
2. Being ordered to do work below your level of competence.
3. Having your opinions ignored.
4. Being given tasks with unreasonable deadline.
5. Excessive monitoring of your work.
6. Pressure not to claim something to which by right you are entitled (e.g. sick leave, holiday entitlement, travel expenses).
7. Being exposed to an unmanageable workload.
8. Being humiliated or ridiculed in connection with your work.
9. Having key areas of responsibility removed or replaced with more trivial or unpleasant tasks.
10. Spreading of gossip and rumors about you.
11. Being ignored or excluded.
12. Having insulting or offensive remarks made about your person, attitudes or your private life.
13. Hints or signals from others that you should quit your job.
14. Repeated reminders of your errors or mistakes.
15. Being ignored or facing a hostile reaction when you approach.
16. Persistent criticism of your errors or mistakes.
17. Practical jokes carried out by people you don't get along with.
18. Having allegations made against you.
19. Being the subject of excessive teasing and sarcasm.
20. Being shouted at or being the target of spontaneous anger.
21. Intimidating behaviors such as finger-pointing, invasion of personal space, shoving, blocking your way.
22. Threats of violence or physical abuse or actual abuse.

APPENDIX C

ITEMS ON SUBORDINATE SURVEY – TIME 3

Subordinate-rated Organizational Citizenship Behavior – Individual

1. I help others who have been absent.
2. I help others who have heavy workloads.
3. I assist supervisor with his/her work, even when not asked.
4. I take time to listen to co-workers' problems and worries.
5. I go out of my way to help new employees.
6. I take a personal interest in other employees.
7. I pass along information to co-workers.

Subordinate-rated Organizational Citizenship Behavior – Organizational

1. My attendance at work is above the norm.
2. I give advance notice when unable to come to work.
3. I do not take undeserved work breaks.
4. I do not spend a great deal of time with personal phone conversations.
5. I do not complain about insignificant things at work.
6. I conserve and protect organizational property.
7. I adhere to informal rules devised to maintain order at work.