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Transformational Leadership and Perceived Role Breadth: Multi-Level Mediation of Trust in Leader and Affective Organizational Commitment

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TRANSFORMATIONAL LEADERSHIP AND PERCEIVED ROLE BREADTH: MULTI-LEVEL MEDIATION OF TRUST IN LEADER AND AFFECTIVE ORGANIZATIONAL COMMITMENT

A Dissertation
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy
Industrial-Organizational Psychology

by
Benjamin P. Hardy
May 2019

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ABSTRACT

This dissertation proposed a multilevel serial mediation model wherein trust in leader and affective organizational commitment mediated the effect of transformational leadership on perceived role breadth. This same serial mediation model was examined with role instrumentality as the outcome variable. Moreover, perceived role breadth, after factor analyses, was broken into three separate factors roughly corresponding to: 1) organizational loyalty, 2) sportsmanship, and 3) altruism. The sample of this study was 997 employees from government agencies who were surveyed about their leader and other constructs described in the hypothesized model. All employees reported which specific leader they had, therefore allowing each individual's response nested within the grouping of Level 2 leader. After initial multilevel model null testing as well as ICC1 calculations, it was determined that MLM techniques were appropriate for organizational loyalty, sportsmanship, and role instrumentality due to between-group variance. However, for altruism no evidence was found for group variance, and thus the proposed serial mediation model was examined only at the individual level when altruism was the outcome variable. For all three of the outcome variables examined with MLM, trust in leader was not found to serially mediate when accounting for nesting. Therefore, trust in leader was removed from the MLM and affective organizational commitment was analyzed as a single multilevel mediator. For all three outcomes being tested with MLM, affective organizational commitment mediating transformational leadership to the outcome variable was represented at both individual and group levels. This study showed that individual and group level transformational leadership predicts organizational
loyalty, sportsmanship, and role instrumentality. Furthermore, this study showed that group level affective organizational commitment mediated group level transformational leadership on organizational loyalty, sportsmanship, and role instrumentality. When accounting for nesting of individuals within leader groups, there was also individual level mediation of the transformational leadership on organizational loyalty and on role instrumentality, but not on sportsmanship. When testing the proposed serial mediation model at the individual level without account for clustering of individuals by their leader, significant serial mediation did occur wherein trust in leader through affective organizational commitment mediated transformational leadership to altruism. In fact, when not accounting for nesting, the proposed serial model was actually confirmed for each of the four outcome variables. However, when accounting for nesting, trust in leader was not found to be a multilevel mediator of any of the four outcome variables. Therefore, this study answers several calls for multilevel research on transformational leadership and highlights the importance of accounting for nesting on the results researchers find.
DEDICATION

This dissertation is dedicated to four pivotal relationships. First and foremost, my relationship to God. I’m humbled by my life and all I’m continuing to learn. There is no way I could have completed this dissertation without the belief that God wanted me to do so, and the felt support along the way. Second, my wife Lauren for not letting me quit on multiple occasions when my intrinsic motivation ran out. Third, my research advisor, Dr. Robert Sinclair, who watched me fumble my way through my PhD program and always remained patient and respectful toward me, especially in times when he did not have to be. Furthermore, Dr. Sinclair, to me, demonstrated more than transformational leadership in my behalf. He demonstrated something I honestly cannot put words to, in allowing me to finish my PhD at Clemson, and in helping me throughout the process. Bob, thank you for your help. I really don’t have much else to say. This is in large part dedicated to you and I will never forget what you’ve given me. Fourth and finally, to both my own parents as well as my in-laws. I wouldn’t have made it this far without your continued love and support.
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Organizational success relies on what employees do in their workplace (Wright, Dunford, & Snell, 2001). One form of employee behavior, organizational citizenship behavior (OCB; Organ, 1988), has received large interest from researchers and organizations interested in getting the most out of their employees. OCB was initially defined as discretionary behavior that is not directly and explicitly rewarded (Organ, 1988). However, evidence suggests that employees often perceive OCB to be part of their job (i.e., *perceived role breadth*; e.g., Lam, Hui, & Law, 1999; Morrison, 1994), and that OCB is associated with performance evaluations and compensation decisions (Podsakoff, Whiting, Podsakoff, & Blume, 2009). As such, Organ (1998) redefined the concept as behavior that is not specifically task-focused but still nourishes the social-psychological work context in ways that enable task performance and overall organizational well-being.

OCBs are a central element of work performance that contribute to overall performance ratings in a manner comparable to task performance (Podsakoff et al., 2009). OCBs are also related with “bottom line” effectiveness and specifically related to unit-level productivity, cost reduction, customer satisfaction, turnover, and profitability (Podsakoff et al., 2009). Sun, Aryee, and Law (2007) found that HR practices promoting OCB increase organizational-level outcomes and that OCB mediates the impact of high-performance HR practices on turnover and productivity.

Given that OCBs are considered vital to work performance and organizational well-being, researchers have sought to understand the mediating mechanisms that facilitate OCB. One such mechanism is perceived role breadth, defined as the degree to which employees consider
OCB to be an inherent part of their job (Hofmann, Morgeson, & Gerras, 2003; Jiao, Richards, & Hackett, 2013; Morrison, 1994). Morrison (1994) was the first to contend that some employees view their jobs more expansively than others do. Specifically, Morrison had employees categorize behaviors from existing measures of OCB as either “an expected part of your job” or “above and beyond what is expected for your job” (Morrison, 1994, p. 1549), and found that employees who defined more OCBs as in-role (i.e., greater role breadth) were rated by their supervisors as performing more OCB. Similar to Morrison (1994), findings from other studies have shown that perceived role breadth directly predicts OCB (Coyle-Shapiro et al., 2004; Hofmann et al., 2003; Kamdar et al., 2006; Tepper & Taylor, 2003).

Given that prior research has shown perceived role breadth to directly influence OCB behaviors, it seems that researchers and organizations would be interested in how perceived role breadth is developed. Although prior research and theory have shown that employees define their roles from a number of sources including environmental factors, social cues, and in particular, through interactions between themselves and their supervisors (Graen, 1976) little research has directly linked leadership with perceived role breadth in followers. I believe this is a potentially large misstep in the current literature and thus have made examining this relationship the central purpose of this dissertation.

Some research has connected transformational leadership with role breadth self-efficacy (e.g., Den Hartog & Belschak, 2012), defined as an individual’s self-perceived ability to perform proactive behaviors successfully (e.g., Parker, 1998, 2000). Although related, perceived role breadth and role breadth self-efficacy are two distinct constructs. No prior research has directly examined transformational leadership and perceived role breadth.
In a recent meta-analysis, Jiao, Richards, and Hackett (2013) showed that despite there being only a small number of studies concerning leadership and perceived role breadth, the evidence suggests a strong positive correlation between leader-member exchange (LMX) quality and perceived role breadth ($r = .55$, Hofmann et al., 2003; $r = .45$, Jiao & Hackett, 2007; $r = .49$, Klieman, Quinn, & Harris, 2000; $r = .28$ to .46, Van Dyne et al., 2008). Although prior research has primarily connected perceived role breadth with LMX rather than transformational leadership, it seems relevant to examine the connection between transformational leadership and perceived role breadth directly. Indeed, recent meta-analytic structural equation modelling based on 132 studies revealed that LMX mediates transformational leadership’s relationships with employee outcomes (Boer, Deinert, Homan, & Voelpel, 2016). In fact, Shaffer et al. (2016) examined the discriminant validity of several leadership constructs and questioned whether transformational leadership and LMX are empirically distinct. In any case, it is possible that prior research connecting LMX to perceived role breadth could either be better understood or expanded by examining the relationship between transformational leadership and perceived role breadth.

In their meta-analysis, Jiao et al. (2013) explain that prior research has found positive correlations of perceived role breadth with affective organizational commitment ($r = .21$ to .30; Morrison, 1994), trust ($r = .24$; Chiaburu & Byrne, 2009; $r = .18$ to .24; Chiaburu & Marinova, 2006), and organizational identification ($r = .53$; Jiao & Hackett, 2007). Given that transformational leadership has been found to facilitate both affective organizational commitment (e.g., Ng & Feldman, 2011) as well as trust (e.g., Lin, Dang, & Liu, 2016), it seems likely that transformational leadership may facilitate perceived role breadth through these constructs in a mediating manner, both at the individual and group levels.
Examining the underlying mechanisms through which transformational leadership influences follower perceptions and behaviors has become an important consideration to many of the scholars studying and trying to better understand transformational leadership. Some of these scholars have voiced concerns about the limited amount of research explaining the mediating mechanisms, describing how transformational leadership influences follower behavior (e.g., Braun et al. 2011). For instance, prior research supports positive correlations between transformational leadership and OCB (Carter et al., 2014; Wang et al., 2011). Yet, there is little research explaining how transformational leadership facilitates OCB. I argue that perceived role breadth may be one of the mediating factors linking transformational leadership with OCB. Therefore, in this dissertation, my first aim is to determine whether transformational leadership and perceived role breadth are related.

By striving to better understand the antecedents of employee role definitions, I am responding to calls from prior researchers (Morrison, 1994) and seek to expand upon three clear gaps in the current role-definition literature, namely: 1) a lack of knowledge of predictors of perceived role breadth, 2) a lack of understanding of the potential psychological mechanisms operating on the relationship between predictors such as leadership and perceived role breadth, and 3) a need to investigate perceived role breadth and its antecedents from a multilevel perspective. Indeed, few studies have investigated the predictors of perceived role breadth (Chiaburu & Byrne, 2009), and those studies which have explored antecedents have focused on attitudes such as job satisfaction (e.g., Morrison, 1994) or organizational commitment (Gordon et al., 1992), and contextual variables such as organizational support, organizational justice, and the quality of exchanges with the direct supervisor (Coyle-Shapiro et al., 2004; Hoffman et al., 2003; Tepper et al., 2001). Although enlargement of role definitions can be the result of how
employees perceive their relationships with their leaders and overall organization, few researchers have examined the specifics—such as the mediating mechanisms and multiple levels of analysis—of perceived role breadth within the employee-leadership relationship. Consequently, I believe it is necessary to examine how leadership, specifically transformational leadership, may facilitate perceived role breadth.

Secondly, prior research points to a need to identify mechanisms explaining the relationship between predictors and perceived role breadth (Coyle-Shapiro et al., 2004; Morrison 1994), yet few studies have examined such mechanisms. One significant exception (Coyle-Shapiro et al., 2004) demonstrated that mutual commitment mediated the relationships between procedural justice and perceived role breadth. Coyle-Shapiro and colleagues (2004) defined mutual commitment as an employer’s commitment to the employee and the employee’s commitment to the organization. This dissertation extends this line of work by examining affective organizational commitment as a mediating mechanism of the relationships between transformational leadership and perceived role breadth. In addition to research which has connected perceived role breadth with affective commitment (Morrison, 1994), trust has also been found to be an antecedent (Chiaburu & Byrne, 2009; Chiaburu & Marinova, 2006). Consequently, this dissertation seeks to determine whether affective organizational commitment, as well as trust in leader, explain the relationship between transformational leadership and perceived role breadth.

Thirdly, I seek to understand how the proposed mediators (i.e., affective organizational commitment and trust in leader) may operate at both the individual and group levels to explain how transformational leadership may expand followers’ ideas of their perceived roles. Indeed, in addition to effects at the individual level, transformational leadership is suggested to also have an
impact at the team or group-level of analysis. This contention is based on a direct consensus model, which employs consensus among lower level units to specify another form of a construct at a higher level (Chan, 1998). This model is assumed because transformational leadership 1) comprises individual-focused as well as group-focused behaviors (Wang & Howell, 2010) and 2) as a participative leadership style, it contributes to mental model convergence in teams (Dionne, Sayama, Hao, & Bush, 2010). Therefore, this study seeks to fill another important gap in the transformational leadership literature by examining how transformational leadership may facilitate perceived role breadth through multilevel mediation.

Examining the multilevel mechanisms of transformational leadership is warranted and needed in the current state of the literature. Indeed, despite many calls for more multi-level research of leadership (e.g., Braun et al. 2011; Leroy, Segers, van Dierendonck, & den Hartog, 2018), the state of the science predominantly looks at leadership as an individual phenomenon (Batistic, Cerne, & Vogel, 2017). These and other scholars have voiced concerns regarding the limited explanations of how transformational leadership relates to follower performance, and even more, the lack of evidence and need for research on how transformational leadership and follower performance may be mediated at multiple levels. Of this quandary, Braun et al. (2011, p. 271) explicitly stated that, “Even more limited than insights into the direct relations between transformational leadership and performance at multiple levels is knowledge about multilevel mediators.”

Furthermore, despite the fact that several scholars have stressed that “the study of leadership is inherently multilevel in nature” (Bliese, Halverson, & Schriesheim, 2002, p. 4), leadership research has continued to suffer from a dearth of explicit theoretical and empirical differentiation between levels of analysis (Yammarino et al., 2005). Indeed, transformational
leadership is closely related to desired outcomes for individuals (e.g., Casimir, Waldman, Bartran, & Yang, 2006; Judge & Piccolo, 2004; Liu, Siu, & Shi, 2010) and teams (e.g., Bass, Avolio, Jung, & Berson, 2003; Schaubroeck, Lam, & Cha, 2007; Schaubroeck, Lam, & Peng, 2011). Yet, with some recent exceptions (e.g., Wang & Howell, 2010), research analyzing effects of transformational leadership at individual as well as team levels is still scarce.

Indeed, prior research has found trust in leader to be a mediator of the effects of leader behavior on team performance (Schaubroeck, Lam, & Peng, 2011) and team-level trust climate among top-level management teams to be a mediator of the relationship between CEO transformational leadership and firm performance (Lin, Dang, & Liu, 2016). Moreover, the connection between transformational leadership and affective commitment has been well documented, as has the connection between affective organizational commitment and OCB (e.g., Ng & Feldman, 2011).

The potential multilevel mediation of affective organizational commitment and trust in leader is made even more relevant by a recent meta-analysis which highlighted key psychological mechanisms underlying the relationship between transformational leadership and OCB (Nohe & Hertel, 2017). Specifically, they found that affective organization commitment and trust in leader mediated the relationship between transformational leadership and OCB. Even still, like the majority of existing research examining the connection between transformational leadership and OCB, this meta-analysis was performed solely at the individual-level of analysis. Nevertheless, the model developed in Nohe and Hertel’s (2017) meta-analysis provides a strong basis for the multilevel mediation model being proposed in this dissertation. Specifically, their model, based on social exchange theory, contrasted attitudinal mediators (affective organizational commitment, job satisfaction) and relational mediators (trust in leader, leader-
member exchange; LMX) of the positive relationship between transformational leadership and OCB and found, when testing single-mediator models, that each of the mediators explained the relationship between transformational leadership and OCB (Nohe & Hertel, 2017). Furthermore, when testing a multi-mediator model, they found that LMX was the strongest mediator. Finally, when testing a model with a latent attitudinal mechanism and a latent relational mechanism, the relational mechanism was the stronger mediator of the relationship between transformational leadership and OCB (Nohe & Hertel, 2017).

By examining perceived role breadth as a byproduct of transformational leadership, this dissertation seeks to provide additional insight into why transformational leadership facilitates OCB. By better understanding how transformational leadership shapes perceptions, leaders and organizations may become more proficient at proactively shaping such perceptions, and thus facilitate desirable individual and group-level behaviors and climate. Moreover, exploring the multilevel effects of transformational leadership has merit and relevance given that organizations often have team-based structures requiring leaders “to lead and motivate not only individuals but also teams as a whole” (Chen et al., 2007, p. 331). Therefore, by studying individual and group-level mediators of transformational leadership, this dissertation seeks to provide useful information to organizations and teams regarding how transformational leadership influences team and individual dynamics and performance.

The preceding chapters are organized in the following manner. Chapters 2-6 provide a literature review of key constructs of this dissertation. Chapter 2 provides an overview of the literature on perceived role breadth and OCB. Chapter 3 reviews the literature and hypotheses for transformational leadership and its connection to perceived role breadth. Chapter 4 provides a brief summary of the literature on trust in leader, and provides hypotheses for trust in leader as...
both an individual and group-level mediator between transformational leadership and perceived role breadth. Chapter 5 gives a brief examination of the literature on affective organizational commitment, and provides hypotheses for affective organizational commitment as an individual and group-level mediator between transformational leadership and perceived role breadth. Finally, Chapter 6 specifies the method of the current study including design, participants, measures, and proposed analyses.
CHAPTER TWO
PERCIEVED ROLE BREADTH

Role theory (Katz & Kahn, 1978) proposes that people enact their roles in different ways and that these roles can be expanded. A role is a set of expectations associated with a particular social position in a specific type of setting (Biddle, 1979). A manager, for instance, has far-reaching duties within his or her work context, but minimal obligations as a manager when at home. In contrast, membership in a social group based on demographic variables such as age, race, or gender has trans-situational influence. A father, for example, has obligations based on being a father in all settings in which his role is identified. This distinction between roles and groups reflects the distinction in expectation status theory between specific status characteristics, which operate in a delineated range of settings, and diffuse status characteristics, which operate trans-situationally (Correll, Ridgeway, & Delamater, 2003; Ridgeway, 2011).

In the work context, individuals who hold what would be considered the same position within an organization often engage in a somewhat different set of tasks and activities, and in turn go on to shape distinct and individualized roles for themselves (Graen 1976; Ilgen & Hollenbeck 1991; Katz & Kahn 1978). Empirical work supports the notion that there can be considerable variation in how broadly individuals define their work roles (Kamdar et al., 2006; McAllister et al., 2007; Morrison, 1994). This is referred to as perceived role breadth and is the set of behaviors or activities that an individual defines as being in-role (Morrison, 1994). The more activities an employee defines as in-role, the greater his or her perceived role breadth will be. Given that individuals differ in how they define their roles, researchers have recently directed energy towards understanding perceived role breadth in an effort to better explaining when and under what conditions employees perform OCBs.
Morrison (1994) contended that some employees have a distinction in where they “draw the line between in-role and extra-role behavior” (p. 1544). She further argued that, all else being equal, employees feel more compelled and motivated to perform behaviors that they define as in-role. Her perspective was that OCBs are based on distal attitudinal antecedents, such as organizational commitment and job satisfaction, operating through role enlargement (Morrison, 1994). Findings from several subsequent studies have shown that employees do not uniformly view their jobs in narrow terms with OCB considered extra-role.

For instance, employees who view their psychological contract as relational rather than transactional see OCB as in-role behavior—an obligation they owe their organizations (Gakovic & Tetrick, 2003; Robinson, Kraatz, & Rousseau, 1994; Shore & Barksdale, 1998). Indeed, the commonly accepted explanation for broader perceived role breadth is that there is a give-and-take exchange process through ongoing interactions with others (e.g., coworkers, supervisors) which influences how individuals perceive and define their roles (e.g., Graen 1976; Grant & Ashford, 2008; Katz & Kahn, 1978). Similarly, different respondents (i.e., subordinates and supervisors) disagree whether OCBs are part of the employees’ required work roles or are extra-role behaviors (e.g., Lam et al., 1999). Not surprisingly, these findings are aligned with prior suggestions signifying that work roles are subject to negotiation and modification (e.g., Ilgen and Hollenbeck, 1991), or that they can be artificially and continuously enlarged by managers in attempts to make employees overfulfill their work obligations (e.g., Van Dyne and Ellis, 2004).

Perceived role breadth has been examined in connection to OCB (Bachrach & Jex, 2000; Haworth & Levy, 2001; Lam, Hui, & Law, 1999; Morrison, 1994; Tepper, Lockhart, & Hoobler, 2001; Tepper & Taylor, 2003). It is important to note that perceived role breadth and OCB, although similar, are two fundamentally different things. Research on OCB focuses on the actual
behaviors that employees engage in, while research examining perceived role breadth focuses on how an individual perceives their job. Although far more research has focused on the actual proactive behaviors in which employees engage in, such as network building and taking initiative (Thompson, 2005), other research has shown that perceived role breadth directly predicts whether these OCB are performed in the first place (e.g., Coyle-Shapiro et al., 2004; Hofmann et al., 2003; Kamdar et al., 2006; Tepper & Taylor, 2003). Specifically, numerous studies have shown that employee OCB role definitions (i.e., what is considered in-role vs. extra-role) affect OCBs either through role enlargement (e.g., Coyle-Shapiro & Kessler, 2002; Coyle-Shapiro et al., 2004; Kidder, 2002; Morrison, 1994; Pond et al., 1997) or through role discretion (e.g., Tepper et al., 2001; Tepper & Taylor, 2003; Zellars et al., 2002).

For instance, Kamdar, McAllister, and Turban (2006) performed a field study among engineers and their supervisors at a Fortune 500 company in India and found both direct and interactive effects of procedural justice perceptions and individual differences on perceived role breadth, which they and others call OCB role definition. Furthermore, they found that perceived role breadth not only predicted OCB directly, but also moderated the effects of procedural justice perceptions on OCB. Another study sought to disentangle whether employees engage in OCB’s due to reciprocation to the organization or if they simply perceived OCB-behaviors as part of their job, regardless of reciprocation (Coyle-Shapiro et al., 2004). They found that procedural and interactional justice are positively associated with mutual commitment that, in turn, is related directly to OCB, and indirectly, through expanding the boundaries of an individual’s job, suggests that together the reciprocation thesis and ‘it’s my job’ argument actually complement, rather than compete with, each other and provide a more complete understanding of OCB.
Coyle-Shapiro et al. (2004) further explain that the more nuanced differences in whether an employee engages in OCBs based on reciprocation solely or out of perceived duty lies in the process by which individuals respond; that is, role enlargement and role maintenance. Pond, Nacoste, Mohr, and Rodriguez have argued that “employees believe that most behaviors on a typical measure of OCB are formally evaluated by their supervisors” (p. 1537). Thus, Morrison (1994) concludes that employees engage in OCB because these behaviors are viewed as part of their job while Pond et al. (1997) argues that employees engage in OCB because these behaviors are viewed as being directly rewarded. Coyle-Shapiro et al.’s (2004) work demonstrates that both Morrison (1994) and Pond et al.’s (1997) perspectives have merit. Put simply, individuals are likely to engage in OCB and to expand their role perceptions due in large part to exchanges and reciprocity, which is developed through trust and perceptions of justice with their organization.

**Antecedents of Perceived Role Breadth**

Few studies have investigated the predictors of perceived role breadth (Chiaburu & Byrne, 2009). Those studies that have explored antecedents have focused on attitudes such as job satisfaction (e.g., Morrison, 1994) or organizational commitment (Gordon et al., 1992), and contextual variables such as organizational support, organizational justice, and the quality of exchanges with the direct supervisor (Coyle-Shapiro et al., 2004; Hoffman et al., 2003; Tepper et al., 2001). Although enlargement of role definitions can be the result of how employees perceive their relationships and exchanges with their leaders and overall organization (Cropanzano & Mitchell, 2005), few researchers have examined the specifics of OCB role definition within the employee-organization relationship. Even fewer researchers have examined the specifics, such as the mediating mechanisms at multiple levels of analysis of perceived role breadth within the employee-leadership relationship. Whether an individual perceives OCB as extra-role or within-
role, it has been demonstrated that such behaviors are more likely to occur when perceived as within-role (Coyle-Shapiro et al., 2004).

**Social exchange and trust as antecedents of perceived role breadth.** Chiaburu and Byrne (2009) investigated the relationship between trust and perceived role breadth through both relation- and exchange-based variables and found that organizational commitment mediated the relationships between trust and perceived role breadth. They further found that job satisfaction moderated the relationship between trust and perceived role breadth. Thus, both attitudinal as well as social variables were shown to expand employee role breadth. Other related research has shown that individuals with high levels of trust in the organization tend to enter social exchange relationships with the organization (Dirks & Skarlicki, 2004). Indeed, research has demonstrated that individuals indicating a social exchange with the organization do contribute high levels of OCBs (e.g., Masterson et al., 2000). As noted previously, performing OCB based on social exchange does not necessarily indicate that the employee perceives such behaviors as extra-role, as was initially theorized (Coyle-Shapiro et al., 2004).

Rather than perceiving a one-sided view of an individual’s relationship with their organization, some researchers have shown that covenantal relationships, reflecting the degree of commitment in the relationship as well as mutual trust and shared values, can be a more expansive way of conceptualizing the reasons individuals engage in OCB behaviors (Graham & Organ, 1993). These types of covenantal relationships, like social exchange, retain the element of reciprocity (Van Dyne et al., 1994). Indeed, one key antecedent to an individuals’ development of job roles is how much they trust in their leadership. Mayer et al. (1995) defined trust as the general willingness to make oneself vulnerable to the actions of another party (e.g., one’s organization or leader). Further, Mayer et al. (1995) proposed that trust should lead to increased
cooperation on the part of the employee. Specifically, this linkage to cooperation suggests that those who are more trusting may be more likely to expand their job roles in the spirit of cooperation and collaboration. In support, previous research has linked organizational trust to civic virtue behaviors (one form of OCB; Robinson & Morrison, 1995) and to OCB (Aryee et al., 2002; Dirks & Ferrin, 2002).

Rotter (1967, 1971) defines trust as a generalized expectancy to attribute benevolent intent to others. Thus, employees who trust their organization and leadership are expected to enlarge their role to a greater extent than those low in trust, at least in part because they are less likely to perceive malevolence on the part of their organization (e.g., an attempt to manipulate or exploit the employee’s trust). Furthermore, those who trust others anticipate that they will be treated fairly and not taken advantage of (Smith et al., 1983). Hence, these individuals are more likely to become involved in their organizations, such as expanding their work roles and engaging in OCBs, when compared with those who do not trust their organization.

Kamdar and colleagues (2006) suggest that “within social exchange theory, OCB role definitions emerge as individually held beliefs about personal obligations within social exchange relations” (p. 841). A social exchange relationship is a relationship existing outside formal contracts and in which one’s contributions and obligations are not explicitly stated (Blau, 1964). Consistent with economic exchanges, social exchange relationships include expectations of some future return for contributions (Blau, 1964). However, unlike economic exchange, social exchange relationships are based on unspecified agreements, in which there is no time-table for reciprocation. Hence, given the ambiguity surrounding social exchange relationships, trust is critical (Blau, 1964). Specifically, employees must trust that their exchange partner will fulfill his or her agreements, otherwise the likelihood of social exchange will be low. Research has
shown that employees reciprocate with extra-role behaviors after the organization and/or leadership has provided valued resources such as organizational fairness (Masterson et al., 2000), organizational support (Eisenberger et al., 1990), trust (Aryee et al., 2002), psychological contract fulfillment (Turnley et al., 2003), and generalized social exchanges (Shore et al., 2006).

**Social exchange and organizational commitment as antecedents of perceived role breadth.** Empirical studies show that employees engaged in social exchanges with their organizations are more committed (e.g., Shore et al., 2006). Organizational commitment has been defined as:

“The relative strength of an individual’s identification with and involvement in a particular organization… and can be characterized by at least three related factors: 1) a strong belief in and acceptance of the organization’s goals and values; 2) a willingness to exert considerable effort on behalf of the organization; and 3) a strong desire to maintain membership in the organization (Mowday et al, 1979; p. 226).”

Almond and Verba (1963) argue that individuals who strongly identify with a collective identity and feel valued are more likely to expand their role and engage in contributory behaviors toward that community. Likewise, Gorden, Anderson, and Bruning (1992) found a positive relationship between employees’ perceptions of the commitment that exists in their relationship with their organization (i.e., the organization’s commitment to them as an individual in addition to their own commitment to the organization) and OCBs. Other research supports the notion that those with higher levels of organizational commitment are more likely to engage in OCBs (Moorman et al., 1993; Organ & Ryan, 1995; Shore & Wayne, 1993). As it relates to perceived role breadth, Morrison (1994) found that employees who were more organizationally committed defined their job roles more broadly (i.e., included OCBs as in-role behaviors) than those with
low organizational commitment. In seeking to better understand why individuals with higher perceived role breadth were more likely to engage in OCB, Coyle-Shapiro et al. (2004) tested whether mutual commitment between organization and employee mediated the relationship between perceived role breadth and OCB, and only found a partial mediation. The present dissertation is not examining the relationship between perceived role breadth and OCB, but rather, on transformational leadership and perceived role breadth, but, like Coyle-Shapiro et al. (2004), anticipates that organizational commitment is a mediating mechanism explaining this relationship.

**Four Distinct Types of Role Perceptions**

McAllister et al. (2007) disentangled four distinct types of OCB role perceptions: 1) perceived role breadth, 2) perceived role instrumentality, 3) perceived role efficacy, and 4) perceived role discretion. The dimension most studied is *perceived role breadth*, which refers to whether one regards behaviors associated with a particular class of OCB as part of one’s job (Bachrach & Jex, 2000; Morrison, 1994). Perceived role breadth is greater when behaviors from a particular OCB category are considered in-role rather than extra-role (Bachrach & Jex, 2000; Coyle-Shapiro, Kessler, & Purcell, 2004; Hofmann, Morgeson, & Gerras, 2003; Morrison, 1994).

**Role instrumentality.** The second role perception that McAllister et al. (2007) distinguished is *perceived role instrumentality*, which refers to whether one perceives a relationship between performance of an OCB and outcomes, such as rewards and punishment (Haworth & Levy, 2001; Hui et al., 2000; Reed & Kidder, 2005). Although, uncertainty remains because perceived role instrumentality has typically been combined with perceived role breadth (Tepper et al., 2001; Tepper & Taylor, 2003; Zellars et al., 2002).
Despite the idea that OCB is not directly rewarded (Organ et al., 2006), evidence indicates supervisors’ factor in OCB when evaluating and rewarding performance (MacKenzie, Podsakoff, & Fetter, 1991, 1993). Indeed, evidence suggests that perceived role instrumentality predicts OCB (Haworth & Levy, 2001; Hui et al., 2000). Findings have also shown that many employees identify a connection between OCB and valued outcomes such as promotions and pay increases (Haworth & Levy, 2001; Hui et al., 2000; Schnake & Dumler, 1997), and that most employees believe that OCB should be rewarded in some way (Reed & Kidder, 2005). Given these findings, it is perhaps not unexpected that employees are more likely to perform OCB when they perceive it to be linked to outcomes they value (Haworth & Levy, 2001; Hui et al., 2000).

Haworth and Levy (2001) used the term *instrumentality beliefs* to describe the perceived link between OCB and valued outcomes. They argued that because OCBs are generally more volitional than task behaviors, they vary as a function of the employee’s cognitive appraisal of costs and benefits. In other words, OCB has a “deliberate controlled character” and is affected by “perceived environmental contingencies” (Haworth & Levy, 2001, p. 65).

Wang, Baba, Hackett, and Hong (2016) performed a study showing that employees’ efficacy, instrumentality, and autonomy perceptions concerning voice mediated the association between high-performance work systems (HPWS) and expanded role definition for voice. Instrumentality mediated the HPWS-role definition relationship for helping. Importantly, these relationships were found even after controlling for the social exchange concept. Moreover, Wang et al. (2016) further found positive links between HPWS, and both supervisor-rated helping and voice were mediated by employees’ role definitions. They further found that employees’ trust in
their supervisor strengthened the positive impact of HPWS on expanded role definitions for both helping and voice.

This last finding is relevant to this dissertation and, as will be shown later during the literature review on trust in leader, I will propose that trust in leadership is a mediator of the relationship between transformational leadership and perceived role breadth. Moreover, perceived role instrumentality, which I will be calling role instrumentality for the remainder of this dissertation for sake of consistency, will be one of the primary outcome variables. To be clear, perceived role breadth is the primary construct of interest in this study, but role instrumentality is also of interest. Hypotheses related to both perceived role breadth and role breadth instrumentality will follow the remainder of the literature review.

**Role breadth self-efficacy.** Self-efficacy is defined as the individuals’ belief in their capability to perform tasks (Bandura, 1994). This belief can include one’s assessment of their ability to cope with new challenges. Role Breadth Self-Efficacy (RBSE) is a form of self-efficacy which refers to the degree of people’s belief or confidence that they have the capability to perform broader tasks besides the immediate technical work (Parker, 1998). Other definitions of RBSE refer to an individual’s perception of his or her competence in performing a given type of OCB (Bandura, 1986; Gist & Mitchell, 1992). Prior research has connected self-efficacy to OCB-related behaviors such as issue selling (Ashford, Rothbard, Piderit, & Dutton, 1998), proactive behavior that supports work unit functioning (Parker, 2000; Parker, Williams, & Turner, 2006), and creative self-efficacy predicts creative behavior at work (Tierney & Farmer, 2002, 2004). Employees with task-specific self-efficacy generally perform those tasks better (Barling & Beattie, 1983) and persevere when problems arise (Lent, Brown, & Larkin, 1987). Individuals with high RBSE have been found to react positively when faced with new job
challenges (Cunningham et al., 2002). Furthermore, previous research suggests RBSE as a central linking mechanism between job control and proactive behavior (Grant & Ashford, 2008; Parker et al., 2006).

Up until this point, transformational leadership has only been examined directly with PBSE, not with perceived role breadth. This dissertation seeks to expand the current scope of literature on transformational leadership by examining it as a predictor of perceived role breadth.

**Perceived role discretion.** The fourth role perception McAllister et al. (2007) distinguished was perceived role discretion, which refers to the extent an individual perceives choice with respect to performing a particular class of OCB (Organ et al., 2006). From its early conceptualization, OCB has been understood as discretionary behavior that employees can choose whether to engage in (Organ, 1990). Still, scholars have argued that employees may differ in the extent to which they actually perceive OCB as being discretionary (Morrison, 1994; Tepper et al., 2001).

Scholars have argued that felt autonomy leads to higher internalized motivation (Ryan & Deci, 2000; Sheldon, Turban, Brown, Barrick, & Judge, 2003). Consistent with this idea, studies have shown that perceived job autonomy and self-determination are positively associated with OCB (Alge, Ballinger, Tangirala, & Oakley, 2006; Bell & Menguc, 2002; Cappelli & Rogovsky, 1998; Farh, Podsakoff, & Organ, 1990; Niehoff, Moorman, Blakely, & Fuller, 2001). In addition, felt control has been shown to lead to more personal initiative (Frese et al., 1997), a construct closely related to taking charge.

Prior researchers have confirmed that role definitions interact with procedural justice and subsequently influence employee engagement in OCB (e.g., Tepper et al., 2001; Tepper and Taylor, 2003). Specifically, employees who perceive OCBs as part of their roles are less
influenced by organizational justice factors when they decide to be good organization citizens. Conversely, employees who perceive OCBs as extra-role perform the corresponding OCB with higher frequency when they perceive higher levels of procedural justice in their work organizations. When procedural justice is low, however, employees who classify OCBs as extra-role exercise their option to refrain from citizenship behaviors. Thus, Tepper et al. (2001) proposed that employees engage in an assessment of their organizational justice context, and use role definitions to enhance or diminish their behavioral engagement in subsequent OCBs using role discretion.

Chiaburu (2007) performed a study examining whether role enlargement and role discretion explained the relationship between interactional fairness and OCB. Their results provided support for a role discretion effect, whereby the OCBs of employees with more restricted role definitions are a function of interactional fairness to a greater extent than they are for employees with less restricted role definitions.

**OCB-Factors to be Examined as Role Breadth Factors**

Although most citizenship behavior research assumed citizenship behaviors were universally extra-role across people, jobs, and tenure, arguments have been made that OCB’s are actually more role-specific (Morrison, 1994; Van Dyne et al., 1995). Indeed, numerous studies have shown that employee OCB role definitions (i.e., what is considered in-role vs. extra-role) affect OCBs either through role enlargement (e.g., Coyle-Shapiro & Kessler, 2002; Coyle-Shapiro et al. 2004; Kidder 2002; Morrison 1994; Pond et al. 1997) or through role discretion (e.g., Tepper et al., 2001; Tepper & Taylor ,2003; Zellars et al. 2002). According to role theory, employees will enact their work roles in different ways (Biddle, 1979; Graen 1976; Ilgen & Hollenbeck, 1991). Hence, researchers have recently directed energy towards understanding
OCB role definitions in an effort to better understand when and under what conditions employees perform citizenship behaviors (Chiaburu & Byrne, 2009). Although researchers are directing more attention and energy toward OCB role definitions, such as perceived role breadth, it often remains unclear whether scholars are actually discussing extra-role or in-role perceptions and behaviors. This, however, is becoming increasingly clarified by researchers on these subjects, which will make future research, particularly on role perceptions such as perceived role breadth, more focused, contextual, and clear.

Although there are a number of ways in which OCBs have been conceptualized over the years (e.g., Bateman & Organ, 1983; Organ, 1988, 1990; Smith et al., 1983; Van Dyne, Graham, & Dienesch, 1994; Williams & Anderson, 1991), the two most used and helpful conceptualizations are those developed by Organ (1988, 1990) and by Williams and Anderson (1991). Indeed, Organ (1988) originally proposed a five-factor OCB model consisting of altruism, courtesy, conscientiousness, civic virtue, and sportsmanship. However, he subsequently expanded this model (Organ, 1990) to include two other dimensions (i.e., peacekeeping and cheerleading).

Empirical evidence (Bell & Menguc, 2002; Hui, Lee, & Rousseau, 2004; Lam, Hui, & Law, 1999; Podsakoff et al., 1990) suggests managers can easily distinguish between Organ’s (1988, 1990) sportsmanship, civic virtue, and conscientiousness dimensions. According to Organ (1988), sportsmanship is defined as a willingness on the part of employees to tolerate less-than-ideal circumstances without complaining and making problems seem bigger than they actually are; civic virtue is behavior indicating employees take an active interest in the life of their organization; and conscientiousness (often called compliance) is behavior indicating employees accept and adhere to the rules, regulations, and procedures of the organization. However,
empirical research (Bachrach, Bendoly, & Podsakoff, 2001; MacKenzie et al., 1991; Podsakoff & MacKenzie, 1994) also suggests managers struggle distinguishing between the other dimensions identified in Organ’s conceptual model. Specifically, managers often perceive altruism, courtesy, peacekeeping, and cheerleading under the same overall helping dimension. Thus, some have argued that helping behavior may be viewed as a second-order latent construct comprising these four first-order dimensions, because as noted by Podsakoff, Ahearne, and MacKenzie (1997), these dimensions “clearly involve helping others with or preventing the occurrence of work-related problems” (p. 263).

The second major conceptualization of OCBs is that proposed by Williams and Anderson (1991). These authors organize OCBs into categories on the basis of the target, or direction, of the behavior. Specifically, they call behaviors directed toward the benefit of other individuals OCB-I, whereas behaviors directed toward the benefit of the organization are called OCB-O. Williams and Anderson originally identified Organ’s (1988, 1990) altruism dimension as an exemplar of OCB-I. Based on the fact that courtesy, peacekeeping, and cheerleading behaviors are aimed at helping other individuals, it is also appropriate to include them in the OCB-I category. Moreover, although Williams and Anderson originally used Organ’s compliance (or conscientiousness) dimension as an exemplar of OCB-O, other researchers (Coleman & Borman, 2000; Hoffman, Blair, Meriac, & Woehr, 2007; LePine et al., 2002) have also included civic virtue and sportsmanship in this category. Thus, all of Organ’s (1988, 1990) OCB dimensions can be captured by Williams and Anderson’s conceptual model.

In addition, Williams and Anderson’s (1991) categorization incorporates most other OCB-related constructs. For example, OCB-I captures not only Organ’s (1990) altruism, courtesy, peacekeeping, and cheerleading dimensions, but also Graham’s (1989) interpersonal
helping, Van Scotter and Motowidlo’s (1996) interpersonal facilitation, and Farh, Earley, and Lin’s (1997) helping coworkers and interpersonal harmony constructs. In a similar way, OCB-O captures not only Organ’s (1990) compliance, civic virtue, and sportsmanship dimensions, but also Graham’s (1991) organizational loyalty; Borman and Motowidlo’s (1993, 1997) endorsing, supporting, and defending organizational objectives; Van Scotter and Motowidlo’s (1996) job dedication; LePine and Van Dyne’s (1998) voice behavior; Morrison and Phelps’s (1999) taking charge (or individual initiative); and Farh, Zhong, and Organ’s (2004) promoting the company’s image constructs. Graham (1991, p. 255) defined organizational loyalty as an, “Identification with and allegiance to organizational leaders and the organization as a whole, transcending the parochial interests of individuals, work groups, and departments. Representative behaviors include defending the organization against threats; contributing to its good reputation; and cooperating with others to serve the interests of the whole.” This definition seemed to comprise civic virtue, which was previously described as an active interest in the life of the organization (Organ, 1988, 1990; Podsakoff et al., 1990). As will be discussed further, specifically in the methods and results sections, factor analyses were conducted on the perceived role breadth and role instrumentality measures of this study. Factors were developed based on the literature review just described.

Conclusion

There can be considerable variation in how broadly individuals define their work roles (Kamdar et al., 2006; McAllister et al., 2007; Morrison, 1994). This is referred to as perceived role breadth and is the set of behaviors or activities that an individual defines as being in-role (Morrison, 1994). Expanding one’s role definition generally occurs as a byproduct of give-and-take exchanges via ongoing interactions with others (e.g., Graen 1976; Grant & Ashford, 2008;
Katz & Kahn, 1978). One study investigated the relationship between trust and perceived role breadth and found that organizational commitment mediated the relationships between trust and perceived role breadth (Chiaburu & Byrne, 2009). Other research has shown organizational commitment to predict perceived role breadth as well (Gordon et al., 1992).

The present dissertation seeks to expand upon the lack of research and empirical understanding of the antecedents of perceived role breadth (Chiaburu & Byrne, 2009). In so doing, this dissertation was the first to directly study transformational leadership as a predictor of perceived role breadth, and even went beyond simply studying that direct relationship by exploring multilevel mediators that further explained the relationship. Given that perceived role breadth is associated with the quality of exchanges between an employee and their direct supervisor (Coyle-Shapiro et al., 2004; Hoffman et al., 2003; Tepper et al., 2001), and that LMX has been found to fully mediate the relationship between transformational leadership and employee outcomes (Boer, Deinert, Homan, & Voelpel, 2016), it seems likely that transformational leadership may explain perceived role breadth. In the next chapter, I provide literature review of transformational leadership and then provide theoretical explanations and hypotheses relating to perceived role breadth as an outcome of transformational leadership.
CHAPTER THREE
TRANSFORMATIONAL LEADERSHIP

Downton (1973) first coined the term transformational leadership, which he defined as a leadership style whereby one or more persons engage with others in such a way that leaders and followers raise one another to higher levels of motivation and morality. The concept, however, did not emerge as an important leadership approach until the publication of Burns’ (1978) book, Leadership. Burns used the term transforming leadership to emphasize the distinguishing feature of this approach, which is to “convert self-interest into collective concerns” (p. 19). For Burns, leadership is about change and sharing a common purpose and values.

Originally, theorists used Burns’ transforming leadership to classify politicians’ leadership styles. Burns compared this transforming leadership to the traditional leadership style, which he related to transactional leadership. Burns’ premise for transforming leadership comprised of transactional leaders, ordinary leaders, or transformational leaders. He determined that the leaders’ actions and the impact of those actions on their followers shaped the basis of transactional and transformational leadership types. Bass (1985) changed Burns’ transforming leadership theory’s name to transformational leadership theory and provided a more structured and detailed explanation of transformational leadership and its components.

Bass’ transformational leadership has been a leadership approach that organizational leaders have used to examine if followers are inspired by their leaders to increase in their morals and work performance motivation level (Bass, 1985; Hyypia & Parjanen, 2013). Differing from Burns’ (1978) outline of transforming leadership, Bass did not sort transformational and transactional leadership as being polar opposites (Krishnan, 2012; Leroy, Palanski, & Simons,
2012). Indeed, Bass designated transactional leadership and transformational leadership as being effective concurrently.

Based on Burns’ (1978) theory, Bass and Aviolo (1990) developed the Full Range of Leadership Program (FLRP), a method for training and developing transformational leaders. Later, Bass and Avolio (1995) produced the Multifactor Leadership Questionnaire-Form 6S (MLQ), an instrument that assesses transformational, transactional, and laissez-faire leadership styles. Since the publication of the MLQ, researchers have gathered extensive data that provide evidence of the instrument’s reliability and validity, and it is widely used in leadership research (Bass & Riggio, 2006).

Transformational leadership has been examined in relation to other leadership styles. Mahdinezhad et al. (2013) and Basham (2012) compared transformational leadership to transactional leadership. Transactional leadership refers to a leadership style in which leaders demonstrate transactional behavior and use rewards to achieve cooperation from employees (Mahdinezhad et al., 2013). The purpose of the study conducted by Mahdinezhad et al. (2013) was to identify which leadership style, transactional or transformational, was more effective as it relates to job performance. The researchers defined job performance and provided an analysis of literature relating to transformational leadership and transactional leadership. They concluded that the two leadership styles are not at opposite ends of a continuum and that leaders can exhibit characteristics of both leadership styles to achieve desired results in their follows.

Transactional and transformational leadership are two of the primary components of Bass and Avolio’s (1995) Full Range Leadership Theory. Both types of leadership are derived largely from social exchange theory and have been defined primarily in terms of their component behaviors. Although transactional and transformational leadership are distinct, they are not
mutually exclusive; to be effective, leaders must use a combination of both types of leadership (Bass, 1990a).

*Transactional leadership* refers to an exchange between the leader and follower in which the follower receives valued outcomes when he or she acts in accordance with the leader’s desires (Yukl, 2009). Transactional leadership is characterized by two behaviors: 1) contingent reward and 2) active management-by-exception (Avolio, Bass, & Jung, 1999). Contingent reward behaviors include clear explanations of the actions required to obtain desired rewards, and the use of incentives and conditional rewards to motivate and influence followers. Active management-by-exception refers to attempts by leaders to actively enforce rules in an effort to avoid mistakes (Avolio, Bass, & Jung, 1999). In contrast, *transformational leadership* refers to the ways in which leaders affect followers who, in turn, respect, trust, and admire the leader (Bass, 1985).

Transformational leaders influence followers by: 1) focusing on the value and importance of the task, 2) encouraging followers to replace self-interest with the goals of the team/organization, and 3) engaging higher-order needs of followers. Transformational leaders thus “encourage followers to embrace moral values and to act in the interest of the collective rather than according to self-interest” (Brown & Trevino, 2006, p. 955). By engaging the values of followers, transformational leaders transcend purely exchange-based transactional leadership processes (Bass, 1985).

**The Four Dimensions of Transformational Leadership**

Transformational leadership is a type of normative theory of leadership that signifies how leaders ought to behave (Grant, 2012; Hyypia & Parjanen, 2013; Olafsen, Halvari, Forest, & Deci, 2015). Bass’ (1985) transformational leadership theory signified that followers can feel and
experience admiration, loyalty, and trust, and consequently, focused on followers’ impact and influence of their leaders (Bass, 1985; Pandey, Davis, Pandey, & Peng, 2016). Bass’ transformational leadership theory consists of four main dimensions: 1) intellectual stimulation, 2) individualized consideration, 3) inspirational motivation, and 4) idealized influence (Bass, 1985; Grant, 2012; Olafsen, Halvari, Forest, & Deci, 2015; Pandey et al., 2016). These four dimensions of transformational leadership are have been shown to motivate employees to improve work performance and encourage personal and professional development (Caldwell et al., 2012).

**Idealized influence.** Leaders who exhibit *idealized influence* or charisma are revered, respected, and trusted (Bayram & Dinc, 2015). Transformational leaders enable such a relationship by conveying a vision of the future of the organization and its employees and providing encouraging details on how to attain this vision (Okcu, 2014). Consequently, leaders with idealized influence are confident and optimistic, but also have been found to share information on risks and challenges with their followers (Okcu, 2014). Finally, leaders with idealized influence stress the importance of values and morals, particularly through their own actions (Bayram & Dinc, 2015; Okcu, 2014).

**Inspirational motivation.** The second dimension of transformational leadership is *inspirational motivation*, which refers to the ability of a leader to motivate followers to think and act towards achieving goals and reaching high expectations (Bayram & Dinc, 2015). Inspirational motivation is possible and effective when leaders know their followers’ individual and collective characteristics such that they are better able to lead their followers towards improved thinking and behavior, and collaborative action (Bayram & Dinc, 2015).
As transformational leaders communicate and share a collective vision with their followers, they also highlight the importance of each individual’s role in the achievement of that vision. Indeed, it has been shown that one of the most critical skills related to inspirational motivation is the ability to effectively communicate and clearly explain their vision, mission, and roles to followers (Bayram & Dinc, 2015). Given that transformational leadership consists of helping followers clarify and define their work roles, it seems that transformational leadership would predict perceived role breadth, or the extent to which followers consider a set of behaviors or activities to be defined as being in-role (Morrison, 1994).

**Intellectual stimulation.** While inspirational motivation refers to the leader’s ability to motivate followers through emotional encouragement, the third dimension, *intellectual stimulation*, refers to a transformational leader’s aptitude for engaging followers in intellectual exercises towards the creation of solutions to organizational issues as well as to innovate in problem solving (Bayram & Dinc, 2015; Marinova et al., 2015). Transformational leaders who utilize intellectual stimulation can increase followers’ awareness about issues and problems within the organization and seek to change how followers or employees think about their work and roles in the firm (Marinova et al., 2015). Indeed, intellectual stimulation may help employees expand their work roles, thus enabling them to go above and beyond the prescribed call of duty.

Encouraging employees to engage in unconventional thinking and innovation allows them to develop and utilize a broader range of skills and knowledge, thereby allowing them to better contribute to the organization in ways such as involvement in collective decision-making and addressing new challenges (Marinova et al., 2015). Such intellectual stimulation and augmented responsibility create a sense of empowerment among employees, which can
subsequently increase their creative ability to develop, share, and apply innovative ideas (Marinova et al., 2015).

**Individualized consideration.** The final dimension, *individualized consideration*, refers to the personal attention and reinforcement a leader provides to each of his or her subordinates. By providing each follower ample personal time and attention, a transformational leader is able to understand and describe followers’ personalities, abilities, needs, and desires (Bayram & Dinc, 2015). Consequently, a transformational leader with individualized consideration can often help subordinates create a vision for the future and also provide them opportunities for growth and professional development (Bayram & Dinc, 2015; Okcu, 2014).

**Expansions to the four dimensions.** Researchers have expanded upon the four dimensions of transformational leadership in attempts to better conceptualize its influence on outcomes and to adapt the concept to a variety of fields and situations. For instance, Conchie, Taylor, and Donald (2012) added the dimension of *trust to transformational leadership* in order to apply the concept to high-risk industries that promote safety. They found that affect-based trust has a mediating role on the effects of transformational leadership. For this study, the concept of affect-based trust was used, in which it is expected that individuals would act unselfishly towards one another and show concern for their welfare.

**Outcomes of Transformational Leadership**

Through a consistent process of motivation, learning, and the constant thrust towards excellence both for oneself and the organization as a whole, transformational leadership can enable leaders to create an organizational culture of high trust and excellent performance, which can facilitate opportunities for increased profitability and long-term sustainability (Caldwell et al., 2012). Moreover, as transformational leadership requires a continuous process of motivation,
action, and development, it embodies a need for great commitment to the organization and its members, including the commitment to honor obligations to employees, not only as required by law but also to keep them informed, improve their motivation, and to provide them with ample reach and resources to enable their personal and professional growth (Caldwell et al., 2012). As transformational leaders demonstrate commitment to followers, it is likely the followers will reciprocate by enhancing their commitment to their leaders and to the organization as a whole (Coyle-Shapiro et al., 2004).

Previous research shows that transformational leadership relates positively to employees’ proactive behavior (e.g., Belschak & Den Hartog, 2010; Griffin, Parker, & Mason, 2010; Strauss, Griffin, & Rafferty, 2009). Over the past few decades, researchers have consistently examined the idea that transformational leadership can motivate followers “to perform above and beyond the call of duty” (House et al., 1991, p. 364; Wang et al., 2011; Carter et al., 2014) by building enthusiastic team spirit and inspiring employees’ commitment to the organization (Bass & Avolio, 1995; Joo et al., 2012). Robust evidence has shown that followers of transformational leaders are more productive, regardless of whether performance is measured at the individual, team, unit, or firm level (Barrick, Thurgood, Smith, & Courtright, 2015; Bass, Avolio, Jung, & Berson, 2003a, 2003b) and whether the performance outcomes are in-role tasks, extra-role activities, or innovations (Chen, Farh, Campbell-Bush, Wu, & Wu, 2013; Choi, 2009; Keller, 1992).

Transformational leadership behavior is frequently associated with higher levels of employee satisfaction (Walumbwa, Orwa, Wang, & Lawler, 2005), organizational performance, follower work engagement (Zhu, Avolio, & Walumbwa, 2009), and employees’ willingness to exert extra effort to reach a given goal. More recently, Higgins (2015) found that
transformational leaders improve the quality of patient care among nurses by creating supportive practice environments and OCBs.

**Transformational Leadership and OCB**

Recent studies have examined the relationship between transformational leadership and OCB (Shah, Hamid, Memon, & Mirani, 2016). Transformational leadership can be effective in promoting OCB in the workplace, and although there is much known about the mechanisms explaining this relationship, there is still much to be discovered (Carter et al., 2012). For instance, Carter et al. (2012) examined the effect of transformational leadership in maintaining employee productivity, commitment, and satisfaction in a continuous incremental change context. In their study, they conducted surveys among employees and their team leaders that measured perceptions on transformational leadership, relationship quality, change frequency, task performance, and OCB. Through hierarchical linear modelling of the gathered data, their results showed that transformational leadership was related to employees’ task performance and OCB, and that this effect was greatly influenced by the quality of the relationship between the manager or team leader and the members (Carter et al., 2012).

Moghadam, Moosavi, and Dousti (2013) also assessed the relationship between transformational leadership and OCB. They specifically analyzed the relationship of these constructs among the general office of the Sport and Youth of Mazandaran Province. The results from the regression test revealed that OCB can be predicted staff member’s perception and understanding of transformational leadership (Moghadam, Moosavi, & Dousti, 2013). Another study used a general framework of proactive motivation to examine the effects of the individualized consideration dimension of transformational leadership and organizational climate on change-oriented OCB (López-Domínguez, Enache, Sallan, & Simo, 2013). They found that
individuals’ cognitive emotional states were considered mediating variables between transformational leadership and OCB.

Other research examined the effect of transformational leadership on OCB in the food service industry and found that 1) the individualized inspiration and charisma of transformational leaders can lead to positive effects on the altruistic action of OCB, 2) intellectual stimulation and individual consideration of transformational leadership can negatively affect the altruistic action of OCB, and 3) intellectual stimulation and individual consideration of transformational leadership do not have effects on the conformist action of OCB (Shin, 2012). Shin (2012) further found in their study that individualized inspiration and charisma can lead to conformist actions, showing that the various dimensions of transformational leadership could potentially promote both positive and negative influences on dimensions of OCB. Another study examined the relationship between transformational leadership and OCB in the healthcare industry, and found mediating effects of empowerment on the relationship between transformational leadership, job characteristics, and OCB among nurses (Lin, Li, & Hsiao, 2012).

Saeed and Ahmad (2012) performed a study measuring the effects of the level of perceived transformational leadership style on the level of OCBs among the administrative staff of the Punjab University, consisting of 15 faculties. Their results indicated that transformational leadership and OCB are positively correlated, suggesting that transformational leaders may encourage altruism, courtesy, and conscientiousness among their followers.

**Transformational Leadership and Perceived Role Breadth**

Relationship-based theories have been predominantly used to account for the tendency of employees who expand their role definitions to ultimately engage in more frequent OCB. For instance, social exchange (Blau, 1964) can explain why employees are likely to engage in OCB
and the relationship of OCB to role breadth. Employees in a social exchange relationship are thought to follow equity (Homans, 1961) and reciprocity norms (Gouldner, 1960) to reciprocate favorable treatment from the supervisor and organization by broadening their work role to include OCB (Chiaburu & Marinova, 2006; Hofmann et al., 2003; Kamdar, McAllister, & Turban, 2006; Tepper, Lockhart, & Hoobler, 2001). Importantly, unlike a transactional quid pro quo exchange, a social exchange relationship is open-ended, such that the timing and nature of reciprocity is loosely defined. This provides employees with the flexibility to engage in reciprocity by way of expanded role definitions that include OCB. From a social exchange perspective, perceived role breadth reflects felt obligations of employees to their supervisors and organizations (Hofmann et al., 2003; Kamdar et al., 2006), and OCB is a currency of exchange that can be used to fulfill these obligations.

The generally accepted rationalization for broader perceived role breadth is that there is a give-and-take exchange process through ongoing interactions with others (e.g., coworkers, supervisors) which influences how individuals perceive and define their roles (e.g., Graen 1976; Grant & Ashford, 2008; Katz & Kahn, 1978). According to Bass (1990a), both transactional and transformational leadership are derived largely from social exchange theory and have been defined primarily in terms of their component behaviors. Furthermore, transformational leaders who utilize intellectual stimulation can increase followers’ awareness about issues and problems within the organization and seek to change how followers or employees think about their work and roles in the firm (Marinova et al., 2015).

According to some scholars, one of the most critical skills related to inspirational motivation is the ability to effectively communicate and clearly explain their vision, mission, and roles to followers (Bayram & Dinc, 2015). Given that transformational leadership consists of
helping followers clarify and define their work roles, and that perceived role is associated with quality of exchanges between the employee and direct supervisor (Coyle-Shapiro et al., 2004; Hoffman et al., 2003; Tepper et al., 2001), it seems that transformational leadership would predict perceived role breadth.

Understanding the connection between transformational leadership and perceived role breadth will help to explain the consistent connection that has been made between transformational leadership and OCB. Indeed, prior research shown that individuals are less likely to engage in OCB if they view OCB as extra-role rather than in-role. Thus, it seems that perceived role breadth may explain the relationship between transformational leadership and OCB. Yet, no research to this point has examined transformational leadership as a predictor of perceived role breadth. Given that perceived role breadth has been found to strongly predict OCB (Coyle-Shapiro et al., 2004; Hofmann et al., 2003; Kamdar et al., 2006; Tepper & Taylor, 2003), it is likely that perceived role breadth may provide additional insight and future research directions regarding the well-established connection between transformational leadership and OCB.

The following two chapters will cover the constructs of trust in leader and affective organizational commitment, both of which have been shown to be outcomes of transformational leadership and antecedents of perceived role breadth. As will be shown, it is hypothesized that these constructs act as both individual and group-level mediators of the relationship between transformational leadership and perceived role breadth.
CHAPTER FOUR
TRUST IN LEADER

According to Mayer et al. (1995), “Trust is the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control the other party” (p. 712). Shockley-Zalabak, Ellis, and Cesaria (2000) propose that trust “takes time and patience to establish with repetition, interactions, and degrees of openness or delegation. Spending informal, nonwork time with co-workers nurture trust and speeds up its effects” (p. 1).

Mayer et al. (1995) proposed one of the most well-known and influential models of trust. This model was influential in that it was one of the first to begin to truly define trust as separate from its antecedents. Developed to examine organizational trust across levels (e.g., Schoorman, Mayer, & Davis, 2007), the importance of both the perceived characteristics of the trustee as well as the disposition of the trustor is acknowledged. The model proposed by Mayer et al. (1995) examined the antecedents of trust focusing on ability, benevolence, and integrity. Perceived risk and the trustor’s tendency to trust moderated the relationship of trust. While the model had several strengths, a weakness was a lack of specification of the outcomes of trust.

Utilizing and extending the initial work within Mayer et al.'s (1995) model, Williams (2001) developed a model whose referent is trust within groups. Williams (2001) further delineated trust antecedents into belief and affect-based categories. Categorized under the belief component are Mayer's original three antecedents (i.e., benevolence, integrity, and ability). However, extending the original model is the addition of: 1) emotional states as an affect-based antecedent, 2) moderating role of motivation to trust, and 3) specification of a distal outcome of trust (i.e., cooperation).
Taking a slightly different standpoint on trust, Whitener, Brodt, Korsgaard and Werner (1998) defined the antecedents to managerial trustworthy behavior, and correspondingly, how managerial behavior influenced employee perceptions of trust. Specifically, Whitener et al. (1998) presented five types of behavior that affect trust: 1) behavioral consistency, 2) behavioral integrity, 3) participative decision making, 4) communication, and 5) demonstrated concern. The strength of their model was primarily due to its recognition of cross-level phenomena impacting managerial behavior, including a view of trust from the manager and employee perspectives, and the recognition that task interdependence moderates the relationship between leader behavior and development of trust with his/her subordinates.

Frustrated by a lack of integration across the literature base, Dirks and Ferrin (2002) conducted a meta-analytic examination of trust in leadership. Highlighting the complexity within the literature, their framework expanded on the antecedents to trust, conceptualization of trust, and outcomes. Additionally, it examined the moderating role of direct versus indirect leadership. Specifically, their framework consisted of three antecedent variables to trust: leader action and practices, follower attributes (i.e., propensity to trust), and relationship attributes (i.e., length of the relationship). Leader action/practices were defined with constructs such as perceived organizational support, participative decision making, and unmet expectations. Interactional, procedural, and distributive justice was included under leader action practices as well as transformational and transactional leadership styles.

In their meta-analysis, Dirks and Ferrin (2002) specifically reported that trust in leadership had a significant relationship with individual outcomes, including job performance ($r = .16$), OCB (altruism, $r = .19$), turnover intentions ($r = -.40$), job satisfaction ($r = .51$), organizational commitment ($r = .49$), and a commitment to the leaders’ decisions ($r = .24$). They
also showed that there are substantial relationships between perceptions of leaders’ actions and transformational leadership ($r = .72$), interactional justice ($r = .65$), and participative decision-making ($r = .46$). They concluded that “trust in leadership appears to be associated with a well-established set of leadership actions and behaviors” (p. 31). They also noted that this research suggests trust is important to effective organizational functioning.

**Relationship-Based Trust and Character-Based Trust**

Later, Dirks and Skarlicki (2004), who reviewed the trust literature, stated, “Trust in leaders has been linked to positive job attitudes, organizational justice, psychological contracts, and effectiveness in terms of communication, organizational relationships, and conflict management” (p. 21). Dirks and Skarlicki (2004) argued that the trust formation literature is viewed through the lens of two qualitatively different theoretical perspectives of trust: relationship-based and character-based. *Relationship-based trust* is concerned with followers’ perceptions of the nature of their relationship with a leader. Blau (as cited in Dirks & Skarlicki) noted that relation-based trust operates through a social exchange process, stating, “followers see their relationship with their leader as beyond the standard economic contract such that the parties operate on the basis of trust, goodwill, and the perception of mutual obligations” (p. 22). Effective relation-based trust may form the type of relationship with a transformational leader that allows the organization and its members to willingly go beyond what has been expected of them (Burns, as cited in Ciulla, 1998; Simons, 1999).

Following social exchange principles, the relation-based trust perspective suggests that followers will reciprocate benefits received and that individuals will direct their efforts toward the person who initiated the benefit. Relation-based trust operates from a perspective of reciprocity. Dirks and Skarlicki (2004) stated that the immediate line supervisor who manages
performance today may be the beneficiary of followers’ increased job performance or increased OCBs. Followers see the relationship with their leader as beyond the standard economic contract, such that the parties operate on the basis of trust, goodwill, and the perception of mutual obligations (Blau, 1964). The exchange denotes a high-quality relationship, and issues of care and consideration in the relationship are central. Researchers have used this perspective in describing how trust in leader-follower relationships evokes OCBs (Konovsky & Pugh, 1994), in some research, on the operation of transformational leadership and trust (Pillai, Schriesheim, & Williams, 1999), and in literature on leader-member exchange relationships (e.g., Schriesheim et al., 1999). Furthermore, Simons (1999) argues that behavioral integrity is critical in followers trusting that they will “walk their talk and keep their promises” (p. 95). The leader’s behavioral integrity forms the basis for mutual trust or, more precisely, relation-based trust.

Character-based trust, on the other hand, is a perspective that focuses on followers’ perceptions of a leader’s character and how it influences followers’ vulnerability in a hierarchical relationship (Dirks & Skarlicki, 2004). Thus, the followers are especially attuned to the behaviors of the leader, specifically whether he or she keeps their promises (Simons, 1999). If the leader breaks his or her promises and exhibits a lack of integrity, character-based trust would suggest that followers will perceive that person as lacking integrity and withdraw their support in terms of doing extra things for the organization. Mayer et al. (1995) hypothesized that followers would be more willing to take workplace risks if they perceive their leaders to have integrity, capability, or benevolence.

**Trust in Leader**

In Dirks and Skarlicki (2004) review of trust literature, they argued that trust has been an understudied component of several leadership theories, including trust building, transformational
and charismatic leadership, effective leadership behavior, leader and member exchange theory, and leadership effectiveness. In their review, they specifically stated, “Until recently, however, surprisingly little research has focused on illuminating how trust in leaders contributes to the effective functioning of the groups and organizations and how it can be leveraged to meet this objective” (p. 21). By studying trust in leader as a mediating mechanism in the relationship of transformational leadership on perceived role breadth, this dissertation will further illuminate how trust in leaders can contribute to individual and group functioning and effectiveness.

Measure of trust in the leader have been widely used by researchers to assess the quality of social exchange between the leader and follower (Lavelle, Rupp, & Brockner, 2007). Trust in leadership, as stated by Kanji and e Sa’ (2001), promoted good leader-follower relationships, which were the center for the effective functioning of the organization. Pierce and Newstrom (2003) noted that trust in leadership is one means by which leadership operates. Efficient leaders generate a positive kind of follower; followers who are distinguish by their discretionary endeavors (Chi, Chung, & Tsai, 2011; Wang & Rode, 2010).

For instance, employees whose leader practiced individualized consideration had greater trust in their leader, overall satisfaction, role clarity, in-role performance, altruism, sportsmanship, and civic virtue (Podsakoff et al., 1996). As compared to transactional leadership behaviors, transformational behaviors appear to be more positively related to subordinate effectiveness and satisfaction (Waldman, Ramirez, House, & Puranam, 2001) Indeed, transformational leadership has been found to be one of the strongest predictors of trust in one’s leader (Dirks & Ferrin, 2002). Put more directly, it has been shown that transformational leadership can only be made effective through the development of follower trust in the leader (Jung & Avolio, 2000; Kark, Shamir, & Chen, 2003; Podsakoff, Mackenzie, Moorman, & Fetter,
While articulating inspirational visions, transformational leaders emphasize building trust and promoting high levels of performance for organizational success (Gholamreza, Matin, & Farjami, 2009; Piccolo & Colquitt, 2006; Mozes, Josman, & Yaniv, 2011).

According to Gong, Haung, and Farh (2009) trust in transformational leadership is exemplified when employees’ and/or followers’ creativity flourishes. Transformational leaders should engender higher levels of trust in followers as they exhibit support, encouragement, concern and respect for their followers (Dirks & Ferrin, 2002; Jung & Avolio, 2000). With high levels of trust in the leader, followers are more likely to exert stronger efforts to finish their work tasks on time and are more likely to engage in OCBs (Burke et al., 2007; Organ, Podsakoff, & MacKenzie, 2006). For example, prior research (e.g., Organ et al., 2006) found that followers in a trusting relationship reciprocate in the form of enhanced job attitudes, performance and OCBs. Similar findings of a positive relationship between trust in the leader and follower work outcomes were uncovered through meta-analytical work by Dirks and Ferrin (2002). Although trust in the leader has been consistently found to be an influential mediator on the relationship between transformational leadership and follower outcomes, uni-dimensional measures of trust using cognitive elements alone, or ones combining affective and cognitive elements, have typically been adopted in previous studies (Jung & Avolio, 2000; Pillai et al., 1999; Podsakoff et al., 1990).

Trust in leader was chosen for this dissertation because it has been empirically tested and validated in a wide variety of industrial and geographic settings (Schaubroeck et al., 2011; Wang et al., 2010; Yang & Mossholder, 2010), and been the subject of meta-analytical work (Dirks & Ferrin, 2002). It also shares many similarities with prominent transformational models of trust (Lewicki & Bunker, 1996; Rousseau et al., 1998; Shapiro, Sheppard, & Cheraskin, 1992), given
its cognitive dimension captures deterrence or knowledge-based definitions of trust, and its affective dimension captures identification or relationship-based definitions of trust. Even more, is that trust in leader has already been found to be a mediator of transformational leadership and OCB (Burke et al., 2007; Organ, Podsakoff, & MacKenzie, 2006). Moreover, trust in leader has been found to predict perceived role breadth (Chiaburu & Byrne, 2009). Thus, it seems likely that trust in leader may explain the relationship between transformational leadership and perceived role breadth.

Evidence suggests that failure of the trustee to meet expectations regarding such characteristics provides a rational basis for the trustor to withhold trust (McAllister, 1995). In contrast, affective trust is based on the emotional bond the trustor has developed with the trustee. It results from the trustor’s recognition that the trustee sincerely cares about the trustor and acts with the other party’s welfare in mind (Colquitt, Scott, & LePine, 2007). Affective trust matures over time as the two parties engage in a process of social exchange through the display of mutual concern and care for each other (McAllister, 1995; Rempel, Holmes, & Zanna, 1985).

Cognitive definitions of trust are related with the character-based perspective, since they capture perceptions about the leader’s character that may influence the vulnerability of the subordinate to him or her (Dirks & Ferrin, 2002). Conversely, affective definitions of trust are logically related to the social exchange-based perspective, given they focus on the exchange of socio-emotional benefits between individuals (McAllister, 1995). Indeed, trust in the leader has been found to mediate the impact of transformational leadership on follower work outcomes (Jung & Avolio, 2000; Podsakoff et al., 1990).
Trust in Leader as Mediator

Over the last three decades a great deal of research has examined the direct effects of transformational leadership on follower work outcomes including job performance, creativity and OCBs (Burke, Sims, Lassara, & Salas, 2007; Judge & Piccolo, 2004; Lowe, Kroeck, & Sivasubramaniam, 1996). However, it is only in recent years that leadership researchers have begun to unravel the psychological mechanisms which underlie such relationships (e.g., Avolio, Zhu, Koh, & Puja, 2004; Walumbwa & Hartnell, 2011). One mechanism central to the process of effective transformational leadership is the development of follower trust in the leader (Kark, Shamir, & Chen, 2003), which has been found to fully mediate the impact of transformational leadership on OCB (Pillai et al., 1999; Podsakoff et al., 1990), and job performance (Jung & Avolio, 2000). Trust in leader refers to an individual's positive expectations toward the behaviors of the leader and the willingness to become vulnerable to the leader (Rousseau, Sitkin, Burt, & Camerer, 1998).

Kelloway, Turner, Barling, and Loughlin (2012) found that trust in the leader fully mediated the positive relationship between perceptions of managers’ transformational leadership and employee psychological well-being in a cross-sectional sample. They performed another study which extended the model by showing that active management-by-exception and laissez-faire behaviors negatively affected employee psychological well-being by reducing trust in the manager, excluding the possibility that these results were accounted for by individual differences or liking of the manager.

Zhu, Newman, Miao, and Hooke (2013) found that affective trust fully mediated the relationships between transformational leadership and the work outcomes of followers, including their affective organizational commitment, OCB, and job performance. In contrast, cognitive
trust negatively mediated the relationship between transformational leadership and follower job performance, and had insignificant effects on their affective organizational commitment and OCB. These findings highlight the importance of affective trust as a mechanism which translates transformational leadership into positive work outcomes for the organization (Zhu, Newman, Miao, & Hooke, 2013). Related research demonstrates that when employees feel they can trust their leaders, they are able to focus more on both in-role and extra-role performance (Mayer & Gavin, 2005). Indeed, trust in leader has been found to directly predict perceived role breadth (Chiaburu & Byrne, 2009).

Given that affective or relationship-based trust has been found to fully mediate transformational leadership on both affective organizational commitment as well as extra-role and in-role behaviors, it seems likely that this form of trust in leader would also mediate transformational leadership on perceived role breadth. Therefore, this dissertation seeks to both replicate and extend current research on transformational leadership, trust in leader, affective organizational commitment, and perceived role breadth. Specifically, this study seeks to replicate prior findings that trust in leader predicts perceived role breadth (Chiaburu & Byrne, 2009) as a potential mediating mechanism of transformational leadership to perceived role breadth.

As will be developed more fully in the next chapter, affective organizational commitment has been found to predict perceived role breadth (e.g., Gordon et al., 1992). Given that trust in leader has been shown to mediate the relationship between transformational leadership and affective organizational commitment (Zhu et al., 2013), and that organizational commitment has been found to mediate the relationship between trust and perceived role breadth (Chiaburu & Byrne, 2009), this dissertation proposes a serial mediation model wherein trust in leader mediates the relationship between transformational leadership and affective organizational
commitment, which affective organizational commitment then acts as a mediator between trust in leader and perceived role breadth. Thus, transformational leadership facilitates trust in leader which then facilitates affective organizational commitment, which then facilitates perceived role breadth (see Figure 1). All of this is based on the affective trust or relationship-based trust model, which is rooted in social exchange (McAllister, 1995), which social exchange has been used to explain how transformational leadership facilitates both trust (Burns, 1978; Ciulla, 1998; Simons, 1999) and OCB (Boer et al., 2016). Indeed, trust in the leader has been widely used by researchers to measure the quality of social exchange between the leader and follower (Lavelle, Rupp, & Brockner, 2007).

**Trust in Leader as Group-Level Mediator**

Most teams, even those that are self-managed, are typically also supervised by a team leader (Druskat & Wheeler, 2003; Hackman, 1987). Given their dependence on this leader, team members are likely to develop a certain level of trust in him/her. Team members typically rely on the leader for setting the overall direction and coordination of the team, monitoring the team’s performance, as well as for boundary-spanning activities, such as negotiating and acquiring resources, information and support for the team’s work, and representing the team to higher organizational authorities (Druskat & Wheeler, 2003).

Burke, Sims, Lazzara, and Salas (2007) sought to develop an integrative and multilevel model of trust in leadership, and found that trust in leadership generally springs from three broad categories of antecedents which can be delineated: ability, benevolence, and integrity (see Mayer et al., 1995; Gill, Boies, Finegan, & McNally, 2005; Schoorman et al., 2007). Having gone through nearly all of the research on trust available at the time, they composed several suggestions or requirements for an integrative and multilevel model on trust. Given that the
current dissertation is focused on both individual and group-level trust in leader as a mediator of the relationships between transformational leadership and perceived role breadth, this literature review will isolate and more fully examine a few of the propositions developed by Burke et al. (2007). By facilitating interactions between co-workers, transformational leaders should also enhance group cohesion, making followers feel more comfortable in one another's presence, and lead to a greater willingness amongst them to go above and beyond their job role, or even expand that role, to assist one another and their organization on a voluntary basis (Burke et al., 2007; Konovsky & Pugh, 1994; Yang & Mossholder, 2010). One symptom of higher group cohesion would be group-level or team trust. Indeed, one such way in which transformational leadership may create a team or group-level trust is through a climate of psychological safety.

Specifically, team psychological safety, which has been defined as the shared belief that the team is safe for interpersonal risk taking (Edmondson, 1999). Indeed, team psychological safety reflects a team climate where interpersonal trust and mutual respect are present such that well-intentioned actions will not lead to punishment. Within such a climate, it has been argued that team members will feel free to question suggestions and decisions (Burke, Stagl, Salas, Pierce, & Kendall, 2006), including those of the leader. Edmondson (2003) found that team leaders could develop psychological safety within the team through interpersonal activities which serve to motivate the team and illustrate the importance of all members' inputs and downplay power differences. Other research found that the effects of leader behavior on team performance were fully mediated through trust in leader as well as the team members’ psychological states (Schaubroeck, Lam, & Peng, 2011). Specifically, Schaubroeck et al. (2011) found that transformational leadership influenced team performance indirectly through
cognition-based trust, which directly influenced team potency and, through affect-based trust, indirectly influenced team psychological safety.

It seems likely that group-level trust in leader operates similarly to trust climate. The connection between transformational leadership and trust climate has been previously established. For instance, Lin, Dang, and Liu (2016) found that team-level trust climate among a top-management team mediated the relationship between CEO transformational leadership and firm performance. Their findings of top-management, team-level intragroup trust as a mediator of transformational leadership and organization-level performance extend prior research, which explained the moderating role of trust in workplace team contexts.

Indeed, team climate can exert both mediating and moderating effects on the leaders’ influence (e.g., Eisenbeiss, Knippenberg, & Boerner, 2008; West, 1990) and has been found to be a key mechanism through which leadership behaviors can promote advantageous outcomes (Boies, Fiset, & Gill, 2015; Braun, Peus, Weisweiler, & Frey, 2013; Carmeli et al., 2012; Shih, Chiang, & Chen, 2012). Following the inputs-mediators outcomes (IMO) model (Mathieu et al., 2008), this dissertation hypothesizes trust in leader as a group-level mediator, operating similarly to trust climate (Liu, Hernandez, & Wang, 2014; Sun et al., 2014), and sees it as a psychological state that may explain why transformational leadership evokes role breadth and OCB. Thus, transformational leadership may facilitate group-level trust in leadership, which could then evoke greater perceived role breadth in each individual follower. Given Mayer et al.’s (1995) definition of trust as “the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control the other party” (p. 712), this dissertation defines team-level trust in leader as a shared willingness of a group to be vulnerable to the actions of their leader.
based on the expectation that their leader will perform particular actions that are important to the trustor, irrespective of the ability to monitor or control the leader.

Prior studies focused on leadership behavior toward individuals and individual outcomes (e.g., Eisenbeib & Boerner, 2013), or on leadership behavior toward teams and resulting team outcomes (e.g., Sy et al., 2013, Wang and Howell, 2010). By linking individual-level and team-level phenomena, this dissertation goes above and beyond prior studies and examine how leadership behavior toward individuals contributes to the emergence of relevant team outcomes.

Unlike previous research that examined team constructs as potential antecedents of team trust, I propose a bottom-up relationship between an individual-level variable, which, in the case of this study, is transformational leadership, and team or group-level trust in leader. Although bottom-up relationships are theoretically meaningful (e.g., Liao and Chuang, 2004), they have rarely been tested because available analytical methods have constrained statistical tests of such relationships, but recent advances in multilevel modeling techniques have made such tests feasible (e.g., Preacher, Zyphur, & Zhang, 2010). Bottom-up relationships are especially likely to contribute to the manifestation of a higher-level phenomenon when it has yet to fully form, such as during a major organizational change initiative (Mathieu & Chen, 2011). Notably, two recent studies addressed bottom-up relationships and found positive relationships among individual-level informal leader emergence (Zhang, Waldman, & Wang, 2012), individual-level commitment to change, and in-role team performance (Nohe, Michaelis, Menges, Zhang, & Sonntag, 2013).

How does trust in the leader ascend to affect team-level trust in leader? An individual team member who trusts his/her leader is likely to be bound to the leader's stated goals and mission. This assumption is based on the notion that followers and leaders are engaged in a
social exchange relationship in which followers reciprocate good leader treatment through behavior that benefits the leader (i.e., identification with the leader’s goals; Blau, 1964, Konovskiy and Pugh, 1994). When trust is established, followers should feel a sense of obligation to reciprocate through behavior that benefits the leader’s goals, such as coordination of tasks within the team and support of other team members (Cropanzano and Mitchell, 2005, Kacmar et al., 2012). As a result, norms of interaction develop and codify the normative level of trust in leader performed within the team (Ehrhart, 2004, Whitman et al., 2010).

Furthermore, once team members have identified with the leader’s goals, their within-team shared focus on joint goals is likely to facilitate positive member interactions, such as coordination of tasks and support of members who need assistance. In other words, the leader-member social exchange relationship inspires trust among team members, in turn contributing to the emergence of social exchange relationships between individual members. According to theory on collective constructs, individual interactions are “the basic building block upon which all larger collective structures are composed” (Morgeson & Hofmann, 1999, p. 252). Thus, when individual team members develop trust in leader, it seems possible that others in the group could develop trust in the leader as well. Hence, this dissertation proposed that transformational leadership predicts both individual and group-level trust in leader.
CHAPTER FIVE

AFFECTIVE ORGANIZATIONAL COMMITMENT

Commitment is an attitude that highlights a worker’s loyalty to the company, and a continuous process that lets the organization’s staff voice their concerns for the organization and its prolonged success and welfare (Phillips, Kim-Jun, & Shim, 2011). Commitment is viewed as attachment and devotion (Shanker, 2013). Phillips et al. (2011) defined commitment as having three components: 1) an ambition to always be a part of the organization, 2) an adaptation in the morals and objectives of the organization, and 3) a desire to highlight responsibility on behalf of the organization.

Bateman and Strasser (1984) defined organizational commitment as concerning a worker’s integrity and devotion to the company, readiness to work hard as part of the organization, level of organizational objectives and code congruency, and longing to remain a member of the organization. Commitment is characterized by several aspects within the organization, such as the nature of the job and the mode of leadership of the management (Bateman & Strasser, 1984). Furthermore, organizational commitment can also be influenced by a number of personal aspects such as age, character, investment in the organization, and other organizational or non-organizational factors (Bateman & Strasser, 1984).

Allen and Meyer (1990) conceptualized organizational commitment as consisting of three fundamental components: 1) affective, 2) continuance, and 3) normative. Meyer and Allen (1984) initially proposed that a distinction be made between affective and continuance commitment, with affective commitment denoting an emotional attachment to, identification with, and involvement in the organization and continuance commitment denoting the perceived costs associated with leaving the organization. Allen and Meyer (1990) later suggested a third
distinguishable component of commitment, *normative commitment*, which reflects a perceived obligation to remain in the organization.

For their study, Allen and Meyer (1990) developed a 24-item scale in order to measure these three components of organizational commitment. The researchers found that there was statistically significant evidence suggesting the affective and continuance components were different and distinguishable from other constructs related to organizational commitment. Additionally, the affective and normative components appear to be related. The affective component of organizational commitment conceptualized by Allen and Meyer (1990) perceived employees as identifying with their organization and being committed to retaining their employment in order to achieve their own personal and professional goals (Cohen, 2003). Moreover, organizational commitment has been found to play a major role in the research on organizational behavior (Bateman & Strasser, 1984). Several studies have found a connection between organizational commitment and employee conduct in the place of work (Wright et al., 2012; Thamrin, 2012).

For this dissertation, affective organizational commitment will be focused on because prior research has already shown that transformational leadership predicts both employee affective organizational commitment and contextual performance (Pradhan & Pradhan, 2015). Other research has shown that affective trust fully mediated the relationships between transformational leadership and the work outcomes of followers, specifically their affective organizational commitment, OCB, and job performance (Zhu, Newman, Miao, & Hooke, 2013). Trust has been found to mediate the relationship between transformational leadership and affective organizational commitment, as well as the relationship between transformational leadership and OCB and job performance. Therefore, this study focuses directly and exclusively
on affective organizational commitment, and as will be shown, proposed it as a mediator of the relationship between transformational leadership and perceived role breadth. More specifically, this dissertation proposed a two-step mediation model wherein the relationship between transformational leadership and perceived role breadth is mediated by trust in leader, which predicts affective organizational commitment, which predicts perceived role breadth.

**Transformational Leadership and Organizational Commitment**

According to Popper, Ori and Ury (1992), the defining characteristic of transformational leaders is their ability to secure subordinates’ commitment towards the organizational goal. A transformational leader generates meaning in otherwise mundane activities, a meaning that arrests subordinates’ commitment towards the organization’s goals. A transformational leader acts as an example who translates subordinates’ motivation to commitment and their commitment into extraordinary performance. Consistent with this reasoning, several studies have linked transformational leadership with organizational commitment (Avolio et al., 2004; Mert, Keskin & Bas, 2010; Tseng & Kang, 2008).

The direct relationships between transformational leadership and follower organizational commitment have been well supported by empirical and meta-analytic findings (Lowe et al., 1996; Wang, Oh, Courtright, & Colbert, 2011). Moreover, such organizational commitment has been found to be influential in translating transformational leadership into positive work outcomes among employees (Thamrin, 2012). For instance, Han, Seo, and Yoon (2016) studied the mediating effects of variables on transformational leadership, in relation to knowledge sharing intention. The researchers noted that the concept of knowledge sharing, or the way that an organization’s knowledge assets are distributed and disseminated, is gaining attention. The mediating effects examined were psychological empowerment and organizational commitment.
The participants selected for the study were full-time employees of Korean conglomerate companies. The participants filled out a questionnaire, which was a combination of the Multifactor Leadership Questionnaire, Spreitzer’s (1995) psychological empowerment scale, Meyer, Allen, and Smith’s (1995) organizational commitment scale, and a modified scale to measure knowledge sharing intention. The researchers concluded that organizational commitment was a mediator of the relationship between transformational leadership and knowledge sharing intention.

Pradhan and Pradhan (2015) explored the effect of affective organizational commitment on *contextual performance*, wherein individuals who are firmly committed towards the goals of the organization will look beyond their vested interests and will demonstrate more discretionary prosocial behaviors. Their cross-sectional study included a sample of 480 software professionals working in several information technology (IT) companies across India. Results showed a significant positive influence of transformational leadership on the followers’ affective organizational commitment and contextual performance (Pradhan & Pradhan, 2015). Moreover, they found that affective organizational commitment had positive linkage with the contextual performance of the followers.

**Trust in Leader, Affective Organizational Commitment, and Perceived Role Breadth**

Prior research has already connected trust, commitment, and OCBs. For instance, Zhu, Newman, Miao, and Hooke (2013) performed a study using structural equation modeling and found that affective trust fully mediated the relationships between transformational leadership and the work outcomes of followers, specifically their affective organizational commitment, OCB, and job performance. According to Butler (1991, p. 647), “the literature on trust has converged on the beliefs that 1) trust is an important aspect of interpersonal relationships, 2) trust
is essential to managerial careers, and 2) trust in a specific person is more relevant in terms of predicting outcomes than is the global attitude of trust in generalized others.” As Siegel, Brockner, and Tyler (1995) suggest, organizational commitment can be preserved during organizational downturns if trust has been established with employees. It is true that “all leaders require trust as a basis for their legitimacy and as the mortar that binds leader to follower” (Nanus, 1989, p. 101). Liou (1995) found that trust in the supervisor and the organization was predictive of commitment to the organization.

Prior research suggests that affective trust should mediate the relationship between transformational leadership and follower outcomes, given that trust reflects the process that occurs as leaders develop strong social exchange relationships with their subordinates (Yang & Mossholder, 2010). Transformational leadership behaviors should assist leaders to develop close emotional ties with their followers, engendering higher levels of affective trust. Furthermore, trust in leader has been shown to mediate the relationship between transformational leadership and affective organizational commitment (Zhu et al., 2013), and that organizational commitment has been found to mediate the relationship between trust and perceived role breadth (Chiaburu & Byrne, 2009).

According to one theory, OCBs are based on distal attitudinal antecedents such as organizational commitment and job satisfaction, operating through role enlargement (Morrison 1994). Specifically, employees engage in OCBs due to their commitment and satisfaction, and because they perceive OCBs as role-specific. Indeed, numerous studies have shown that employee OCB role definitions (i.e., what is considered in-role vs. extra-role) affect OCBs either through role enlargement (e.g., Coyle-Shapiro and Kessler 2002; Coyle-Shapiro et al. 2004;
Kidder 2002; Morrison 1994; Pond et al. 1997) or through role discretion (e.g., Tepper et al. 2001; Tepper and Taylor 2003; Zellars et al. 2002).

**Affective Organizational Commitment as a Mediator**

Several studies have linked transformational leadership with organizational commitment (Avolio et al., 2004; Mert, Keskin & Bas, 2010; Tseng & Kang, 2008). Furthermore, trust in leader has been shown to mediate the relationship between transformational leadership and affective organizational commitment (Zhu et al., 2013). Additionally, affective organizational commitment has been shown to facilitate perceived role breadth (Morrison 1994). Finally, affective organizational commitment has been found to mediate the relationship between trust in leader and perceived role breadth (Chiaburu & Byrne, 2009). This dissertation seeks to replicate and extend these findings by 1) showing trust in leader and affective organizational commitment as mediators of the relationship between transformational leadership and role breadth, and 2) in examining these relationships at the group-level of analysis. Therefore:

**Affective Organizational Commitment as a Group-Level Mediator**

Research shows that transformational leadership positively impacts affective organizational commitment, defined as an employee’s emotional attachment to an organization (Allen & Meyer, 1990, 1996), across a variety of organizational settings and cultures (Bono & Judge, 2003; Judge & Piccolo 2004; Meyer et al., 2002). A recent meta-analysis found a corrected mean correlation of 0.45 between transformational leadership and affective organizational commitment (Jackson et al., 2013). The connection between transformational leadership and affective commitment has been well documented, as has the connection between affective commitment and OCB (e.g., Ng & Feldman, 2011). Moreover, Nohe and Hertel’s (2017) recent meta-analysis demonstrated that affective commitment operates as a mediator of
transformational leadership on OCB. However, given the call to study transformational leadership as a group-focused and multilevel construct, this dissertation seeks to expand current understanding and fill a research gap by testing affective commitment as a group-level mediator of transformational leadership on role breadth.

Theoretically, affective commitment as a group-level mediator may operate similarly to prior research on commitment done at the team level. For instance, although this line of research is sparse, *team-goal commitment* is one way in which commitment has been measured at the group level. It refers to team members’ determination to achieve team goals, their attachment to the team goals, their intention to exert effort to achieve team goals, and team members’ persistence in pursuing the goals (Aube & Rousseau, 2011). According to Aube and Rousseau (2011), teams with high team-goal commitment utilize their time, effort, and resources to achieve their goals. In contrast, teams with low team-goal commitment are likely to lose focus and be easily distracted. In their study, Aube and Rousseau (2011) measured team-goal commitment using Klein et al.’s (2001) commitment scale, which they adapted to refer to the established team goals, rather than individual goals. Another study found that team commitment in self-directed teams moderated the relationship between job satisfaction and OCB, such that the relationship was stronger when team commitment was high (Foote & Li-Ping Tang, 2008). In Foote et al.’s (2008) study, they measured team commitment by starting with the 15-item Organizational Commitment Questionnaire (OCQ) (see Mowday et al., 1979) as a model. They then identified specific items of the OCQ and modified them to fit the context of self-directed work teams, eventually developing and validating a new ten-item team commitment scale (TCS) specifically for their study.
Affective commitment as a group-level mediator may also operate similarly to collective identity. For instance, Shamir et al.’s (1993) self-concept-based theory suggests transformational leaders can facilitate followers’ affective organizational commitment by engaging followers’ self-concept in the interest of the leader’s mission. Just as leaders may engage followers’ self-concept to increase affective organizational commitment, they may also engage a group’s collective identity. On this subject, Del Carmen Triana, Richard, and Yücel (2017) found that collective identity mediated the relationships between transformational leadership and affective organizational commitment. Similarly, Luo, Marnburg, and Law (2017) found that collective identity partially mediated the effects of transformational leadership and procedural justice on employee commitment. Thus, one potential way to conceptualize affective organizational commitment as a group-level mediator could be through collective identity, which is prompted by transformational leadership behaviors.

A final potential avenue for conceptualizing affective organizational commitment as a group-level mediator is positive group affective tone, defined as homogeneous or consistent positive affective reactions among team members (George, 1990). Indeed, previous studies have consistently found positive associations between affective organizational commitment and OCB (Ng & Feldman, 2011), which is perceived to be due, at least in part, to the experience of positive affect making people more likely to engage in OCB (George & Brief, 1992). Moreover, transformational leadership has been found to positively predict group affective tone, which positively relates to team-level performance (Chi & Huang, 2014). Other research has examined how leadership moods can affect team performance via emotional contagion (Hatfield, Cacioppo, & Rapson, 1994), suggesting that leader positive moods might influence team processes and team performance through an increase in team members’ positive group affective
tone. However, as Kelly and Spoor (2006) and Sy et al. (2005) proposed, in addition to nonconscious, automatic, and implicit processes such as emotional contagion, it is possible that leaders in positive moods might influence team processes or performance through conscious, deliberate, and explicit processes, such as transformational leadership behaviors (Ashkanasy & Tse, 2000; Bass, 1998; Grandey, 2008; Kelly & Barsade, 2001).

Although prior research has examined commitment at the team level, no prior research has specifically examined affective organization as a team or group-level mediator of transformational leadership on perceived role breadth. Building upon theory on collective identity, group affective tone, and prior research done on team commitment, the present dissertation hypothesizes affective organizational commitment as a group-level mediator, seeing it as a psychological state that may explain why transformational leadership may evoke perceived role breadth. Specifically, this study defines group-level affective commitment as shared emotional attachment and positive affective reaction to the organization among group members.

Similar to the explanation detailed above related to group-level trust in leader, I propose a bottom-up relationship between an individual-level variable, which in the case of this study is transformational leadership, and team or group-level affective organizational commitment. Although bottom-up relationships are theoretically meaningful (e.g., Liao & Chuang, 2004), they have rarely been tested because available analytical methods have constrained statistical tests of such relationships, but recent advances in multilevel modeling techniques have made such tests feasible (e.g., Preacher, Zyphur, & Zhang, 2010). Bottom-up relationships are especially likely to contribute to the manifestation of a higher-level phenomenon when it has yet to fully form such as during a major organizational change initiative (Mathieu & Chen, 2011). In the following
chapter, the method and proposed analysis will be described for this dissertation, as well as the demographic information of the study sample.
CHAPTER SIX

HYPOTHESES, METHOD, AND ANALYSIS

The prior chapters provided literature reviews for perceived role breadth, transformational leadership, trust in leader, and affective organizational commitment. In those literature reviews, I highlighted relevant gaps in the current literatures, particularly that no previous study had attempted to examine the direct relationships of transformational leadership to perceived role breadth or role instrumentality, which relationships seem relevant given the burgeoning and long-standing interest in transformational leadership and OCBs. Moreover, the previous literature reviews also provided ample evidence for the need of multilevel understanding of the effects of transformational leadership, and offered evidence of trust in leader and affective organizational commitment as likely multilevel mediators. Specifically, the proposed model (see Figure 1) of this dissertation is a serial multilevel mediation model, wherein the relationship of transformational leadership and perceived role breadth is mediated by trust in leader and affective organizational commitment, at both the individual and group-level, by accounting for individuals nested within leader groups. This same model is hypothesized for role instrumentality as well.

Therefore, the two hypotheses for this dissertation are as follows:

**Hypothesis 1:** The relationship of transformational leadership and perceived role breadth is mediated by trust in leader and affective organizational commitment, at both individual and group levels, when accounting for nesting.

**Hypothesis 2:** The relationship of transformational leadership and role instrumentality is mediated by trust in leader and affective organizational commitment, at both individual and group levels, when accounting for nesting.
As will be shown in the results section, exploratory factor analyses were performed for both perceived role breadth and role instrumentality. Based upon the outcomes of those exploratory factor analyses, these hypotheses were adjusted to account for the new outcome variables.

**Data for this Study**

The proposed dissertation used prior collected data (Cox, 2000) that were originally gathered via a mail survey considering recommendations for survey design to enhance response rate as much as possible. The test instruments used to assess the proposed constructs were developed and validated by other researchers. When formatting the questions, guidelines from the Total Design Method (TDM; Dillman, 1978) were followed to ensure responding as easy as possible.

Although this dissertation analyzed the same data as Cox (2000), there is relatively little overlap in variables studied each of our studies. Specifically, Cox (2000) examined leader character based on moral development and personality as a predictor of employee trust, and found that perceptions of character mediated the relations between character and trust. Cox (2000) further found that empathy was the only component of leader character that retained a direct effect on perceptions of leader openness, and moral judgment and values were not related to trust or perceptions of character. Finally, Cox (2000) found that leader stress moderated the relations between self-regulation and perceptions of integrity, promise keeping, and consistency, and further that stress also moderated the relations between the leader character composite and trust.
Sample

**The target sample.** The sample of leaders for this dissertation included individuals in state government agencies with supervisory responsibility for three or more employees (i.e., followers). Agencies were selected for participation depending on size (large enough to employ a leader and at least six employees). There are approximately 80 agencies in state government, 75 of which were contacted by mail.

**Sampling procedure.** According to Cox (2000), the selected state agencies were contacted for participation with the help of a personal letter of introduction from the Administrator of the Office of Personnel Management. Additionally, the original researchers made follow-up calls and meetings were used to generate interest and participation. During those conversations, the agency heads were told that beyond the leaders, the study attempted to recruit at least four to six followers for each leader. These followers would be asked to complete a shorter questionnaire, estimated to take 15 to 20 minutes. In all, sixty-two (62) agencies agreed to participate in the original study, representing 15,000 to 20,000 employees. The data from that study are to test the current hypotheses for this dissertation.

**Response rate.** According to Cox (2000), there were seventy-five agencies, ranging in size from 7 to over 7500, who were contacted to participate in the study. Of those agencies, 62 (83%) agreed to participate. The agencies that chose not to participate cited organizational change or extreme workload as the reasons. Three agencies did not respond to letters and phone calls during the recruitment phase of the study. Five hundred seventy-eight (578) leaders were identified for inclusion in the original study, based on organizational charts and apparent supervisory responsibility. Agencies were grouped roughly into thirds, representing small
agencies (<100 employees), medium agencies (100-500 employees), and large agencies (>500 employees). The sample was evenly distributed among these groups.

Questionnaires with cover letters were either mailed, hand-delivered and internally distributed to the leaders between the dates of September 20 and October 30, 1999. Additionally, Cox (2000) sent follow-up postcards to all leaders approximately one week after the questionnaires were distributed. There were exceptions made for two agencies that were late joining the original study. In one of those agencies, internal personnel followed up and encouraged participation (response rate 64%). In the second agency, no follow-up action was taken (response rate 21%).

After the leader surveys had been distributed, it was brought to the original scholars’ attention that the cover letter to the leaders did not inform leaders that their followers would also be asked to fill out a questionnaire (Cox, 2000). A letter was subsequently sent to all leaders who had responded, explaining the oversight and offering them the option of withdrawing from the study. Eleven leaders elected to withdraw after returning their surveys. For all other agencies, follower questionnaires were prepared and mailed or distributed after the leader questionnaires were returned. Drop boxes were provided to collect completed questionnaires in most local agencies.

The original questionnaire distributed to followers contained 106 items, and the estimated time to complete was 10 minutes (Cox, 2000). The present dissertation did not use all of the data collected in that original study, only the data on the relevant constructs being examined. Out of the original 2,254 questionnaires distributed, 959 were reportedly returned (Cox, 2000). Follower responses were aggregated and only those leaders with two or more follower responses were
included in the model analyses. The resulting sample of leaders who had the requisite follower responses was 209 (Cox, 2000).

Demographic characteristics of the sample. There were no demographic data gathered for the followers in this study to preserve the anonymous nature of the data.

Measures

Transformational leadership. Podsakoff et al.’s (1990) Transformational leadership inventory (TLI) was used to measure transformational leadership behaviors in this study. This scale consisted of 22 items, and measured six dimensions of transformational leadership: articulating a vision, providing an appropriate model, fostering the acceptance of group goals, high performance expectations, providing individualized support, and intellectual stimulation. Although previous research supports the hypothesized six-factor structure (e.g., Podsakoff et al., 1996), three of the dimensions have been found to be highly correlated (articulating a vision, providing an appropriate model, and fostering the acceptance of group goals). As such, these three factors are sometimes combined to represent a “core” transformational leadership construct. Internal consistency reliabilities for each of the dimensions range from .82 to .87. In addition, the TLI has shown impressive validities with related constructs across several studies (e.g., Podsakoff et al., 1990; Podsakoff et al., 1996; Podsakoff et al., 2001). As shown in Table 2, the reliability of this full measure had high reliability (α = .95).

Trust in leader. Follower trust in leaders was assessed with the Conditions of trust inventory (CTI; Butler, 1991), an instrument designed specifically to assess conditions of trust, or antecedents that are necessary for one person to trust another. Items were scored on a five-point Likert agreement scale, with low scores indicating little trust and high scores indicating a great deal of trust. Research on trust identifies integrity, competence, consistent behavior,
loyalty, and openness as antecedents to trust (Butler & Cantrell, 1984). Butler (1991) developed the CTI specifically to measure these antecedents of trust. The current version of the CTI has 11 subscales: Openness, Loyalty, Fairness, Integrity, Promise Fulfillment, Consistency, Overall Trust, Availability, Competence, Discreetness, and Receptivity. Of these, Openness, Fairness, Integrity, Promise Fulfillment, and Consistency could be expected to relate differentially to the dimensions of leader character as defined for this study. As shown in Table 2, this measure had high reliability ($\alpha = .97$).

**Affective organizational commitment.** Allen and Meyer’s (1990) instrument was used with their permission to measure the three dimensions of organizational commitment, namely, affective commitment. The affective commitment scale consists of eight items. Each subject was asked to indicate the extent to which he/she agree with statements, such as “I would be very happy to spend the rest of my career with this organization” and “I enjoy discussing my organization with people outside of it.” As shown in Table 2, this measure had high reliability ($\alpha = .89$).

**Perceived role breadth.** Based on Morrison (1994), perceived role breadth was measured by respondents answering a series of questions regarding work-related activities and were then given the option of answering either “No, not a part of my job,” or “Yes, part of my job,” wherein answering in the affirmative about specific activities would represent greater perceived role breadth. This scale was originally intended to represent multiple dimensions or factors of perceived role breadth, such as OCB-O and OCB-I. For this dissertation, I first examined if there were different factors of this scale using exploratory factor analysis (see Table 1) and then examined the reliabilities of the factor solution decided upon (see Table 2).
**Role instrumentality.** In asking about the work-related activities captured the perceived role breadth scale, respondents were also asked about the instrumentality of performing these behaviors in terms of receiving rewards or not when performing these activities. Specifically, respondents indicated if the work-related activity “Does not help to,” “Helps to obtain rewards,” or “Critical to obtain rewards.” As with perceived role breadth, I conducted a series of exploratory factor analyses to investigate the structure of this scale.

**Data Analysis**

All of the data collected and analyzed in this study were collected at the individual level. In other words, none of the measures of interest directly assessed group-level phenomena. In collecting the data from employees, however, employees indicated who their leader was, which became a grouping variable. Thus, employees were nested within leader groups. Factor analyses on the two outcome variables (i.e., perceived role breadth and role instrumentality) were conducted to determine the best solution for outcome variables. Descriptive statistics for all measures were conducted, including for each of the selected outcome variables drawn from the factor analyses.

The primary purpose of this dissertation was to examine the possibility of group-level mediation on the relationship between transformational leadership and perceived role breadth. In order to determine whether there was variation at the group level, and therefore whether the use of multilevel modeling (MLM) techniques was appropriate, two initial criteria were examined: 1) null model testing separately for each of the outcome variables with random intercepts of Level 2 leader but no predictors, and 2) intraclass correlations (ICC1) testing between-group variance. Explanation of each of these two analyses will be shown below, respectively.
Multilevel modeling (MLM) properly controls for the non-independence of errors by allowing both intercepts and slopes to vary across groups. In two-level MLM, three variance terms are estimated: intercept variance, slope variance, and random variance (Bliese & Jex, 2002). Intercept variance refers to mean differences between groups’ dependent variables. Slope variance refers to the variance that occurs between groups in their IV and DV relationships. Finally, random variance is the variance within groups. Thus, MLM estimates and tests the differences that occur within and between groups (i.e., within and between leaders).

Similar to other multilevel mediation studies on transformational leadership (e.g., Braun, Peus, Weisweiler, & Frey, 2013), I followed Zhang, Zyphur, and Preacher's (2009) approach to multilevel mediation, and analyzed the relations of the independent variable (transformational leadership), mediator variables (trust in leader and affective organizational commitment) at individual and group levels, and outcome variables (perceived role breadth and role instrumentality). To overcome confounding of mediation within and between groups, Zhang and colleagues (2009) proposed a multilevel mediation approach based on team-mean centered analyses. The MLmed SPSS macro (May 2017 version) was used to fit multilevel mediation based on Bauer, Preacher, and Gil (2006) and Zhang, Zyphur, and Preacher (2009). There is within-group centering of Level 1 predictors, group means are used to estimate between-group effects, and indirect effects were tested using Monte Carlo confidence intervals, which have been found to reduce confounding, have sufficient empirical power, and reduce Type-I error rates (Braun, Peus, Weisweiler, & Frey, 2013; Zhang et al., 2009). Maximum likelihood estimation was used with an unstructured covariance matrix to allow random effects estimates to be correlated.
For any outcome variables whose mixed model null testing and ICC1 calculations did not merit MLM, the proposed mediation model was tested, but not accounting for group-differences. Thus, in such cases, Hayes Process Macro (version 3.3) for SPSS was used to assess serial mediation models without variance at group levels, due to the small degree of nesting in terms of between-leader differences. More explanation on this will be provided in the chapter covering the results of this study.
CHAPTER SEVEN
RESULTS

A total of 997 employees were surveyed. There were 47 participants removed who did not have scores on all the four measures of primary interest (transformational leadership, trust in leader, affective organizational commitment, and perceived role breath items), and thus the primary sample was $N = 950$; due to some missing responses, a slightly smaller $n = 936$ was used for analyses predicting role instrumentality.

**Role Breadth and Instrumentality Scales**

The role breadth and role instrumentality items were created for this study, and thus psychometric analyses were performed to determine if they should each represent single constructs or be better described by being separated into factors. There were 24 items participants answered regarding specific activities at work. Firstly, they were asked whether these various activities were perceived as aspects of their actual job (i.e., in-role activities): no (= 1) or yes (= 2). Activities viewed as in-role were considered as enlarged perceived role breadth. After answering whether or not a specific activity was viewed as in-role behavior, that is, as part of their actual job, they were asked whether engaging in that activity would lead to obtaining rewards (1 = Does not help to, 2 = Helps to obtain rewards, 3 = Critical to obtain rewards). When activities were viewed as relating to specific rewards, it was an indication of greater role instrumentality.

For this study, perceived role breadth was of primary interest, so consequently it was examined first. Ultimately, the decisions made about how to use the items to represent perceived role breadth would influence the choices made about how to use those same items to represent role instrumentality. While the initial 24 items had a good reliability for perceived role breadth
Factor analyses was first conducted with principal axis extraction and a direct oblimin rotation to allow the factors to be correlated with each other, were first tested on all 24 items. The eigenvalue value greater than one rule led to a six-factor solution, which was not parsimonious. The scree plot could have argued for a two-factor solution, a three-factor solution, or even a four-factor solution. A two-factor solution did not yield interpretable factors, and both a 3 and 4 factor solution were not clean. Among the problems were that the items previously identified as having low item-total correlations from the reliability analyses tended to have low loadings on factors. Thus, it was determined that these items did not have low corrected item-total correlations simply because they may have represented a different subfactor, but rather they were just not measuring the same constructs. They were removed and exploratory factor analysis with principal axis extraction and a direct oblimin rotation was conducted using the 19 remaining items to allow the factors to be correlated with each other.

The eigenvalue value greater than one rule led to a three-factor solution, while the scree plot would argue for a two-factor solution or a three-factor solution. The two-factor solution had an item with cross loadings above .30, and was not as conceptually interpretable. Both the four and three-factor solutions did not have items 18 and 24 loading onto any factor (loadings below .30), and the four-factor solution also dropped item 3. The only other difference between the two was that four-factor solution split one of the factors for the three-factor solution. Thus, the three-factor solution using 17 items was chosen because it was supported by the scree plot, for parsimony, and on conceptual grounds. The first factor had some items matching concepts that later literature called civic virtue and organizational loyalty (as will be addressed in the
Discussion), and for simplicity in this dissertation, the factor will be called \emph{RB-organizational loyalty} (eight items), the second factor represented \emph{RB-altruism} (four items), and the third factor was \emph{RB-sportsmanship} (five items). The items are shown in Table 1 with their factor loadings.

The reliabilities of the scales for RB-organizational loyalty and RB-sportsmanship were acceptable ($\alpha = .77$ and $\alpha = .70$, respectively) and all corrected item-total correlations were above .30. The reliability for altruism was slightly beneath the .7 threshold of what is usually considered as an acceptable range ($\alpha = .69$). However, I noted that, for this scale, all item loadings in the factor analysis were above .50 and all corrected item-total correlations were above .46, meaning the retained items reflected the construct.

As a result, this particular three-factor solution was deemed acceptable for further analyses. Based on this three-factor solution decided upon, Hypothesis 1, wherein perceived role breadth was the dependent variable, was adjusted to account for the new three factor solution. The multilevel serial mediation model remained the same, however, rather than a single perceived role breadth variable, each of the perceived role breadth factors became separate outcome variables. Therefore, Hypothesis 1 was adjusted to the following three separate hypotheses:

\textbf{Hypothesis 1a:} The relationship of transformational leadership and RB-organizational loyalty is mediated by trust in leader and affective organizational commitment, at both individual and group levels, when accounting for nesting.

\textbf{Hypothesis 1b:} The relationship of transformational leadership and RB-altruism is mediated by trust in leader and affective organizational commitment, at both individual and group levels, when accounting for nesting.
**Hypothesis 1c:** *The relationship of transformational leadership and RB-sportmanship is mediated by trust in leader and affective organizational commitment, at both individual and group levels, when accounting for nesting.*

Although role instrumentality had a high reliability for all 24 items ($\alpha = .97$) and no corrected item-total correlations below .52, for consistency with the perceived role breadth factors the same items were excluded: the five items that reliability and initial factor analyses identified as problematic as well as the two item that did not load onto the three factors. Using these 17 items of role instrumentality, an exploratory factor analysis using principal axis extraction and a direct oblimin rotation suggested a single factor. The two-factor solution produced a second factor with only a single item with a small cross loading, and a three-factor solution was not justified by the scree plot and would not converge. Thus, role instrumentality was a single factor (17 items) with an excellent reliability ($\alpha = .96$) and no corrected item-total correlations below .56. Given that role instrumentality remained a single-factor solution, Hypotheses 2 remained the same.

To summarize, based on the analyses explained above, the final perceived role breadth representation used for all further analyses was three separate factors, RB-organizational loyalty with eight items, RB-altruism with four items, and RB-sportsmanship with five items. For role instrumentality, the same 17 items were used for consistency and given factor loadings, and the best solution was a single-factor scale.

**Descriptive Statistics**

The individual-level descriptive statistics of the three newly-created perceived role breadth factors, role instrumentality, and the other constructs of interest, namely 1)
transformational leadership, 2) trust in leader, and 3) affective organizational commitment, are shown in Table 2. Each scale was represented as a mean of its individual items.

While the full range of every scale was used, people were slightly positive about their affective organizational commitment (compared to a neutral midpoint of 3), and a bit more positive about the transformational leadership qualities of their boss and their trust in the leader (which also had a neutral midpoint of 3). The majority perceived all RB-altruism and RB-sportsmanship activities as expected in their job, while averages across the role instrumentality of all the job activities were in the lower range, indicating that these activities were perceived somewhere between not helping and helping obtain rewards, but not as being critical. RB-altruism and RB-sportsmanship had large negative skews; corrections for these potential violations of assumptions of the models did not yield any different conceptual conclusions, as will be addressed after presenting the mediation analyses, and thus the original untransformed variables were used in all subsequent analyses.

Also shown in Table 2 are the individual-level bivariate correlations of all the scales. Transformational leadership and trust in leader were very highly correlated \( (r = .81, p < .01) \), causing initial concern about the distinction of these two constructs and about whether trust could serve a mediational role, as will be discussed further below in the hypothesis testing. Transformational leadership had small correlations with the three role breadth factor outcomes, and a medium correlation with role instrumentality. The factors of role breadth had medium and large correlations with each other, but even the largest \( (r = .53 \text{ between RB-organizational loyalty and RB-sportsmanship}) \) was not large enough to indicate that these could not be conceptually distinguished. Role instrumentality had small and medium correlations with the
perceived role breadth factors, again indicating perceived requirements and instrumentality of the same activities to be distinct concepts.

**Level 2 Grouping: Leader**

Each individual surveyed rated their leader for transformational leadership and trust in leader, and more generally individuals were clustered in terms of having the same leader. That is, individuals were nested within leaders. As seen in Table 3, groups ranged in size from single individuals up to 11 people ($M = 3.30$, $SD = 1.63$). There were 288 different leaders evaluated by this sample. The majority of groups (64.5%) contained three or more individuals, and the vast majority of individuals (82.5%) in this sample were in groups with three or more other individuals also rating their leader.

The group means of each of these predictor variables were calculated, and descriptive statistics at the group level are shown in Table 4. As seen, the results were largely consistent with the individual level: groups were slightly positive about their affective organizational commitment, and a bit more positive about the transformational leadership qualities of their boss and their trust in the leader. Transformational leadership and trust in leader had a very large correlation at the group level as well ($r = .81$).

**Assumption Checking for Skewness**

As will be shown later in this chapter, there were negatively skewed distributions of the perceived role breadth outcomes of RB-altruism and RB-sportsmanship, and thus, there was some concern about violations of assumptions of normality of residuals for the regressions that make up mediation analyses. For RB-altruism, the Hayes Process Macro (version 3.3) calculated bootstrap confidence intervals for all parameter coefficients of the serial mediation models and reached the same conclusions with respect to the overall patterns of which regression coefficients
were significant and not significant. For RB-sportsmanship, a reflected inverse transformation reduced the skew from -2.20 (SE = .08) to -1.59 (SE = .08), but the multilevel mediation model patterns of relationships were conceptually similar. Thus, analyses on the original untransformed variable were presented for clarity.

**Hypothesis Testing: Establishing Need for Multi-Level Analyses**

The first step of testing Hypotheses 1a, 1b, 1c, and 2 was determining if group level differences existed for each of the four outcome variables. As such, series of null models were tested using maximum likelihood estimation, with no predictors but random intercepts for the Level 2 variable of leader to assess if there was significant variation in these outcomes at the group level. Covariance parameters of the null model represent the amount of variance occurring in the role outcome variable at the individual level (residual variance) and at the agency group level (intercept variance; Mathieu, Ahearne, & Taylor, 2007). As shown in Table 5, the null models for three of the outcome variables (i.e., RB-organizational loyalty, Estimate = .008, SE = .001, p < .001; RB-sportsmanship, Estimate = .004, SE = .002, p = .008; role instrumentality, Estimate = .023, SE = .008, p = .005) showed significant intercept variance for Level 2 leadership, whereas the null test for RB-altruism as the outcome variable did not show any intercept variability (Estimate = .000, SE = .002, p = .851). Moreover, as shown in Table 5, the null models for three of the predictor variables (i.e., affective organizational commitment, Estimate = .106, SE = .025, p < .001; trust in leader, Estimate = .191, SE = .035, p < .001; transformational leadership, Estimate = .214, SE = .035, , p < .001) are also presented, each of which showed clear evidence of between group variance. This initial analysis provides evidence that for three out of the four outcome variables, a moderate amount of variance existed at Level 2. This means that a moderate amount of variability was due to between-leader differences, and
the use of multilevel techniques were appropriate. In this case, individuals are nested within leaders.

Next, the ICC1s were calculated to determine if significant nesting was present by comparing the relative proportion of intercept variance to the total of the residual and intercept variances. ICC1 values represent the degree to which the data are dependent on the grouping variable, or the proportion of total variance of individual scores that can be explained by the agency in which an individual is a member of (Bliese, 2000). Greater ICC1 values indicate a greater level of non-independence among group members; the theoretical range would be from 0 (no variance can be explained by agency membership) up to 1.0 (indicating all variance among individuals is due to their group membership).

In addressing the question of when to justify ICC1 values, the results of a recent literature review provide a normative base against which to compare (Woehr, Loignon, Schmidt, Loughry, & Ohland, 2015). Specifically, Woehr et al. (2015) found that across a sample of 416 ICC1 values reported in the literature, the average was .21 ($SD = .15$), and over 75% of the values reported exceeded .11. Many scholars prefer to evaluate agreement in comparison to levels typically found in the literature for similar constructs.

As shown in Table 5, the ICC1 value for RB-organizational loyalty ($ICC1 = .115$) was reflective of the values reported in similar studies shown by Woehr et al. (2015), whereas the ICC1 values for RB-sportsmanship ($ICC1 = .085$) and role instrumentality ($ICC1 = .091$) were slightly lower, but according to some rules of thumb, still reflecting a small to medium-sized effect (Bliese, 2000). Therefore, these ICC1 values for RB-organizational loyalty, RB-sportsmanship, and role instrumentality provide further evidence that variability exists due to Level 2 effects, and thus, MLM is appropriate. However, in the case of RB-altruism, the ICC1
value was lower ($ICC_1 = .005$), further evidencing that examining RB-altruism at the group level is not appropriate for this particular study. Therefore, Hypothesis 1b was not confirmed.

**Hypothesis Testing: Multilevel Serial Mediation**

A serial mediation model was proposed to explain the relationship of transformational leadership to each role outcome by mediation first through trust in leader and then through affective organizational commitment. The role outcomes of RB-organizational loyalty, RB-sportsmanship, and role instrumentality were analyzed using MLM, while RB-altruism was analyzed further below as a Level 1 individual model, as there was no variation of RB-altruism by leader groups. The MLmed SPSS macro (May 2017 version) was used to fit multilevel mediation based on Bauer, Preacher, and Gil (2006) and Zhang, Zyphur, and Preacher (2009). There was within-group centering of Level 1 predictors; group means were used to estimate between-group effects, and indirect effects were tested using Monte Carlo confidence intervals, which have been found to reduce confounding, have sufficient empirical power, and low Type-I error rates (Braun, Peus, Weisweiler, & Frey, 2013; Zhang et al., 2009). Maximum likelihood estimation was used with an unstructured covariance matrix to allow random effects estimates to be correlated.

The proposed mediation model for this study was a serial mediation, the relationship between transformational leadership and perceived role breadth was mediated by trust in leader and affective organizational commitment (see Figure 1). However, in initial MLM testing, there was no evidence of trust in leader as a mediator of the relationship between transformational leadership and affective commitment for each of the three outcome variables being analyzed, at the group or individual level. All intercepts and slopes of transformational leadership and trust in leader were estimated as random effects to allow them to vary at Level 2. Transformational
leadership did predict trust in leader at both the individual or within level ($\gamma_{10} = .83, SE = .03, p < .001$) and the group or between level ($\gamma_{01} = .81, SE = .03, p < .001$). However, while transformational leadership still had significant direct effects on affective organizational commitment, trust in leader did not predict affective organizational commitment at the within level ($\gamma_{20} = .07, SE = .05, p = .195$) nor at the between level ($\gamma_{02} = .13, SE = .07, p = .080$). Thus, trust in leader cannot serially mediate the relationship of transformational leadership to affective organizational commitment and subsequently to the outcome because it does not have any pathway to affective organizational commitment. Therefore, Hypotheses 1a, 1c, and 2 were not confirmed

**Three Variable Multilevel Mediation**

Given that trust in leader was found to be highly correlated with transformational leadership, in addition to not being found to mediate transformational leadership and affective organizational commitment at individual or group levels when accounting for nesting, a simplified model was developed and tested, wherein the relationship between transformational leadership and each of the role outcomes (RB-organizational loyalty, RB-sportsmanship, instrumentality) was mediated through affective organizational commitment. The MLmed macro was again used for each of these analyses, using within-group centering of Level 1 predictors, and group means to estimate between-group effects. Indirect effects were tested using Monte Carlo confidence intervals. Maximum likelihood estimation was used with an unstructured covariance matrix to allow random effects estimates to be correlated, and all intercepts and slopes were estimated as random effects to allow them to vary at Level 2.

**RB-organizational loyalty.** As seen in Figure 2, individual employee Level 1 transformational leadership predicted affective organizational commitment, and individual
affective organizational commitment significantly predicted RB-organizational loyalty. There was a significant indirect or mediation effect of individual transformational leadership to RB-organizational loyalty through individual affective organizational commitment (within indirect effect = .03, SE = .01, p = .017). The direct pathway of transformational leadership to RB-organizational loyalty was also significant. At the group level, Level 2 transformational leadership significantly predicted group level affective organizational commitment, and group level affective organizational commitment significantly predicted individual RB-organizational loyalty. There was a significant indirect or mediation effect of group level transformational leadership to RB-organizational loyalty through group level affective organizational commitment (between indirect effect = .06, SE = .01, p < .001). The direct pathway of group level transformational leadership to individual RB-organizational loyalty was not significant. Thus, mediation existed at both the individual and the group level, with a direct pathway still existing for the individual level but no direct pathway for the group level.

Given that hypotheses were only developed for the serial multilevel mediation model which included trust in leader, there were no specific hypotheses for this simplified mediation model wherein affective organizational commitment was the sole mediator. However, the proposed adjusted model excluding trust in leader was found to be significant, wherein affective organizational commitment mediated transformational leadership and RB-organizational loyalty at both individual and group levels when accounting for nesting. These findings demonstrate that transformational leadership can enhance affective organizational commitment at both group and individual levels, which group and individual affective organizational commitment then increases individual perceived role breadth in the form of RB-organizational loyalty.
**RB-sportsmanship.** As seen in Figure 3, individual employee Level 1 transformational leadership predicted affective organizational commitment, but affective organizational commitment did not predict RB-sportsmanship. Thus, there was also no significant indirect or mediation effect of individual transformational leadership to RB-sportsmanship through individual affective organizational commitment (within indirect effect = .01, \(SE = .01, p = .362\)). The direct pathway of transformational leadership to RB-sportsmanship was significant. At the group level, Level 2 transformational leadership significantly predicted group level affective organizational commitment, and group level affective organizational commitment significantly predicted individual sportsmanship. There was a significant indirect or mediation effect of group level transformational leadership to sportsmanship through group level affective organizational commitment (between indirect effect = .03, \(SE = .01, p < .001\)). The direct pathway of group level transformational leadership to individual RB-sportsmanship was not significant. Thus, mediation existed at the group level with no direct pathway, but mediation did not exist at the individual level, only a direct pathway.

Given that hypotheses were only developed for the serial multilevel mediation model which included trust in leader, there was no specific hypotheses for this simplified mediation model wherein affective organizational commitment was the sole mediator. However, the proposed adjusted model excluding trust in leader was not found to be significant, given that individual affective organizational commitment was not found to mediate transformational leadership and RB-sportsmanship. Even still, these findings demonstrate that transformational leadership can enhance affective organizational commitment at the group level, which group level affective organizational commitment then increases individual perceived role breadth in the form of RB-sportsmanship.
**Role instrumentality.** As seen in Figure 4, individual employee Level 1 transformational leadership predicts affective organizational commitment, and individual affective organizational commitment significantly predicts role instrumentality. There is a significant indirect or mediation effect of individual transformational leadership to instrumentality through individual affective organizational commitment (within indirect effect = .06, SE = .02, p = .003). The direct pathway of transformational leadership to instrumentality is also significant. At the group level, Level 2 transformational leadership significantly predicted group level affective organizational commitment, and group level affective organizational commitment significantly predicted individual instrumentality. There was a significant indirect or mediation effect of group level transformational leadership to instrumentality through group level affective organizational commitment (between indirect effect = .08, SE = .02, p < .001). The direct pathway of group level transformational leadership to individual RB-organizational loyalty was significant. Thus, mediation existed at both the individual and the group level, with a direct pathway still present for both the individual and the group level.

Given that hypotheses were only developed for the serial multilevel mediation model which included trust in leader, there was no specific hypotheses for this simplified mediation model wherein affective organizational commitment was the sole mediator. However, the proposed adjusted model excluding trust in leader was found to be significant, wherein affective organizational commitment mediated transformational leadership and role instrumentality at both individual and group levels when accounting for nesting. These findings demonstrate that transformational leadership can enhance affective and organizational commitment at both group and individual levels, and both group and individual organizational commitment subsequently lead to increased individual role instrumentality.
Level 1 RB-Altruism Mediation

As noted previously, Hypothesis 1b was not confirmed given that there was no group level variability in RB-altruism, and thus using rule-based methods of ICC1s and null testing, I only analyzed the hypothesized mediation model at the individual level with no leader Level 2 clustering represented. In contrast to the MLM and despite the high correlation with the predictor of transformational leadership, initial analyses looking at transformational leadership to trust in leader to affective organizational commitment did indicate trust in leader had a mediational role, and thus the full serial mediation is presented. The Hayes Process Macro for SPSS, version 3.3, was used with model 6 to test for serial mediation. Bootstrapping with \( N = 5000 \) samples was used to compute confidence intervals for testing the indirect effects. Confidence intervals whose lower and upper bounds did not encompass zero were inferred to represent significant indirect effects at the \( p < .05 \) level. As shown in Figure 5, there was a significant total effect between transformational leadership and RB-altruism (\( \beta = .11, p < .001 \)). There was not a significant combined indirect effect when examining all three indirect pathways collectively in the full mediation model (completely standardized indirect effect = .01, \( p > .05 \)). However, the only indirect pathway that was not significant was the first part of the serial mediation that may not have a pathway to the outcome. Specifically, the indirect effect of trust in leader as a mediator of transformational leadership to RB-altruism was not significant (completely standardized indirect effect = -.07, \( p > .05 \)). However, there was a significant indirect effect of affective organizational commitment as a mediator of transformational leadership to RB-altruism (completely standardized indirect effect = .07, \( p < .05 \)). And most importantly, there was a significant indirect effect of the full serial pathway of transformational leadership to trust in leader to affective organizational commitment to RB-altruism (completely standardized indirect effect = .01, \( p < .05 \)).
.05). With all of the indirect effects in the model, the direct effect of transformational leadership to RB-altruism was no longer significant ($\beta = .10, p = .081$). This overall model explained a significant 3.3% of variance in RB-altruism ($R^2 = .033, F(3, 945) = 10.63, p < .001$).

Given that hypotheses were only developed for the serial multilevel mediation model which included trust in leader, there was no specific hypotheses for a serial mediation model without accounting for nesting. However, the proposed adjusted model examining serial mediation strictly at the individual level was found to be significant, wherein trust in leader and affective organizational commitment mediated transformational leadership and RB-altruism. These findings demonstrate that transformational leadership can enhance trust in leader and affective organizational commitment at individual level, which then increase perceived role breadth in the form of RB-altruism.

Potential Problems with Level 1 Analyses when Individuals are Clustered

When observations are not independent, OLS regression analyses and the mediation analyses based on those regressions using individual level data may lead to incorrect inferences (Cohen, Cohen, West, & Aiken, 2003). This is why MLM was used to represent the clustering of individuals who were nested within leaders for RB-organizational loyalty, RB-sportsmanship, and role instrumentality.

However, OLS regression analyses and meditations on such clustered data are frequently reported. Therefore, I will present three analyses of my data for the proposed serial mediation models predicting RB-organizational loyalty, RB-sportsmanship, and role instrumentality using just the individual level data without considering the nesting within leader groups. The purpose will be to contrast the findings and conclusions that would be drawn from this common approach compared to representing the clustering of the data using MLM. To be clear, these analyses were
not appropriate for this clustered data, but these models were conducted to demonstrate how different inferences may be drawn by not representing the nesting of individuals within groups.

The Hayes Process Macro for SPSS, version 3.3, was used with model 6 to represent serial mediation. Bootstrapping with $N = 5000$ samples was used to compute confidence intervals for testing the indirect effects. Confidence intervals whose lower and upper bounds did not encompass zero were inferred to represent significant indirect effects at the $p < .05$ level.

As shown in Figure 6, there was a significant indirect pathway representing the serial mediation of transformational leadership to trust in leader to affective organizational commitment to RB-organizational loyalty (completely standardized indirect effect = .03, $p < .05$). Similarly, in Figure 7 there was significant indirect pathway representing the serial mediation of transformational leadership to trust in leader to affective organizational commitment to RB-sportsmanship (completely standardized indirect effect = .01, $p < .05$). In Figure 8, there were also significant indirect pathways representing the serial mediation of transformational leadership to trust in leader to affective organizational commitment to instrumentality (completely standardized indirect effect = .02, $p < .05$). Thus, there were significant indirect serial meditations among the individual level data for each of these outcomes in direct contrast to the MLM, which found no mediation role of trust in leader at group or individual levels when accounting for the nesting of individuals within their groups.
CHAPTER EIGHT
DISCUSSION

The current dissertation assessed what may predict increased perceived role breadth; that is, what may increase the degree to which employees think that various kinds of pro-organization and helpful behaviors are not extra-role but actually an expected part of their job (Morrison, 1994). I focused on predicting individuals’ perceived role breadth while considering the context that relationships may independently operate at group levels, differing between workgroups, and individual levels, differing among individuals within the same workgroups. Employees are often situated within small work groups, sharing the same leader or boss, and these work groups naturally develop collective characteristics and norms that are different from the characteristics of the individuals themselves, within the group. Thus, this study sought to determine if group level characteristics, as well as individual characteristics, led individuals to increasing their perception of prosocial work behaviors as part of their job.

The predictors of interest were transformational leadership, trust in leader, and affective organizational commitment. Transformational leadership has been conceptualized as involving four broad types of behaviors, namely 1) idealized influence, which includes creating a shared vision and relationship with team members; 2) individualized consideration, which includes addressing each individual’s needs and creating a shared learning climate; 3) intellectual stimulation, which includes sharing relevant and important knowledge, inspiring the team to share knowledge with each other, as well as inspiring cultural and individual innovation; and finally 4) inspirational motivation, which includes setting higher standards for individuals and groups to live up to (Bass, 1985). Trust in leader has been defined as a willingness of a group or individual to be vulnerable to the actions of their leader based on the expectation that their leader
will perform actions that are important, relevant, or meaningful to the trustor (Mayer et al., 1995). Finally, affective organizational commitment has been defined as an emotional attachment to, identification with, and involvement in the organization (Meyer & Allen, 1984).

Specifically, I assessed if there was a relationship between transformational leadership and perceived role breadth that was serially mediated through trust in leader and affective organizational commitment at both individual and group levels. Conceptually, this addresses the question: Does leading in this leadership style motivate employees to perceive their workplace roles more broadly because such leadership style increases trust and this trust increases the commitment individuals feel to their organization? Further, I assessed if this occurs at both the group and individual level. At the group level, the question was: Do work groups (employees with the same leader) who collectively perceive their leader as transformational develop a cohesive and shared sense of trust and commitment to that leader, which group characteristics and experiences then influence each individual to view their roles more broadly? In other words, can leaders promote a climate or shared feeling of trust and commitment among group members that then changes how each individual perceives their job? Finally, and independently at the individual level, do individual differences in how each employees views their leader influence their trust and commitment to that leader, which may shape how they individually view their job?

Perceived role breadth as measured in this study was found to be best represented as three correlated but distinct factors. These three factors were 1) \textit{RB-organizational loyalty}, which is defined as an employee perceiving the identification with and allegiance to their leader and organization as part of their job, 2) \textit{RB-altruism}, which is defined as an employee perceiving helping and supportive behaviors toward team members as part of their job, and 3) \textit{RB-}
sportsmanship, which is defined as an employee perceiving the acceptance of less-than-ideal circumstances without complaining as part of their job. The proposed multilevel serial mediation model was tested separately for each of the three perceived role breadth factors of RB-organizational loyalty (Hypothesis 1a), RB-altruism (Hypothesis 1b), and RB-sportsmanship (Hypothesis 1c).

This dissertation also examined whether the same multilevel serial mediation model could predict role instrumentality; that is, the extent an individual perceives prosocial and helpful behaviors as a part of their job, and thus something they are rewarded for (McAllister et al., 2007). Thus, hypothesis 2 was that trust in leader and affective organizational commitment would mediate the relationship between transformational leadership and role instrumentality. Role instrumentality did not separate into distinct factors, and was assessed as a single outcome (hypothesis 2).

It is important to note that the interpretations of mediations as causation are conceptual claims based on prior research, and it is an explanatory and language style choice in this Discussion. However, as will be discussed further below, this is not intended to imply claims of actually demonstrating such causation as the data was cross sectional and causation cannot be assessed in the current study.

Hypotheses

The following were all of the proposed hypotheses for this dissertation:

**Hypothesis 1a:** The relationship between transformational leadership and RB-organizational loyalty is serially mediated by trust in leader and affective organizational commitment, at both individual and group levels, when accounting for nesting.
**Hypothesis 1b:** The relationship between transformational leadership and RB-altruism is serially mediated by trust in leader and affective organizational commitment, at both individual and group levels, when accounting for nesting.

**Hypothesis 1c:** The relationship between transformational leadership and RB-sportmanship is serially mediated by trust in leader and affective organizational commitment, at both individual and group levels, when accounting for nesting.

**Hypothesis 2:** The relationship between transformational leadership and role instrumentality is serially mediated by trust in leader and affective organizational commitment, at both individual and group levels, when accounting for nesting.

In short, there was not support for any of these four full hypotheses of multilevel serial mediation. However, there was support for some pieces of these full hypotheses, which will be restated as modified hypotheses in response to initial findings.

First, it was confirmed that there was variability in group scores for all three predictors (transformational leadership, trust in leader, and affective organizational commitment) and for three of the four outcome variables (RB-organizational loyalty, RB-sportmanship, and role instrumentality), but not for the outcome of RB-altruism. Thus, RB-altruism would be tested without considering any clustering in the data; that is, a modified hypothesis 1b at just the individual level was tested for RB-altruism. The proposed multilevel mediation model of hypothesis 1a, 1c, and 2 were tested for the other outcomes of RB-organizational loyalty, RB-sportmanship, and role instrumentality, respectively.

However, when considering clustering of individuals within their leaders, trust in leader was not found to mediate the relationship between transformational leadership and affective organizational commitment between groups or within groups. Without these first pathways, trust
in the leader could not serve as a serial mediator. Therefore, there was ultimately not support for hypothesis 1a, 1c, nor 2 of multilevel serial mediation. However, simplified versions of these hypotheses were examined for the multilevel analyses with trust in leader removed as a mediator, leaving affective organizational commitment as a single multilevel mediator. These modified hypotheses of multilevel single mediation by affective organizational commitment were tested for RB-organizational loyalty (hypothesis 1a) and RB-sportsmanship (hypothesis 1c), and a modified hypothesis 2 of multilevel single mediation by affective organizational commitment was tested for role instrumentality. As noted, because there was no evidence to examine RB-altruism at the group level, the proposed serial mediation model was examined only at the individual level, which I will call a modified hypothesis 1b. The multilevel findings (hypotheses 1a, 1c, and 2) will be addressed in turn first, followed by the non-multilevel model predicting RB-altruism in hypothesis 1b.

The following is a listing of the modified hypotheses following initial testing:

**Modified hypothesis 1a:** The relationship between transformational leadership and RB-organizational loyalty is mediated by affective organizational commitment, at both individual and group levels, when accounting for nesting.

**Modified hypothesis 1b:** The relationship between transformational leadership and RB-altruism is serially mediated by trust in leader and affective organizational commitment, at the individual level of analyses.

**Modified hypothesis 1c:** The relationship between transformational leadership and RB-sportsmanship is mediated by affective organizational commitment, at both individual and group levels, when accounting for nesting.
Modified hypothesis 2: The relationship between transformational leadership and role instrumentality is mediated by affective organizational commitment, at both individual and group levels, when accounting for nesting.

Findings of this Dissertation

RB-organizational loyalty. The modified multilevel single mediation hypotheses 1a was tested to see if transformational leadership increases RB-organizational loyalty because it increases affective organizational commitment, and if this occurs at both group and individual levels. There was mediation of group level transformational leadership increasing individual RB-organizational loyalty through increasing group feelings of commitment to the organization, and there was no longer a direct effect of group level transformational leadership predicting individual RB-organizational loyalty. There was also mediation of individual transformational leadership increasing RB-organizational loyalty through increasing individual feelings of commitment to the organization, although there was still a direct effect of individual level perceptions of transformational leadership predicting increased RB-organizational loyalty.

Thus, the more the employees of a working group overall perceive their leader as transformational, the more the individuals perceive RB-organizational loyalty behaviors as expected in their job assumedly because the group as a whole tends to have higher feelings of commitment to the organization. In addition, within groups the individuals who tend to have the best opinions of their leader in terms of their transformational style also tend to perceive RB-organizational loyalty behaviors as expected in their job at least in part because they have greater individual feelings of commitment to their organization. Thus, there was support for the modified multilevel single mediation hypothesis 1a.
**RB-sportsmanship.** In testing the modified multilevel single mediation hypothesis 1b, there was also mediation of group level transformational leadership increasing individual RB-sportsmanship through increasing group level affective organizational commitment, and there was no longer a direct effect of group level transformational leadership predicting individual RB-sportsmanship. However, at the individual level although transformational leadership perceptions of individuals predicted their increased RB-sportsmanship, and individual perceptions of transformational leadership increased individuals’ feelings of commitment to the organization, individuals higher in commitment did not perceive RB-sportsmanship behaviors as any more expected in their job. That is, there was no mediation of individual transformational leadership predicting increased perceptions of RB-sportsmanship being a part of their job because of increased individual affective organizational commitment.

In other words, while groups that overall perceive their leaders as more transformational may think that RB-sportsmanship — essentially, willingness to put up with less than ideal situations and be optimistic — is more expected in their job because they collectively have greater commitment to the organization, the same relationships are not true of individuals within groups. That is, within a particular group, individuals with the greatest feelings of commitment to the organization are not any more likely than their coworkers to think that putting up with less than ideal situations are expected of them. Thus, there was group level mediation but no support for individual level mediation for the modified multilevel single mediation hypothesis 1c.

**Role instrumentality.** Broadly similar to the findings for RB-organizational loyalty, the modified multilevel single mediation hypotheses 2 found that group level transformational leadership increases individual perceived role instrumentality because it increases group level affective organizational commitment. Unlike RB-organizational loyalty, there was still a direct
effect such that higher group level transformational leadership still predicted increased individual perceived role instrumentality even after accounting for the effect of greater group level affective organizational commitment. There was also mediation of individual transformational leadership increasing the perceived role instrumentality through increasing individual feelings of commitment to the organization, and similar to the results for RB-organizational loyalty there was still a direct effect of individual level perceptions of transformational leadership predicting increased perceived role breadth.

Thus, the more the employees in working groups overall or collectively perceive their leader as transformational, the more the individuals perceive their workplace behaviors as bringing them rewards assumedly at least in part because the group as a whole tends to have higher feelings of commitment to the organization. In addition, within groups the individuals who tend to have the best opinions of their leader in terms of their transformational style also tend to perceive workplace behaviors as bringing them rewards at least in part because they have greater individual feelings of commitment to their organization. Thus, broadly similar to the results for modified hypothesis 1a for RB-organizational loyalty, there was support for the modified multilevel single mediation hypothesis 1c.

**RB-altruism.** As noted, there was no variation between the groups in overall RB-altruism levels. Therefore, RB-altruism was assessed without considering clustering in the data with the modified individual level serial mediation hypothesis 1b. There was significant serial mediation such that greater transformational leadership predicted increased RB-altruism because it increased trust in leader and that increase led to increased feelings of commitment to the organization. There was also an indirect effect of transformational leadership increasing RB-altruism because it increased feelings of commitment more directly; in contrast, trust in leader
did not directly lead to RB-altruism in this model, it affected it only through feelings of commitment to the organization. Accounting for these indirect relationships, there was no longer a direct relationship of transformational leadership increasing RB-altruism.

Thus, at an individual level and not taking account that many individuals shared leaders, when individuals perceive their leader as behaving in transformational styles, it increases both their trust in the leader and their feeling of commitment to the organization. Their feelings of trust also increase their feelings of commitment. And it is these feelings of being committed to their organization that increases the extent to which they feel that helping their coworkers is an expected part of their job. Thus, there was support for individual level serial mediation of hypothesis 1c.

Overall Findings

Overall, while there was no support for the hypotheses as originally presented, there was support for some modified aspects of these original hypotheses. Broadly speaking and with some caveats, transformational leadership does predict perceived role breath and role instrumentality outcomes because of its ability to increase positive feelings of commitment to one’s organization. This is true at the group level for RB-organizational loyalty, RB-sportsmanship, and role instrumentality. This is true at the individual level, when accounting for nesting, for RB-organizational loyalty and role instrumentality, but not for RB-sportsmanship. Not accounting for nesting, this is also true for RB-altruism, but additionally trust in leader can also serially mediate from the individual’s perceptions of their leader’s transformational style to their feelings of commitment and then increase RB-altruism.

Exploratory Analyses of Level 1 Serial Mediation Ignoring Nesting
This dissertation particularly focused on examining these relationships of perceptions of leaders and individuals’ perceptions of workplace behavior expectations in the context that these relationships may independently operate at both the group and individual level. However, much of the prior research—indeed research that influenced the creations of the multilevel mediation hypotheses—has primarily focused on the individual level, not considered nesting of individuals within groups, and not examined group level dynamics for the relationships they may show.

Interestingly, when the current data were examined ignoring clustering of individuals and looking only at the individual level of data, there was support for the full serial mediation. Specifically, for RB-organizational loyalty, RB-sportsmanship, and role instrumentality there was significant serial mediation from transformational leadership to trust in leader to affective organizational commitment to each of these outcomes. (As already noted RB-altruism was examined only at the individual level and it too showed this serial mediation.) Specifically, the proposed relationship of trust in the leader occurred only when examining individual data without considering that these individuals were clustered within workgroups; when considering nesting within workgroups trust in leader no longer had any mediational role at the group or even at the individual level. Thus, different results were found in assessing what predicts individual employee perceptions of their role when accounting for and not accounting for their nesting into work groups.

**Importance of Multilevel Modeling to Represent Nested Groups**

There seem to be a few possible reasons as to why different results are found when considering nesting of individuals under their particular leader. When observations are clustered within groups, they do not meet a fundamental assumption of regression analyses (which mediation analyses are based on) of independent observations and may lead to incorrect
inferences (Cohen, Cohen, West, & Aiken, 2003). In particular, standard error estimates are too small and alpha levels are subsequently inflated, in short leading to significant findings that may be Type 1 errors. Further, there can be heterogeneity of regression in which the relationships of predictors to the outcome vary based on the grouping variable (Raudenbush & Bryk, 2002). In fact, not considering grouping can fundamentally change the conclusions (Roberts, 2004). Roberts (2004) demonstrated that a predictor can have a positive relationship to an outcome, but when taking grouping into account the predictor showed a positive relationship to the outcome at the group level, but a negative relationship at the individual level.

From a more conceptual perspective and as described in the introduction, despite the fact that several scholars have stressed that “the study of leadership is inherently multilevel in nature,” (Bliese, Halverson, & Schriesheim, 2002, p. 4) and that transformational leadership has been found to operate at both individual and group levels (e.g., Wang & Howell, 2010; Dionne, Sayama, Hao, & Bush, 2010), the state of the science predominantly looks at leadership as an individual phenomenon (Batistic, Cerne, & Vogel, 2017). Indeed, there have been several calls for more multilevel research on transformational leadership and especially calls for research examining multilevel mediating mechanisms of transformational leadership. These calls for research have merit, considering it has been suggested that “transformational leaders are often thought to have their greatest effect by changing how work groups (rather than individuals) function” (Lord & Dinh, 2011, p. 31).

Considering individual values on a construct (e.g., individual perceptions of supervisors’ transformational leadership) independently of the group value (e.g., team perceptions of supervisors’ transformational leadership) “is not only informative but necessary to interpret an individual’s placement or standing” (Klein et al., 1994, p. 202). If theoretical constructs relate to
individuals nested in groups or teams, then one must acknowledge the group or team as a meaningful entity (Braun et al., 2013), and with respect to leadership as a theoretical construct, it has been suggested that “transformational leaders are often thought to have their greatest effect by changing how work groups (rather than individuals) function” (Lord & Dinh, 2011, p. 31).

Leading teams yields several challenges, like aligning individual goals with a shared mission, managing resources, establishing a positive climate of trust and support, and coordinating information transfer and task completion (Zaccaro, Rittman, & Marks, 2001). Yet, while scholars stressed that “the study of leadership is inherently multilevel in nature” (Bliese, Halverson, & Schriesheim, 2002, p. 4), leadership research has been suffering from a dearth of deliberate theoretical and empirical differentiation between levels of analysis (Yammarino, Dionne, Chun, & Dansereau, 2005).

It is for these reasons that many scholars acquainted with MLM have criticized the state of the literature, particularly the exponentially growing topic of transformational leadership. It is well understood, now more than ever, that organizations’ predominantly team-based structures require leaders “to lead and motivate not only individuals but also teams as a whole” (Chen et al., 2007, p. 331). The findings of this dissertation seem to highlight the statistical and theoretical arguments for studying leadership and other organizational constructs from a multilevel perspective.

**Connecting this Study’s Findings with Existing Literature**

The findings of this study contribute to, as well as expand upon, current understanding of transformational leadership and perceived role breadth. Various scholars have voiced concerns about the dearth of research identifying mechanisms explaining the relationship between predictors and perceived role breadth (Coyle-Shapiro et al., 2004; Morrison 1994). For instance,
prior research has connected transformational leadership with role breadth self-efficacy (e.g., Den Hartog & Belschak, 2012), yet no prior study has directly examined the relationship between transformational leadership and perceived role breadth. Importantly, perceived role breadth and role instrumentality are concepts about what behaviors an employee believes are expected of them or will earn them rewards; they are not measures of what behaviors they are actually performing. Yet, given that a large body of research exists connecting transformational leadership to OCB (Carter et al., 2014; Wang et al., 2011), and that perceived role breadth has been found to directly predict OCB (Coyle-Shapiro et al., 2004; Hofmann et al., 2003; Kamdar et al., 2006; Tepper & Taylor, 2003), the potential connection between transformational leadership and perceived role breadth seemed promising.

Expanding on the prior literature showing that transformational leadership facilitates citizenship behaviors (e.g., MacKenzie, Podsakoff, & Rich, 2001; Martinez, Sun, Gergen, & Wheeler, 2018; Podsakoff et al., 1990), this study demonstrated that transformational leaders can shape the perceptions of employees such that they view citizenship behaviors as expected parts of their job. More directly, this study showed how transformational leaders expand role perceptions to include loyalty, altruism, and sportsmanship. The facilitation of expanded work roles makes sense given that fundamental to transformational leadership is inspirational motivation, which includes the raising of individual and group expectations and standards (Bass, 1985). Thus, it seems that individuals are motivated by their leaders to reshape their work role to include higher standards of loyalty, helping, and positive attitudes toward imperfect situations.

Moreover, this study shows that affective commitment plays a meaningful role in explaining how transformational leadership expands individual’s perceived role breadth and role instrumentality. Through their leadership style, affective commitment is formed as a group level
experience, wherein a shared experience is felt between group members. As a whole, the group becomes more committed to the leader, the organization, the vision, and each other. This shared and enhanced sense of commitment then leads individual members to expand their work role, wherein they believe they should go above and beyond what may have initially be considered the expected call of duty.

These findings provide meaningful connections to currently disconnected bodies of literature. Specifically, the findings of this dissertation seem to connect research on transformational leadership theory with research on leader-member exchange (LMX) theory. For instance, previous evidence suggests a strong positive relationship between LMX quality and perceived role breadth (Hofmann et al., 2003; Jiao & Hackett, 2007; Jiao, Richards, & Hackett, 2013; Klieman, Quinn, & Harris, 2000; Van Dyne et al., 2008). Indeed, LMX theory is premised the notion of role making (Graen, 1976), social exchange, reciprocity, and equity (Deluga, 1994), wherein leaders clearly convey role expectations to their followers and provide potential rewards, both tangible and intangible, to followers who satisfy these expectations. Although leaders often initially create role expectations, followers are not passive role recipients, but either reject, embrace, or renegotiate roles prescribed by their leaders (Graen, 1976). Role negotiation occurs over time, defining the quality and maturity of LMX, and leaders develop relationships of varying quality with different followers over time (Graen, 1976; Graen & Uhl-Bien, 1995).

It seems possible that transformational leadership actually operates through LMX, although that relationship was not examined here nor has that relationship been examined much in the past. Although transformational leadership and LMX are two distinct forms of leadership, recent meta-analytic structural equation modelling based on 132 studies revealed that LMX mediates transformational leadership’s relationships with employee outcomes (Boer, Deinert,
Homan, & Voelpel, 2016). In fact, Shaffer et al. (2016) examined the discriminant validity of several leadership constructs and questioned whether transformational leadership and LMX are empirically distinct. Although this study did not directly examine LMX, nor does this study seek to determine whether LMX and transformational leadership are distinct or separate, it seems possible that LMX may be involved in the process by which transformational leaders enhance perceived role breadth. This possibility does not seem far-fetched given that recent research has shown LMX is positively related to extra-role customer service where affective commitment mediated this relationship (Garg & Dhar, 2016). Although Garg’s study was focused on extra-role performance, the findings are quite similar to this study’s findings that affective organizational commitment facilitated the expansion of work role perception. Future research could further disentangle the connection between transformational leadership and LMX, and how these two phenomena are distinct and how they may operate simultaneously. Furthermore, future research could explore how transformational leadership, LMX, and affective organizational commitment operate to facilitate expanded work roles.

Beyond perceived role breadth, this study also showed that transformational leadership predicts role breadth instrumentality through affective organizational commitment, both at group and individual levels. As such, individuals who are members of committed groups following transformational leaders can have expanded work roles wherein they perform behaviors they believe will bring rewards. Findings of previous research has shown that many employees identify a connection between OCB and valued outcomes such as promotions and pay increases (Haworth & Levy, 2001; Hui et al., 2000; Schnake & Dumler, 1997), and that most employees believe that OCB should be rewarded in some way (Reed & Kidder, 2005). This study shows that not only can OCB be viewed as in-role, but that those in-role behaviors are done
strategically in order to produce rewards. Thus, it is likely that part of transformational leadership is helping employees want greater rewards for themselves and for the group as a whole through increased commitment to the vision and organization. Bass (1985) suggests transformational leaders are influential in that they raise followers’ awareness of the importance and value of designated outcomes and ways of reaching these outcomes.

Although this dissertation further contextualized how work roles are developed, in addition to role instrumentality wherein transformational leaders inspire their followers to enhance work roles and awareness of the value of outcomes, there are still clear gaps that future researchers could explore and address. For instance, LMX may also be at play in regards to the connection between transformational leadership and role instrumentality. Indeed, the very idea of LMX argues that during work associated exchanges, leaders develop different kinds of relations with their followers (Graen and Cashman, 1975, Graen and Scandura, 1987). Those followers who experience high quality LMX relationships with their leader usually earn favored treatment such as large support (Kraimer, Wayne, & Jaworski, 2001), more growth opportunities (Graen & Scandura, 1987) and greater freedom in taking decisions (Liden & Graen, 1980). Such favored treatments, growth opportunities, and freedoms may be intentionally sought via role instrumentality as inspired by transformational leaders. Thus, it is possible that individuals with high LMX did so because the transformational leader engaged them powerfully, both individually and as a group, and inspired them to raise their standards and expand their roles. The ones who do so may then be greater rewarded by such leaders because they became aware via role instrumentality that such rewards were not only possible, but expected.

Finally, this study provides evidence that when a data analysis accounts for nesting, there will be differences in the relationships and pathways found between variables. Regarding RB-
sportsmanship, however, there was a distinct finding in this study that bears further discussion. Unlike RB-organizational loyalty and role instrumentality, which both had similar results in that affective organizational commitment was found to be both a group level and individual level mediator of transformational leadership, the relationship between transformational leadership and RB-sportsmanship was only found to be mediated by affective organizational commitment at the group level, not at the individual level. In other words, it seems that individuals who are part of highly committed groups begin to see putting up with less than ideal circumstances as part of their job. However, having individual commitment to the organization does not seem to facilitate this expansion of perceived role breadth. This finding may highlight the sometimes portent impact of group characteristics on individual perception, or it may simply be an example of Type 2 error given the number of relationships being tested.

**Practical Implications**

Like others (Braun et al., 2013), the results of this study highlight the importance of transformational leadership at multiple levels. These findings should inspire leaders to consider how individual and team perceptions of their behavior and how transformational leadership can be facilitated at both levels. Indeed, prior research shows that transformational leadership can be trained (Barling, Weber, & Kelloway, 1996). Thus, the findings of this study suggest that organizations should introduce training approaches that address transformational leader behavior at multiple levels (i.e., individual-directed and team-directed) in order to provide leaders with necessary knowledge, skills, and abilities.

Second, the results of this study highlight the impact of affective organizational commitment. Indeed, leaders should consider the importance of developing commitment among not only individuals, but also among groups as a whole. Transformational leadership positively
influences affective organizational commitment among group members. Therefore, leaders should be aware of their impact on group members’ mutual and shared sense of commitment. Such should be of great interest to leaders, especially given that affective organizational commitment in large part explains how leaders raise the standards and motivation of their followers. Indeed, affective organizational commitment explains in varying degree how leaders can help their employees see loyalty, altruism, and sportsman as expected parts of their jobs. Such perceptions would likely lead to increases in related behaviors, which would likely improve the overall climate, performance, and outcomes of the organization. One way in which leaders could foster an open climate of discussion and exchange with individual followers is through continuous team reflection (Braun et al., 2013), which may facilitate a group of individual followers to work together as a single cohesive unit or team (Eisenbeiss et al., 2008).

Third, transformational leadership must be considered in hiring, promoting, and training supervisors in organization contexts. Indeed, leadership development in any organization wherein teams are being led by leaders would benefit from implementing combined training and coaching methods based on the transformational leadership research (Braun et al., 2009; Braun et al., 2013). Overall, the results of this study demonstrate the beneficial impact of a culture shaped by transformational leadership and affective organizational commitment at multiple levels.

Finally, the results of this study showed that transformational leaders, through both group level and individual level affective organizational commitment, can expand individual role perceptions. These findings should be inspiring and interesting to organizations seeking employees who go above and beyond the call of duty. Indeed, prior research has shown that perceived role breadth and role instrumentality both predict OCB behavior (Coyle-Shapiro et al., 2004; Hofmann et al., 2003; Kamdar et al., 2006; Tepper & Taylor, 2003). Thus, if companies
want their employees to engage in more of these behaviors, they should first address the perception of their employees work roles. Importantly, one of the roles of transformational leaders is to help expand their follower’s work roles to include organizational loyalty, altruism toward team members, and sportsmanship. Such expansion of roles would likely yield a positive impact on the organization within in terms of culture and environment as well as outcomes.

**Limitations and Future Research**

This dissertation is not free of limitations that should be kept in mind when interpreting the findings, and several future directions can be proposed. First there are limitations of the design for testing the proposed model. Second, there are limitations of the measures themselves. Third, there are limitations in generalizability because of the sample and the recruitment of participants.

As initially noted, one of the main caveats to bear in mind is that although the model proposes a sequence of relationships based on prior research, in the present study the data is cross sectional, measured at a single time point, and cannot establish direction of causation. Future research could attempt to measure these constructs and their changes over time to correctly establish causal direction. And while experimental manipulations are difficult in the context of employees in their workplaces, research following natural changes could be informative. For example, following the introduction of training programs that emphasize transformational leadership styles, or tracking employees as who is their leaders changes due to organizational restructuring or new hiring.

A strength of this study is that it is one of the first studies explicitly combining multilevel research of transformational leadership with mediating processes via trust in leader and affective organizational commitment, and I encourage researchers to further pursue multilevel modeling in
the domain of transformational leadership. And this study found important differences in mediational process when representing the clustering of individuals under their leaders. Clustering based on the leader made sense given that two of the original proposed predictors in the model were directly assessing the leader (transformational leadership and trust in leader). However, given that it has been shown that accounting for nesting can produce different results, a further question is if clustering within other levels should be represented for this or similar models. That is, what other higher levels of grouping or clustering in the data may be conceptually important? Does affective organizational commitment vary at higher levels of agency or department within an organization?

Conceptually overlapping between the first limitations (the design) and the second limitations (the measures), another topic to raise is this study’s ability to represent the multilevel nature of relationships is that all of the data was collected at the individual level. That is, there were no overall group assessment or performance measures; the group representations were conceptually how the individuals collectively or on average thought about their leader as compared to other groups. Considering the same variable at two levels can lend itself to theoretically interesting models (Cohen, Cohen, West & Aiken, 2003), but future research could benefit from gathering information regarding the nature of the groups themselves. That is, additional important questions could be addressed when asking individuals about how the leader acts towards others or their group as a whole; that is, directly asking them about the constructs at the team level (Braun et al, 2013; Wang & Howell, 2010; Yammarino, Schriesheim, Sosik, Jung, & Liu, 2012).

In addition to these considerations about levels of measurement, some of the constructs in this study were also assessed in somewhat outdated ways. As noted previously, given the
timeframe in which this data was collected, there have been several developments in the literatures for many of the constructs being studied. For instance, more recently, researchers have come to distinguish between cognitive and affective-based trust, wherein each produces separate outcomes (Dirks, 2000). In examining the results of previous studies which have found trust to be a mediator, often there is distinction of results when accounting for either affective or cognitive trust. For instance, Zhu and colleagues (2013) examined the mediating effects of cognitive and affective trust on the relationship between follower perceptions of transformational leadership behavior and their work outcomes. The results of their study indicated that affective trust fully mediated the relationships between transformational leadership and the work outcomes of followers, including their affective organizational commitment, organizational citizenship behaviors (OCBs), and job performance. In contrast, they further found that cognitive trust negatively mediated the relationship between transformational leadership and follower job performance, and had insignificant effects on their affective organizational commitment and organizational citizenship behaviors. Zhu et al.’s (2013) study demonstrates that affective trust can be a mechanism which translates transformational leadership into positive work outcomes for the organization. Other research shows different results, for example, Schaubroeck, Lam, and Peng (2011) found that transformational leadership influenced team performance indirectly through cognition-based trust. They further found that cognition-based trust directly influenced team potency and indirectly (through affect-based trust) influenced team psychological safety. Given that more recent literature on trust is becoming more nuanced and complex, one potential weakness of the current study is that the scale was constructed before these conceptualizations were derived. Future research examining multilevel trust in leader could account for the various forms in which trust could manifest, such as affective and cognitive. it is possible that the lack of
multilevel findings with respect to trust could be due to contradictory influences of these two types of trust that the current scale could not clearly distinguish.

It should be noted that the third main limitation was that the entire sample of this study comprised employees of state governmental agencies. Among the ways in which that may have impacted the findings, what employees perceive to be an expected part of their job, that is the perceived role breadth, may differ in this kind of organization. Beyond the type of organization, there were also concerns about the potential bias in the sample in this study and thus the ability to generalize from them to workplaces more broadly. The researcher who collected the original data (Cox, 2000) noted some example of fear expressed by respondents, including fears of retribution for their responses. Other employees called requesting an address so they could mail their questionnaires to her directly. Drop boxes in the agencies were used for survey collection; given technological advances since this time and the widespread use of online surveys, future research can easily address these concerns.

Given that trust in one’s leader, as well as affective commitment and role breadth were constructs being examined, it seems likely that the sample may have been biased on these particular measures. Those with lower trust in their leader may have been less confident in the anonymity of their responses and less likely to participate or honestly participate. Those with lower commitment to their organization may also have been less motivated or felt their voice was less important. In addition, those particularly high in thinking that many potentially extra role behaviors are expected of their job, that is those with high perceived role breadth, may have been more likely to participate. Future research would benefit from more careful recruitment and communication with participants to allay fears and perhaps provide kind of monetary rewards for
participation so that the sample is not just limited to those who feel a commitment and feel that they should perform these extra behaviors.

**Conclusion**

This dissertation proposed a multilevel serial mediation model wherein trust in leader and affective organizational commitment mediated the effect of transformational leadership on perceived role breadth among 950 employees from government agencies. This same serial mediation model was examined with role breadth instrumentality as the outcome variable. Moreover, perceived role breadth was broken into three separate factors roughly corresponding to: 1) RB-organizational loyalty, 2) RB-altruism, and 3) RB-sportsmanship. All employees reported which specific leader they had, therefore allowing each individual's response to be nested within the grouping of Level 2 leader. After initial multilevel model null testing as well as ICC1 calculations, it was determined that MLM techniques were appropriate for RB-organizational loyalty, RB-sportsmanship, and role breadth instrumentality due to between-group variance. However, for RB-altruism no evidence was found for group variance, and thus the proposed serial mediation model was examined only at the individual level when RB-altruism was the outcome variable.

For all three of the outcome variables examined with MLM, trust in leader was not found to serially mediate when accounting for nesting. Therefore, trust in leader was removed from the MLM and affective organizational commitment was analyzed as a single multilevel mediator. For all three outcomes being tested with MLM, affective organizational commitment mediated transformational leadership to the outcome variable at the group level. For RB-organizational loyalty and role instrumentality, but not RB-sportsmanship, affective organizational commitment mediated transformational leadership to the outcome variable at the individual level as well.
When testing the proposed serial mediation model at the individual level without account for clustering of individuals by their leader, significant serial mediation did occur wherein trust in leader through affective organizational commitment mediated the relationship between transformational leadership and RB-altruism. In fact, when not accounting for nesting, the proposed serial model was actually confirmed for each of the four outcome variables. However, when accounting for nesting, trust in leader was not found to be a multilevel mediator of any of the four outcome variables. Therefore, this study answers several calls for multilevel research on transformational leadership and highlights the importance of accounting for nesting.
REFERENCES


Ashkanasy, N. M., & Tse, B. (2000). Transformational leadership as management of emotion: A conceptual review. In N. M. Ashkanasy, C. E. Hartel, & W. J. Zerbe (Eds.), *Emotions in


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Transformational Leadership Behavior Inventory (Podsakoff et al., 1990)

In this section, we would like to ask you about other qualities of the person you rated above. Please use the key below and circle your response.

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

Response Choices

He/she has a clear understanding of where we are going. 1 2 3 4 5
He/she leads by “doing,” rather than by simply “telling.” 1 2 3 4 5
He/she fosters collaboration among different work groups. 1 2 3 4 5
He/she shows that he/she expects a lot from us. 1 2 3 4 5
He/she paints an interesting picture of the future for our organization. 1 2 3 4 5
He/she provides a good role model. 1 2 3 4 5
He/she encourages employees to be “team players.” 1 2 3 4 5
He/she insists on only the best performance. 1 2 3 4 5
He/she constantly seeks new opportunities for the organization. 1 2 3 4 5
He/she leads by example. 1 2 3 4 5
He/she will not settle for second best. 1 2 3 4 5
He/she gets the group to work together for the same goal. 1 2 3 4 5
He/she demonstrates good character. 1 2 3 4 5
He/she leads based on principles. 1 2 3 4 5
He/she puts the good of the organization above his/her own needs. 1 2 3 4 5
He/she demonstrates self-control. 1 2 3 4 5
Trust In Leader Conditions of Trust Inventory (CTI; Butler, 1991)

A Strongly Disagree
B Moderately Disagree
C Neither Agree Nor Disagree
D Moderately Agree
E Strongly agree

Response Choices

He/she does things consistently from one time to the next..........  A B C D E
He/she does the same thing every time the situation is the same...  A B C D E
He/she behaves in a consistent manner.................................... A B C D E
I seldom know what he/she will do next.................................. A B C D E
He/she treats me fairly.......................................................... A B C D E
He/she treats others better than he/she treats me................. A B C D E
He/she always gives me a fair deal........................................ A B C D E
He/she treats me on an equal basis with others...................... A B C D E
He/she always tells me the truth............................................ A B C D E
He/she would not lie to me................................................... A B C D E
He/she deals honestly with me............................................. A B C D E
Sometimes he/she does dishonest things.............................. A B C D E
He/she tells me what he/she is thinking............................... A B C D E
He/she tells me what’s on his/her mind................................. A B C D E
He/she shares his/her thoughts with me............................... A B C D E
He/she keeps information from me...................................... A B C D E
Sometimes I cannot trust him/her........................................ A B C D E
I can count on him/her to be trustworthy............................ A B C D E
I feel that he/she can be trusted......................................... A B C D E
I trust him/her................................................................. A B C D E
He/she follows through on promises made to me.................... A B C D E
Keeping promises is a problem for him/her.......................... A B C D E
If he/she promises something to me, he/she will stick to it..... A B C D E
He/she does things that he/she promises to do for me.......... A B C D E
### Organizational Commitment Questionnaire (Allen & Meyer, 1990)

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

#### Response Choices

<table>
<thead>
<tr>
<th>Statement</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would be happy to spend the rest of my career in this organization</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I really feel as if this organization’s problems are my own</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>My organization has a great deal of personal meaning for me</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I feel like I’m “part of the family” at my organization</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I enjoy discussing my organization with people outside it</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I think that I could easily become as attached to another organization as I am to this one</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I feel “emotionally attached” to my organization</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>I feel a strong sense of belonging to my organization</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
**Perceived Role Breadth**

In this section, we would like to ask some questions about the activities you do as part of your job. In **PART I**, PLEASE INDICATE WHICH ACTIVITIES YOUR ARE EXPECTED TO DO AS PART OF YOUR JOB. IN **PART II**, PLEASE INDICATE HOW IMPORTANT PERFORMING EACH OF THESE ACTIVITIES IS FOR OBTAINING REWARDS AT WORK (raises, promotions, good assignments, personal status, etc.).

**Part I**

<table>
<thead>
<tr>
<th>Activity</th>
<th>N</th>
<th>Y</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Representing my organization favorably to outsiders</td>
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<tr>
<td>Assisting coworkers when they have heavy workloads</td>
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<tr>
<td>Keeping informed about events in my organization</td>
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<tr>
<td>Understanding work procedures</td>
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<tr>
<td>Avoiding complaining about trivial matters at work</td>
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<tr>
<td>Taking on new assignments with enthusiasm</td>
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<tr>
<td>Promoting my organization’s services</td>
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<tr>
<td>Working well without supervision</td>
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<tr>
<td>Demonstrating technical proficiency at my job</td>
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<tr>
<td>Making suggestions to improve productivity</td>
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<tr>
<td>Tolerating minor hassles without complaining</td>
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<td></td>
<td></td>
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<tr>
<td>Helping coworkers catch up when they have been absent</td>
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<tr>
<td>Defending my organization when others criticize it</td>
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<td></td>
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<tr>
<td>Requesting challenging work assignments</td>
<td></td>
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</tr>
<tr>
<td>Focusing on the positives at work, not the negatives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Getting involved in work-related events, even when they are not required</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Lending a helping hand to my coworkers</td>
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<td></td>
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<tr>
<td>Working harder than I am expected to</td>
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<tr>
<td>Helping new coworkers get oriented</td>
<td></td>
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<tr>
<td>Accepting changes in my department</td>
<td></td>
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<tr>
<td>Staying at my organization even if another organization offered more money</td>
<td></td>
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<tr>
<td>Attending optional work-related functions</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Working efficiently</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persisting to complete difficult tasks</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Response Choices**
Table 1

*Exploratory Factor Analysis Loadings of Role Breadth Items*

<table>
<thead>
<tr>
<th>Item</th>
<th>Organizational loyalty</th>
<th>Altruism</th>
<th>Sportsmanship</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. Getting involved in work-related events, even when they are not required</td>
<td>0.715</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Attending optional work-related functions</td>
<td>0.699</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Promoting my organization’s services</td>
<td>0.525</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Defending my organization when others criticize it</td>
<td>0.462</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Requesting challenging work assignments</td>
<td>0.410</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Staying at my organization even if another organization offered more money</td>
<td>0.400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Representing my organization favorably to outsiders</td>
<td>0.371</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Keeping informed about events in my organization</td>
<td>0.364</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Assisting coworkers when they have heavy workloads</td>
<td></td>
<td>0.771</td>
<td></td>
</tr>
<tr>
<td>12. Helping coworkers catch up when they have been absent</td>
<td>0.587</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Lending a helping hand to my coworkers</td>
<td>0.564</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Helping new coworkers get oriented</td>
<td>0.515</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Avoiding complaining about trivial matters at work</td>
<td></td>
<td></td>
<td>-0.614</td>
</tr>
<tr>
<td>11. Tolerating minor hassles without complaining</td>
<td></td>
<td></td>
<td>-0.600</td>
</tr>
<tr>
<td>15. Focusing on the positives at work, not the negatives</td>
<td></td>
<td></td>
<td>-0.549</td>
</tr>
<tr>
<td>6. Taking on new assignments with enthusiasm</td>
<td></td>
<td></td>
<td>-0.379</td>
</tr>
<tr>
<td>10. Making suggestions to improve productivity</td>
<td></td>
<td></td>
<td>-0.323</td>
</tr>
<tr>
<td>18. Working harder than I am expected to</td>
<td></td>
<td>Did not load on any factor &gt; .30</td>
<td></td>
</tr>
<tr>
<td>24. Persisting to complete difficult tasks</td>
<td></td>
<td>Did not load on any factor &gt; .30</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Principle axis factoring with direct oblimin rotation. Loadings < .30 are suppressed.
Table 2

Descriptive Statistics and Pearson Correlations

<table>
<thead>
<tr>
<th>Descriptives</th>
<th>Transformational Leadership</th>
<th>Trust in Leader</th>
<th>Affective Organizational Commitment</th>
<th>Role Breadth Organizational Loyalty</th>
<th>Role Breadth Altruism</th>
<th>Role Breadth Sportsmanship</th>
<th>Role Instrumentality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.75</td>
<td>3.87</td>
<td>3.52</td>
<td>1.70</td>
<td>1.87</td>
<td>1.89</td>
<td>1.58</td>
</tr>
<tr>
<td>Median</td>
<td>3.92</td>
<td>4.13</td>
<td>3.63</td>
<td>1.75</td>
<td>2.00</td>
<td>2.00</td>
<td>1.59</td>
</tr>
<tr>
<td>SD</td>
<td>0.91</td>
<td>0.93</td>
<td>0.84</td>
<td>0.26</td>
<td>0.24</td>
<td>0.21</td>
<td>0.50</td>
</tr>
<tr>
<td>Skewness (SE=.08)</td>
<td>-0.80</td>
<td>-0.94</td>
<td>-0.62</td>
<td>-0.70</td>
<td>-2.00</td>
<td>-2.20</td>
<td>0.43</td>
</tr>
<tr>
<td>Min-Max</td>
<td>1-5</td>
<td>1-5</td>
<td>1-5</td>
<td>1-2</td>
<td>1-2</td>
<td>1-2</td>
<td>1-3</td>
</tr>
<tr>
<td>N</td>
<td>950</td>
<td>950</td>
<td>950</td>
<td>950</td>
<td>949</td>
<td>950</td>
<td>936</td>
</tr>
<tr>
<td>Cronbach’s α</td>
<td>.95</td>
<td>.97</td>
<td>.89</td>
<td>.77</td>
<td>.69</td>
<td>.70</td>
<td>.96</td>
</tr>
</tbody>
</table>

Pearson correlations

<table>
<thead>
<tr>
<th></th>
<th>Trust in Leader</th>
<th>Affective Organizational Commitment</th>
<th>Role Breadth Organizational Loyalty</th>
<th>Role Breadth Altruism</th>
<th>Role Breadth Sportsmanship</th>
<th>Role Instrumentality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust in Leader</td>
<td>.807**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affective Organizational Commitment</td>
<td>.508**</td>
<td>.445**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role Breadth Organizational Loyalty</td>
<td>.217**</td>
<td>.159**</td>
<td>.345**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role Breadth Altruism</td>
<td>.111**</td>
<td>.066*</td>
<td>.171**</td>
<td>.401**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role Breadth Sportsmanship</td>
<td>.167**</td>
<td>.143**</td>
<td>.197**</td>
<td>.530**</td>
<td>.442**</td>
<td></td>
</tr>
<tr>
<td>Role Instrumentality</td>
<td>.341**</td>
<td>.312**</td>
<td>.363**</td>
<td>.316**</td>
<td>.137**</td>
<td>.221**</td>
</tr>
</tbody>
</table>

Note. For all correlations ***p < .001
Table 3

*Level 2 Grouping Variable of Leader*

<table>
<thead>
<tr>
<th>Number of individuals rating a particular leader</th>
<th>Number of groups</th>
<th>Percentage of groups</th>
<th>Number of individuals in groups that size</th>
<th>Percent of individuals in groups that size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 individual per leader</td>
<td>38</td>
<td>13.2</td>
<td>38</td>
<td>4</td>
</tr>
<tr>
<td>2 individual per leader</td>
<td>64</td>
<td>22.2</td>
<td>128</td>
<td>13.5</td>
</tr>
<tr>
<td>3 individual per leader</td>
<td>66</td>
<td>22.9</td>
<td>198</td>
<td>20.8</td>
</tr>
<tr>
<td>4 individual per leader</td>
<td>56</td>
<td>19.4</td>
<td>224</td>
<td>23.6</td>
</tr>
<tr>
<td>5 individual per leader</td>
<td>34</td>
<td>11.8</td>
<td>170</td>
<td>17.9</td>
</tr>
<tr>
<td>6 individual per leader</td>
<td>24</td>
<td>8.3</td>
<td>144</td>
<td>15.2</td>
</tr>
<tr>
<td>7 individual per leader</td>
<td>4</td>
<td>1.4</td>
<td>28</td>
<td>2.9</td>
</tr>
<tr>
<td>9 individual per leader</td>
<td>1</td>
<td>0.3</td>
<td>9</td>
<td>0.9</td>
</tr>
<tr>
<td>11 individual per leader</td>
<td>1</td>
<td>0.3</td>
<td>11</td>
<td>1.2</td>
</tr>
<tr>
<td>Total</td>
<td>288</td>
<td>100</td>
<td>950</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 4

*Level 2 Leader Group Descriptive Statistics and Pearson Correlations*

<table>
<thead>
<tr>
<th>Descriptives</th>
<th>Transformational Leadership</th>
<th>Trust in Leader</th>
<th>Affective Organizational Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.74</td>
<td>3.86</td>
<td>3.53</td>
</tr>
<tr>
<td>Median</td>
<td>3.81</td>
<td>3.97</td>
<td>3.58</td>
</tr>
<tr>
<td>SD</td>
<td>0.68</td>
<td>0.68</td>
<td>0.61</td>
</tr>
<tr>
<td>Skewness (SE = .14)</td>
<td>-0.91</td>
<td>-1.08</td>
<td>-0.71</td>
</tr>
<tr>
<td>Min-Max</td>
<td>1-4.97</td>
<td>1.29-5</td>
<td>1.13-4.88</td>
</tr>
<tr>
<td>N</td>
<td>288</td>
<td>288</td>
<td>288</td>
</tr>
</tbody>
</table>

**Pearson correlations**
- Trust in Leader : .810***
- Affective Organizational Commitment : .514*** .479***

*Note.* For all correlations ***$p < .001$*
Table 5

Null Models Testing for Level 2 Random Intercept Variability by Leader, ICC1s

<table>
<thead>
<tr>
<th>Null Models with Random Intercepts for Level 2 Leader</th>
<th>Parameter</th>
<th>Estimate</th>
<th>SE</th>
<th>Wald Z</th>
<th>p</th>
<th>95% CI Lower</th>
<th>95% CI Upper</th>
<th>ICC1</th>
</tr>
</thead>
<tbody>
<tr>
<td>RB– Organizational Loyalty</td>
<td>Residual</td>
<td>0.062</td>
<td>0.003</td>
<td>18.84</td>
<td>&lt;.001</td>
<td>0.055</td>
<td>0.068</td>
<td>0.115</td>
</tr>
<tr>
<td></td>
<td>Intercept</td>
<td>0.008</td>
<td>0.002</td>
<td>3.50</td>
<td>&lt;.001</td>
<td>0.005</td>
<td>0.014</td>
<td></td>
</tr>
<tr>
<td>RB– Altruism</td>
<td>Residual</td>
<td>0.056</td>
<td>0.003</td>
<td>18.70</td>
<td>&lt;.001</td>
<td>0.051</td>
<td>0.062</td>
<td>0.005</td>
</tr>
<tr>
<td></td>
<td>Intercept</td>
<td>0.000</td>
<td>0.002</td>
<td>0.19</td>
<td>.851</td>
<td>0.000</td>
<td>10.116</td>
<td></td>
</tr>
<tr>
<td>RB– Sportsmanship</td>
<td>Residual</td>
<td>0.041</td>
<td>0.002</td>
<td>18.72</td>
<td>&lt;.001</td>
<td>0.037</td>
<td>0.046</td>
<td>0.085</td>
</tr>
<tr>
<td></td>
<td>Intercept</td>
<td>0.004</td>
<td>0.001</td>
<td>2.64</td>
<td>.008</td>
<td>0.002</td>
<td>0.008</td>
<td></td>
</tr>
<tr>
<td>Role Instrumentality</td>
<td>Residual</td>
<td>0.229</td>
<td>0.012</td>
<td>18.66</td>
<td>&lt;.001</td>
<td>0.206</td>
<td>0.254</td>
<td>0.091</td>
</tr>
<tr>
<td></td>
<td>Intercept</td>
<td>0.023</td>
<td>0.008</td>
<td>2.84</td>
<td>.005</td>
<td>0.011</td>
<td>0.045</td>
<td></td>
</tr>
<tr>
<td>Affective Organizational Commitment</td>
<td>Residual</td>
<td>0.598</td>
<td>0.032</td>
<td>18.69</td>
<td>&lt;.001</td>
<td>0.538</td>
<td>0.664</td>
<td>0.150</td>
</tr>
<tr>
<td></td>
<td>Intercept</td>
<td>0.106</td>
<td>0.025</td>
<td>4.21</td>
<td>&lt;.001</td>
<td>0.066</td>
<td>0.169</td>
<td></td>
</tr>
<tr>
<td>Trust in Leader</td>
<td>Residual</td>
<td>0.674</td>
<td>0.036</td>
<td>18.56</td>
<td>&lt;.001</td>
<td>0.607</td>
<td>0.749</td>
<td>0.221</td>
</tr>
<tr>
<td></td>
<td>Intercept</td>
<td>0.191</td>
<td>0.035</td>
<td>5.47</td>
<td>&lt;.001</td>
<td>0.133</td>
<td>0.273</td>
<td></td>
</tr>
<tr>
<td>Transformational Leadership</td>
<td>Residual</td>
<td>0.613</td>
<td>0.033</td>
<td>18.51</td>
<td>&lt;.001</td>
<td>0.551</td>
<td>0.681</td>
<td>0.259</td>
</tr>
<tr>
<td></td>
<td>Intercept</td>
<td>0.214</td>
<td>0.035</td>
<td>6.06</td>
<td>&lt;.001</td>
<td>0.155</td>
<td>0.296</td>
<td></td>
</tr>
</tbody>
</table>

Note. Level 1 N = 950 (n = 949 for Altruism); Level 2 N = 288. Maximum likelihood estimation.
Proposed Dissertation Serial Mediation Model of Transformational Leadership and Perceived Role Breadth
Figure 2

*Multilevel Mediation Model of Transformational Leadership to RB-Organizational Loyalty Through Affective Organizational Commitment*

**Note.** n.s. not significant, *p < .05, **p < .01, ***p < .001. Level 1 N = 950; Level 2 N = 288. Maximum likelihood with unstructured covariance matrix for estimating all intercepts and slopes as random effects. Monte Carlo procedures using N = 10000 samples were used for testing indirect effects. Parameter estimates are unstandardized.
Figure 3

Multilevel Mediation Model of Transformational Leadership to RB-Sportsmanship Through Affective Organizational Commitment

Between indirect effect: .03***

Level 2 (Leader)

Transformational Leadership

Affective Organizational Commitment

.45***

.07***

.00 n.s.

Level 1 (Individual)

Transformational Leadership

Affective Organizational Commitment

.50***

.04**

.02 n.s.

Role Breadth Sportsmanship

Within indirect effect: .01 n.s.

Note. n.s. not significant, *p < .05, **p < .01, ***p < .001. Level 1 N = 950; Level 2 N = 288. Maximum likelihood with unstructured covariance matrix for estimating all intercepts and slopes as random effects. Monte Carlo procedures using N = 10000 samples were used for testing indirect effects. Parameter estimates are unstandardized.
Multilevel Mediation Model of Transformational Leadership to Role Instrumentality Through Affective Organizational Commitment

Note. # not significant, *p < .05, **p < .01, ***p < .001. Level 1 N = 950; Level 2 N = 288. Maximum likelihood with unstructured covariance matrix for estimating all intercepts and slopes as random effects. Monte Carlo procedures using N = 10000 samples were used for testing indirect effects. Parameter estimates are unstandardized.
Figure 5

Serial Mediation Model of Transformational Leadership to RB-Altruism through Trust in Leader and Affective Organizational Commitment

Total indirect effects: .01 n.s.
Transformational → Trust → Altruism: -.07 n.s.
Transformational → Organizational Commitment → Altruism: .07*
Transformational → Trust → Organizational Commitment → Altruism: .01*

Note. n.s. not significant, *p < .05, **p < .01, ***p < .001. N = 950. All coefficients are standardized. Indirect effects are reported as completely standardized effects and were tested using N = 5000 bootstrap samples for confidence interval, and thus p value is inferred at the α = .05 level based on bootstrapped confidence intervals for all indirect effects.
Serial Mediation Model of Transformational Leadership to RB-Organizational Loyalty Through Trust in Leader and Affective Organizational Commitment without Accounting for Clustering of Individuals

Total indirect effects: .10

Transformational → Trust → Loyalty: -.06
Transformational → Organizational Commitment → Loyalty: .14*
Transformational → Trust → Organizational Commitment → Loyalty: .03*

Note. \(^* p > .05, ** p < .05, *** p < .01, **** p < .001\). \(N = 950\). Indirect effects are reported as completely standardized effects and were tested using \(N = 5000\) bootstrap samples for confidence interval, and thus \(p\) value is inferred at the \(\alpha = .05\) level based on bootstrapped confidence intervals for all indirect effects.
Figure 7

Serial Mediation Model of Transformational Leadership to RB-Sportmanship through Trust in Leader and Affective Organizational Commitment without Accounting for Clustering of Individuals

Total indirect effects: .08\textsuperscript{n.s.}
Transformational $\rightarrow$ Trust $\rightarrow$ Sportmanship: .01\textsuperscript{n.s.}
Transformational $\rightarrow$ Organizational Commitment $\rightarrow$ Sportmanship: .06\textsuperscript{*}
Transformational $\rightarrow$ Trust $\rightarrow$ Organizational Commitment $\rightarrow$ Sportmanship: .01\textsuperscript{*}

Note. \textsuperscript{n.s.} $p > .05$, \textsuperscript{*} $p < .05$, \textsuperscript{**} $p < .01$, \textsuperscript{***} $p < .001$. $N = 950$. Indirect effects are reported as completely standardized effects and were tested using $N = 5000$ bootstrap samples for confidence interval, and thus $p$ value is inferred at the $\alpha = .05$ level based on bootstrapped confidence intervals for all indirect effects.
Figure 8

Serial Mediation Model of Transformational Leadership to Role Instrumentality through Trust in Leader and Affective Organizational Commitment without Accounting for Clustering of Individuals

Total indirect effects: .20*
  Transformational → Trust → Instrumentality: .07
  Transformational → Organizational Commitment → Instrumentality: .11*
  Transformational → Trust → Organizational Commitment → Instrumentality: .02*

Note. n.s. $p > .05$, *$p < .05$, **$p < .01$, ***$p < .001$. $N = 936$. Indirect effects are reported as completely standardized effects and were tested using $N = 5000$ bootstrap samples for confidence interval, and thus $p$ value is inferred at the $\alpha = .05$ level based on bootstrapped confidence intervals for all indirect effects