Journal of LEADERSHIP AND MANAGEMENT

Volume 11 Issue 1
Published January 2025

Edited by
CJ Rhoads
and
Adam Szpaderski

Published by
Institute of Management and Leadership

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Institute of Management and Leadership,
a Program of Health Prosperity & Leadership Institute

HPL Publications

Institute of Management and Leadership

Institute of Management and Leadership is a program of
the Health, Prosperity, and Leadership Institute.

Publisher:

HPL Publications

PO Box 564, Douglassville, PA 19518,

USA

Digital Version ISSN: 2391-6087

Print Version ISSN: 2998-1042

Print ISBN: 978-1-61305-040-8

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Journal of Leadership and Management®
An International Journal of Strategic, Behavioral and Public Aspects of Leadership in Management
Cabell's Listed
A journal of the Institute of Leadership and Management Association, PO Box 564, Douglassville PA 19518. 484-332-3331. https://www.jleadershipmanagement.org

Better Together: The Additive Effects of Ethical Leadership and Engagement on Decreasing Stress and Anxiety

Kobena Osam, Arlington County
Joseph A. Westlin, Minnesota State University, joseph.westlin@mnsu.edu

Online published: January 2025 Print published: March 2025 Editor: CJ Rhoads	Authorship Roles and Conflict of Interest Statement is on file at the Journal of Leadership and Management offices, available on request. Contact editors@jleadershipmanagement.org

ABSTRACT
It is well known that leadership within organizations can have profound impacts on employee outcomes. Recent research has focused on understanding how ethical leadership in particular can elicit positive outcomes regarding employee wellbeing (Kaffashpoor, & Sadeghian, 2020). Likewise, engagement research has established that when a workforce is highly engaged there are corresponding levels of health and wellbeing (Osam et al., 2020). Individual stress and anxiety are increasing on an annual basis, and the COVID-19 pandemic further strained employees, prompting organizations to seek out innovative means to deter the negative effects of these wellbeing variables. Although research demonstrates the positive impact of ethical leadership or engagement alone, studies have yet to investigate their combined effects on wellbeing. Chief among the concerns of employers are turnover, burnout, and reductions in performance, all of which result in potential financial challenges for organizations (Goh, Pfeffer, & Zenios, 2015b). Accordingly, this study investigates the additive impact of ethical leadership with engagement as a means of reducing employee stress and anxiety. Results from moderation analysis of survey data for 459 participants revealed that the combination of ethical leadership and engagement led to a significant decrease in both stress and anxiety above and beyond the effect of either variable alone. Implications for research and practice are discussed.

KEYWORDS
Ethical Leadership, Engagement, Stress, Anxiety, Wellbeing

Introduction

Large scale ethical scandals such as Enron in the 1990s set off a chain reaction of interest in ethical leadership with the purpose of preventing ethical transgressions, due in-part to impact on the bottom line (Monahan, 2012; Moss, 2002). These scandals impact organizations not only because of their moral nature, but also due to their negative impact on company reputation and profit. Because of these negative impacts, organizational leaders are now expected to lead the way in setting a culture of ethical leadership and perpetuating an ethical climate (Stouten, Van Dijke et al., 2013). In connection to this goal, researchers (see Monahan 2012) have examined ethical leadership with the goal of generating knowledge that practitioners can use to prevent future ethical transgressions. In doing so, they have generated more scholarly knowledge about ethical leadership that includes how to define it, measure it, and the characteristics of ethical leadership (Monahan, 2012). For example, an important feature of ethical leadership is its relationship with workplace behaviors. According to Trevino et al. (2000), workplace behaviors inform leader reputations and are key to whether or not leaders are considered ethical. Leaders who model ethical behavior stress the importance of organizational values as well as appropriately reward and discipline ethical and unethical behaviors, thus laying the foundation for the creation of an ethical climate (Trevino et al., 2000).

In recent years, the direction of ethical leadership research has shifted from exploring how to channel it to avoid bad outcomes (such as the Enron scandal), to how to leverage it to yield positive outcomes such as

higher levels of performance that allow organizations to remain at a competitive advantage (Ali Chughta, 2016). For example, there is research that has shown that ethical leadership is positively associated with increased employee creativity and performance (see Olivier, 2012), increased organizational citizenship behaviors (Brown & Trevino, 2006), higher levels of work engagement (Chughtai, 2014; Demirtas, 2015), and greater job satisfaction (Avey et al., 2012). Thus, based on this growing body of research ethical leadership can be considered a positive organizational construct that not only prevents negative outcomes but results in desirable organizational outcomes.

However, little research has investigated the circumstances in which ethical leadership is most impactful, and in fact, emergent research has highlighted the potential *downside* of ethical leadership, particularly for the individual level outcome of wellbeing. Wellbeing, when used in this context has been used as a proxy variable that is described as a positive emotional state where negative feelings such as anxiety, fear, or anger are not present (See Diener et al., 2009; Fu et al., 2020; Yang 2014). Studies such as Yang (2014) and Fu et al. (2020) have suggested that ethical leadership has a negative relationship with employee wellbeing and negative effects on employee behavior at work. In these studies, the authors posited that ethical leadership's negative impact on wellbeing was due, in part, to felt pressures to "act right" at all times, as modeled by the individuals' leaders. These findings run counter to most ethical leadership research (cf. Brown & Trevino, 2006; Demirtas, 2015; Monahan, 2012) and highlight the need to develop a stronger understanding of the circumstances in which organizations can maximize the positive impacts of ethical leadership while limiting or even eliminating the potential downsides.

To this end, there exists a pressing need for further examination of the situations and/or contexts that could increase or decrease the impact of ethical leadership on employees in the workplace. This emergent research is particularly relevant now as the landscape of work has changed as a result of the recent COVID-19 pandemic. Following the pandemic, as organizations navigated changes in their work environment, considerable attention has been given to employee wellbeing as an important factor to higher levels of performance and the reduction of turnover (see for example Gorgenyi-Hegyes et al., 2021; Tedone, 2022). Additionally, reports of higher levels of burnout and exhaustion have led to decreased employee engagement which in turn negatively impacts employee wellbeing (Dillard & Osam, 2021). Therefore, employee engagement and wellbeing have remained key areas of concern for employers in the post COVID-19 pandemic era.

Contemporary research on the impact of ethical leadership on employee behavior, as well as the importance of employee wellbeing and employee engagement in the post COVID-19 pandemic era presents a unique opportunity for research. Importantly, the studied variables can have a profound and practical impact on human resource development and management. For example, recent research has negatively linked ethical leadership to employee sense of entitlement (Joplin, et al., 2021), and employee stress (Zhou, et al., 2015). Accordingly, the purpose of this study was to examine the relationship between ethical leadership, employee engagement, and wellbeing with a specific focus on understanding the contexts that potentially increase the positive impact of ethical leadership on wellbeing. As with prior studies of this nature (see Fu et al., 2020; Yang 2014), this study also considered wellbeing as a positive state marked by the absence of negative emotions. Specifically, stress and anxiety were used as proxy variables where their presence is indicative of lower levels of wellbeing. Additionally, this study was intended to be exploratory in nature and bolster existent evidence to aid researchers and practitioners in better understanding the effect of ethical leadership. Further, it may enable the development and design of workplace contexts that can facilitate positive outcomes of ethical leadership specific to employee wellbeing. In what follows, we review previous scholarly work on the variables in this study, detail the methods and results, and finally discuss implications of our findings for practice and research.

Literature Review

This section reviews the variables of interest in this study i.e., ethical leadership, employee engagement, and wellbeing with the goal of providing a summary of previous research and laying the foundation for the methodological approach utilized in the next section. First, a synthesized review of ethical leadership is presented, followed by employee engagement, and then wellbeing.

Ethical Leadership

Ethical behaviors in the workplace are not limited to leaders and managers, but rather, they are the shared responsibility of everyone within the organization (Stouten, Van Dijke et al., 2013). However, due to past scandals (e.g., Enron, Tyco) organizational leaders are expected to set the tone for ethical behaviors in the workplace and as such there is a heavy expectation that they act as the moral compass for the company. Therefore, how leaders behave is used as a way to measure how ethical they are. The use of behaviors and actions to assess ethical leadership is tied to Brown et al.'s (2005) conceptualization of ethical leadership as a type of leadership that emphasizes actions that are grounded in honesty and integrity. Brown et al., defined ethical leadership as "the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships and the promotion of such conduct to followers through two-way communication, reinforcement and decision-making" (p. 120). In short, one can judge the ethical level of leaders based on the range of behaviors and actions they display and how these are perceived by employees in the workplace. It should be noted that prior to the Brown et al., conceptualization, ethical leadership was considered to be a part of other types of leadership theory rather than a stand-alone construct (Bedi et al., 2016). This is seen in scholarly work in influential leadership theories such as transformational leadership, servant leadership, and authentic leadership (Bedi et al., 2016; Stouten, van Dijke et al,. 2013). In Bass' (1985) transformational leadership theory, for example, leader behavior can be categorized as ethical or pseudo transformational. Leaders who are pseudo transformational aim for undesirable goals using motives that are not legitimate. Simply put, transformational leaders who are unethical have selfish motives, abuse their powers, and demonstrate behaviors that are inconsistent with moral values (Bass, 1985; Stouten, van Dijke et al.,2013).

The main difference between ethical leadership and classic theories such as transformational leadership is the presence of a transactional component where leaders communicate and encourage ethical conduct rather than simply being a role model that others aspire to be (Brown et al., 2005). Ethical leadership therefore consists of two components, modeling behavior and transactions. To support the two-component view of ethical leadership, researchers have used social learning and the social exchange theory to demonstrate how ethical leadership differs from existing leadership theory. Through social learning, people learn appropriate behavior by watching others and from their own experience (Brown et al., 2005; Brown & Treviño 2006). Therefore, employees who see their leaders act ethically and gain experience by acting in a similar manner internalize values-driven behavior and are more likely to consistently be ethical (Brown et al. 2005; Brown & Treviño 2006). Social exchange theory concerns itself with reciprocity, and researchers (e.g., Dirks & Ferrin, 2002; Podsakoff et al., 2000) have identified that ethical leaders tend to create positive organizational environments (characterized by trust and fairness) by using positive and negative reinforcement that makes it likely for employees to reciprocate with beneficial organizational behavior (e.g. organizational citizenship behaviors).

In sum, what is clear from the extant literature is that ethical leadership is not merely a sliver of other leadership theories but a unique construct that stands alone. More, research on ethical leadership has evolved from understanding what it is to studying its relationship with desirable organizational outcomes. For example, research shows that ethical leadership is positively associated with increased prosocial behaviors (Avey et al., 2011; Bonner et al., 2014; Kacmar et al., 2011), leader and job satisfaction (Avey et al., 2012; De Hoogh & Den Hartog, 2008), work engagement (Chughtai et al., 2014; Demirtas, 2015) and higher performance (Bonner et al., 2014; Bouckenooghe et al., 2014). While results from these studies provide evidence of the benefits of ethical leadership, a recent meta-analysis conducted by Bedi et al. (2016) provided more context to the nature of these relationships. Overall, they found moderately strong positive associations exist between ethical leadership and outcomes such as follower self-efficacy and job satisfaction ($r = 0.56$). However, the majority of the positive associations with beneficial organizational outcomes noted were weak (e.g., organizational commitment, $r = 0.38$; job performance, $r = 0.22$; job engagement, $r = 0.37$). The key takeaway from their work however is that ethical leadership has stronger effect on employees' attitudes about their leader (e.g. leader satisfaction, $r = 0.70$; leader effectiveness, $r = 0.77$) than on individual or organizational outcomes (e.g. job performance, organizational commitment).

Based on the findings above, care must be taken when discussing the strength of impact of ethical leadership on organizational outcomes as it is at best weak to moderate. The next step in ethical leadership research needs to focus on identifying situations that can magnify the effect of ethical leadership on individual

organizational outcomes. This includes research about other work-related constructs (e.g. employee engagement) that can combine with ethical leadership to produce stronger associations on individual and organizational outcomes.

Engagement Typologies

The term engagement stems from Kahn's (1990) seminal work on personal engagement. Kahn defined engagement as "the simultaneous employment and expression of a person's 'preferred self' in task behaviors that promote connections to work and to others, personal presence (physical, cognitive, and emotional) and active, full performances" (p. 700). Since Kahn's work, several engagement typologies and definitions have emerged that are often misused in research (Shuck, 2011; Shuck et al., 2017; Shuck & Reio, 2014). Examples of the emergent typologies include employee engagement (Shuck et al., 2017), work engagement (Schaufeli et al., 2002), job engagement (Rich et al., 2010) and organizational engagement (Saks, 2006). Employee engagement was selected for this study because according to Shuck and Reio (2014), it incorporates Kahn's (1990) key assumptions that shape a person's decision to be engaged, unlike many of the other engagement typologies (cf. Cole, Walter, Bedeian, & O'Boyle, 2011; Rich et al., 2010). Employee engagement is defined as "a positive, active, work-related psychological state operationalized by the maintenance, intensity, and direction of cognitive, emotional, and behavioral energy" (Shuck et al., 2017, p. 269).

Employee engagement occurs in three distinguishable levels: cognitive, emotional, and behavioral (Shuck et al., 2017; Shuck & Reio, 2014; Shuck et al., 2017). Cognitive engagement is drawn from Kahn's (1990) idea that an employee will seek to appraise their work to determine meaningfulness, safety, and the availability of resources to perform their work (Shuck et al., 2017). This appraisal forms part of a broader, more situation-specific assessment that ultimately informs an employee whether or not to engage (Shuck et al., 2017; Shuck & Reio, 2014). To put this into context, employees whose cognitive appraisal of the workplace is negative results in adverse impacts on behavior such as turnover and lower commitment (Nimon et al., 2011; Shuck & Reio, 2014).

While cognitive engagement seeks to determine availability of resources, emotional engagement on the other hand focuses on widening and expending emotions related to work (Shuck & Reio, 2014). Connectedly, Shuck and Wollard (2010) stated that emotional engagement (stemming from affective appraisal) results in the maintenance, intensity, and direction of energy focused on a target. Common terms associated with employees who are emotionally engaged include pride, trust, and knowledge (Shuck & Reio, 2014). Emotional engagement is thus dependent on the outcome of an employee's cognitive appraisal of the workplace (Shuck et al., 2017). According to Shuck et al., (2016), the cognitive and affective appraisal that characterize cognitive and emotional engagement respectively, are intertwined and reliant upon each other for intentional work behavior to occur.

Behavioral engagement is the overt manifestation of the employee engagement process (Shuck et al., 2016; Shuck et al., 2017; Shuck & Reio, 2014). This is the observable behavior that employers typically expect of their employees in the pursuit of organizational goals (Macey & Schneider, 2008; Shuck & Reio, 2014). Employees who are behaviorally engaged expend more individual effort and are likely to be the ones who go 'above and beyond' or 'work twice as hard' to meet goals and targets (Shuck & Reio, 2014).

Employee Wellbeing

Employee wellbeing is acknowledged as an important social consensus and in the workplace has been linked empirically to improved work performance and promoting physical and mental health (Nielsen et al., 2017; Robertson & Cooper, 2011; Wright & Cropanzano, 2000). While consensus exists on the importance of wellbeing, there is less so on its definition, and consequently wellbeing is conflated with other terms such as engagement (Kowalski, & Loretto, 2017). The lack of a unifying definition of wellbeing is because as a construct, it is so broad and cuts across many disciplines (e.g. psychology, medicine, sociology) with each area providing its unique view of wellbeing (Kowalski, & Loretto, 2017). What is clear from the extant literature is that while the term wellbeing may be broad, there are several dimensions to it that can be studied separately such as pleasure and life satisfaction (Ryan & Deci, 2001), physical and psychological functioning (Grant, Christianson, & Price, 2007), and positive social interactions and connections (Karasek & Theorell, 1990). It is for reasons such as these that previous researchers have defined and used proxy variables in the stead of wellbeing. Examples of some of these proxy variables include depression, stress, anxiety, fear, and

anger (See Diener et al., 2009; Fu et al., 2020; Lovibond & Lovibond 1995; Yang 2014). Likewise, we adopted a similar approach and for the purposes of this study, we chose to focus on the dimension of wellbeing that encompasses the state of individuals' mental, physical, and general health (see Dana & Griffin, 1999). Furthermore, we decided on this dimension and interpretation of wellbeing due to the COVID-19 pandemic that prompted the necessity for an increased amount of research around stress and anxiety related to working in a global pandemic.

This study focuses on two well-known constructs associated with wellbeing: stress and anxiety. Although often referenced synonymously, the two constructs are unique. Stress refers to a dynamic condition wherein the individual encounters an opportunity, demand, or desired resource with an uncertain and important outcome (Spector et al., 2002). Employee stress has been linked to health outcomes such as increased heart rate and changes in metabolism, psychological outcomes including reduced job satisfaction and mental exhaustion, and behavioral outcomes such as decreased work productivity, increased absences, and turnover (Shuck et al., 2017).

Workplace anxiety is defined as "feelings of nervousness, uneasiness, and tension about job-related performance" (Cheng, & McCarthy, 2018, p. 1), and is associated with higher levels of turnover and counterproductive work behaviors. Both stress and anxiety have been found to lead to psychological disorders among employees.

High levels of stress and anxiety in employees can lead to absenteeism, turnover, and counterproductive work behaviors (see Shuck et al., 2017), and each of these outcomes are expensive monetarily, and in the health of the organization. Individual stress and anxiety are increasing on an annual basis, and the COVID-19 pandemic has further strained employees, prompting organizations to seek out new and innovative means to deter the negative effects of these wellbeing variables. Chief among the concerns of employers are turnover, burnout, and reductions in performance, all of which result in large financial concerns for organizations. In fact, a recent study conducted by the National Safety Council found that organizations spend over $15,000 on average annually for each employee experiencing mental health issues, a figure that they say "likely underrepresents the current cost to employers" as prompted by the global pandemic (National Safety Council, 2021). Accordingly, organizations should, and are, seeking out new and inexpensive ways to proactively lessen employee stress and anxiety to deter costs of both mental health resources, and the negative outcomes associated with these wellbeing concerns.

The variables under consideration in this study on their own have a sizeable amount of prior research. However, there is scant research that has examined the ways in which they are linked. This gap in the literature feels pertinent now because of the increased emphasis that organizations are placing on leader-employee relationships and cultivating highly engaged work cultures where all employees feel valued and consequently contribute positively to organizational performance (Osborne, & Hammoud, 2017). Employee engagement has therefore become a core part of organizational objectives because of its demonstrated links to increased employee investment in performing at a high rate (Iman et al., 2021). At the heart of employee engagement application is leadership, and to this end, the litany of connected research often recommends that leaders take proactive measures to demonstrate respect of employees as this helps to develop work culture that promotes employee engagement (Shuck et al., 2017; Osam et al., 2020). When employees feel their leaders treat them with respect, they are more likely to think of the employee-leader relationship in terms of a social exchange (Yu et al. (2018). Employees therefore are more willing to 'exchange' engagement focused outcomes (e.g., putting as in extra effort at work, delivering high quality work) with leader actions that are characterized by fairness, integrity, honesty (Goswami & Agarwal, 2022). These leader actions such as integrity and honesty are hallmarks of ethical leadership as defined by Brown et al. (2005). Therefore, experiencing fair treatment, care and support working with ethical leaders (Islam et al., 2019b), should correspond with higher levels of employee engagement, reflecting the principles of social exchange theory that underpin ethical leadership (Dirks & Ferrin, 2002; Podsakoff et al., 2000). Therefore, based on the reciprocal nature of the relationship between ethical leadership and employee engagement, this study proposes that:

Hypothesis 1: Ethical leadership will be positively associated with employee engagement

As engagement research continues to expand, it has begun to be associated with employee wellbeing (Osam et al., 2020). More specifically, there is an emergence of empirical research on employee engagement that has found direct links between how people experience their work and how it impacts their wellbeing (Fairlie, 2017). In this line of engagement research, the focus is on developing the understanding between work and health while implementing strategies that prioritize wellbeing. This engagement research is in response to employees reporting increased levels of stress particularly in the wake of hybrid and remote work (Kondratowicz et al., 2022). This focus has prompted many organizations to focus on employee engagement as a means to address wellbeing issues (e.g., stress, anxiety, burnout) that in the long term are proving to be consequential for job performance (Rudolph et al., 2021). As previously mentioned, wellbeing has typically been represented by proxy variables in past research. As such, this study proposes that employee engagement will be positively associated with wellbeing or in the case of this study, negative associated with the proxy variables of stress and anxiety.

Hypothesis 2: Employee engagement will be negatively associated with stress

Hypothesis 3: Employee engagement will be negatively associated with anxiety

Generally,, ethical leadership has been associated with positive outcomes including but not limited to increased prosocial behaviors at work (Avey et al., 2011; Bonner et al., 2014; Kacmar et al., 2011); higher performance (Bonner et al., 2014; Bouckenooghe et al., 2014) and of particular importance to this study, employee engagement (Chughtai et al., 2014; Demirtas, 2015). While there are a few studies (highlighted earlier) that empirically link ethical leadership with negative outcomes on wellbeing in particular, these studies are outliers compared to the general trend in ethical leadership research. Therefore, while this study seeks to provide additional empirical evidence in support of the ethical leadership-wellbeing relationship, it takes the espoused view that ethical leadership leads to positive wellbeing outcomes. As a result, this study proposes that:

Hypothesis 4: Ethical leadership will be negatively associated with stress

Hypothesis 5: Ethical leadership will be negatively associated with anxiety

If results from the outlier studies previously mentioned were supported by our study, we would expect that employee engagement would negate or lessen the impact of ethical leadership on stress and anxiety. In short, employee engagement would be used as a moderating variable to assess its impact on the ethical leadership-wellbeing relationship.

As previously highlighted employee engagement has been empirically linked with positive outcomes. Therefore, it is expected that if there are any negative effects of ethical leadership on wellbeing, employee engagement could, in part, counter that.

Hypothesis 6: Employee engagement will moderate the relationship between ethical leadership and anxiety such that higher levels of employee engagement will correspond with an increase in the strength of the relationship between ethical leadership and anxiety.

Hypothesis 7: Employee engagement will moderate the relationship between ethical leadership and stress such that higher levels of employee engagement will correspond with an increase in the strength of the relationship between ethical leadership and stress

Methodology

Participants

There was a total of 808 participants that began this study. Ultimately, 459 participants' data were used in analyses. Participants were full (86.9%) or part (13.1%) time employees over the age of 18. Within our sample 61.7% of participants were male, and 71.5% were Caucasian. Data from 349 participants were removed prior to analyses due to incomplete data (multiple questions left blank, including incomplete demographic items), failed attention-check questions, or perceived survey manipulation (e.g., providing the same numerical response to all Likert-scale items).

Instrumentation

Measures within this cross-sectional survey included demographic items, the Ethical Leadership Scale (Yukl et al., 2013), Employee Engagement Scale (Shuck et al., 2017), as well as Anxiety and Stress scales (Lovibond & Lovibond, 1995). Participants responded to demographic items concerning age, gender, employment status, and race. The Ethical Leadership Scale (Yukl et al., 2013) includes 15-items on a 6-point Likert scale and a high reliability ($\alpha = 0.91$). Sample items include "My boss shows a strong concern for ethical and moral values" and "My boss is honest and can be trusted to tell the truth." The Employee Engagement Scale (Shuck et al., 2017) includes 12 items split across three sub scales on a 5-point scale. The reliability of each subscale is as follows cognitive engagement ($\alpha = 0.94$), emotional engagement ($\alpha = .88$), and behavioral engagement ($\alpha = .91$). Sample items include "I really push myself to work beyond what is expected of me" and "I give my job responsibility a lot of attention". The Lovibond & Lovibond (1995) Depression Anxiety Stress Scale's shortened version contains 21-items from the three subscales (depression, anxiety, and stress; seven items for each construct) with a high reliability ($\alpha = 0.93$). The scale is scored from 0 (Never) to 3 (Almost Always) and asks respondents to apply statements to their last week. Sample items from the scale include "I found it hard to wind down" and "I found myself getting agitated". For this study, only items from the stress and anxiety measures were included, as previous literature has not suggested that ethical leadership or employee engagement would impact depression. In addition to these measures, two attention-check items, which read "In years, how long has your supervisor/boss been in their current position? If unsure, please give your best estimate or state "unsure". This question was repeated in the middle of the survey, and respondents whose responses to both did not match were removed from the study. The second attention-check measure was a paragraph containing a list of instructions to which participants were supposed to respond 'no' at the end of the paragraph. Participants who selected 'yes' were removed from the study. If participants failed to answer or incorrectly responded to these attention-check items, they were disqualified from continuing and did not receive financial compensation for their participation.

Procedures

A cross-section survey with self-report measures was used for data collection. This research was conducted through the use of Amazon's Mechanical Turk (MTurk). MTurk is a crowdsourcing marketplace in which individuals can respond to user-posted surveys in exchange for financial compensation. MTurk also allows those collecting data to limit who can and cannot respond to their surveys. MTurk has been found to produce data quality comparable to student-based samples, and its use in academic research has become commonplace in the past decade due to the ease of access to participants, and the speed of data collection (see Bartneck et al., 2015; Buhrmester et al., 2011; Holden et al., 2013; Mason & Suri, 2012; Rouse, 2015). In this study, respondents were limited to those with current full-time or part-time employment and located in the US. Respondents were compensated forty cents in exchange for completing a roughly 10-15-minute survey. At the onset of the survey, participants were asked employment-related questions and those who did not qualify (those without employment) were redirected and did not complete any additional measures. Likewise, those that failed attention-check questions were redirected and did not complete the other measures. All others completed each of the above-mentioned measures.

Results

Zero-order correlations were conducted to test Hypotheses 1 through 5 (see Table 1). As expected, results showed significant and negative relationships between ethical leadership and anxiety (r = -.12, p < .05), but surprisingly not stress (r = -.08, p = .10). Likewise, there was a significant and negative relationship between employee engagement and anxiety (r = -.11, p < .05) but again, no significant relationship between employee engagement and stress was found (r = -.04, p = .38). Finally there was a significant positive relationship between ethical leadership and employee engagement (r = .58 p < .05).

Table 1 Descriptive Statistics and Correlations for Ethical Leadership, Engagement, Stress, and Anxiety

	Mean (SD)	Correlations			
		1	2	3	4
1. Ethical Leadership	4.54 (0.90)	-			
2. Engagement	4.04 (0.62)	58**	-		
3. Stress	3.06 (0.91)	-.08	-.04	-	
4. Anxiety	2.75 (1.01)	-.12*	-.11*	.77**	-

Note: N = 459; SD = Standard Deviation; ** p < .01; * p < .05

To test Hypotheses 6 and 7 moderation analyses were conducted using a series of stepwise regressions, where employee engagement moderated the relationship between ethical leadership and anxiety or stress. In step 1 of each moderation, the wellbeing variables (stress and anxiety) were regressed on ethical leadership. In steps 2 and 3, employee engagement and the interaction term of ethical leadership with employee engagement were added, respectively (see Figure 1). Results showed that employee engagement significantly moderated the relationship, such that the interaction of employee engagement and ethical leadership strengthened the negative relationship between ethical leadership and both anxiety *(*$F(1, 458) = 4.55$, $p < .01$, $\Delta R^2 = .029$) and stress *(*$F(1, 458) = 5.75$, $p < .01$, $\Delta R^2 = .030$). Thus, there was support for Hypotheses 6 and 7.

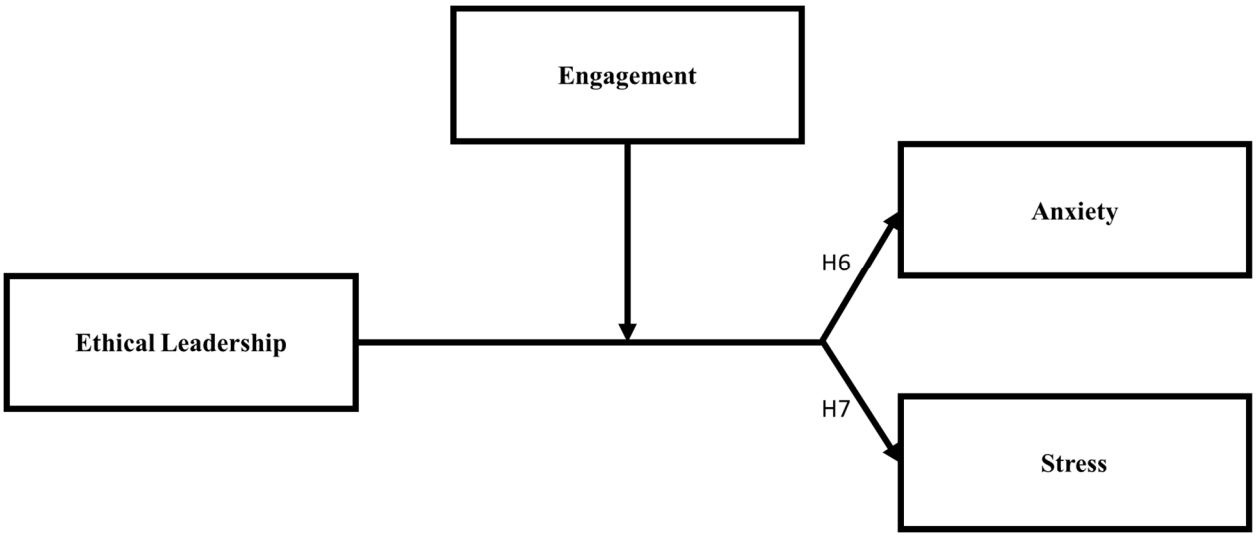

Figure 1. Proposed relationship between ethical leadership, employee engagement with stress and anxiety.

Hypotheses 4 and 5 predicted that ethical leadership would be related to decreased stress and anxiety. Although non-significant for anxiety, in both stress and anxiety, there existed a negative relationship, such that higher levels of ethical leadership were linked to lower levels of stress and anxiety. In the case of stress, this relationship was statistically significant. These findings suggest that ethical leadership can indeed have a meaningful impact on indicators of wellbeing, but that this relationship is limited in its explanatory power.

Stress and anxiety are multifaceted constructs, and although organizational leadership can have a positive impact on both, it is important to recognize that leadership alone is unlikely to fully explain the wellbeing outcomes of workers. Instead, research should emphasize that leadership, in tandem with other organizational

interventions and individual-level constructs, can play a positive role in the reduction of wellbeing-related variables such as stress and anxiety.

Hypotheses 6 and 7 predicted that the moderating effect of employee engagement would impact the relationship between ethical leadership with stress and anxiety. For both stress and anxiety, employee engagement moderated the relationship between ethical leadership and stress/anxiety such that higher levels of employee engagement strengthened the negative relationship between ethical leadership and stress/anxiety. This finding suggests that employee engagement plays a significant role in the reduction of the wellbeing-related variables when paired with ethical leadership. Thus, a work environment with both ethical leadership and employee engagement is more likely to have employees with lower levels of stress and anxiety.

Discussion

This research adds to the growing body of literature supporting the positive impacts of ethical leadership on both individual and organizational-level outcomes (e.g. Brown & Trevino, 2006; Monahan, 2012). More importantly, the findings suggests that ethical leadership does not operate in a vacuum, and that in fact, ethical leadership may be more impactful in an environment of employee engagement.

The benefits of ethical leadership cannot be understated, and this study further demonstrates the positive impact ethical leadership can have on wellbeing variables. There are several methods for increasing ethical leadership within an organization. First and foremost, ethical leadership can be effectively modeled (see Brown et al. 2005; Brown & Treviño 2006). Ethical leadership begins at the top of the organization and leaders set the tone for all employees with regard to their conduct within the company. Employees should not only see their leaders modeling ethical behavior, they should also know and understand how their leaders ethically overcome organizational constraints such as deadlines and challenging goals. Leaders who exhibit ethical behavior in spite of constraints provide guidance to followers in navigating their own ethical dilemmas, and this can reduce the likelihood of followers engaging in unethical behavior (Brown & Trevino, 2006; Zhang et al., 2018). Modeling ethical behavior must be an organizational emphasis, particularly in instances of remote work, where leader-follower interactions may be more limited, and employees have more autonomy over how they chose to spend their work hours. In these remote-work situations, leaders must place an added emphasis on how their actions impact both follower perceptions of leader ethicality, and the consequences of followers' unethical behavior.

Employee engagement is widely recognized as an important area of focus to maintain a workforce that is happy and productive (Dillard & Osam, 2021). Companies that are transitioning to a more remote-work model, may need to place an even greater emphasis on strategies to increase employee engagement. Recent qualitative research found that a transition to remote work led to higher levels of employee presenteeism and higher stress (Adisa et al., 2023) As a result, there is a high demand for strategies that can improve and sustain engagement levels in the workforce (Osam & Shuck, 2020). Considering the impact that employee engagement combined with ethical leadership has on wellbeing, the following recommendations are grounded in the theoretical principles that underpin employee engagement and as such are presented in tandem with them. At a minimum, engaged employees are optimistic, keep good interpersonal rapport with each other, and also show high level of performance in the organization (Jena et al., 2018). Central to this is creating a work environment that is characterized by trust and respect (Osam et al., 2020). Therefore, it is important that the culture of an organization reflects trust and respect and is actively promoted by organizational leaders.

There is an abundance of research demonstrating the benefits of ethical leadership and employee engagement within organizations. The study at-hand examined the interactional benefits of leadership with employee engagement on the wellbeing outcomes of stress and anxiety. Notably, although ethical leadership led to a decrease in both stress and anxiety, these effects were small, and for stress, non-significant. However, when ethical leadership was combined with employee engagement, both stress and anxiety were significantly reduced. The findings of this study suggest that organizations should strive to have ethical leaders who also are committed to fostering high levels of employee engagement, and that organizations would benefit from implementing practices designed to promote both ethical leadership and employee engagement; perhaps more important however, the study's findings indicate that the approach to improving employee stress and anxiety should be multifaceted and wide-ranging. There is unlikely to be a single intervention that comprehensively

addresses stress and anxiety. Accordingly, organizations need to investigate the causes of employee stress and anxiety and adapt their practices and policies to be reflective of their unique concerns.

Study Implications and Recommendations

There are a number of organizational implications of the research at hand specific to fostering increased levels of ethical leadership and employee engagement. First, it is known that unethical leadership is linked to unethical employee behavior, negative health outcomes, and counterproductive work behaviors (see Monahan, 2012). Counter to the findings of Yang (2014) and Fu et al. (2020), this study adds to the growing body of literature that links ethical leadership to positive individual outcomes. Practitioners and managers should continue to emphasize the importance of leaders at all levels to engage in ethical business practices, and to lead with ethics. In addition to modeling ethical behavior, organizations must also establish transactional relationships with followers, such that ethical behavior is rewarded and encouraged (Brown et al., 2005). The transactional element of ethical leadership must be addressed in a two-fold approach. First, organizations and their leaders must emphasize and make clear the ethical expectations of their followers. These expectations should be addressed formally through organizational guidelines and policies and should be reinforced informally through leader feedback and guidance when followers are navigating ethical dilemmas.

Second, the performance management system of an organization should reinforce and reward those that behave ethically. Ethical expectations should be clear and directly reflected in the language of a formal performance appraisal, limiting the ambiguity of follower action by establishing clear ethical boundaries and norms. Likewise, the performance management system should emphasize follower processes rather than outcomes, to ensure that engaging in ethical behavior remains a focal point in the work of all within the organization. For example, a typical organization may reward a sales team and their leader for reaching a specific sales goal. The reward in this instance, is conditional on the outcome, regardless of how the outcome was achieved. Instead, organizations should reward both the outcome, and the process used to attain the outcome. To facilitate a process-based reward system, customer perceptions of fairness and honesty of the sales team should also be considered when determining how to allocate raises, promotions, and other organizational rewards to sales teams. Rewards tied solely to outcomes will inevitably result in the easiest, sometimes less ethical means of reaching those outcomes.

Finally, organizations must train both leaders and followers about the ethical standards of the organization and how to approach ethical dilemmas, should they arise in the course of work. Although there is limited research on the training of ethical leadership, studies have suggested that training individuals on ethical behavior and ethical decision-making is often more effective when learners are provided with a variety of strategies and methods to address novel problems (Antes et al., 2009) rather than being given exact solutions to exact problems.

When it comes to employee engagement, there are a couple of recommendations based on the study findings that are rooted in enhancing work relationships and improving work culture. First, a simple yet inexpensive recommendation to promote trust and respect in the workforce is through sustained acts of kindness (Osam et al., 2020). Examples of acts of kindness include holding doors or elevators open for others, exchanging pleasantries, leaving handwritten notes of appreciation, and brewing another pot of coffee after taking the last cup. Committing acts of kindness has been shown in research to result in numerous positive outcomes such as increased self-confidence, increased likelihood of reciprocating responses, positive feedback (e.g. appreciation, and gratitude), as well as an increase in social interaction (Schaufeli & Salanova, 2010). Additionally, based on the theory of employee engagement (Shuck et al., 2017) the more acts of kindness are prevalent in the workplace, the more likely it is that employees will associate positive emotions with the workforce (Osam et al., 2020). This in turn will increase the presence of observable outcomes of employee engagement that employers desire including organizational citizenship behaviors, lower turnover, and increased organizational commitment (Osam & Shuck, 2020).

A second recommendation to improve employee engagement in the workforce is connected to organizational practices that demonstrate care and concern for employees through employee resource groups (ERGs). This recommendation is specifically tied to employees from historically underrepresented groups and is presented as a way for organizations to avoid blindly replicating employee engagement strategies that are not suited to

the unique needs of their workforce (see Osam & Shuck, 2020). Employee Resource Groups are voluntary, employee-led groups whose aim is to foster a diverse, inclusive workplace through generation of ideas about improving workplace conditions for underrepresented groups, which can then be brought to leaders for implementation. Recent research has indicated that employees from underrepresented groups (e.g. race, gender, ethnicity) often feel that attempts at employee engagement practices in the workforce are not meaningful and demonstrate a lack of care and understanding. For example, individuals from sexual minority groups have reported instances where genuine attempts by leaders at providing competency training on gender and sexuality have backfired because of the lack of understanding and use of appropriate terminology (Dillard & Osam, 2021). Therefore, to avoid this, organizational leaders should utilize employee resource groups (ERGs) to generate rich and meaningful information from different identity groups within their workforce. This information should include feedback about current employee engagement practices and ways to make the work environment more inclusive. For this recommendation to be effective, employers need to be committed to following through on information provided through the ERGs and develop and implement practices from the ERGs. Failure to do so will only erode the trust between management and employees from underrepresented groups as well as reduce the level of employee engagement in the workplace.

The third and final strategy to improve employee engagement in the workforce is developing and implementing training on employee engagement for leaders and managers. There is a large emphasis on the visible outcomes of employee engagement (e.g., lower turnover, increased commitment etc.) without a clear understanding of the process that leads to these outcomes (Shuck, 2020). Therefore, it is important that leaders understand how higher levels of employee engagement can be attained in the workforce. These trainings should focus on engagement typologies (e.g. work engagement, employee engagement, job engagement) as well as how to determine the most appropriate way to define and measure engagement specific to the employer's workforce. Measuring employee engagement should not be limited to a yearly event and nor should it be tied to incentives such as bonuses as this will only conceal the level of employee engagement and hide the true level of engagement that exists (Osam & Shuck, 2020). To counter this, employers should consider periodic (e.g. quarterly) employee engagement checks or 'pulse' checks aimed at understanding how employees feel about the workplace and receiving feedback on employee engagement practices that are being implemented.

Limitations and Conclusion

There were several limitations to this study. First, this was a convenience sample who's only limiting parameter for participation was full or part time employment. As previously mentioned, there is a body of research supporting the use of MTurk as a data collection method, but it should also be noted that individuals were monetarily incentivized to participate. Second, the data collection for this study took place during the height of the COVID-19 pandemic. It is possible that within our sample, self-reported stress and anxiety were higher than typical. Similarly, the links between ethical leadership, employee engagement, and our wellbeing variables may have been strengthened or weakened due to the impact of COVID-19 on organizations and their employees. If data were collected again, it is possible that the relationships found in this study may or may not replicate. Third, it is known that ethical leadership can have positive impacts on distal outcomes. This study assessed two such variables which were proxy variables for wellbeing. Wellbeing is a multifaceted and complex construct, and as such, additional wellbeing variables should be investigated in relation to ethical leadership and employee engagement.

Additional research is needed to assess the primary causes and drivers of wellbeing variables, and to determine the most appropriate preventative steps organizations can use to alleviate stress and anxiety before it becomes damaging. The present research assessed two important variables in the mitigation of stress and anxiety, but there are an abundance of additional organizational culture, training, and individual-difference (e.g., personality, cognitive ability) variables that should be examined. Likewise, the interactional nature of these to-be-studied variables should be theoretically and empirically evaluated. Additionally, because the present study demonstrates the benefits of ethical leadership and employee engagement, researchers should investigate how the positive effects of both variables can be magnified and accentuated through inclusion of additional variables. Organizations are complex and layered, and there is no perfect strategy for the promotion of employee wellbeing. The present study found two variables within organizations that can be beneficial in

the reduction of employee stress and anxiety, but they are by no means comprehensive in their capacity to benefit employees. Further, stress and anxiety represent two proxies of wellbeing, and the combined positive impact of ethical leadership and employee engagement should be studied in relation to other wellbeing-related variables. It is important that organizations continually assess how they can help their employees, and this research identifies two important means of doing so.

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A journal of the Institute of Leadership and Management Association, PO Box 564, Douglassville PA 19518. 484-332-3331. https://www.jleadershipmanagement.org

Strategic Planning by State Chief Information Officers

Shawn Na, Science Applications International Corporation, shawn.na@saic.com
Darlene Russ-Eft, Purdue University

Online published: January 2025 Print published: March 2025 Editor: CJ Rhoads	Authorship Roles and Conflict of Interest Statement is on file at the Journal of Leadership and Management offices, available on request. Contact editors@jleadershipmanagement.org

ABSTRACT
State Chief Information Officers (CIOs) have a vital role in information technology (IT) organizations; this role leads and sponsors information system (IS) programs, ensures operations, and provides technologies and digital capabilities for their organizations. Previous studies (Eiras, 2010; Haffke et al., 2016; Mitchell, 2015; Muller, 2011; Roberts et al., 2014) have discussed CIOs' effectiveness in organizational management, the skillset and credentials for the role and responsibilities involved in leading the IT organization. Compliance with Presidential Executive Orders 13571 and 13576 requires the federal government to undertake appropriate steps to streamline and improve digital services and to deliver an efficient, effective, and accountable federal government. At the state government, the CIO position is established in each of the 50 U.S. and is tasked with overseeing and managing the state information technology (IT) and information system (IS). Investigating CIOs' involvement in dealing with IT initiatives in their organizations can identify practices leading to successful implementations (Porfírio et al., 2021). This research sought to contribute to the body of knowledge and aimed to highlight the State CIOs' involvement in IT strategic planning.

KEYWORDS
State Chief Information Officers, Information Technology Strategic Planning, Remote Collaboration.

Introduction

Chief Information Officers (CIOs) exist in many industries including commercial, private, and government industries as well as various research and academic institutes; they strive for their organization's success by meeting their goals and objectives. Their primary focus revolves around ensuring that the organization and its employees have access to the necessary technological tools to accomplish their work, as well as the appropriate training to be able to use those tools effectively and efficiently. Thus, strategic leadership and management practitioners involved in commercial, private, nonprofit, and government should focus efforts in developing CIOs for their leadership positions, as well as supporting CIOs in developing others to use the available technological tools. Strategic leadership and management researchers should focus attention on identifying the unique challenges faced by these CIOs.

CIOs from non-government entities may have different perspectives in their information technology (IT) organization then CIOs from government as there are various levels of compliance, regulations, policies and processes that each organization would need to incorporate and adhere with. State Chief Information Officers (CIOs), as a subset of the CIOs in the private sector and in other levels of the governmental sector, have a vital role in IT organizations; they lead and sponsor information system (IS) programs, ensure operations, and provide technologies and capabilities for their organizations. Previous studies (Eiras, 2010; Haffke et al., 2016; Mitchell, 2015; Muller, 2011; Roberts et al., 2014) have discussed CIOs' effectiveness in organizational management, and CIOs' skillsets and credentials for roles and responsibilities involved in leading an organization. However, previous studies have focused on the CIO role in the private sector and federal government.

Compliance with Presidential Executive Orders 13571 and 13576 requires federal government agencies to undertake appropriate steps to streamline and improve digital services, and deliver an efficient, effective, and

accountable federal government. At the state government level, the CIO position is established in each of the 50 U.S. states and tasked with providing oversight and managing state IT and IS. Investigating CIOs' involvement in dealing with IT initiatives in their organizations can identify practices leading to successful implementations (Porfirio et al., 2021). This research adds to the understanding of how the State CIO's involvement in IT strategic planning led to the execution of strategies and actions enabling remote collaboration, and it provides a contribution to the literature and suggestions for future research.

Problem

More research is needed concerning IT strategic planning, given that work to date has shown a high failure rate in such initiatives (Brown & Brown, 2019). State CIOs need to understand the importance of IT strategic planning to meet the organization's business and technology needs. Despite over 50 years of research and practice, the track record for industry IT projects remains very poor, with a failure rate of over 70% (Li, 2020). Many industry reports emphasize the importance of drive and the strategic need for IT investments.

This research was motivated by the first author's experience in the field of information technology and the support he provided to the U.S. government's Chief Information Officer (CIO) office. The term *CIO* was first used in the early 1980s and later associated with the main responsibilities of planning, operating, and managing an organization's IT resources, IT investment, and IT management as a corporate executive leader (Ostrowski & Helfert, 2011). The Clinger-Cohen Act of 1996 mandated the position of CIO; this individual would take the steps necessary to implement and manage IT and processes through policies and strategic plans to meet organizational business and mission needs (Government Accountability Office, 2001).

Scant research literature pertaining to State CIOs is available (De Tuya et al., 2020). Some reports from the U.S. Government Accountability Office (GAO) cover topics on U.S. federal government CIOs, and reports from the National Association of State Chief Information Officers (NASCIO) covering topics on U.S. state government CIOs are also available. However, current literature includes limited information about State CIOs (McCarthy et al., 2021). A gap exists in the literature pertaining to State CIOs' involvement, and the implications of IT strategic planning and remote collaboration during the height of the COVID-19 pandemic.

Purpose and Research Questions

The purpose of this research with a complete version appearing in Na (2024), was to investigate State CIOs' involvement in IT strategic planning for enabling remote collaboration during the COVID-19 pandemic. A CIO is appointed in each of the 50 U.S. states as a senior executive to lead and manage IT initiatives, serving as change agents and decision makers. A CIO needs various characteristics and attributes as a strategist, effective communicator, and visionary as well as technological savvy (Whitehurst, 2015). New IT initiatives by state governments present opportunities to modernize IT. IT strategic planning has generated much research in recent years from both academic and strategic leadership and management practitioner perspectives, as the COVID-19 global pandemic impacted the pace of new remote collaboration technologies within organizations of all types and sizes, across many industry sectors (McCarthy et al., 2021).

This research sought to contribute to the body of knowledge that addresses the ways in which State CIOs are involved in IT strategic planning. It highlighted State CIO involvement in IT strategic planning that enabled remote collaboration during the height of the COVID-19 pandemic. Such information could assist strategic leadership and management practitioners with the development of needed strategic planning skills and crisis leadership and strategic leadership and management researchers with future studies focusing on strategic planning skillsets training development and crisis leadership development investigation and relationships. Furthermore, the research findings could also contribute to studies of State CIOs, for which scant research is available (De Tuya et al., 2020).

The main research question and sub-questions for this research were as follows:

1. In what ways were State CIOs involved in IT strategic planning to enable remote collaboration for their organization's remote workforce at the height of COVID-19 pandemic?
    - 1a. Identify and categorize State CIOs' involvement in IT strategic planning to enable remote collaboration.
    - 1b. Analyze State CIOs' involvement in IT strategic planning to enable remote collaboration.

Literature Review

The purpose of the literature review was to provide some background and information on current issues. A concept map was generated to depict the relationships between the subject areas researched. (See Figure 1). The literature review showed the current depth of the subject area of interest and provided some ideas for the research methods.

Remote Collaboration

Within an IT organization that operates and maintains information systems (ISs), the CIO has the ultimate responsibility for ensuring the operation of all IT systems and satisfying internal customers with any new IT requirements that may become new IS.

Due to the COVID-19 pandemic, many government organizations had to shift the work environment to ensure that staff could work from remote locations. IT departments were the responsible entities to ensure the internal customers' IT needs were met. The State CIOs led transformational initiative of enabling remote collaboration with new remote work environments through their leadership and their responsibilities as a system owner and an authorizing owner (AO). Strategic planning by State CIOs resulted in new forms of remote collaboration by the workforce. Seamless transition from past and current IT systems to this remote collaboration was and remains a challenge for both end users and IT departments to implement.

Video conferencing and collaborative team tools allowed end users to conduct meetings, take notes, brainstorm, and continue to engage actively online in a manner similar to typical in-person office meetings (NASCIO, 2021). This new work environment paradigm enabled IT organizations to continue to push for IT initiatives to meet internal customer needs, for which CIOs were ultimately responsible to lead and manage. Brown (2019) decried the lack of academic research, given the growth in practice.

State CIO

All 50 states have their own state law that establishes a State CIO. Within the State CIO office, the State CIO generally engages with many stakeholders including the Chief Technology Officer, Chief Data Officer, and Chief Information Security Officer as well as the Chief Executive Officer and Chief Operating Officer. Haffke et al. (2016) suggested that the C-suite has become more interested in taking on the CIO's work, given the lack of value provided by CIO from previous IT investments.

The State CIO has the authority to manage and govern IT and IS, and to ensure technology and security management of accessibility, connectivity, interoperability, resiliency, and business continuity to meet and align with business goals. Thus, State CIOs' qualifications and credentials are key to hiring and retaining individuals with technical and business acumen. For example, according to the state of Oklahoma's statute of CIO, job qualifications include a bachelor's degree in STEM; 10 or more years of professional experience in managing and supporting IT operations, IS, networks, telecommunications, budgets, and contract processes; ability to handle strategic direction, organizational management, and complex problems; and ability to resolve issues and conflicts, and manage teams (Chief Information Officer, 2014).

The CIO's role has changed from providing oversight of current IT and IS for the organization and a management role to helping the business to implement its vision for new digital technologies. Multifaceted expectations exist for the CIO executive level position. These include trust, openness, intelligence, confidence, fairness, transformational, interpersonal relationship, technical and business skills, and innovation (Ghawe & Brohman, 2016). Further, the CIO's role has changed and evolved throughout the years as digital technologies continue to change the technology landscape. The CIO role has evolved from simply building modern technology to creating an adaptive and collaborative culture as one of the desired behaviors for leading an organization and playing a huge role in leading opportunities (McKinsey & Company, 2018).

A CIO's inability to adapt to changes and evolve into the new role may cause them to receive blame for failed initiatives (Gonzalez & Ashworth, 2021). The CIO's role has changed from that of internal manager of IT and IS functions to that of executive responsible for business alignment and technology investment for an organization's competitive advantage, and from dealing with supply to demand-focused work (Ostrowski & Helfert, 2011). It becomes ever more complex with modern technologies and dealing with both customer engagement and product delivery for an organization (Ghawe & Brohman, 2016). Due to the complexity of State CIOs roles and responsibilities, organizational changes, and changes due to both new technology and

business impacts, this literature review could not identify findings or case studies of such challenges due to the scarcity in this subject matter.

In the 2018 NASCIO State CIO survey, top characteristics and attributes of a State CIO were identified as communication, relationship building, and strategic thinking (Finley, 2021). Other important State CIO roles included motivator, diplomatic, change manager, negotiator, facilitator, technologist, and educator (Grass, 2018). These characteristics and attributes overlapped with job search results on State CIO. The next generation of new State CIOs should have the following abilities: improving customer experience, gaining buy-in, demonstrating brokering and relationship building, serving in a transformational role in data and analytics, and displaying risk management, transparency, and vision (Malone, 2019; Regan, 2019; Wood, 2016, 2022). The literature review conducted have shown that State CIOs skillsets and leadership development are important to address the challenges of both technical and business sides of leading their IT organizations. Job board searches were conducted to review State CIO positions that may also include characteristics and attributes. For example, state of Oregon Assistant State CIO, state of California CIO, state of Nebraska Deputy CIO, and state of Washington CIO position descriptions included characteristics and attributes of strategist, effective communicator, strong business acumen, problem solver, critical thinking, collaborative, technology knowledgeable, management role and cultural (Indeed, n.d.).

IT Strategic Planning

IT strategic planning provides a solution to strategic, operations, and tactical mindset within traditional bureaucratic organizations, and collaborative forecasting and creation of short-term and long-term goals to encourage the organization's goals and objectives (Mayer & Martin, 2021). Typically, an IT strategic plan is an output of an IT strategic planning process. IT strategic planning should be an ongoing exercise as technologies continue to evolve, and strategy serves as a placemat for technological directions and analysis of IT investment opportunity (Titthasiri, 2000). A technology strategic plan is critical for an IT organization to lay out its vision and goals as well as priorities in technologies to evaluate, acquire, and implement. Identifying emerging technology trends and forecasting their potential implementation represents a part of technology strategic plan. Developing an IT strategic plan is an important process to prepare an IT organization for upcoming work and to create an opportunity to review the IT organization's mission and vision, and future work as aligned with the internal customer and stakeholders (Pistentis, 2023). The IT strategic planning process is conducted to identify and establish technology priorities that align with the organization's goals and objectives. It serves as a roadmap by which leaders and management teams define targets to accomplish. An annual strategic discussion among IT organization executives and the management team to identify scenarios, give new guidance on direction, and lead new IT initiatives is important (Kane, 2019).

According to research by De Tuya et al. (2020), responses from over 60 participants in the state of New York revealed shortfalls by their IT leaders. These included lack of critical thinking; lack of technical experience; lack of strategic planning and vision; lack of execution and operational behaviors; inept resource and timeline management; lack of IT and IS knowledge and understanding; lack of openness to transparency, collaboration, and communication; distrust; and lack of clear objectives and goals. According to a report from NASCIO (2019), critical success factors for a State CIO listed by priority ranking were: relationship with state officials and internal customers, security, governance, communication, mission focus, innovation, conflict management, portfolio/program management, and data-driven decision making. An IT strategic plan is a valuable resource by which to reinforce the value of IT and show commitment to the organization's success in achieving key goals through modern technologies (Pistentis, 2023).

National Association of State Chief Information Officers (NASCIO)

The National Association of State Chief Information Officers (NASCIO) is a nonprofit organization that supports networks and resources for State CIOs. This organization was founded in 1969 and serves to represent State CIOs and IT executives and managers. NASCIO's mission is to assist U.S. state-level governments with excellence in leadership, business, technology, and management and support with business and technology innovation, and IT service delivery. They host two conferences a year that are open to both state-level senior government executives and representatives from companies and organizations. NASCIO brings together State CIOs, IT executives and managers, state members, and representatives from federal, local, and tribal private and public sectors to support discussions regarding challenges with which State CIOs

struggle. Through collaboration and information sharing the organization promotes best practices and innovations with conferences, networking, research, and publications. Since 2010, a survey report of State CIOs has been published annually by NASCIO. A total of 11 publicly available reports were used in this research, and these included the latest topics identified as priorities by State CIOs high priority items that need to be addressed, and any topics pivotal to their organizations' mission and vision. In addition, 20 critical success factors for State CIOs were identified in NASCIO's 2021 annual survey report. Top factors noted in this report include relationship building, clear goals and objectives, value proposition from technology to business, and generating innovation and vision when leading new IT initiatives for success (NASCIO, 2021).

Multiple reports are available which share the status of new IT initiatives at the state level in the United States. An August 2021 report from the Virginia IT Agency (VITA) summarized new IT initiatives implemented under the Virginia State CIO from July 2019 to April 2021. The purpose of VITA's new IT initiatives was to respond to the COVID-19 global pandemic; the State CIO led the effort to help the remote workforce by migrating workplace tools to a virtual environment (NASCIO, 2021). The goals of this initiative included setting up an agile environment, capturing business opportunities, improving service delivery, improving workforce effectiveness, enhancing the internal customer experience, and enabling data-driven decision making. With an established digital strategy and the State CIO's priorities, this new IT initiative was successful by instantiation of a virtual environment and tools that enabled the workforce to work remotely and seamlessly to conduct business as usual. One of various annual digital state survey reports from government technology (GovTech) noted that implementing new digital technologies such as cloud computing, artificial intelligence, and citizen-centric service enabled a remote workforce environment that allowed the workforce to operate and continue business as usual, and increased efficiency and performance (Stone, 2020).

Methods

This research utilized the grounded theory research method (e.g., Charmaz & Thornberg, 2020; Glaser & Strauss, 1968). To do so, a comprehensive literature search on topic of State CIOs' involvement in IT strategic planning was conducted, as listed below:

1. Conduct a comprehensive literature search on the topic of State CIOs, IT strategic planning, and remote collaboration for the data collection.
2. Conduct the grounded theory analysis from the data collection with triangulation.
3. Apply computer-assisted qualitative data analysis software (CAQDAS) to validate the grounded theory analysis of State CIOs, IT strategic planning, and remote collaboration.

Based on the results, a Construct Course of Action (COA) for State CIOs involvement in IT strategic planning was constructed to assist both State CIOs and strategic leadership and management practitioners.

Search Process

The literature search process was limited to the years December 2019 to December 2023 and included only texts in English. Engineering Village (Compendex and Inspec), IEEE Xplore, and ProQuest were selected for the relevant literature search.

For the purpose of the literature review, key words were used along with Boolean to better locate records. The following searches were executed and adjusted as needed to better find records for the literature review: State CIO AND Remote Collaboration; State CIO AND IT Strategic Planning; IT Strategic Planning AND Remote Collaboration; and State CIO, IT Strategic Planning, AND Remote Collaboration.

After reviewing reference materials on search strategy, the key words listed above were revisited to undertake a different search procedure. For the ProQuest database search, previous search was reworded as follows: (*remote collaboration* OR *remote work* OR *telework* OR *virtual collaboration* OR *online collaboration*) AND (*state chief information officer* OR *state CIO* OR *government chief information officer* OR *CIO*) AND (*IT strategic planning* or *strategic information system planning*) since 2020. This revised search led to nine results that were reviewed and selected as the literature review data sample.

The following sections present the results of the literature review. Discussions include the following: (a) remote collaboration, (b) State CIO, (c) IT strategic planning and (d) the National Association of State Chief Information Officers (NASCIO).

Role of the Researcher

In this research, the primary researcher has a professional career in the fields of systems engineering, information technology, and project management. Throughout the researcher's professional career, clients have included various U.S. federal government agencies' CIOs and C-suite officers including, but not limited to CTOs, CISOs, and CDOs. Current work performed has included executive management consulting, cross-collaboration with various agencies' C-suite officers, and open communication support with state and local governments. There were also opportunities to work with CIOs from private sector companies. At present, many countries and companies around the world have CIOs leading organizations within both public and private sectors.

Philosophy and Worldview

In qualitative research, the researcher's worldview is important to clarify. This study utilized constructivism and pragmatism.

The constructivism worldview assumes that the researcher intended to examine the views of a research idea being studied from many perspectives (Kivinen & Riestela, 2003). This would allow the researcher to construct the meaning of the research idea being studied through historical data and to interpret the meanings of personal and societal experiences.

Another worldview addressed in this study was pragmatism, which is important when focusing on a research problem or question using various research techniques and methods to address a practical problem (Kivinen & Riestela, 2003). For this qualitative research, the researcher was not bounded to specific theories but rather used rigorous methods to identify valid results for applicability. This research sought practical value and applied relevancy from the research questions.

Document Search Procedures

The research method involved locating records pertinent to this research topic. Database sources including ProQuest, Engineering Village (Compendex and Inspec databases), and the NASCIO website online database were utilized to search for published articles and related sources. After all relevant search results were located and examined, records were reviewed to remove any duplicates and exclude any records that did not meet the study criteria. Only full text articles were considered for the research, and any records that did not meet study criteria were removed. Study criteria identified for this research included literature search findings solely scoped to State CIO, State CIOs' involvement in IT strategic planning, and state-wide IT strategic planning by State CIOs.

Diverse types of documents served as sources for document analysis. Document sources included letters, memoranda, official records, general announcements, reports, and scholarly or peer-reviewed documents found in a database (Tellis, 1997). All types of documents had potential value when examined to understand and discover the meaning and insights relevant to the research problem. These documents provided historical and background information that could assist the researcher to understand the context and specific topic of interest (Bowen, 2009).

Document Analysis

Document analysis involved an 8-step process that included the following: gather data, develop category scheme, create version control, assess document authenticity, examine document biases, review document background information, question document status, and examine document content (Document Analysis, 2016). There are two ways to examine document content: content analysis and thematic analysis. Content analysis enables the researcher to identify meaning and relevant passages; thematic analysis provides the researcher with patterns or themes from document data (Document Analysis, 2016).

Constant comparison is a critical part of the grounded theory method (Turner, 2022). There were many themes and categories to compare from multiple data sources. The four steps of constant comparison include (a) comparing data applicable to each category, (b) integrating categories, (c) delimiting theory, and (d)

generating theory (Turner, 2022). This needed to be a constant and continuous process to generate theory as part of the grounded theory approach.

The sources of data were identified using peer-reviewed databases and documents from the National Association of State CIOs (NASCIO) website online database. An iterative research process of document collection and document analysis was used to identify new insights and to address the research problem (Busetto et al., 2020).

Triangulation

In qualitative research, triangulation increases research data reliability. Its purpose is to find multiple sources of data evidence (Tellis, 1997). Triangulation in qualitative research allows cross-checking of evidence collected from multiple sources and enhances understanding of the research problem from a larger perspective (Bhandari, 2022). This study used data triangulation of document analysis with the researcher as an instrument in concepts pertaining to State CIOs, IT strategic planning, and remote collaboration. Systematic procedures and purposeful sampling of data collected were an important part of data triangulation.

Use of Grounded Theory

For synthesizing findings from the literature review, grounded theory analysis was conducted Charmaz & Thornberg, 2020; Chun Tie et al., 2019). The grounded theory method includes simultaneous phases of (a) data collection and analysis, (b) an inductive approach to analysis, (c) allowing the theory to emerge from the data, (d) use of the constant comparison method for theoretical sampling to reach theoretical saturation, and (e) generation of the new theory (Barnett-Page & Thomas, 2009). The grounded theory was selected for this research due to the scarcity of literature available for this research subject matter area and the complexity of strategic planning, and State CIOs involvements and management. With this approach, a theoretical saturation was realized by using an iterative process to sample and then analyze those data. The aim of grounded theory is to produce or construct a process inherent to a subject area of inquiry and generate a theory grounded in the original data that will lay a foundation for a framework to describe the relationship between methods and processes (Chun Tie et al., 2019). Grounded theory is a systematic approach to conducting research, collecting data, and conducting analysis. In grounded theory studies, the researcher's or researchers' focus starts at the beginning of the research process, and they construct and interact with the data throughout the research process (Charmaz & Thornberg, 2020). It involves multiple sources and references to review, examine, and analyze from experience and guidance. The researcher uses the data to identify the categories and subcategories capturing and describing those data. These categories and themes can be developed into a hierarchical structure for visual representation, and that structure provides the resulting theoretical model. This research method required creativity, objectivity, experience, and critical thinking. This methodology provides an approach to examining a research problem from qualitative data and addressing practical, challenging subject topics.

After the literature review using the grounded theory method, categories and themes were developed. Next, computer-assisted qualitative data analysis (CAQDAS) software (an NVivo product developed by QSR International) was used to validate the categories and themes developed (Dalkin et al., 2020; SAGE Publications, 2020). The software can be applied with text data and provides visualization and analytical representations. Using the synthesized results from the grounded theory methodology and the analysis via the CAQDAS software tool, the researcher attempted to address the research questions by enumeration of the terms *State CIO* and *IT strategic planning*, and categorization of hierarchical grouping of State CIO and IT strategic planning.

Scope, Population, and Samples

The scope of the sample included database searches for journal articles, trade journals, magazines, and dissertations including IEEE Xplore, ProQuest, and Engineering Village (Compendex and Inspec databases). The time period of the publications included from December 2019 to December 2023. The sample was collected to help preparation for document analysis, and all types of documents were considered for sample size. The National Association of State Chief Information Officers (NASCIO) serves as a community that provides resources to State CIOs. Within the resource center, there were numerous reports and surveys from State CIOs inputs and their involvement in annual events (https://www.nascio.org/resource-center/). The information available from this site was examined as well.

Trustworthiness

This section addressed the qualitative research trustworthiness attributes including credibility, transferability, confirmability, and dependability. The qualitative research process included continuous data analysis and simultaneous refining and tuning (Korstjens & Moser, 2018).

Credibility defines the confidence of truth in research findings and represents correct interpretation of the original data in the findings (Korstjens & Moser, 2018). The sources of the original data used in this research were scholarly databases and nonprofit organizations' reports that are widely accepted and endorsed by state governments.

Transferability means that the results from qualitative research could be transferred to other means of use. This research could be transferred to other researchers who seek to use the original data found from literature research and resources from NASCIO to conduct different research topic of interest. In addition, the findings may be transferable to federal agencies, nonprofit organizations, and for-profit businesses.

Dependability defines how the research findings could be stable over time and involves evaluations of the research findings, interpretations, recommendations from qualitative research (Korstjens & Moser, 2018). This research is dependable based on findings derived from the literature review, the grounded theory method, and findings from CAQDAS software on NASCIO reports on State CIOs.

Confirmability applies to how other researchers could review the research findings, interpretations, and recommendations and determine that the procedures and results are sound (Korstjens & Moser, 2018). This research provided thorough descriptions of the data sources and procedures, which can be replicated.

Responsible Conduct of Research

The researchers followed all of the training requirements for Responsible Conduct of Research (RCR) and the University Institutional Review Board requirements.

Results

Description of Sample

All 50 states' State CIO websites were identified and researched for IT Strategic Planning. From searches conducted, relevant reports were identified as part of the sample data to review along with initial peer reviewed results from the various databases. A text search query was conducted to determine an occurrence of word frequency results. After a systematic review of database searches, and exclusion of non-related and non-applicable, and duplicative sources, a total of 134 document sources including eight peer reviewed literature sources, 110 State CIOs government reports, and 16 reports from NASCIO, StateScoop and GovTech media sources dated from December 2019 to December 2023 were identified as sample data for the document analysis.

Description of Analyses Completed

Tables were prepared to describe the analyses completed for each research question. These appear below.

State CIOs involvement in IT strategic planning to enable remote collaboration for their organization's remote workforce in the height of COVID-19 pandemic (1)

With the advent of COVID-19 and quick response on shifting the workforce to remote collaboration technology to allow them to work from alternate locations, State CIOs activities were captured in 2020 annual reports and 2021 IT strategic plans. Furthermore, annual reports from 2021, 2022, and 2023 included State CIO office project activities conducted to support remote collaboration technologies. Additionally, IT strategic plan from 2022 and 2023 elaborated the future plan to ensure remote work locations and collaboration to conduct businesses and operations. Results appear in Table 1. All literature sources from State CIO websites and other sources of data collected showed the State CIOs involvement to enable remote collaboration in the height of COVID-19 pandemic through the changes made in IT strategic planning.

Table 1. *State CIOs Involvement in IT Strategic Planning Summary*

State CIOs Involvement in IT Strategic Planning	**Document Sources**	**References**
Importance of State CIO's involvement in IT strategic planning.	• CIOs need to be engaged with strategic innovations and improvement opportunities. • Strategic planning, processes, and procedures are utilized to develop IT and business alignment. • CIOs need to work together with applicable stakeholders to establish strategic directions of IT in an organization. • IT strategic planning is an on-going process to identify organizational needs and potential opportunities to prioritize key business and IT activities.	• Success factors of long-term CIOs, 2022 • CIO's role in building IT enabled organizational ambidexterity, 2022 • Technology Managers Challenges to Align IT Strategies with Business Strategies, 2021 • Strategies for Adoption of Innovative Information Technology for Business Performance Improvement, 2022
State CIO's involvement in IT strategic planning.	• IT investment allowed the State CIOs to prioritize strategic technology planning to support remote workforce. • Statewide IT strategic plan was developed to implement cloud environment to enable remote collaboration and support virtual environments for the workforce. • State CIO has a key responsibility to develop, implement and manage Statewide IT strategic plan and supporting activities including IT investment management, IT governance, IT strategic planning IT service management and IT operations. • Effective IT investment management, IT governance, IT strategic planning enabled State CIOs to align IT investments to business goals and objectives, monitor and track IT projects, and improve internal customer satisfaction.	• 2020 Arizona IT Strategic Plan • 2022 Connecticut IT Strategic Plan • 2020 Minnesota IT Strategic Plan • 2022 Montana IT Strategic Plan • 2021 Oregon IT Strategic Framework • 2022 Virginia IT Strategic Plan
State CIO's involvement in COVID-19 pandemic response.	• COVID-19 pandemic accelerated broadband infrastructure and cloud computing technology to support telework and access to state government services. • New IT hardware including computers, laptops, tablets, hotspots, softphones, mobile devices, and printers were purchased to support the new remote workforce. • Due to the COVID-19, IT support was in dire need to support suddenly a virtual workforce. • The State CIOs were forced to act to support the workforce needs and the pandemic has lifted the value of IT and criticality of services delivery. • COVID-19 response activities enabled the State CIOs to transform IT investments, IT governance with flexibility and respond quickly to changes needed.	• 2020 NASCIO COVID-19 Planning for State CIO • 2021 NASCIO State CIO Survey • 2022 NASCIO State CIO Survey • 2020 GovTech Digital State • 2022 GovTech Digital State Survey
State CIO's involvement in enabling remote collaboration.	• State CIOs reported to support new remote work policy, IT investments in new IT infrastructure and resources for remote workforce as well as remote training and remote hiring. • IT investments were shifted to face the challenges faced with COVID-19 to implement cloud for virtual collaboration and expand broadband infrastructure. • New online training is offered to the remote workforce to ensure organizational effectiveness and the performance does not hinder.	• 2022 New York IT Strategic Plan • 2021 Maine Annual Report • 2021 Washington IT Strategic Plan • 2021 Texas IT Strategic Plan

Identify and categorize State CIOs involvement in IT strategic planning to enable remote collaboration (1a)

The remote collaboration technology such as Microsoft 365 (M365), Google Workspace, Amazon Web Services (AWS) Workspaces, Zoom, Cisco Webex, and Microsoft Teams have been available to the workforce before the COVID-19 pandemic, and these technologies were expanded to a larger scale of users due to an increased demand due to the COVID-19 pandemic and transitioning of workforce into working remotely. Other IT hardware such as computers, laptops, tablets, mobile devices, and printers were identified to be purchased and distributed to the workforce for them to work at a remote location. The State CIOs had to respond quickly and make a critical strategic decision on shifting the workforce to work remotely and ensuring proper IT support was provided. Common themes categorized from the document analysis results are identified in Table 2 below to support the empirical evidence from all sources indicated that State CIOs have been involved in the following activities to enable remote collaboration.

Table 2 *Document Analysis Results Categorized into Common Themes*

Common Themes	Document Sources	References
State CIO's involvement with COVID-19 pandemic Response.	• "COVID-19 pandemic forced the state workforce to start working remotely." • "Responded quickly to provide additional bandwidth, acquired additional VPN licenses, implemented Microsoft Teams Transition to supporting remote work."	• 2022 California Annual Report • 2022 Virginia IT Strategic Plan
State CIO's involvement with Critical Decision Making.	• "Lead efforts to prioritize investments, and enable strategies that ensure accountability, alignment and the achievement of the plan's goals." • "State CIO meet to discuss IT strategy and review the established roadmap for technology investment opportunities that support/enhance the agency mission, while ensuring there is enterprise strategic alignment."	• 2020 California IT strategic plan • 2021 Oregon IT Governance Guide
State CIO's involvement with IT service delivery and IT operations support.	• "Purchased and deployed tablets for remote work during and post COVID-19." • "Purchased 490 laptops of which 201 were issued or loaned out to provide agencies resources to support state employees teleworking."	• 2022 Connecticut Annual Report • 2021 Nex Mexico IT Strategic Plan
State CIO's involvement with new technology training.	• "By offering remote training, CDT expanded its audience to the entire state." • "Training modules addressing issues facing employees in the new remote work environment have been implemented and continue to raise awareness to protect the expanded attack surface."	• 2022 California Annual Report

Analyze State CIOs involvement in IT strategic planning to enable remote collaboration (1b)

There were numerous records and reports available from State CIO IT Strategic Planning websites to analyze State CIOs involvement in IT Strategic Planning to enable remote collaboration. With the quick and sudden responses required due to the state emergency on COVID-19 pandemic and the reporting of new cases on a daily basis, State CIOs had the executive authority to make strategic IT decisions that changed the IT landscape for its workforce. Table 3 summarizes the analysis of common themes and categories.

Table 3 *Analysis of Common Themes and Subthemes Identified and Categorized*

Common Themes	Subthemes	Analysis	Document Sources	References
State CIO's involvement with COVID-19 pandemic Response.		State CIOs were involved with COVID-19 pandemic response to provide IT support to their workforce shifted to work remotely.	• "COVID-19 pandemic forced the state workforce to start working remotely." • "Responded quickly to provide additional bandwidth, acquired additional VPN licenses, implemented Microsoft Teams Transition to supporting remote work."	• 2022 California Annual Report • 2022 Virginia IT Strategic Plan
	State CIOs involvement in providing guidance as a response to COVID-19 pandemic.	State CIOs were involved to support a change in work location guidance to shift the workforce from onsite to remote location.	• "Formal remote work policy along with associated technology changes implemented for the agency based on a hybrid model." • "Establishing hoteling and alternative workspaces within facilities to accommodate the remote and hybrid schedules of many state employees."	• 2022 Kansas IT Plan • 2022 Ohio Annual Report
	State CIOs involvement in response to COVID-19 pandemic to the workforce with changes to policies and standards.	State CIOs were involved to provide COVID-19 pandemic response by implement changes to policies and standards for remote workforce to continue to operate business as usual.	• "The state's International Teleworking and Remote Access standard establishes that state-issued phones, computers, tablets, etc. should not be taken out of the country without an exemption approved by the agency." • "Adapted and modernized all HR processes, including new hire onboarding, to be fully remote."	• 2022 Georgia Annual Report • 2023 Oklahoma IT Strategic Plan

Common Themes	Subthemes	Analysis	Document Sources	References
State CIO's involvement with Critical Decision Making.		State CIOs were involved to make critical strategic decision through IT strategic planning along with IT investment management, IT governance and IT service management activities to ensure the workforce have access to remote collaboration technology.	• "Lead efforts to prioritize investments, and enable strategies that ensure accountability, alignment and the achievement of the plan's goals." • "State CIO meet to discuss IT strategy and review the established roadmap for technology investment opportunities that support/enhance the agency mission, while ensuring there is enterprise strategic alignment."	• 2020 California IT strategic plan • 2021 Oregon IT Governance Guide
	State CIOs involvement in critical decision making to adjust and shift IT resources to focus to support the workforce with remote collaboration.	State CIOs were involved to make critical decision in IT strategic planning to adjust and shift planned IT resources to support the workforce to perform remotely through IT service management.	• "The mass shift to remote work, the use of video conferencing in place of in person meetings, and the adoption of digital signing in lieu of physically handling documents are just some of the changes that have permanently altered the way." • "Shifting a large percentage of the State's workforce to teleworking by rapidly scaling up the technology that State employees need to remain productive from their home offices."	• 2022 Washington IT Projects Status Report • 2021 Ohio Annual Report
	State CIOs involvement in critical decision making to adopt changes to IT governance to support the workforce access to remote collaboration technology.	State CIOs were involved to make critical decision in IT strategic planning to implement changes to IT governance process for the workforce provided with remote collaboration technology.	• "Implemented enterprise IT governance to optimize IT investments." • "Enhanced enterprise IT alignment and ensure agency interests are represented within the IT governance process and duplicative activities are minimized."	• 2022 North Carolina Annual report • 2020 Ohio IT Strategic Plan

Common Themes	Subthemes	Analysis	Document Sources	References
State CIO's involvement with IT service delivery and IT operations support.		State CIOs were involved through IT strategic planning to ensure changes in IT service delivery and IT operations support the responses to COVID-19 pandemic.	• "Purchased and deployed tablets for remote work during and post COVID-19." • "Purchased 490 laptops of which 201 were issued or loaned out to provide agencies resources to support state employees teleworking."	• 2022 Connecticut Annual Report • 2021 Nex Mexico IT Strategic Plan
	State CIOs involvement in IT service delivery support to the workforce equipped with remote collaboration.	State CIOs were involved to provide support in IT service delivery to the workforce with logistics of IT resources including hardware and software for remote collaboration.	• "The state has made progress in efforts to update its overall IT planning strategy, including an IT governance process that closely involves all agency IT directors and staff." • "Moved all users from desktops to laptops to improve teleworking capabilities."	• 2022 GovTech Digital State Survey • 2021 Kansas IT Plan
	State CIOs involvement in IT operations support the workforce to perform remotely.	State CIOs were involved to provide support in IT operations support to the workforce with remote call centers and helpdesk support.	• "Collaboration and improved customer experience also drove the creation of an AI-powered conversation chatbot to serve the state's veterans when they seek assistance from government officials." • "A statewide, AI-driven digital assistant, was launched to offer a clearer path to various agency services."	• 2022 GovTech Digital State Survey

Common Themes	Subthemes	Analysis	Document Sources	References
State CIO's involvement with new technology training.		State CIOs were also involved to provide the new remote workforce with online training to ensure remote collaboration technology is used effectively.	• "By offering remote training, CDT expanded its audience to the entire state." • "Training modules addressing issues facing employees in the new remote work environment have been implemented and continue to raise awareness to protect the expanded attack surface."	• 2022 California Annual Report
	State CIOs involvement in providing support to new remote training.	State CIOs were involved to provide new remote training for the workforce.	• "Provided virtual meeting capabilities/training for staff and many other pandemic technology needs." • "Microsoft Enterprise Skills Initiative provides self-paced and virtual instructor-led courses. Google similarly offers learning tracks and vouchers for certifications in Google Cloud Platform (GCP)."	• 2020 Illinois Annual Report • 2023 Oklahoma IT Strategic Plan
	State CIOs involvement in providing the new remote workforce with remote technology training.	State CIOs were involved to provide training for new remote technologies.	• "Broader distribution of guidance and educational materials for remote workers. State websites with detailed instructions on computer configuration and use are a necessity." • "Training modules addressing issues facing employees in the new remote work environment have been implemented."	• 2020 NASCIO COVID 19 Planning • 2020 Georgia Annual Report

After coding was completed using systematically conducted document analysis and categorically coded data based on the research questions, they were compared for analysis and validation. The word frequency query conducted by the researcher using NVivo software generated a word cloud based on data collected and this query minimized the research bias when comparing results for comparison. Figure 3 is a generated Word Cloud from NVivo software with the highest frequency of words closer to the center of the diagram.

Next, a Word Frequency Tree Map query was conducted by the researcher to present the list of most occurring words located by the data collected using the NVivo software. The most frequent words were: (a) states, (b) remote, (c) agencies, and (d) services. The second most frequent words were: (a) works, (b) plans, (c) technology, and (d) strategic.

Lastly, a Text Search query was conducted to show the relationship between a key word and its relating words based on the data collected by the NVivo software. Figure 4 was generated by the NVivo software as an output of coding branches based on word frequency and text search to address the research questions.

Within the State CIO office, IT strategic planning had been identified and in practice for strategic IT decisions to be made on an annual basis to lay out the statewide IT vision and roadmap to align business and IT goals. The responses to the COVID-19 pandemic required State CIOs to manage through a decision-making process in IT strategic planning. These changes allowed the workforce to work from alternate locations, use remote collaboration technology, receive, and set up IT hardware to enable a remote work environment. Online training had to be offered to train them with new technology systems.

Conclusions and Recommendations

Connection of the Findings with Previous Research

Due to the existence of a gap identified due to the scarcity of literature, there is a lack of connection between this research findings and the previous research. Nevertheless, the findings from studies of CIOs in Federal agencies and in business organizations were similar to those found in the present study of State CIOs on the premise of advocating and enabling remote collaboration during COVID-19. A memorandum from the United States Office of Personnel Management (OPM) published on April 20, 2020, provides guidance on federal agencies to encourage remote work to continue operational needs. Federal CIOs were directed to meet this requirement for their workforce transitioning to remote work and utilize remote collaboration during the COVID-19. According to the United States Office of Personnel Management (OPM) report on the status of telework in fiscal years 2020 and 2021, roughly over 45% of federal employees teleworked, and this trend has increased each previous year due to IT modernization and investment put into place (United States Office of Personnel Management, 2020, 2021). Due to COVID-19, Federal CIOs made decisions, and assisted in transition of the workforce to remote work and utilized remote collaboration. According to the 2020 Federal CIO Survey, COVID-19 accelerated federal IT modernization and investment to accommodate and shift to remote work (Professional Services Council, 2021). A report from International Data Corporation (IDC) published in 2020 stated that over 2000 organizations and companies globally transitioned their workforce and operations to remote operations and allowed real-time collaboration (International Data Corporation, 2020).

Implications for Practice

As noted earlier, the position of the State CIO was established in 1996 along with the Federal agency's CIOs. Since then, CIO level positions have led and managed IT organizations. The State CIOs continue to lead and manage ever-growing IT initiatives as a system owner and authorizing owner (AO) to meet their organizational business needs and adapt to technological advancement. As State CIOs websites share efforts in IT strategic planning, State CIOs must continue to practice the discipline of IT strategic planning and various enabling factors to lead and manage their IT organizations effectively.

Based on the research findings and discussion of the results of analyses, COAs are identified for consideration for future State CIOs and for strategic leadership and management practitioners assisting in CIO development. COAs were identified to prepare for and to use when the next high-risk event or crisis such as natural disaster, war, pandemic, and or other such emergency may occur in the future. State CIOs could consider the COAs listed below to better prepare in advance and make quick critical strategic decisions to deliver much needed technologies for their workforce resulting in positive impacts for the organization. strategic leadership and

management practitioners could use the listing to develop future CIOs in business and industry, as well as with local, state, and federal agencies to address workforce development to handle potential future crises.

Although the following recommendations are targeted to State CIOs, these may be applicable for government agencies at all levels, as well as for-profit and nonprofit organizations.

- State CIO should consider IT Strategic Planning as a continuous process, not a one-time shelfware that captures a snapshot of the IT organization's project status and initiative needs.
    - Instead of conducting this activity periodically to deliver an IT Strategic Plan, such IT Strategic Planning should be undertaken as a continuous process to review, assess, and update the Plan regularly.
- State CIOs should coordinate and collaborate regularly to share information and knowledge regarding the emerging technological outlook as connected with IT Strategic Planning, and they should embrace and adopt public-private partnerships (PPPs) to align investment and works accordingly.
    - Institutionalizing IT Strategic Planning with all levels of stakeholders' involvement, assuring knowledge management and information sharing, and engaging with PPPs could better prepare for emerging technology outlook and the next highly risked event or crisis.
- State CIO should consider having an overarching enterprise IT architecture to represent how IT Strategic Planning fits with the organization's vision, mission statement, IT roadmap, IT strategy, ITIM, ITAM, ITSM, and other applicable references.
    - The discipline of enterprise IT architecture is critical to State CIOs to map all current operational IS, as well as IT systems and applications within the organization's system security boundary. Continuous review and assessment of "as-is" or current architecture and preparations and planning for "to-be" or future architecture would further aid in mapping different components of IT Strategic Planning with State CIO's future vision and strategy.
- State CIO should consider defining measurable and meaningful metrics to evaluate successes, achievements, and return on investment (ROI) from IT Strategic Planning.
    - Quantitative measures and meaningful metrics for State CIOs to consider may include the following within the scope of IT Strategic Planning on an annual basis:
        - ▪ Number of IT acquisitions planned versus actual.
            - To determine the variance between planned versus actual on IT acquisitions made.
        - ▪ Duration of each IT acquisition from planning to post-award.
            - To determine the variance between planned versus actual duration on IT acquisitions awarded.
        - ▪ IT budget planned versus actual.
            - To determine the variance between planned versus actual on the annual IT budget.
        - ▪ Total cost of ownership (TCO) on IT infrastructure (e.g., cloud, on-prem).
            - To determine the TCO on IT infrastructure and IT landscape that State CIO is managing and planning for future vision and strategy.
        - ▪ % of IT budget for innovation, prototyping, internal research & development (IR&D).
            - To determine % of the IT budget being spent for innovation and prepare for future emerging technological outlooks.
        - ▪ Number of IT projects by categories: initiated, completed, on hold, stopped.
            - To determine the progress of IT projects.
        - ▪ Number of IT requirements received (new or existing internal customer support) by internal customer-based.
            - To determine the types of IT requirements based on different internal customers to justify future IT budget requests.
- State CIO should provide process training on IT Strategic Planning to all relevant stakeholders to ensure institutionalization and a thorough understanding of the requirements.
    - Institutionalization of IT Strategic Planning will take time and effort to prepare and train all levels of stakeholders. Such training needs to reflect the latest contents and developments. The frequency of

training taken by the workforce, end-of-training exam scores, and training surveys could be captured for future training content and delivery improvement opportunities.

Limitations of the Research

A limitation of this research was that both the preliminary database search results and the final search results revealed a scant number of literature reviews and studies on the topic of interest. The scarcity of literature may have impacted the quality of this document analysis research. The types of sources found may have been a limitation to the research when non journal articles or dissertations were located from literature review searches. The data collection approach may have decreased generalizable findings, as the data that need to be collected and reviewed included CIO related documents from other industries and various governments. Thus, qualitative research for future studies on this topic should consider how to generalize involvement by other types of CIOs and IT strategic planning.

One limitation to the research was that minimal peer-reviewed literature sources were available about this subject matter, and the synthesis of the findings came from only publicly available documentation from State CIO websites. This study did not collect data through a measure of surveys or interviews of State CIOs.

Suggestions for Future Research

The present work represents an extension of previous work undertaken by the authors (Na & et al., 2024). Future research is recommended for strategic leadership and management researchers interested in the subject matter of the State CIOs. Future researchers could use the findings to conduct the Delphi Method with a selected number of State CIOs. In further rounds of the Delphi Method, all 50 State CIOs could receive an online survey request. The Delphi Method is a rational approach to research real-world practice by focusing on structured communication analysis of individuals who could provide subject matter expertise to meet the goal of a consensus (Brady, 2015). This research method is applicable when there is an existence of a group of experts available for participation. The Delphi Method has been applied in IT management related research as a means to improve the efficiency and effectiveness of technology and business management within private, public and government, and to bring a group of experts geographically dispersed together as a structured and organized panel group to communicate for suggestions and recommendations for improvement opportunities (Skinner et al., 2015).

A study similar to the present study could be undertaken with Federal agency CIOs or with CIOs from private and public sectors. That study or another study could possibly investigate and compare CIOs at the Federal, State, and Local levels. A future research scope may consider conducting a case study of multiple states or a state-by-state comparison on the various levels of engagements and processes in which CIOs were involved in order to enable and deliver remote collaboration technologies for their remote workforce.

Another research approach could involve in-person or online interviews with several State CIOs. Such a study could potentially use the results of the present study and interview selected State CIOs to determine their agreement with the study results. A future study may also consider interviewing potential participants from PPPs involved and engaged with various levels of government officials on providing and promoting remote collaboration technologies.

Identifications and analysis of the State CIOs' various involvements in their organizations and the development of such studies would contribute to the literature and body of knowledge. The development of new government level policies and standards to reflect new technologies implemented, focused on implications for State CIO involvement with policy stakeholders such as attorneys and lawyers could be identified and analyzed as future a research effort. Strategic leadership and management researchers and practitioners could further investigate State CIOs leadership, IT organization's effective management, IT organization's workforce development, IT training and organizational learning. Quantitative measures of State CIOs' involvements in these other areas could be planned for future research. Measuring and evaluating involvements and relationships between State CIOs and State level organizations' C-level suite officers could offer consideration for future studies.

Conclusions

The research findings contribute to reducing the gap in the literature and body of knowledge that COAs are for consideration for future State CIOs. Furthermore, additional contributions to a gap in the literature in this subject matter are essential for future researchers, the State CIOs, and their stakeholders. State CIOs could further explore how to integrate these COAs into future IT strategic planning processes or how to implement these action items to enable existing IT strategic planning. As a leader, manager, and practitioner of the position of State CIO, successful planning, execution, management, and operation are all vital to achieving vision, goals, and objectives. Future research related to this topic could strengthen the commitment to public service from current and future state-level employees and a desire to achieve capabilities and deliveries of IT services within the organizational business and technological needs.

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A Test of Follower Psychological Reactance to a Leader in the College Classroom: Investigating Late Work Policies on Instructional Dissent Through Freedom Threat and Reactance

Rebekah M. Chiasson, Department of Communication Studies,
Sam Houston State University, Huntsville, TX. rmc080@shsu.edu
Matthew M. Martin, Department of Communication Studies,
West Virginia University, Morgantown, WV
Christopher B. Neck, Department of Management, University of Nebraska Kearney, Kearney, NE
Christopher P. Neck, Department of Management and Entrepreneurship,
Arizona State University, Tempe, AZ

Online published: January 2025 Print published: March 2025 Editor: CJ Rhoads	Authorship Roles and Conflict of Interest Statement is on file at the Journal of Leadership and Management offices, available on request. Contact editors@jleadershipmanagement.org

ABSTRACT

Employing psychological reactance theory (PRT; Brehm, 1966), this study investigated how instructors' late work policies influence students' dissenting behaviors through perceived freedom threat and psychological reactance. Using a 2 (Forcefulness: low vs. high) by 2 (Late work: accepted vs. not accepted) experimental design, results indicated that, compared to a policy that incorporates low forceful language and accepts late work, a late work policy that is more rigid and uses more forceful language led to greater expressive and vengeful dissent serially through freedom threat and psychological reactance. While there was no evidence of serial mediation for rhetorical dissent, there was evidence of simple mediation in that the highly forceful, late work not accepted policy led to greater use of rhetorical dissent through freedom threat when compared to the low forceful, late work not accepted policy. This study argues for the use of serial mediation to test PRT in future instructional experiments. Implications for management and leadership are discussed.

KEYWORDS

psychological reactance theory, instructional dissent, late work policies, forceful language

Introduction

The survival of a firm depends on its continual ability to adapt, innovate, and remake itself to meet industry demands (Piderit, 2000). At the heart of the firm's survival is thus its ability to successfully navigate the organizational change necessitated by effective innovation and adaptation (Lewis, 2019; Nesterkin, 2012). However, organizational change does not occur in a vacuum, as such overarching change requires the individual adaptation of employees within the transforming entity to be successful (George & Jones, 2001). While the process of organizational change demands firm-level adaptation, that of individual change requires individual, cognitive adaptation (George & Jones, 2001). It may therefore be more accurate to suggest that it is the ability of employees within the organization to navigate the cognitive adaptation necessitated by effective innovation that lies at the heart of a firm's survival (Nesterkin, 2012).

Unfortunately, individual change brought about by organizational transformation is likely to be met with resistance, as the associated cognitive adaptation is apt to be viewed as a forced deviation from the individual's established norms, routines, and ideas and thus perceived as an undermining of one's personal autonomy (Deci & Ryan, 1985; Nesterkin, 2012; Ryan & Deci, 2006). When individuals' autonomy is threatened in such a manner, they may experience reactance, a motivational state triggered when one's freedoms are threatened or restricted (Brehm, 1966; Brehm & Brehm, 1981). According to psychological reactance theory (PRT; Brehm, 1966; Brehm & Brehm, 1981) when an individual perceives their behavioral freedom is threatened, they will be motivated to reestablish their threatened or eliminated freedom. In the case of organizational change, employees experiencing reactance may become unresponsive to leaders, resist change, and even engage in deviant behaviors directed toward their managers in an attempt to bolster their autonomy, especially when changes are presented in a demanding or threatening manner (Nesterkin, 2012; Powers & Altman, 2022; Rees et al., 2024).

In particular, this study aims to test the principle that persuasive messages which imply threats increase the magnitude of reactance (Brehm, 1966). To do so, the present paper utilizes a student sample to examine how followers respond to a leader's (e.g., a teacher's) persuasive messages. Utilizing a classroom sample is appropriate for the nature of this study, as such an environment may be seen as a microcosm of an organization when considering issues related to leadership, structure, and control (Cohen, 1976). For instance, when instructors introduce course policies in their syllabi, students may feel that their autonomy to make decisions is thwarted in response to an organizational change, or an alteration to a core aspect of an entities' operation (Hallencreutz & Turner, 2011). From a position of authority, college instructors must often persuade students to complete learning tasks and to follow course policies and rules in a similar manner as managers must influence subordinates to follow organizational procedures. With this in mind, the present study seeks to illuminate how subordinates (e.g., students) respond to a leader's (e.g., a teacher) persuasive messaging in the face of organizational changes that alter a core aspect of an organization's (e.g., a classroom) operation. Specifically, the goal of this study is to investigate students' psychological reactance toward instructors' late work policies and students' subsequent instructional dissent as autonomy restorative behavior. In doing so, the present paper provides us with a greater understanding of the psychological reactance individuals may experience in the face of systematic change that may hamper a leader's ability to effectively influence them (Nesterkin, 2012; Powers & Altman, 2022; Rees et al., 2024).

Psychological Reactance Theory

PRT posits that if an individual perceives that their behavioral freedom is being infringed upon, they will experience psychological reactance which manifests as the motivation to restore the eliminated or threatened behavior (Brehm, 1966; Brehm & Brehm, 1981). The four major elements of the theory include perceived freedom, threat to freedom, reactance, and freedom restoration. First, individuals must believe that they have the freedom to enact a behavior. When perceived freedoms are then threatened by a compliance-gaining message, reactance will arise. The reactance will cause individuals to try to restore their freedom by disregarding the proscribed behavior altogether, known as the boomerang effect, or by increasing their attitudes toward the threatened behavior.

Originally a theory born in the discipline of psychology, PRT has been widely heuristic in communication research since the early 1990s. Bensley and Wu (1991) first introduced PRT to communication research through an experiment in which they investigated college students' reactance toward high- and low-threat antidrinking messages, discovering that highly threatening messages can increase behavioral intentions to drink. Health communication scholars were early adopters of PRT, conducting myriad reactance studies investigating persuasive prosocial health messages such as teeth brushing (Dillard & Shen, 2005), sunscreen use (e.g., Shen, 2015), organ donation (e.g., Reinhart et al., 2007), and vaccine advocacy (e.g., Richards et al., 2021). PRT has also shown immense utility in persuasion literature, investigating antecedents of freedom threat such as autonomy-supportive, controlling, and threatening language (for a review, please see Burgoon et al., 2002), and ways to reduce reactance with concepts such as implementing restoration postscripts (Bessarabova et al., 2013) and empathy (e.g., Shen, 2010; for a review, please see Rosenberg & Siegel, 2018).

In 2005, Dillard and Shen addressed Brehm's (1966) view that state reactance was not empirically testable by operationalizing reactance as negative cognitions and anger as a result of freedom threat. To measure negative cognitions, PRT research has often relied on a thought-listing technique in which participants are given 90

seconds to write down all thoughts they had while viewing a persuasive message, after which either participants or trained coders are asked to code each thought for relevance and valence (Quick & Stephenson, 2008). However, the thought listing technique can be extremely time-consuming as training coders to complete this task can take hundreds of hours (e.g., Reynolds-Tylus et al., 2021). Further, participants may not be best suited to complete this task, in which each participant may not be as thoughtful in their coding processes as trained coders or lack consistency with other participants. More recently, Reynolds-Tylus et al. (2021) assessed the utility, validity, and reliability of three approaches for measuring negative cognitions for psychological reactance, including the two thought-listing techniques and a three-item negative cognitions measure. Their results advocate the use of a three-item negative cognitions measure. Advancements such as these help with the utility of the theory, the brevity and low inference measures for participants, and allow researchers to adopt PRT more easily.

PRT in the College Classroom

College instructors often employ compliance-gaining techniques, make requests of their students, and proscribe behaviors through their syllabus within the college classroom (e.g., Kearney et al., 1984). Where students have been found to resist instructors' compliance-gaining strategies (Burroughs et al., 1989; Kearney et al., 1991), reactance may very well be the result of instructors' proscriptive messages. In 2013, Zhang and Sapp tested PRT in the instructional setting, finding through their experimental investigations that instructors' requests can lead to students' feeling their behavioral freedom is threatened. Specifically, they found the closer the student-instructor relationship and more polite the instructor was in their request, as well as the more legitimate the request is perceived by the student and the greater perceived teacher credibility, the less likely students will experience freedom threat. The decreased freedom threat will mitigate students' reactance and resistance to instructors' requests. This initial study paved the way for further investigations of student reactance to instructor requests.

Ball and Goodboy (2014) investigated instructor clarity and controlling language on an extra-ungraded assignment request and Frey et al. (2021) investigated controlling language and fairness of instructors' technology policies. Ball and Goodboy (2014) found that instructors' use of forceful and unclear language when asking students to complete an extra assignment positively predicted student perceived freedom threat. Frey et al. (2021) found that the more controlling and the more unfair a technology policy was perceived, the higher the freedom threat. Frey et al. also found an interaction in which the unfair policy resulted in greater perceived freedom threat in both the low and high controlling language conditions. Both studies concluded that freedom threat predicted psychological reactance, leading students to engage in freedom restoration behaviors.

These three studies suggested that their manipulations of antecedent communicative behaviors indirectly affected students' restoration behaviors through freedom threat and reactance by testing their manipulated variables on freedom threat using either ANOVA (Frey et al., 2021) or Pearson correlation (Ball & Goodboy, 2014), then separately testing the effect of freedom threat on restorative behaviors mediated through reactance. While it suggested through their findings that their manipulated persuasive messages indirectly invoked restorative behaviors through freedom threat and reactance, the indirect effects were not fully tested.

In a cross-sectional study, Tatum et al. (2018) successfully tested the indirect effect of students' perceptions of their instructors' discouraging cell phone policies on restorative behavior through freedom threat and psychological reactance. They found that the more discouraging students perceived their instructor's cell phone policy, the greater likelihood of expressively and vengefully dissenting due to the mediating effects of perceived freedom threat and reactance. Arguably, their use of serial mediation offered a more accurate test of the theory when wanting to determine whether certain persuasive language and requests influence reactance and restorative behaviors. Causality, however, may not be verified as time order was not present in the study. Thus, the current study will combine the experimental design of the previous studies (i.e., Ball & Goodboy, 2014; Frey et al., 2021; Zhang & Sapp, 2013) while using serial mediation used in Tatum et al.'s (2018) design to test the indirect effect of the instructors' classroom messages on restorative behaviors through freedom threat and reactance.

Prior instructional PRT studies argue that reactance will lead to instructional dissent as a way to restore students' freedom (Ball & Goodboy, 2014; Tatum et al., 2018). More broadly, dissent occurs in

organizational settings when individuals voice opposition or differing viewpoints about workplace policies and practices (Kassing, 1997). Instructional dissent, as a specific form of this phenomenon, involves students expressing concerns or disagreements related to course policies, instruction, or classroom experiences (Goodboy, 2011b). Goodboy (2011a, 2011b) identified three types of instructional dissent: expressive, rhetorical, and vengeful. Expressive dissent encompasses students venting their emotions for catharsis and venting to classmates, friends, or family members with the expectation of feeling relief (Goodboy & Bolkan, 2017). Rhetorical dissent involves discussing the grievance directly with the instructor with the goal of the instructor remedying the perceived transgression. Rhetorical dissent is considered potentially constructive in allowing instructors to amend or repair problems students might have (Bolkan & Goodboy, 2013, 2016; Goodboy & Bolkan, 2017). Vengeful dissent is performed when students attempt to impose harm on the instructor as retaliation or revenge. Vengeful is the most aggressive instructional dissent as students will maliciously communicate about their instructor to classmates, administrators, or the general public (e.g., social media) in the hopes of damaging their instructor's credibility or career (Goodboy & Bolkan, 2017).

Since its inception, instructional dissent has been widely studied in instructional research. For example, students tend to use dissenting behaviors when they blame their instructors for a disagreement (LaBelle & Martin, 2014) and when students experience negative emotions toward a specific course (e.g., Goodboy et al., 2019; Goodboy et al., 2021). When students feel they are bullied by their instructor, they are more likely to expressively and vengefully dissent (Martin et al., 2015). Instructional dissent behaviors have also been found to be a result of students' perceived freedom threat through reactance as a mediator (Ball & Goodboy, 2014; Tatum et al., 2018). While Tatum et al. (2018) found that students were only likely to vengefully and expressively dissent as an indirect effect of cell-phone policies through freedom threat and reactance, Ball and Goodboy (2014) found that freedom threat indirectly led to all three types of dissent when mediated by reactance.

To further test PRT and findings that instructors' persuasive messages in the classroom will lead to students' instructional dissent as restoration behaviors, the current study will employ classroom late work policies as the manipulated instructor request. Instructors' late work policies may be perceived by students as a threat to their freedom, leading to psychological reactance. Students may perceive the policies to be unfair (Chory-Assad, 2002), infringing upon their autonomy and leading to psychological reactance (Frey et al., 2021). Prior research has investigated this premise through the work of classroom procedural justice scholarship. Procedural injustice includes the judgment students make about the fairness of the criteria instructors use to determine grades in their classes (Chory et al., 2014). Students will thus judge the fairness of instructors' policies, such as a late work policy, in which stricter policies are viewed as more unjust and lenient policies as fairer. Stringent late work policies are perceived to be among the top student-perceived procedural injustices, and students' most common emotional responses to these procedural injustices are anger and frustration (Chory et al., 2017; Horan et al., 2010). Where anger and negative cognitions make up psychological reactance (Dillard & Shen, 2005), students may likely be experiencing reactance to these procedural injustices, namely rigid late work policies.

Thus, this study aims to investigate PRT in the college classroom by predicting that stringent late work policies will lead to instructional dissent because they will feel that it is infringing upon their freedom, thus leading to reactance, especially if forceful language is used in the policy. Although the social psychology literature has long suggested that individuals are apt to follow the instructions of an authority figure (e.g., Blass, 1991; Milgram, 1963), both situational and personal elements alter the likelihood of obedience, or alternatively dissent, in a given scenario (Bass, 1991). For instance, messages that incorporate highly forceful language (e.g., "ought," "must," and "need") as opposed to low forceful (e.g., "might," "could," and "perhaps") continue to result in greater perceptions of freedom threat and increased psychological reactance (e.g., Ball & Goodboy, 2014; Dillard & Shen, 2005; Frey et al., 2021). Because controlling language in syllabi is negatively related to students' self-determined motivation, affect toward the course, and impressions of the instructor (Merchán Tamayo et al., 2022), it is therefore likely to reduce their obedience to a hierarchical superior (Bass, 1991). For instance, both Ball and Goodboy (2014) and Frey et al. (2021) found that students' perceived freedom threat was significantly greater when an instructors' message was high in forceful language. Building off prior instructional research, the current study thus aims to investigate PRT in the college classroom by manipulating an instructor's implementation of a late work policy using both high-

and low-controlling language and accepting or not accepting late work. It is hypothesized that low control and accepting late work will result in less freedom threat than high control and not accepting late work, leading students to experience reactance and intentions of restoring their freedom through instructional dissent. Proposing serial mediation to fully test this process, the following hypotheses were posited:

Ha-c: Compared to a late work policy that allows for late work with less forceful language, utilizing a policy that does not accept late work with highly forceful language will serially increase students' perceived freedom threat, psychological reactance, and students' intentions to dissent (a) expressively, (b) rhetorically, and (c) vengefully.

Method

Participants

Following IRB approval, participants were recruited from several communication courses at a large Eastern university for this anonymous experiment during the Spring 2022 semester. Students received a small amount of extra credit for participating. Participants were directed to a secure link hosted by Qualtrics, an online survey system.

Participants (N = 266) were undergraduate students; 166 participants were female, and 100 participants were male. Ages ranged from 18 to 35 (M = 20.03, SD = 2.05). The sample included students self-identifying as Caucasian (n = 222, 83%), Black/African American (n = 15, 5%), Asian (n = 4, 1%), Hispanic or Latinx/a/o (n = 9, 3%), and other (n = 15, 5%). 39% of participants were first-years (n = 104), 23% of participants were sophomores (n = 61), 18% of participants were juniors (n = 49), and 18% of participants were seniors (n = 50). Participants also indicated how often they typically hand in work past its due date on a scale from 1 (Never) to 7 (Always). 66 participants (24%) reported "never," 97 participants (36%) reported "very rarely," 47 participants (17%) reported "rarely," 38 participants (14%) reported "occasionally," 11 participants (4%) reported "somewhat frequently," 6 participants (2%) reported "very frequently," and 1 participant (<1%) reported "always" typically passing in their work late.

Procedure and Design

A 2 (Forcefulness: low vs. high) x 2 (Late work: accepted vs. not accepted) design was employed. The data were collected electronically through Qualtrics. After consenting to participate, participants were instructed, "Please read the following classroom assignment policy and scenario. Imagine that you are a student in this class." Next, participants were randomly assigned to one of four conditions, including either the low or high forcefulness condition and late work accepted or not accepted. To ensure that participants read through each message, a timer was programmed through Qualtrics, ensuring participants stayed on the page for at least 30 seconds. Participants first read the late work policy. Then they were immediately exposed to their hypothetical instructor's response to a scenario in which the participant attempted to submit a homework assignment two days after the due date. For the message stimuli, forcefulness was manipulated based on the work of Ball and Goodboy (2014), Miller et al. (2007), and Quick and Considine (2008), who used high forceful (e.g., "ought," "must," and "need") and low forceful (e.g., "might," "could," and "perhaps") language in their manipulations. Additionally, the policy was manipulated by whether late work would be accepted or not. If late work was accepted, participants were instructed that they would incur a 10% late penalty for each day late for up to seven days. To read the message stimuli, please see Appendix A.

The no late work accepted message stimuli were between 151 (low forceful) and 158 (high forceful) words; The late work accepted message stimuli were between 198 (low forceful) and 185 (high forceful) words. Next, all participants responded to manipulation checks (see below), followed by psychological reactance, outcome measures, and control variable measures (see below), ending with demographic questions.

Manipulation Check

Participants were asked to respond to one item to assess whether they understood if late work was accepted or not (i.e., "This teacher accepts late work") using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Results of a t-test revealed that participants reported significantly greater acceptance of late work from the accepts late work condition (M = 5.29, SD = 1.59) than in the does not accept late work condition (M = 2.20, SD = 1.63), t (264) = –15.643, p < .001, d = 1.611. Thus, the late work acceptance condition passed the manipulation check.

Next, participants were asked to respond to one item to assess the forcefulness of the language of each message (i.e., "This teacher uses forceful language in their Late Work Policy") using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Results of an independent samples t-test revealed that participants reported significantly greater forcefulness from the high forcefulness condition (M = 4.05, SD = 1.89) than in the low forcefulness condition (M = 3.19, SD = 1.87), t (264) = 3.731, $p < .001$, d = .458. Thus, the forcefulness condition passed the manipulation check.

Measures

Please see Table 1 for a list of variable means and standard deviations as well as correlations among variables. McDonald's omega with 5,000 bootstrap samples and 95% confidence interval was used for reliability of all scales as recommended by Goodboy and Martin (2020).

Table 1 *Correlation Matrix, Scale Means and Standard Deviations.*

Variable	*M*	*SD*	1	2	3	4	5	6
1. Freedom Threat	3.04	1.42	—					
2. Psychological Reactance	3.45	1.47	.589**	—				
3. Expressive Dissent	3.75	1.53	.463**	.601**	—			
4. Rhetorical Dissent	3.41	1.36	.340**	.304**	.384**	—		
5. Vengeful Dissent	1.67	1.05	.287**	.296**	.295**	.268**	—	
6. Frequency Late	2.45	1.27	.070	.108	.182**	.098	.047	—

Note. Psychological reactance is the combination of negative cognitions and anger variables.
**$p < .01$.

Freedom Threat

Perceived threat of freedom was assessed by adapting Dillard and Shen's (2005) four items (i.e., The Late Work Policy tried to manipulate me, the Late Work Policy tried to pressure me, the Late Work Policy threatened my freedom to choose, and the Late Work Policy tried to make a decision for me). Participants were asked to respond to the statement on a 7–point scale ranging from 1 (strongly disagree) to 7 (strongly agree). Freedom threat had an omega reliability coefficient of ω = .869, SE = .017, [.832, .898].

Psychological Reactance

Participants' psychological reactance was measured using anger and negative cognitions (Dillard & Shen, 2005). Four items were used to measure anger toward the late work policy. Participants reported how irritated, angry, annoyed, and aggravated they were toward the policy on a scale ranging from 1 (none of this feeling) to 7 (a great deal of this feeling). Negative cognitions were measured with three items ("The thoughts you had about the Late Work Policy were [unfavorable/negative/bad]") from Quick and colleagues (Al-Ghaithi et al., 2019; Quick et al., 2015) using a 7-point Likert scale from 1 (Strongly Disagree) to 7 (Strongly Agree). Reynolds-Tylus et al. (2021) combined the anger and negative cognitions items to have a seven-item measure of psychological reactance. In this study, we had an omega reliability coefficient of ω = .937, SE = .007, [.922, .949] for the seven-item measure.

Instructional Dissent

The instructional dissent scale (IDS; Goodboy, 2011b) asks participants to respond to 22 items regarding the extent to which they express their grievances about class-related issues using a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Consistent with past PRT research using the IDS (e.g., Ball & Goodboy, 2014; Tatum et al., 2018), items of this scale were adapted to measure how one would respond to the hypothetical classroom scenario. The IDS consists of three subscales that measure expressive dissent (10 items; e.g., "I would complain to others to express my frustrations with this course"), rhetorical dissent (6 items; e.g., "I would express my disagreements with my teacher because I would want

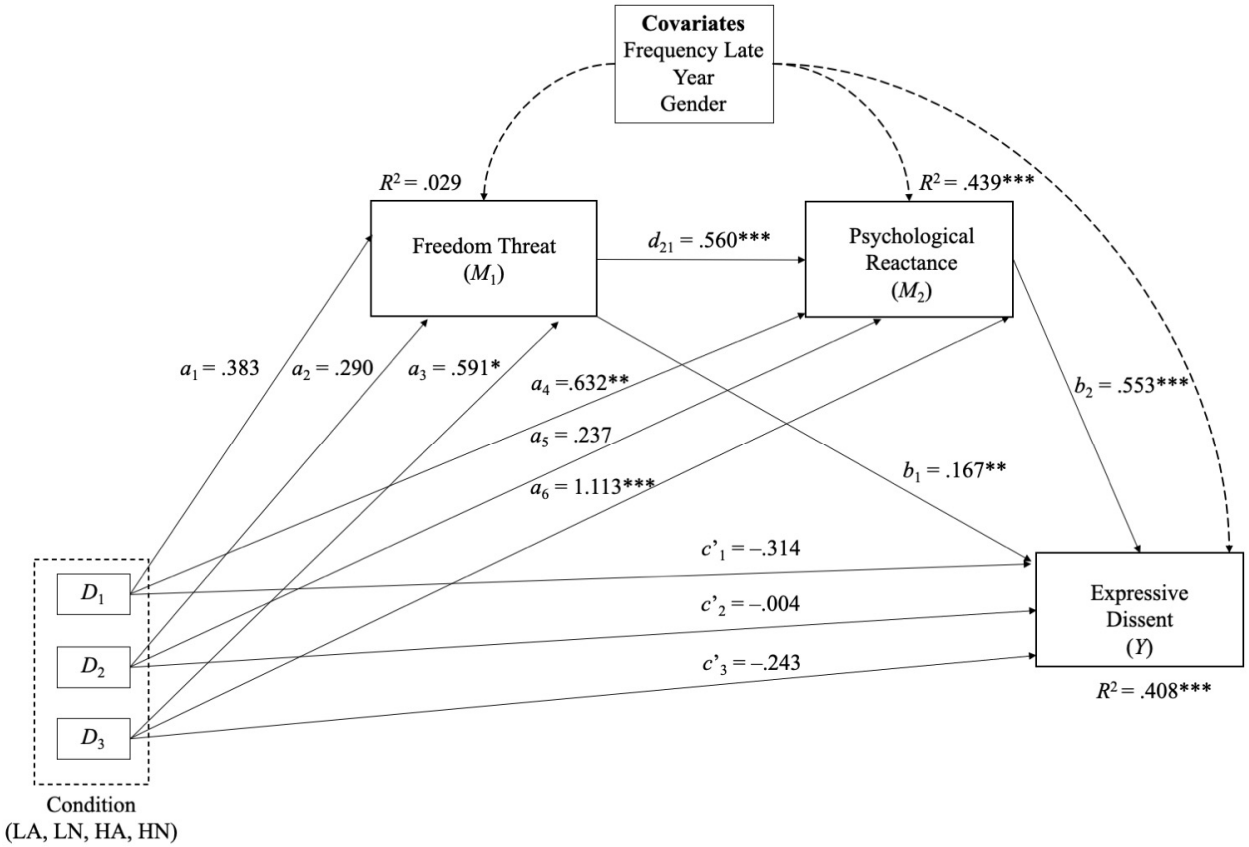
something to change in the course for the better"), and vengeful dissent (6 items; e.g., "I would hope to ruin my teacher's reputation by exposing their bad practices to others"). The expressive dissent subscale had an omega reliability coefficient of ω = .953, *SE* = .005, [.942, .962]. The rhetorical dissent subscale had an omega reliability coefficient of ω = .886, *SE* = .013, [.856, .909]. The vengeful dissent subscale had an omega reliability coefficient of ω = .952, *SE* = .009, [.933, .966].

Results

H1a-c were tested using Hayes (2022) PROCESS macro, Model 6. Serial mediation models with a categorical indicator were investigated, using the low forcefulness by late work accepted policy as the referent. The significance of the indirect effects was tested through the calculation of a bootstrap confidence interval using 5,000 bootstrap samples, with the Mersenne Twister seed set at 15. All reported coefficients are unstandardized. Additionally, all results include participants' year of education, gender, and typical frequency of returning assignments late as covariates.

Ha predicted that the late work policy condition would influence students' expressive dissent through freedom threat and subsequently psychological reactance. Please see Figure 1 for path coefficients, effect sizes, and coefficients of covariates (i.e., frequency late, year, and gender) on freedom threat, psychological reactance, and expressive dissent. Results of the serial mediation model indicated evidence of serial mediation of the high forcefulness by late work not accepted policy when compared to the low forcefulness by late work accepted policy (D_3), $a_3d_{21}b_2$ = .183, *SE*B = .029, [.035, .345], $a_3d_{21}b_{2ps}$ = .119, *SE* = .050, [.023, .223]. There was no evidence of serial mediation for the low forcefulness by late work not accepted policy when compared to the low forcefulness by late work accepted (D_1), $a_1d_{21}b_2$= .041, *SE*B = .081, [-.032, .286], $a_1d_{21}b_{2ps}$ = .077, *SE* = .052, [-.022, .187]. Additionally, there was no evidence of serial mediation for the high forcefulness by late work accepted policy when compared to the low forcefulness by late work accepted policy (D_2), $a_3d_{21}b_2$ = .089, *SE*B = .081, [-.032, .286], $a_2d_{21}b_{2ps}$ = .058, *SE* = .049, [-.033, .164]. Thus, H1a was partially supported in that the policy in which late work was not accepted using high forceful language caused greater expressive dissent through freedom threat and psychological reactance than the policy in which late work was accepted using low forceful language. Furthermore, evidence of simple mediation through freedom threat was present for D_3 (a_3b_1 = .099, *SE*B = .060, [.003, .236], a_3b_{1ps} =.064, *SE* = .039, [.002, .154]), but not for D_1 (a_1b_1 = .064, *SE*B = .050, [-.021, 178], a_1b_{1ps} = .041, *SE* = .033, [-.014, .116]) or D_2 (a_2b_1 = .099, *SE*B = .048, [-.027, .163], a_2b_{1ps} = .031, *SE* = .031, [-.018, .105]). Evidence of simple mediation through psychological reactance was present for D_1 (a_4b_2 = .349, *SE*B = .106, [.144, .571], a_4b_{2ps} = .228, *SE* = .068, [.093, .370]) and D_3 (a_6b_2 = .615, *SE*B = .136, [.370, .907], a_6b_{2ps} = .401, *SE* = .086, [.245, .585]) but not for D_2 (a_5b_2 = .131, *SE*B = .114, [-.091, .365], a_5b_{2ps} = .085, SE = .074, [–.060, .239]).

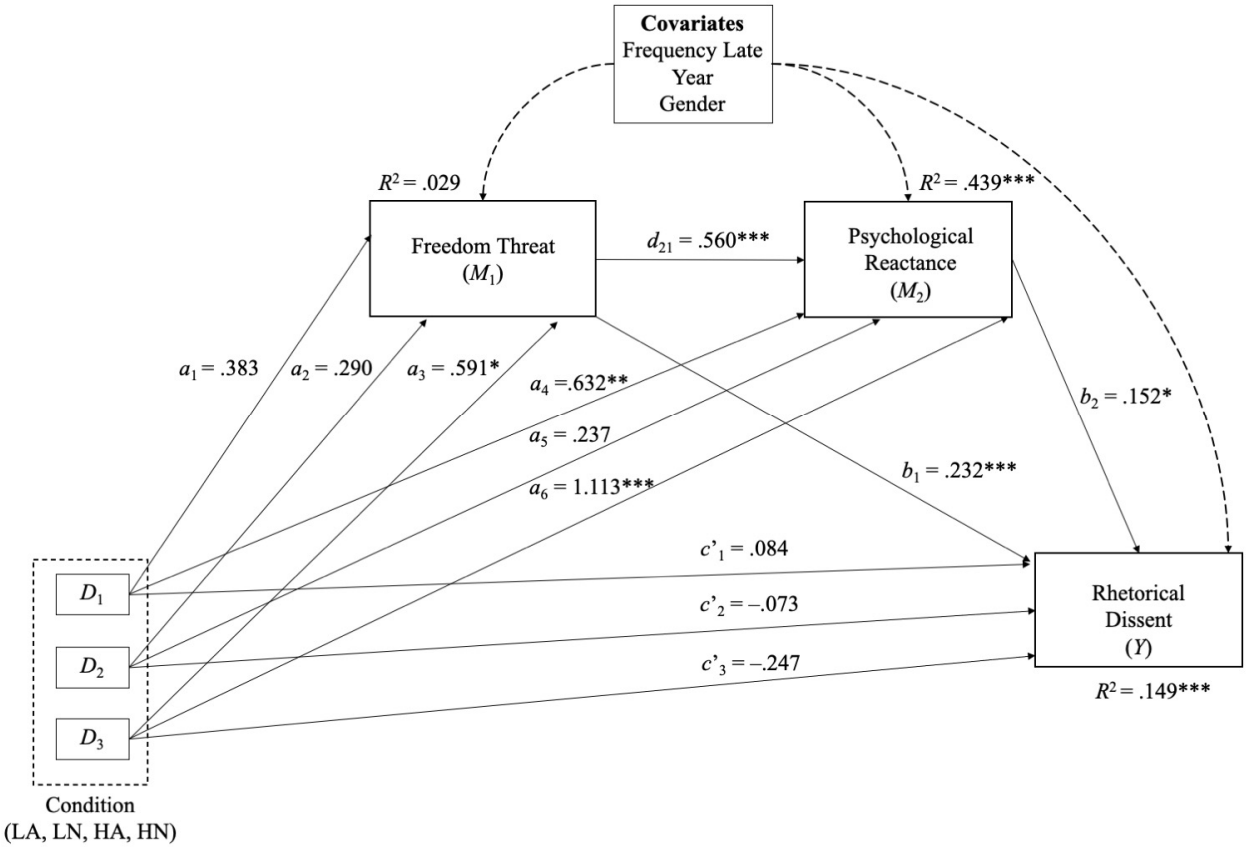
Figure 1. Model of serial mediation with freedom threat and psychological reactance as proposed mediators of forcefulness by policy condition effects on expressive dissent.



Note. Conditions are represented by L (low forcefulness) and H (high forcefulness) by A (late work accepted) and N (late work not accepted). Frequency of passing in late work was a significant predictor of expressive dissent, B = .148, *SE*B = .059, p = .013, but year of school (B = –.058, *SE*B = .063, p = .351) and gender (B = –. 211, *SE*B = .155, p = .176) were not. Frequency late was not a significant predictor of freedom threat (B = .082, *SE*B = .069, p = .239) or psychological reactance (B = .076, *SE*B = .055, p = .163). Year was not a significant predictor of freedom threat (B = .029, *SE*B = .074, p = .697) or psychological reactance (B = .022, *SE*B = .059, p = .705). Gender was not a significant predictor of freedom threat (B = .053, *SE*B = .184, p = .771) or psychological reactance (B = .146, *SE*B = .145, p = .315).
*p < .05, **p < .01, ***p < .001.

Hb predicted that late work policy conditions would influence students' rhetorical dissent through freedom threat and subsequently psychological reactance. Please see Figure 2 for path coefficients, effect sizes, and coefficients of covariates on rhetorical dissent. Results of the serial mediation model indicated no evidence of serial mediation for D_1 ($a_1d_{21}b_2$ = .032, *SE*B = .030, [–.011, .107], $a_1d_{21}b_{2ps}$ = .024, *SE* = .022, [-.008, .078]), D_2 ($a_2d_{21}b_2$ = .024, *SE*B = .026, [–.013, .089], $a_2d_{21}b_{2ps}$ = .018, *SE* = .019, [-.010, .066]), and D_3 ($a_3d_{21}b_2$ = .050, *SE*B = .034, [–.002, .134], $a_3d_{21}b_{2ps}$ = .037, *SE* = .025, [-.001, .096]). Thus, H1b was not supported. Additionally, there was evidence of simple mediation through freedom threat for D_3 (a_3b_1 = .137, *SE*B = .076, [.017, .310], a_3b_{1ps} = .101, *SE* = .055, [.012, .227]), but no evidence of simple mediation through freedom threat for D_1 (a_1b_1 = .089, *SE*B = .068, [-.024, .239], a_1b_{1ps} = .065, *SE* = .050, [-.018, .174]) or D_2 (a_2b_1 = .067, *SE*B = .062, [-.036, .208], a_2b_{1ps} = .049, *SE* = .045, [-.026, .153]). There was no evidence of simple mediation through psychological reactance for D_1 (a_4b_2 = .096, *SE*B = .057, [-.001, .223], a_4b_{2ps} = .070, *SE* = .042, [-.001, .163]), D_2 (a_5b_2 = .036, *SE*B = .038, [-.027, .126], a_5b_{2ps} = .026, *SE* = .028, [-.020, .062]), and D_3 (a_6b_2 = .169, *SE*B = .095, [-.003, .371], a_6b_{2ps} = .124, *SE* = .069, [-.002, .270]).

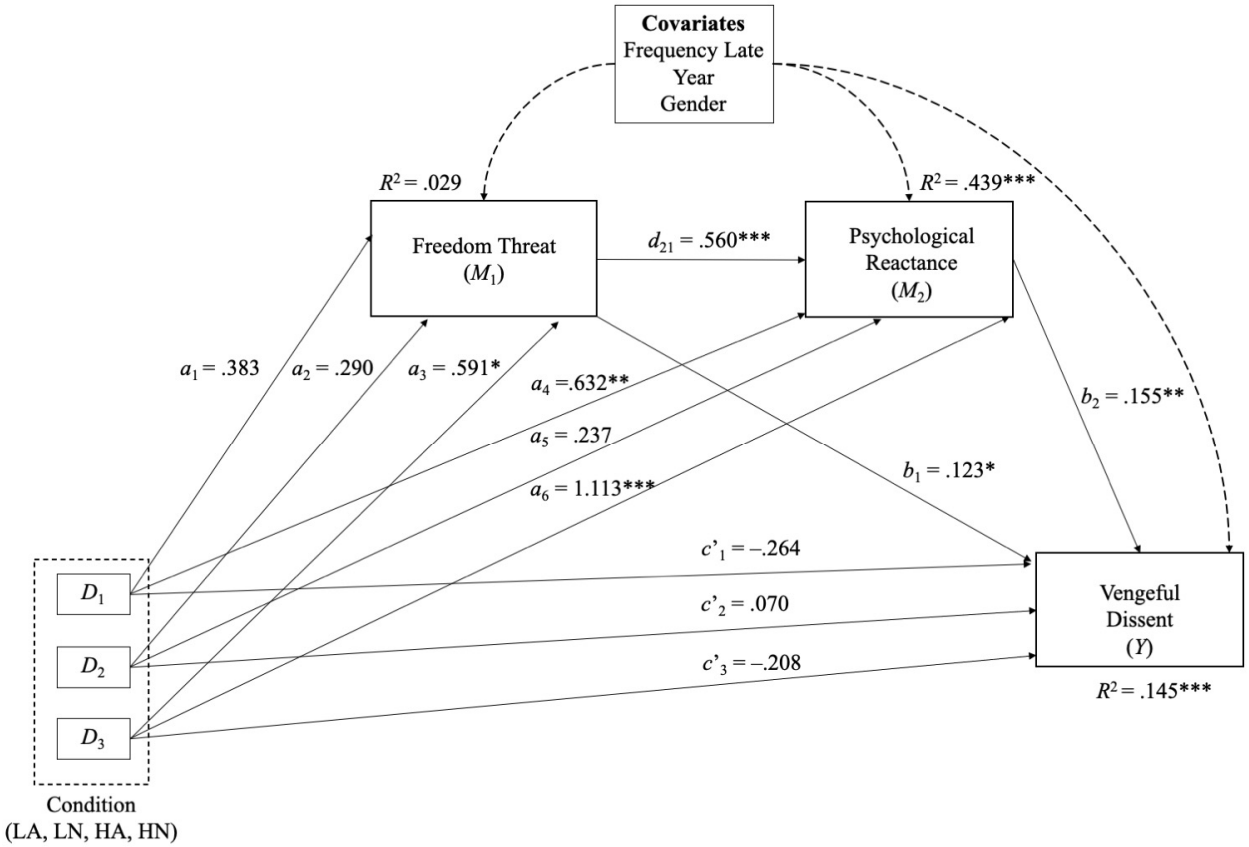
Figure 2. Model of serial mediation with freedom threat and psychological reactance as proposed mediators of forcefulness by policy condition effects on rhetorical dissent.



Note. Conditions are represented by L (low forcefulness) and H (high forcefulness) by A (late work accepted) and N (late work not accepted). Frequency of passing in late (B = .055, *SE*B = .063, p = .376), year of school (B = .034, *SE*B = 067, *p* = .606) and gender (B = .191, *SE*B = .166, *p* = .249) were not significant predictors of rhetorical dissent. See Figure 1 for coefficients of covariates regressed on freedom threat and psychological reactance.
*p < .05, **p < .01, ***p < .001.

Hc predicted that late work policy conditions would influence students' vengeful dissent through freedom threat and subsequently psychological reactance. Please see Figure 3 for path coefficients, effect sizes, and coefficients of covariates on vengeful dissent. Results of the serial mediation model indicated evidence of serial mediation for D_3 ($a_3d_{21}b_2$ = .051, *SE*B = .029, [.007, .121], $a_3d_{21}b_{2ps}$ = .048, *SE* = .026, [.006, .109]), but no evidence of serial mediation for D_1 ($a_1d_{21}b_2$ = .033, *SE*B = .026, [–.009, .097], $a_1d_{21}b_{2ps}$ = .031, *SE* = .024, [–.009, .088]) or D_2 ($a_2d_{21}b_2$ = .025, *SE*B = .023, [–.015, .079], $a_2d_{21}b_{2ps}$ = .023, *SE* = .021, [–.014, .073]). Thus, H1c was partially supported in that the policy in which late work was not accepted using high forceful language caused greater vengeful dissent through freedom threat and psychological reactance than the policy in which late work was accepted using low forceful language. Furthermore, there was evidence of simple mediation through freedom threat for D_3 (a_3b_1 = .073, *SE*B = .044, [.004, .174], a_3b_{1ps} = .069, *SE* = .043, [.004, .168]), but no evidence of simple mediation through freedom threat for D_1 (a_1b_1 = .047, *SE*B = .038, [–.015, .132], a_1b_{1ps} = .044, *SE* = .037, [–.014, .129]) or D_2 (a_2b_1 = .035, *SE*B = .034, [–.021, .113], a_2b_{1ps} = .033, *SE* = .033, [–.020, .110]). There was evidence of simple mediation through psychological reactance for D_3 (a_6b_2 = .172, *SE*B = .070, [.055, .326], a_6b_{2ps} = .163, *SE* = .060, [.056, .289]) and D_1 (a_4b_2 = .098, *SE*B = .046, [.025, .204], a_4b_{2ps} = .093, *SE* = .040, [.025, .182]), but no evidence of simple mediation through psychological reactance for D_2 (a_5b_2 = .036, *SE*B = .034, [–.026, .112], a_5b_{2ps} = .034, *SE* = .031, [–.025, .100]).

Figure 3. Model of serial mediation with freedom threat and psychological reactance as proposed mediators of forcefulness by policy condition effects on vengeful dissent.



Note. Conditions are represented by L (low forcefulness) and H (high forcefulness) by A (late work accepted) and N (late work not accepted). Gender was a significant predictor of vengeful dissent in that males are more likely to vengefully dissent holding constant all other predictors (B = .364, *SE*B = .129, p = .005), but frequency of passing in work late (B =-.021, *SE*B = .049, p = .804) and year of school (B = -.005, *SE*B = .052, p = .923) were not significant predictors of vengeful dissent. See Figure 1 for coefficients of covariates regressed on freedom threat and psychological reactance. *p < .05, **p < .01, ***p < .001.

Post Hoc

While the results indicate that freedom threat is significantly higher for participants in the high forcefulness by late work not accepted condition when compared to those in the referent, low forcefulness by late work accepted policy (a_3 = .591, p < .05), the remaining two conditions did not influence freedom threat resulting in an insignificant effect size for the overall path from condition to freedom, $F(6, 259) = 1.291$, p = .261, R^2 = .029. A Pearson correlation analysis was conducted to confirm that forcefulness and late work policy affected participants perceived freedom threat. As the manipulation checks revealed significant differences between low and high forcefulness and late work accepted and not accepted, consistent with Ball and Goodboy (2013), the scores for forcefulness and late work policy were used in this test. Results of the Pearson correlation analysis revealed that forcefulness had a significant effect on freedom threat (r = .359, p < .001), such that the greater the perceived forcefulness, the greater the perceived freedom threat. Additionally, the late work policy had a significant effect on freedom threat (r = -.198, p = .001), such that the more the policy is perceived as prohibiting late work, the greater the perceived freedom threat. Based on these results, the relationship between instructors' use of forcefulness and late work policy influenced participants' freedom threat.

Discussion

PRT states that persuasive, proscriptive messages that infringe on individuals' autonomy will cause reactance, leading individuals to attempt to restore their threatened behavioral freedom (Brehm, 1966; Brehm & Brehm, 1981). The current study investigated perceived freedom threat, reactance, and instructional dissent as restoration attempts due to instructors' late work policies. Supporting PRT's principle that persuasive messages that imply threats increase the magnitude of reactance (Brehm, 1966), the findings show that instructors' messages in the college classroom aiming to influence behavior influence students' perceived freedom threat, leading to reactance and instructional dissent as restoration behaviors.

As predicted, policies in which late work is not accepted and uses forceful language indirectly led to restoration behaviors through freedom threat and reactance significantly more than a policy in which late work is accepted and low forceful language is used. Specifically, results suggest that students are more likely to dissent vengefully and expressively, but not rhetorically, when instructors' late work policies are rigid and forceful (e.g., "You must submit all work by the due date") as opposed to policies that are more autonomy-supportive and less controlling in language (e.g., "Work may be submitted up until seven days past the due date"). The policy only influenced dissent, however, due to causal mechanisms of perceived freedom threat and reactance. These findings held even when controlling for the frequency at which participants typically turn in assignments late, their year in college, and their gender. The frequency that students turn in assignments late accounted for some of the variance in expressive dissent. These results may suggest that students who more frequently pass in work late will be more likely to dissent expressively in classes with more rigid late work policies because a behavior they frequently do (i.e., passing in assignments late) is being thwarted. Additionally, consistent with past research (e.g., Goodboy, 2012), gender accounted for some variance in vengeful dissent as men are more likely to dissent vengefully than women.

While there were no serial indirect effects of policy conditions on rhetorical dissent, there was evidence of simple mediation through freedom threat on rhetorical dissent. These findings mirror that of Tatum et al. (2018) who found serial indirect effects of cell-phone policy on expressive and vengeful dissent through freedom threat and reactance, but only simple mediation through freedom threat on rhetorical dissent. The current findings suggest that when students perceive the forceful and rigid late work policy to threaten their autonomy but do not experience reactance, they are more likely to go directly to their instructor with their grievances than if the policy is low in forcefulness and allows for late work. As rhetorical dissent is seen as the most constructive form of dissent (Bolkan & Goodboy, 2013; Goodboy & Bolkan, 2017), perhaps this finding would suggest that students who resist anger and negative cognitions about an issue they perceive as freedom threatening would be more likely to take their complaints straight to the instructor rather than use slander. While anger has been positively associated with all three types of instructional dissent (Goodboy et al., 2019; Kennedy-Lightsey, 2017), in this current study anger had the lowest effect on rhetorical dissent. Thus, students who feel anger and negative cognitions may be more apt to use destructive forms of behaviors such as expressive and vengeful dissent as restorative behaviors, as findings from the current study and Tatum et al. (2018) would suggest.

Findings also suggest that students are no more likely to dissent if instructors either use less forceful language when wanting students to pass in work on time, or use controlling language while allowing their students to pass in their work late with a penalty than if instructors were to allow late work while using unassertive language. There was, however, evidence of simple mediation with policies utilizing low forceful language with work not accepted on both expressive and vengeful dissent through psychological reactance when compared to the low forceful, late work accepted policy. Thus, while the serial indirect effects may suggest that if instructors want to avoid students dissenting because of a "no late work accepted" policy they ought to use low forceful language, the simple mediation model would suggest that students are still likely to dissent vengefully and expressively if late work is not accepted no matter the forcefulness of the language. Taken together, the findings therefore suggest that instructors' language choice in their syllabi is likely to alter students' obedience, regardless of the positional authority afforded to them in the classroom (Blass, 1991).

Overall, these findings may be explained in part by prior research that claims students perceive rigid late work policies as a classroom injustice (Chory et al., 2017; Horan et al., 2010). The results of this study may suggest that students perceive rigid policies as unjust because they restrict students' autonomy. Procedural justice

scholarship looks at the fairness in determining grades in class (Chory et al., 2014) stating that strict late work policies such as those that do not allow for late work result in anger and frustrations of students as opposed to those that are lenient (Chory et al., 2017; Horan et al., 2010). Thus, if there is an unfair policy that is forceful in its delivery, it is understandable that students have a greater likelihood of experiencing reactance as a result. As negative emotions toward a course can result in instructional dissent behaviors (e.g., Goodboy et al., 2019; Goodboy et al., 2021), the anger and frustrations felt by the injustice and reactance will then also be likely to result in vengeful and expressive dissenting behaviors as found in this study.

Future research may seek to investigate academic entitlement as another possible explanation for why students may experience such heightened psychological reactance to rigid late work policies. Academic entitlement is defined as the "expectations of high grades for modest efforts and demanding attitudes toward teachers" (Greenberger et al., 2008, p. 1193). Entitled students tend to be more grade-oriented than learning-oriented (Goldman & Martin, 2014). Students could believe they are entitled to pass in work late regardless of their instructor's policy because students may believe they should be able to control their academic achievements (Chowning & Campbell, 2009; Delucchi & Korgen, 2002). Perhaps part of the reason students dissent vengefully and expressively in retaliation to policies that do not allow for late work is due to the increase in academically entitled attitudes of the student population. Students may also be reluctant to rhetorically dissent as Goldman and Martin (2016) argued that students today may not know how to raise their concerns to their instructors. Future research may benefit from investigating whether academic entitlement, and other trait-based dispositions, may influence students' obedience to instructors, including their psychological reactance to rigid course policies and how they respond (or not) to their instructors.

We conducted post-hoc analyses similar to prior experimental PRT studies investigating restoration behaviors due to student reactance. First, prior studies utilized ANOVAs or Pearson correlations to investigate whether their manipulated conditions influenced students' perceived threat to freedom before assessing subsequent simple mediation analyses of freedom threat on restoration behaviors through reactance (Ball & Goodboy, 2014; Frey et al., 2021; Zhang & Sapp, 2013). In the current study, a post hoc test revealed similar results to these previous studies, such that the manipulated variables (high and low forcefulness and accepting or not accepting of late work) influenced freedom threat. More specifically, findings suggest that students perceived greater freedom threat when they perceived language as more forceful and more prohibitive of late work. Also consistent with past literature, findings suggest simple mediation for freedom threat on dissent through reactance. However, when adding the manipulated condition as the initial indicator variable in serial mediation, only one serial path was significantly more likely to predict expressive and vengeful dissent. Thus, while findings are consistent with prior studies, serial mediation is a more punishing analysis, and is thus more exacting in its results and ought to be considered for similar studies in the future.

Limitations of this study include that participants were asked to visualize themselves in a class scenario. Students are not reporting on a real class in which they are enrolled, a real teacher with whom they have a relationship, and their grade was not at stake. Additional methods (e.g., a single case study involving an instructor who manipulates their late work policies over a number of courses and semesters) could provide further evidence that acceptance and controlling language in the syllabus would impact student behaviors (e.g., dissent). An additional limitation that is important to note involves the study's use of a sample sourced from a single university. This limited source reduces the potential generalizability of our results and should be considered when interpreting them.

Further, students were asked to imagine they requested that their instructor would accept a late assignment. This study only looked at a request with no argument or justification for the request, but in many real classroom situations, students often give a reason why they are turning in an assignment late (e.g., COVID, death of a grandparent, family vacation). In these cases, instructors may be willing to make an exception to their course policies, allowing the late assignment. However, procedural justice literature would argue that teachers need to be consistent with their policies and the exceptions they make, otherwise students would be more likely to perceive the exceptions as unjust (Chory et al., 2014).

Lastly, this study controlled for the frequency for which students turn in assignments late, year in school, and gender. There may be other student characteristics that may have influenced the effect of late work policy on instructional dissent through freedom threat and psychological reactance (e.g., reactance proneness, entitlement, narcissism). Future research would benefit from investigating additional student characteristics.

Conclusion

Overall, students reported the largest levels of psychological reactance to policies that did not allow for late work and used forceful language. Furthermore, students' expressive and vengeful dissent are both directly and indirectly influenced by their perceived threat to freedom from a late work policy, mediated by psychological reactance. While rhetorical dissent was not mediated by psychological reactance, there was a direct effect of freedom threat on rhetorical dissent. In other words, the more students feel that their freedom is being threatened by a late work policy, the more likely they are to directly communicate with their instructor about their grievances regarding the late work policy. Overall, these findings suggest that instructors' late work policies can incite psychological reactance from their students, leading to dissenting behaviors. These results would suggest that instructors may opt to instill policies that allow for late work, even if they come with a grade reduction, to mitigate expressive and vengeful dissent as a result of students' psychological reactance. If instructors choose, however, to have more rigid late work policies, they should strive to use less forceful language when constructing their late work policy to reduce psychological reactance.

The present study additionally provides impactful implications to the fields of management and leadership more broadly. The findings of this study offer critical insights for leaders and managers when designing and communicating policies within organizations, especially in the face of organizational change that alters core aspects of an organization's operation (Hallencreutz & Turner, 2011). Leaders should recognize that overly rigid policies and forceful communication styles can inadvertently provoke resistance and dissent among employees, diminishing their ability to effectively influence and/or guide employees through organizational transformations (Nesterkin, 2012; Powers & Altman, 2022; Rees et al., 2024).

This is particularly relevant in contexts where autonomy and flexibility are valued. By framing policies in less forceful and more inclusive language, leaders can reduce perceived threats to individual freedom and mitigate psychological reactance, fostering a more collaborative and productive work environment (Deci & Ryan, 1985; Nesterkin, 2012; Ryan & Deci, 2006). Additionally, managers should consider incorporating elements of flexibility or compromise in their policies, as these features may reduce the likelihood of vengeful or expressive dissent (Brehm, 1966; Brehm & Brehm, 1981). Ultimately, the way policies are communicated is as important as their content; thoughtful communication can enhance perceptions of fairness and minimize resistance, contributing to higher morale, employee obedience, and better organizational outcomes. An organization lives or dies based on its ability to adapt to changing industry conditions. This flexibility is driven by the capability of its employees to cognitively adapt and facilitate the transformation of the organization (Nesterkin, 2012). In consequence, how a leader communicates to their subordinates may be seen as being at the heart of a firm's ability to survive, with the consequences of ineffective communication spelling disaster for a leader's influence, an organization's ability to navigate change, and ultimately, the continued success of the firm (George & Jones, 2001; Lewis, 2019; Nesterkin, 2012).

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Appendix A

Message stimuli (bold words indicate forcefulness manipulations, underlined words indicate policy manipulation):

High forcefulness X No late work:
Late Work Policy: You **must submit all work by** the due date. In order to receive credit, you **must** submit work on time. **Late work will absolutely not be accepted, no excuses. If you attempt to pass in work past the due date, you have to provide** adequate documentation of a university sanctioned absence (e.g., COVID-19 quarantine).You **should** take note of all due dates. **Any sensible person would agree** that completing your assignment on time is advantageous to your success in this course. Therefore, **you really must adhere to this policy**.

Scenario: Imagine that you are in this course and it is nearing the end of the semester. Your work started piling up and you missed a homework deadline. You were able to complete the homework two days after the due date. You ask your instructor if they will accept the late completed assignment and they respond:
*"**The policy must be followed**, I cannot accept your late assignment."*

Low forcefulness X No late work:
Late Work Policy: Work **may be submitted up until** the due date. In order to receive credit, you **might consider** submitting work on time. Late work **may be accepted if you can** provide adequate documentation of a university sanctioned absence (e.g., COVID-19 quarantine). You **might consider** taking note of all due dates. **Many people would probably agree** that completing your assignments on time is advantageous to your success in this course. Therefore, **why not try to adhere to this policy?**

Scenario: Imagine that you are in this course and it is nearing the end of the semester. Your work started piling up and you missed a homework deadline. You were able to complete the homework two days after the due date. You ask your instructor if they will accept the late completed assignment and they respond:
*"**I wish I could, but following the class policy** I cannot accept your late assignment."*

High forcefulness X Late work accepted:
Late Work Policy: You **must submit all work up to seven days past the original due date**. For each day late up to seven days, you will incur a 10% grade deduction. In order to receive full credit, you **need to** submit work on time. After seven days passed the original due date, l**ate work will absolutely not be accepted, no excuses. If you attempt to pass in work past the seven days, you have to provide** adequate documentation of a university sanctioned absence (e.g., COVID-19 quarantine).You **should** take note of all due dates. **Any sensible person would agree** that completing your assignment on time is advantageous to your success in this course. Therefore, **you really must adhere to this policy**.

Scenario: Imagine that you are in this course and it is nearing the end of the semester. Your work started piling up and you missed a homework deadline. You were able to complete the homework two days after the due date. You ask your instructor if they will accept the late completed assignment and they respond:
*"**The policy must be followed**, I can accept your late assignment with a 20% grade deduction for the two days late."*

Low forcefulness X Late work accepted:
Late Work Policy: Work **may be submitted up until** seven days past the due date. For each day late up to seven days, you will incur a 10% grade deduction. In order to receive full credit, you **might consider** submitting work on time. Late work **may be accepted past the seven days if you can** provide adequate documentation of a university sanctioned absence (e.g., COVID-19 quarantine). You **might consider** taking note of all due dates. **Many people would probably agree** that completing your assignments on time is advantageous to your success in this course. Therefore, **why not try to adhere to this policy?**

Scenario: Imagine that you are in this course and it is nearing the end of the semester. Your work started piling up and you missed a homework deadline. You were able to complete the homework two days after the due date. You ask your instructor if they will accept the late completed assignment and they respond:

*"**I would be happy to take your late assignment, but following class policy** your assignment will receive a 20% grade deduction for the two days late."*

Journal of Leadership and Management®
An International Journal of Strategic, Behavioral and Public Aspects of Leadership in Management
Cabell's Listed
A journal of the Institute of Leadership and Management Association, PO Box 564, Douglassville PA 19518. 484-332-3331. https://www.jleadershipmanagement.org

Transdisciplinary, Transregional, Trans-sectoral (T3) Systemic Innovation: Reimagining Stakeholder Network Analysis

Ronald C. Williams, Coppin State University, rwilliams@coppin.edu
Ericka N. Covington, Coppin State University
Tammira Lucas, Coppin State University

Online published: January 2025 Print published: March 2025 Editor: CJ Rhoads	Authorship Roles and Conflict of Interest Statement is on file at the Journal of Leadership and Management offices, available on request. Contact editors@jleadershipmanagement.org

ABSTRACT
This article presents a theoretical framework for a transdisciplinary, transregional, and trans-sectoral (T^3) stakeholder approach to stakeholder network analysis. By integrating insights from social sciences, business, and technology, the proposed framework emphasizes the importance of collaboration competencies and the interdependencies between various sectors and regions. The analysis draws on multilayer network theory to elucidate the complex economic relationships that exist in local production and the expansion of makerspaces as economic. Furthermore, it highlights the necessity of participatory modeling techniques to facilitate effective stakeholder engagement and knowledge co-production, which are crucial for addressing challenges in regional economic development (Siew & Döll, 2012). The framework also incorporates various forms of impact analysis, including economic performance metrics and social development indicators, to assess the outcomes of stakeholder interactions and collaborations (McFarland, 2022; Delgado et al., 2010). Ultimately, this theoretical paper contributes a more nuanced understanding of how transdisciplinary, transregional, and trans-sectoral (T^3) advancements are facilitated through collaborative, systems-oriented leadership practices grounded in open innovation theory (Chesbrough, 2003), collective advantage, and ecosystem leadership (Kanter, 1994; 2015)

KEYWORDS
collaboration, economic development, network analysis, stakeholder engagement, universities, ecosystem leadership

Introduction

In an increasingly interconnected world, the complexity of stakeholder interactions across sectors and regions demands a comprehensive approach to stakeholder network analysis. Traditional methods often overlook dynamic relationships, especially within diverse economic, social, and technological contexts. This article presents a theoretical framework adopting a transdisciplinary, transregional, and trans-sectoral (T^3) perspective, integrating social sciences, business, and technology to enhance stakeholder network analysis. Grounded in multilayer network theory, it explores intricate economic relationships across geographical contexts, increasing awareness of stakeholder interdependence.

Several existing frameworks inform the emerging approach to stakeholder analysis. A systems approach, as conceptualized by Senge (1990), highlights the need to view stakeholder interactions within larger, evolving systems. Organizations operate within networks that shape decisions, and Senge's "learning organization" concept encourages continuous adaptation and shared understanding, fostering resilience and innovation. The framework also aligns with Chesbrough's (2003) open innovation paradigm, emphasizing external knowledge flows and cross-sector collaboration. In stakeholder networks, open innovation enables co-creation and

leverages diverse capabilities, improving economic and social outcomes. This challenges insular engagement approaches by promoting adaptability and cross-boundary idea exchange.

Kanter's (1994) work on collaborative advantage further underscores the value of cross-sector partnerships, advocating for coalitions, shared purpose, and trust. This framework builds on her insights, emphasizing collaboration competencies for effective engagement. Participatory modeling techniques (Siew & Döll, 2012) also address the value of co-production and inclusive decision-making, strengthening stakeholder involvement and network efficacy.

The new, emerging framework includes impact analysis—economic performance metrics and social development indicators—to assess stakeholder collaboration outcomes. Integrating these analyses offers a holistic view of how networks drive sustainable growth and innovation. Applying systems thinking, open innovation, and collaborative advantage highlights the role of diverse collaborations in fostering resilience.

As global challenges grow more complex, systems thinking leadership is vital for navigating stakeholder dynamics. The T^3 framework provides theoretical insights and practical guidance for policymakers, practitioners, and researchers. It contributes to academic literature through conceptual analysis, model development, and theoretical synthesis, emphasizing examples over direct experimentation (Ryan & Deci, 2000).

Literature Review

The increasing complexity of stakeholder interactions across sectors and regions has spurred a growing body of literature on stakeholder network analysis. Traditional methodologies often fail to address complex relationships, especially within diverse economic, social, and technological contexts. This review synthesizes key contributions informing the proposed transdisciplinary, transregional, and trans-sectoral (T^3) stakeholder framework.

Multilayer network theory is essential for understanding intricate economic relationships across regions. Casarin et al. and Goelz et al. (2020) examined oil linkages, revealing significant regional economic dependencies, while Liu et al. and Freebairn et al. (2018) explored urbanization dynamics in China, emphasizing the link between economic growth and regional development. These studies align with Senge's (1990) systems thinking, which highlights the interdependence of organizations and economies, stressing the need for holistic approaches that consider feedback loops and emergent stakeholder patterns.

Participatory modeling techniques have become vital for fostering stakeholder collaboration. Freebairn et al. and Kaisler & Grill (2021) advocate for these methods to integrate diverse perspectives into decision-making, enhancing engagement. Crawford et al. (Tian, 2023) found that involving policy decision-makers in model development fosters trust and interest in outcomes. Such approaches facilitate knowledge co-production, critical for addressing complex regional economic challenges. Senge (1990) further emphasizes shared vision and team learning as key to organizational adaptability and problem-solving.

The literature also highlights collaboration competencies as crucial in stakeholder engagement. Kaisler and Grill (2021) identified enablers and barriers to transdisciplinary collaboration, noting that researchers' attitudes significantly impact success. Similarly, Crawford et al. (Tian, 2023) stress that stakeholder engagement is essential for co-creating solutions in natural resource management. Kanter's (1994) concept of collaborative advantage supports this, emphasizing trust, aligned incentives, and long-term partnerships across sectors. Bridging institutional and disciplinary divides remains a core competency in fostering inclusive, cross-sectoral engagement.

Integrating various forms of impact analysis is key to assessing stakeholder collaboration outcomes. McFarland, Crawford, et al. (2017) highlight regional economic connectivity's role in bridging the urban-rural divide, while Delgado et al. (2010) and Brún et al. (2015) emphasize cluster-based agglomeration's impact on regional performance. These studies show how stakeholder interactions can drive sustainable growth and innovation. Chesbrough's (2003) open innovation framework reinforces this, stressing the importance of external knowledge flows and cross-boundary collaboration. Applying this to stakeholder networks encourages open, flexible strategies that promote cross-disciplinary knowledge exchange.

The literature underscores the need for a transdisciplinary, transregional, and trans-sectoral (T^3) approach to stakeholder network analysis. By integrating multilayer network theory, participatory modeling, and impact analysis, the proposed framework deepens understanding of stakeholder dynamics and their role in sustainable development. As global challenges evolve, fostering resilience through diverse collaborations will be essential for navigating complexity. This view is reinforced by Senge's systems leadership, Chesbrough's open innovation, and Kanter's collaborative advantage, each advocating adaptive, ecosystem-based leadership for today's economic and social challenges.

Academic Innovation Centers and T^3 Strategy

The multifaceted role of universities in innovation ecosystems extends beyond traditional research to encompass product, process, and social innovation. As incubators for product innovation, universities develop new technologies and methodologies that fuel industry advancements (Lundberg & Öberg, 2021). Process innovation is equally critical, as universities refine educational and administrative practices to enhance efficiency and better respond to industry needs. Sorama (2020) underscores student entrepreneurship as a key driver of process innovation, ensuring that graduates possess the entrepreneurial competencies required for business success.

Social innovation represents another crucial dimension of the university's impact. Through their "third mission," universities engage with community partners to address societal challenges, leveraging research and expertise to create inclusive solutions (Feola et al., 2020). This aligns with Kanter's (1994) argument that institutions must move beyond competitive mindsets to embrace cooperative strategies that drive shared value creation. The "entrepreneurial university" model further encapsulates this evolution, positioning universities as active participants in multi-stakeholder collaborations that extend beyond academia into business and government sectors (Aldawod, 2022). Williams et al. (2021) also emphasize the role of universities in fostering inclusive innovation by transcending relational barriers that often lead to the exclusion of marginalized groups.

Developing robust inter-regional and intra-regional economic networks requires a systems perspective that accounts for the interplay of cultural, financial, and technological dynamics. Senge's (1990) systems approach highlights the importance of understanding these interdependencies to maximize collective impact. Economic networks, much like natural ecosystems, function as interconnected systems where each component influences and is influenced by others. This perspective is echoed in Bashan et al. (2012), who demonstrate how network topology affects system functionality—an insight applicable to economic networks in assessing resilience and adaptability.

Chesbrough's (2003) open innovation framework further supports this systems-based approach by advocating for knowledge sharing across institutional boundaries. Universities, in this context, act as intermediaries that bridge gaps between regional and global innovation networks. Martinez et al. (2021) extend this argument by discussing the dynamics of coupled human-natural networks, emphasizing sustainability in resource management—a crucial consideration in regional economic planning.

Finally, Kanter's (1994) ecosystem leadership perspective underscores the importance of fostering trust, aligning incentives, and creating structures that enable long-term collaboration among diverse stakeholders. Universities, as ecosystem leaders, must not only facilitate knowledge exchange but also cultivate environments where innovation can thrive through strategic partnerships. Huggins and Thompson (2015) reinforce this idea, arguing that the structure of entrepreneurial networks significantly impacts regional growth.

The T^3 framework positions universities as central actors in fostering sustainable regional innovation ecosystems by integrating Senge's systems leadership, Chesbrough's open innovation theory, and Kanter's collaborative advantage. Through systemic thinking, cross-sector collaboration, and ecosystem leadership, universities can orchestrate stakeholder networks that drive economic resilience, technological advancement, and societal impact. This comprehensive approach ensures that universities not only generate knowledge but also actively contribute to the economic and social transformation of their regions.

T^3 in Practice

There are projects that demonstrate the T^3 framework across teaching, research, and service. The Center for Strategic Entrepreneurship (CSE) has led groundbreaking research in local production and entrepreneurship, earning a reputation for impactful, transdisciplinary applied research. *Turning Makerspaces into Greater Places* (2019) was the first organizational assessment and economic impact analysis of the initial three years of a 34,000-square-foot makerspace in Baltimore, Maryland. The team included faculty from management, computer science, information systems, entertainment management, hospitality, finance, and marketing. The study found that Open Works supports 118 jobs, generates $8M in annual economic impact for Baltimore City, and $9.9M for Maryland, helping justify the first public investment in the U.S. to expand makerspaces as economic drivers.

Another example is the *Excellence in Entrepreneurial Learning (EXCEL)* report, which focuses on strategies to equip Baltimore youth and emerging adults for opportunity. As a follow-up to the 2017 Annie E. Casey Foundation report on workforce development, EXCEL explored 35 entrepreneurship instructional programs through interviews, questionnaires, and observations. It examined program models, success metrics, stakeholder value, trauma-informed approaches, and learner support beyond launch, aiming to refine methods for studying youth entrepreneurship. The study involved researchers from education, psychometrics, English, dance, health information systems, public health, organization development, business administration, social work, and management.

Two emerging projects focus on workforce preparation and transregional economic collaboration. Increased awareness of supply chain vulnerabilities has made local production, especially in food manufacturing, more urgent. Maryland's blend of rural agricultural regions and urban centers, alongside major sports venues, highlights the need for farm-to-table supply chain alignment. Academic institutions play a key role in transregional collaboration through research, teaching, and service. The expansion of makerspaces across rural and urban areas and the revival of industries like apparel in West Virginia and Baltimore further drive this demand.

T^3 economic development requires innovative outcome assessments. *Making the Future: A New Assessment Framework for Local Production* (CSE, 2024) proposes a unified framework for evaluating social, economic, and technological impacts across sectors, emphasizing collaboration competencies for cross-disciplinary assessment.

Collaborative competencies (Table 1) enhance teaching, research, and faculty engagement. It fosters teamwork, communication, and shared decision-making, enriching educational experiences and preparing students for multidisciplinary careers. It also drives transdisciplinary research, enabling faculty to address complex societal challenges more effectively. Moreover, collaborative competence improves faculty engagement and institutional climate, leading to higher retention and satisfaction. Integrating these competencies into faculty development programs equips educators with tools for effective collaboration. Institutional support and recognition further strengthen this culture, fostering innovation and growth. As universities navigate modern educational complexities, cultivating collaborative competencies remains the key to long-term success and positive change.

T^3 INNOVATION COLLABORATION COMPETENCIES (Table 1)

Collaboration Competency	Leadership Alignment	Description	Theoretical Example
Communication	Collaborative Advantage	Effective communication is foundational to collaboration, enabling team members to share information, express ideas, and resolve conflicts. It involves both verbal and non-verbal skills, active listening, and the ability to tailor messages to different audiences.	Suter et al. emphasizes communication as a core competency for collaborative practice, particularly in interprofessional healthcare environments (2009). Kanter introduced the idea of collaborative advantage, showing how leaders build cross-sector alliances that

			drive innovation and systemic change. She argues that leaders must act as ecosystem facilitators, connecting diverse disciplines and stakeholders (1994) .
Role Awareness and Recognition	Systems-oriented	This competency involves recognizing and respecting the roles and responsibilities of each team member. Understanding one's own role and the roles of others foster mutual respect and enhances team dynamics.	Suter et al. also highlight role understanding as crucial for effective collaboration in healthcare teams (2009). Peter Senge emphasizes cross-disciplinary problem-solving and breaking down silos within organizations. (1990)
Mutual Trust and Respect	Collaborative Advantage	Trust and respect are vital for creating a safe environment where team members feel valued and are willing to share their perspectives.	Ainsworth and Chesley discuss how organizational design can enhance collaboration by fostering trust among team members (2018). Kanter introduced the idea of collaborative advantage, showing how leaders build cross-sector alliances that drive innovation and systemic change. She argues that leaders must act as ecosystem facilitators, connecting diverse disciplines and stakeholders. (1994)
Conflict Resolution	Collaborative Advantage	The ability to manage and resolve conflicts constructively is essential for maintaining team cohesion. This competency involves negotiation skills, empathy, and the capacity to find common ground.	Suter et al. identify conflict resolution as a key competency for collaborative practice (2009). Kanter introduced the idea of collaborative advantage, showing how leaders build cross-sector alliances that drive innovation and systemic change. She argues that leaders must act as ecosystem facilitators, connecting diverse disciplines and stakeholders. (1994)
Acceptance	Open Innovation Theory	This refers to the openness and commitment of individuals to engage in teamwork. A positive attitude towards collaboration can significantly influence team dynamics and outcomes.	Getha-Taylor et al. explore the situational aspects of collaborative competencies, suggesting that willingness can vary based on context (2016). Henry Chesbrough stresses that leadership must create networks where ideas flow across traditional boundaries (Chesbrough, 2003).
Team Skills	Collaborative Advantage	Team skills encompass the ability to work effectively within a group, including collaboration, coordination, and shared decision-making. These skills are critical for achieving common goals and enhancing team performance.	Getha-Taylor et al. emphasize the importance of team skills in their investigation of collaborative competencies (2016). Kanter introduced the idea of collaborative advantage, showing how leaders build cross-sector alliances that

			drive innovation and systemic change. She argues that leaders must act as ecosystem facilitators, connecting diverse disciplines and stakeholders. (1994)
Reflection	Collaborative Advantage	Reflective practice involves critically assessing one's contributions to the team and learning from experiences. This competency encourages continuous improvement and adaptation in collaborative settings.	Prathumtone highlights the role of reflection in developing interprofessional collaborative competencies among health sciences students (2022). Kanter introduced the idea of collaborative advantage, showing how leaders build cross-sector alliances that drive innovation and systemic change. She argues that leaders must act as ecosystem facilitators, connecting diverse disciplines and stakeholders. (1994)
Adaptability	Ecosystem-oriented	The ability to adjust to changing circumstances and diverse team dynamics is crucial for effective collaboration. Adaptability allows team members to respond to new challenges and leverage the strengths of others.	Campos et al. discuss the importance of adaptability in collaborative logistics practices (2020). Kanter introduced the idea of collaborative advantage, showing how leaders build cross-sector alliances that drive innovation and systemic change. She argues that leaders must act as ecosystem facilitators, connecting diverse disciplines and stakeholders. (1994)
Cultural Competence	Collaborative Advantage	Understanding and respecting cultural differences within a team, which can enhance collaboration and improve outcomes. Cultural competence is increasingly recognized as essential in diverse work environments.	O'Keefe et al. emphasize the need for cultural competence in interprofessional education (2017). Kanter introduced the idea of collaborative advantage, showing how leaders build cross-sector alliances that drive innovation and systemic change. She argues that leaders must act as ecosystem facilitators, connecting diverse disciplines and stakeholders. (1994)
Shared Decision-Making	Open Innovation	The ability to engage in shared decision-making processes, where all team members contribute to the decision-making framework. This fosters ownership and commitment to team goals.	Hall et al. illustrate how shared decision-making is integral to collaboration in long-term care settings (2021). Henry Chesbrough stresses that leadership must create networks where ideas flow across traditional boundaries (2003).

Reimagining Stakeholder Network Analysis

Traditional approaches to stakeholder network analysis have primarily relied on qualitative and quantitative methodologies to identify, evaluate, and categorize stakeholders within a given context. Khedmatgozar et al. (2023) outline three key methods commonly employed in stakeholder analysis: archival material analysis, surveys, and open-ended interviews. Archival material analysis involves examining existing documents such as laws, regulations, and organizational communications to gather insights about stakeholders and their interests. Surveys facilitate the collection of quantitative data from stakeholders, allowing researchers to gauge perceptions, preferences, and levels of influence. Open-ended interviews provide a qualitative dimension, enabling a deeper exploration of stakeholder motivations and relationships. While these methods offer valuable insights, they often fail to capture the dynamic and interconnected nature of stakeholder interactions, particularly in complex, multi-sectoral environments. As a result, there is a growing need for more integrative approaches that incorporate systems theory, open innovation, and collaborative leadership to enhance stakeholder engagement and maximize collective impact (Balance et al., 2020; Rooijen et al., 2020).

Peter Senge's (1990) systems thinking framework provides a valuable lens for understanding stakeholder interactions as part of larger, interdependent networks. Systems thinking emphasizes the importance of recognizing patterns, feedback loops, and interconnections that shape the behavior of stakeholders over time. Traditional stakeholder analysis often assumes linear relationships between actors, but a systems-based approach highlights the nonlinear, emergent dynamics that define stakeholder networks. For example, a university engaged in regional economic development is not merely an isolated actor but rather a central node in an evolving ecosystem of industry, government, and community partners. Understanding how these stakeholders interact, adapt, and co-evolve within the system allows for more strategic engagement and long-term sustainability.

Senge's (1990) concept of *learning organizations* is also critical in stakeholder network analysis, as it underscores the need for continuous adaptation and shared learning among stakeholders. Effective collaboration requires more than just identifying key players; it demands an ongoing process of reflection, dialogue, and systemic adjustment to emerging challenges. By embedding learning mechanisms into stakeholder networks, organizations can foster resilience and innovation, ultimately strengthening their capacity to address complex social and economic issues.

Henry Chesbrough's (2003) open innovation theory further supports the need for a more dynamic and cross-disciplinary approach to stakeholder analysis. Traditional models often assume that knowledge generation and problem-solving occur within closed institutional boundaries, but open innovation suggests that valuable ideas flow across organizations and sectors. In the context of stakeholder networks, this means recognizing that universities, businesses, and public institutions must actively collaborate, sharing insights and resources to drive innovation.

For example, integrating social network analysis (SNA) with open innovation principles can reveal how knowledge and resources flow through stakeholder networks, identifying bottlenecks and opportunities for collaboration. While SNA provides a quantitative approach to mapping relationships (Yu et al., 2017), it often lacks the depth needed to understand the cultural, economic, and technological forces that influence stakeholder interactions. Chesbrough's (2003) framework helps address this limitation by emphasizing the value of cross-sectoral engagement and knowledge exchange. Universities, for instance, can act as knowledge intermediaries, connecting startups with corporate R&D teams, policymakers with community organizations, and technologists with social innovators.

Rosabeth Kanter's (1994) concept of *collaborative advantage* further enhances our understanding of stakeholder network analysis by highlighting the role of leadership in fostering trust, alignment, and shared purpose. In complex, multi-stakeholder environments, relationships are not merely transactional but are built on strategic partnerships that generate mutual benefits. Kanter argues that organizations must go beyond competition to embrace cooperative strategies that strengthen entire ecosystems.

Applying this perspective to stakeholder network analysis, collaboration competencies such as communication, mutual trust, and conflict resolution become critical factors in determining the strength and quality of network connections (Getha-Taylor et al., 2016). Centrality measures in network analysis can

identify key stakeholders who serve as ecosystem leaders, facilitating the diffusion of ideas and best practices. Similarly, clustering coefficients can reveal sub-networks where collaboration is particularly strong, pointing to areas of potential synergy and innovation.

By integrating Kanter's ecosystem leadership principles, stakeholder analysis moves beyond static categorization and toward a more nuanced understanding of how trust and cooperation shape network resilience. For instance, in transregional collaborations, cultural competence becomes a vital asset, helping bridge differences and foster shared decision-making (Dennissen et al., 2018). Effective stakeholder networks are not just structurally connected; they are culturally and strategically aligned, enabling deeper and more sustainable collaborations.

The integration of systems thinking, open innovation, and collaborative leadership offers a more holistic framework for analyzing stakeholder networks. In transregional networks, where economic, technological, and cultural dynamics intersect, a multidisciplinary approach is essential for fostering effective partnerships.

By applying these frameworks, stakeholders can enhance their collective capacity to address complex challenges, from regional economic development to global sustainability efforts. While all reflect some form of ecosystem-oriented alignment. Their relationship to the diverse nature of collaborative advantage creation or open innovation may be different. This intersectional analysis not only enriches our understanding of stakeholder networks but also provides actionable insights for practitioners aiming to cultivate effective collaborations in diverse and dynamic environments (Table 2).

Table 2. T^3 Integration and Network Analysis

Stakeholder Network Analysis	**Leadership Alignment**	**Description**	**Theoretical Example**
Nodes (Vertices)	• Ecosystem-oriented • Open Innovation	These represent the entities within the network, such as people, organizations, locations, or concepts. In social networks, nodes are often individuals, while in other contexts, they could be companies, devices, or even places.	Steyvers and Tenenbaum define the degree of a node as the number of links the node has, illustrating how nodes represent entities within a network (2005). Henry Chesbrough stresses that leadership must create networks where ideas flow across traditional boundaries (2003).
Edges (Links or Connections)	• Ecosystem-oriented • Collaborative Advantage	These are the connections between nodes and can represent diverse types of relationships, such as friendships, business transactions, shared membership, or data flow.	Zheng and Skillicorn discussed social network analysis as a method that includes the examination of edges, which represent connections between nodes in various contexts (2017). Kanter introduced the idea of collaborative advantage, showing how leaders build cross-sector alliances that drive innovation and systemic change. She argues that leaders must act as ecosystem facilitators, connecting diverse disciplines and stakeholders (1994).
Degree	• Ecosystem-oriented • Open Innovation	The degree of a node is the number of edges connected to it. In directed networks, we can distinguish between in-degree (incoming edges) and out-degree (outgoing edges). High-degree nodes, or "hubs," can often be influential.	Dai et al. explain degree centrality (DC) as a metric for describing node importance based on the number of direct connections, emphasizing the significance of degree in network analysis (2024). Henry Chesbrough stresses that leadership must create networks where ideas flow across traditional boundaries (2003).

Stakeholder Network Analysis	**Leadership Alignment**	**Description**	**Theoretical Example**
Path and Distance	• Ecosystem-oriented • Collaborative Advantage	A path is a sequence of edges that allows for movement from one node to another. Distance refers to the number of edges in the shortest path between two nodes. Shorter paths generally indicate stronger or faster access to resources or information.	Uddin et al. discuss the analysis of paths and distances within networks, particularly how they change during organizational crises (2011). Kanter introduced the idea of collaborative advantage, showing how leaders build cross-sector alliances that drive innovation and systemic change. She argues that leaders must act as ecosystem facilitators, connecting diverse disciplines and stakeholders (1994).
Centrality Measures	• Ecosystem-oriented • Open Innovation	Centrality is used to identify the most important or influential nodes in a network	Crucitti et al. provide an overview of various centrality measures, including degree centrality, betweenness centrality, and closeness centrality, and their applications in network analysis (2006). Henry Chesbrough stresses that leadership must create networks where ideas flow across traditional boundaries (2003).
Clustering Coefficient	• Ecosystem-oriented • Collaborative Advantage	This measures the extent to which nodes in a network tend to cluster together, creating tightly knit groups. High clustering can indicate strong community structures.	Newman provides a comprehensive analysis of highly clustered networks, demonstrating that increased clustering can lead to a decrease in the size of the giant component of the network (2003). Kanter introduced the idea of collaborative advantage, showing how leaders build cross-sector alliances that drive innovation and systemic change. She argues that leaders must act as ecosystem facilitators, connecting diverse disciplines and stakeholders (1994).
Communities or Clusters	• Ecosystem-oriented • Open Innovation	These are groups of nodes with denser connections among themselves than with the rest of the network. Community detection helps identify clusters or sub-networks, such as social groups or sectors in a business network.	Palla and Vattay explore community detection in networks, identifying clusters of nodes with denser connections among themselves compared to the rest of the network (2005). Henry Chesbrough stresses that leadership must create networks where ideas flow across traditional boundaries (2003).
Network Density	• Ecosystem-oriented • Collaborative Advantage	Density is the ratio of actual edges to all possible edges in a network, indicating how interconnected the network is. Higher density often correlates with greater cohesion among nodes.	Borruso discusses network density as the ratio of actual edges to all possible edges, providing insights into the interconnectedness of urban networks (2003). Kanter introduced the idea of collaborative advantage, showing how leaders build cross-sector alliances that drive innovation and systemic change. She argues that leaders must act as ecosystem facilitators, connecting diverse disciplines and stakeholders (1994).

Stakeholder Network Analysis	Leadership Alignment	Description	Theoretical Example
Network Diameter	• Ecosystem-oriented • Collaborative Advantage	The diameter is the longest shortest path between any two nodes in the network, giving an idea of the network's "size" in terms of connectivity.	Fennell and Gleeson analyze network diameter in the context of multistate dynamics, emphasizing its significance in understanding network connectivity (2019). Kanter introduced the idea of collaborative advantage, showing how leaders build cross-sector alliances that drive innovation and systemic change. She argues that leaders must act as ecosystem facilitators, connecting diverse disciplines and stakeholders (1994).
Homophily and Heterophily	• Ecosystem-oriented • Open Innovation	Homophily is the tendency of similar nodes to connect with each other (e.g., people with similar backgrounds), while heterophily refers to connections between dissimilar nodes. This can shape the network's diversity and access to information.	Newman and Park discuss the concepts of homophily and heterophily in social networks, highlighting how similar or dissimilar nodes connect with each other (2003). Henry Chesbrough stresses that leadership must create networks where ideas flow across traditional boundaries (2003).
Influence and Diffusion	• Ecosystem-oriented • Collaborative Advantage	Network analysis often looks at how influence, information, or resources spread through a network, assessing factors like reach, speed, and barriers to diffusion.	Kumar and Sinha explore models for information diffusion in socially interacting networks, focusing on the dynamics and factors influencing how information spreads across different network structures (2021). Kanter introduced the idea of collaborative advantage, showing how leaders build cross-sector alliances that drive innovation and systemic change. She argues that leaders must act as ecosystem facilitators, connecting diverse disciplines and stakeholders (1994).
Network Motifs	• Ecosystem-oriented • Collaborative Advantage	Motifs are recurring, small sub-structures within the network, like triangles (three nodes all connected) or chains. Identifying motifs can reveal common structural patterns and functional dynamics.	Attar and Aliakbary discuss motifs as recurring structures within networks and their significance in understanding the overall dynamics and functions of complex networks (2017). Kanter introduced the idea of collaborative advantage, showing how leaders build cross-sector alliances that drive innovation and systemic change. She argues that leaders must act as ecosystem facilitators, connecting diverse disciplines and stakeholders (1994).

Conclusion

The proposed theoretical framework for stakeholder network analysis underscores the necessity of adopting a transdisciplinary, transregional, and trans-sectoral (T^3) perspective to navigate the complexities of stakeholder interactions in an interconnected world. By integrating insights from social sciences, business, and technology, this framework enhances our understanding of the intricate relationships among stakeholders, particularly in diverse economic, social, and technological contexts. Systems thinking, as outlined by Senge (1990), reinforces this approach by highlighting the interdependence and feedback loops within stakeholder ecosystems. Recognizing that stakeholder interactions are not static but dynamic and evolving, this perspective allows for continuous learning, adaptation, and co-creation of value across networks.

Incorporating collaboration competencies—such as communication, mutual trust, and cultural competence—into network analysis elements facilitates a more nuanced examination of stakeholder dynamics. This

integration aligns with Kanter's (1994) concept of collaborative advantage, emphasizing that organizations thrive not merely through individual strength but through strategic partnerships that leverage shared resources, knowledge, and innovation capacity. This intersection strengthens stakeholder engagement, fostering resilience and adaptability in addressing complex challenges. As McFarland (2022) and Delgado et al. (2010) highlight, understanding the impact of stakeholder interactions on regional economic performance and social development is crucial for promoting sustainable growth.

Universities are increasingly recognized as pivotal players in fostering innovation through their teaching, research, and community engagement roles. By embracing the concept of the "entrepreneurial university," institutions are evolving from traditional educational roles to active participants in regional innovation ecosystems. This transformation is best understood through the lens of Chesbrough's (2003) open innovation theory, which posits that innovation flourishes in environments that encourage cross-disciplinary collaboration and knowledge exchange. As Lundberg and Öberg (2021) highlight, universities generate innovative ideas and cultivate entrepreneurial skills essential for economic growth. Through product, process, and social innovation, universities can effectively orchestrate stakeholder networks, bridging gaps between knowledge creation and practical application. By leveraging their position as knowledge intermediaries, universities can drive sustainable development and strengthen regional economies, reinforcing their leadership role in shaping innovative ecosystems.

The evolution of stakeholder network analysis reflects a growing recognition of the need for more integrative approaches that capture the dynamic and interconnected nature of stakeholder interactions. While valuable, traditional methods often fail to address the complexities inherent in multi-sectoral and transregional contexts. Incorporating social network analysis (SNA) offers a quantitative framework for mapping relationships and assessing the strength of ties among stakeholders, enhancing our understanding of collaboration dynamics. However, by applying systems thinking and open innovation theory, this analysis moves beyond static representations of stakeholder relationships to emphasize continuous learning, adaptive strategies, and cross-sectoral synergies.

Furthermore, integrating cultural, economic, and technological dimensions into stakeholder analysis aligns with Kanter's (1994) ecosystem leadership framework, which underscores the importance of trust-building, shared vision, and collaborative governance. Stakeholders who develop strong collaboration competencies—such as communication, mutual trust, and conflict resolution—can enhance network density and connectivity, ultimately driving more effective problem-solving and sustainable innovation. By fostering a culture of openness and co-creation, organizations and institutions can expand their collective capacity to address complex challenges, transforming stakeholder networks into resilient ecosystems of change.

This intersectional approach enriches our understanding of stakeholder networks while equipping practitioners with actionable insights to cultivate effective collaborations across diverse environments. As stakeholders increasingly operate in a world defined by rapid technological advancement, economic interdependence, and cultural diversity, embracing these integrative methodologies will be essential. By leveraging systems thinking, open innovation, and collaborative advantage, decision-makers can foster more adaptive, innovative, and sustainable stakeholder networks—paving the way for more effective policymaking, organizational strategy, and cross-sectoral cooperation in an increasingly interconnected world.

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Unintended Consequences of Optimism, Collaboration, and Inquiry: A Career Legacy Interview with Therese F. Yaeger

Jennifer L. Schultz, College of Business, Minnesota State University, jennifer.schultz@mnsu.edu
Katheryn L. Zielinski, College of Business, Minnesota State University

Online published: January 2025 Print published: March 2025 Editor: CJ Rhoads	Authorship Roles and Conflict of Interest Statement is on file at the Journal of Leadership and Management offices, available on request. Contact editors@jleadershipmanagement.org

ABSTRACT
This manuscript is part of a series of articles (Femi-Jegede, Swearingen, Stivers & Schultz, 2021; Gerhardt & Peluchette, 2014; Peluchette & Gerhardt, 2015; Schultz & Thompson, 2017; Schultz & Westlin, 2025; Thompson, 2015) that explore the contributions of notable management educators and leadership researchers in the Midwestern United States. The Midwest Academy of Management (MWAOM) recognizes distinguished scholars in leadership, management, organizational development, strategy, and entrepreneurship annually with their Distinguished Scholar Award. This recognition provides an opportunity to acknowledge senior scholar accomplishments. The series of papers provides an archive of insights, reflections, and professional legacy details of awardees. The 2024 Midwest Distinguished Scholar was awarded to Dr. Therese F. Yaeger. Throughout Dr. Yaeger's career, she has leveraged practitioner proficiencies into engaged teaching, backed by research aimed at educating the next generation of OD leaders. Yaeger's life-long accomplishments are inspiring.

KEYWORDS
Organization development, consulting, mentoring, collaboration

Introduction

Therese F. Yaeger (Ph.D., Benedictine University) is Professor Emerita and former Associate Director of the Organization Development Ph.D. and the Master of Science (M.S.) in Management and Organizational Behavior programs at Benedictine University. She is a Past Chairperson of the Academy of Management (AoM) Management Consulting Division and served on the Executive Board of the Southwest Academy of Management. She was President and on the board of the Midwest Academy of Management (2007-11). Dr. Yaeger has contributed significantly to the understanding of Appreciative Inquiry (Cooperrider, et al., 1999; Cooperrider, et al., 2001; Cooperrider, et al., 2005; Yaeger, et al., 2005), Global Consulting Efforts (Sorensen, et al., 2011; Yaeger, et al., 2006), Organization Development and Change (Head, et al., 2007; Johnson, et al., 2013; Yaeger, & Sorensen, 2009) and Motivation Theory discourse (Sorensen & Yaeger, 2015; Yaeger & Sorensen, 2023). Her work has received numerous AoM best paper awards (Coleman, et al., 2016; Ivory, et al., 2017; Newman, et al., 2014; Reidl, et al., 2020; Thanetsunthorn, et al., 2015). She has over 100 publications, yet more notably, she was the co-recipient (with Peter Sorensen) of the 2023 Pasmore-Woodman Award at the Academy of Management annual meeting.

Congratulations on being named the 2024 Midwest Academy of Management Distinguished Scholar. What or who motivated you to study Organizational Development (OD)?

Before my MS degree in OB/OD, I didn't even know what OD was, or what I wanted to do. I was in corporate America and doing very well. But in my past work life, I remember a consultant who met with my team and told us *we would do things differently now.* He said, *we are going to this and this, and that.* I knew at that moment his plan wasn't going to work. At break time, we met at the proverbial water cooler and agreed that

we needed to get this consultant out of our office. We felt like we were being dictated to, and we knew that change wasn't going to happen. This autocratic, top-down approach to change reinforced my belief in the importance of including people in change efforts. Now, you asked the question, what motivated me to study Organization Development (OD), but at that time, I didn't know there was such a field as OD. I lived through many organizational change challenges before I knew about the formal discipline of organization development. I knew there had got to be a better way of moving forward. It was then that I thought, I had to understand organizational change better. And so, I began by starting in the master's program at Benedictine University. In Peter's OD course, I got an introduction to how organizations could handle change better by involving organizational members. Then, the story just unfolds. I began as a part-time Graduate Assistant in the OB program, and I was one of six graduate assistants at the time working in Peter's department. I was preparing papers for publication for him and other faculty for the National Academy. A lot was going on, but when I finished my master's degree, it was Peter who suggested I apply to the doctoral program.
That's how I came into the field of organization development, and I knew I was learning in the right place. Wanting to better understand organizational change and starting in Benedictine's MSMOB program was my first *unintended consequence* in academia.

When you said it was Peter who suggested that you earn your doctorate, it gave me chills because you have had a career-long partnership with Peter. Would you be willing to just share how that began and what that partnership has given you?

Peter got approval (through numerous committees) to start a doctoral program at Benedictine University (called Illinois Benedictine College until 1996). But after approval, his colleagues said, *Peter, you can't do it alone*. And he said, *You're right, but Therese could help make this happen*. They knew I had corporate experience, and a background in start-ups, which helped, as the students were primarily corporate executives. So, I became a good liaison between the school and the students, and I think it worked out well.
Working, and ultimately researching with, Peter Sorensen was another unintended consequence. Never say never.
However, I never planned on being in higher education as a long-term career because I didn't like the slower pace of academia. I finished my degree and later went to Motorola, but I continued to publish and teach for Benedictine.
Now Peter's commitment to students is something I witnessed and appreciated, along with his willingness and patience for adult learners. He kept finding opportunities for student publications, and as more opportunities arose from more dissertations, together we gained efficiencies at various stages of the publication process. Along with students, we became accustomed to challenging each other's ideas and we would make our points, but it was merely a level of reassurance and respect we developed for each other.

As you think back over your career, will you share any anchoring moments that impacted you?

The biggest impact for me was having good mentors, and that is evident in my work with Peter Sorensen. Also, publications created anchoring moments for me. One of the first visiting faculty in Benedictine's doctoral program was David Cooperrider, and David was relentless in capturing publication opportunities for all. There's a story there. David was a master's student of Peter in the 1970s, and from Peter to David to me is three different generations of OD knowledge. David Cooperrider and Tom Head were on my dissertation committee, and because of them, I had a positive experience undertaking doctoral research.

During my time as a doctoral student, there was growing traction in the new field of appreciative inquiry, so after some publications with David, Peter and I suggested that we get some foundational articles printed in a book. That was 1998, and the first AI book was published in 1999, and the world of appreciative inquiry took off, with two expanded editions after that (Cooperrider, et al., 1999; Cooperrider, et al., 2001; Cooperrider, et al., 2005).
Another anchoring moment was when I realized that Douglas McGregor's theory X and Y had not been reevaluated in 50 years (McGregor, 1960). So, I put together a panel for the Academy of Management in 2007 which resulted in tremendous interest (Schein, et al., 2007). I had no idea that revisiting McGregor's *The Human Side of Enterprise* would turn into a *Journal of Management History* Guest Editor opportunity

(Yaeger, 2011). From there more opportunities arose; and more unintended consequences. Also, I was conducting interviews for the *Organization Development Journal*, and many cases for *OD Practitioners* with Sorensen and Homer Johnson, a colleague at Loyola. Homer said *Let's get a book of cases out*. So, we compiled 10 years of OD case studies that we published in the *OD Practitioner*, and we created a case book that is widely used today (Johnson, et al., 2013).

Another outcome involving McGregor's Theory X and Y occurred five years after the *Journal of Management History* publication. Because Peter Sorensen and I had just published a McGregor piece in Oxford Press (Sorensen & Yaeger, 2015), in 2017, Sorensen and I was invited to write Douglas McGregor's biography for *The Palgrave Handbook of Organizational Change Thinkers* which involved biographies of 87 of the top change thinkers of the last century (Szabla, et al., 2017). Unbeknownst to us, someone also nominated me, Peter Sorensen, and my Benedictine colleague Ram Tenkasi to be among the biographies in *The Palgrave Handbook of Organizational Change Thinkers* book (Sanders et al, 2017/2021; Narel (2017/2021); Sorensen & Yaeger, 2017/2021; Yaeger, 2017/2021). That was humbling, but another anchoring moment.

Recently, I was delighted when Donald Anderson included my profile in his OD textbook (Anderson, 2020). But when I saw the other OD profiles that were included, namely, Edgar Schein, Warner Burke, and Peter Block -- I was intimidated. This OD Profile is another unintended consequence of continued publications.

What has impacted your career most?

OD is a relatively young field, which makes publishing in OD exciting, so publishing was most impactful for my academic career. I think revisiting McGregor's work – that there is a Theory Y that we should be exploring but can't deny Theory X – has impacted my thinking. So I would say, Douglas McGregor's work had a significant impact on my career, along with Cooperrider's Appreciative Inquiry.

Throughout your career, what was the best career advice you received?

My dissertation committee, Tom Head and David Cooperrider, got me out of my comfort zone. They pushed me. David knew I wanted to study global consulting and the people who had experienced OD change efforts. I loved what was happening in the world of Organization Development using appreciative inquiry. So in the late 1990s, I was with Peter and David at the University of Chicago when Dave asked me when I was going to start interviewing global consultants for my dissertation. I said, *Oh in the next couple of weeks* and he said, ***No**, Therese you're going to start now*. I went into full panic mode. I said, ***NO***, but 'Coop' insisted that I get started. So, I learned to say *yes*, even when I wasn't truly comfortable.

Remember when you're not ready, and you say to someone, *I'm not ready to do that right now*, but you just need someone to push you. That was exactly what David did to me. He said, *Now is the time to start. I have time. You have time, and you have a tape recorder, don't you?* Cooperrider made me get out of my comfort zone. He made me stretch and get uncomfortable. Then, my data collection started rolling at full speed.

So, for me, learning to get out of your comfort zone was good advice. I look at professors who have done little research for decades. I think we have to nudge those people to get them out of their comfort zone. The minute you feel work is mundane, or the minute you think the textbook is boring, it's time to shake things up. Also, you need to publish. Organization Development greats such as Edgar Schein, Micheal Beer, and all the OD scholars at MIT and Harvard didn't become famous sitting in their offices. They became famous by publishing, and by getting their ideas out there. Publishing was good advice.

In your opinion, what is the most pressing OD challenge today?

Good OD work is challenging and takes time. As an OD consultant, getting called into an organization, only to find out what the client wants is to get their change effort done quickly. I always have to say, *it takes time,* but clients want a fast magic wand. Organizational change efforts sometimes experience a valley of despair, where issues might get worse before they get better. So that's a pressing challenge.

Differently, OD has untapped opportunities in information technology, and there are successful organizations undertaking change implementation without using OD terminology, so I think there could be a better union there. At the Academy of Management, there are approximately 24 divisions, and OD is one of the larger

divisions. Everybody understands change management, and we need to ensure OD continues to contribute good research.

Looking at practitioners and academics, what do you think is the biggest misunderstanding from each group?

This is a granular question, fraught with different answers. For practitioners, change is difficult, and implementing positive change interventions takes time. For academics, the OD classroom should be experiential and collaborative, not passive. Academics have to understand it is application *and* theory. Perhaps theory can be covered for half of the class, but an OD application has to be *felt* and *experienced* by a student through a group exercise or intervention.

Do you have any unanswered research questions?

Because OD is a relatively young field, opportunities abound. For example, COVID changed so much, and dissertations are now coming out on virtual OD consulting. COVID created the need for more virtual work in OD, and I think there's a niche there for more research. Also, there are unanswered questions about the intersection between change and technology implementation, using various organization development interventions.

Your research has been part of your teaching and your advising. In what ways have you leveraged all of that to help reach your students?

I make it a point to continue researching. When I taught a research methods course, often it was before I traveled to the Midwest Academy conference to present. In class, I would present what I was planning to present at the conference. So, I would ask students to think like they were in the audience. It was so fun to see students feel like they're given a voice *to evaluate my research!* It ignites them and it is empowering for students to take an active role. They will provide suggestions, saying things like, *You need a chart to go explain that better*. I just love to see students take charge of what they think is important. I love when I see those students who are usually passive come alive because I am ingratiating myself to them, and they feel empowered to provide feedback.

You've inspired so many doctoral students. Where do you draw inspiration from?

No, students inspire me! I see students when they have had the mental light bulb go off and I take delight in seeing that happen. I see students, and dissertations, as a gift. I learn with them; things that I would not have learned had I not been on those committees. Most of my publications are with students. Rarely do I publish solo, and when I do, I don't enjoy it as much because I don't feel nudged, and I miss collaborating. I typically don't work on a dissertation unless I feel there is a contribution for publication. When students are uncomfortable, I tell them to start by presenting their earliest thinking at the Midwest Academy conference. Then, students gain confidence and create a publishable paper. I had a student tell me, *Now I get it. I get it,* as an IT student/executive was too focused on the hardware/software at his company, and lost sight of his employees and why they were leaving his organization. As his mental lightbulb went off, I knew something positive happened. So, students are a gift. I want to help them learn and be successful, and for them to enjoy what they do.

Aside from Benedictine, my husband and I have four adult daughters and four granddaughters. These women inspire me. There isn't enough representation of women within OD (as indicated in T*he Palgrave Handbook of Organizational Change Thinkers*), and these female change thinkers have motivated me to encourage more women into the OD arena.

Do you have any closing thoughts to share?

I cannot believe I spent 30 years at Benedictine but it is because of the students. I was that person who believed I would be there for 3 years, in and out, and onto the next corporate job. But my heart is at Benedictine. I enjoy the people and the culture. My degrees are from there; my family's been there. I value the Benedictine atmosphere and what I gained from the doctoral students at Benedictine University.

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Journal of Leadership and Management®
An International Journal of Strategic, Behavioral and Public Aspects of Leadership in Management
Cabell's Listed
A journal of the Institute of Leadership and Management Association, PO Box 564, Douglassville PA 19518. 484-332-3331. https://www.jleadershipmanagement.org

Media Narratives of Leadership: A Decade of German Newspaper Discourse

Thierry Keuscher, Institute of Management and Organisation (IMO), Leuphana University of Lüneburg, thierry.keuscher@leuphana.de

Online published: January 2025 Print published: March 2025 Editor: CJ Rhoads	Authorship Roles and Conflict of Interest Statement is on file at the Journal of Leadership and Management offices, available on request. Contact editors@jleadershipmanagement.org

ABSTRACT

This study employs a ten-year dataset (2009-2019) from six national newspaper publications to analyse implicit leadership prototypes in German newspaper narratives within the framework of Culturally Endorsed Implicit Leadership Theories (CLT). It explores how cultural values and media discourses shape perceptions of leadership, examining the distribution and representation of six CLT dimensions across German newspapers with a focus on their alignment with societal leadership expectations. The findings reveal an emphasis on Autonomous and Humane-oriented Leadership, corresponding with Germany's cultural preference for independence and empathy. Charismatic and Participative Leadership traits also feature prominently, indicating an evolving preference for value-added and collaborative leadership frameworks. Conversely, Team-oriented and Self-protective Leadership receive less representation. A comparative analysis of the framing of editorials reveals a distinct preference of business-focused newspapers which emphasise autonomous and charismatic leadership traits, while those of a more generalist and sensationalist nature offer less nuanced descriptions. The study advances Implicit Leadership Theories by integrating cultural and media-specific contexts, underscoring the media's dual role in reflecting and shaping leadership perceptions in the population. It calls for a cross-cultural analysis, drawing parallels between leadership illustrations in Germany, the United Kingdom, and the United States of America to enhance leadership strategies in an increasingly globalised media landscape. By comparing leadership representations in these countries, it identifies both universal and culturally contingent leadership attributes, enriching the broader discourse on leadership perception and media framing. The study concludes with a call for leadership frameworks aligned with cultural norms and media discourses..

KEYWORDS

Implicit Leadership Theories (ILT), Culturally Endorsed Implicit Leadership Theories (CLT), Media Framing, Leadership Narratives, Cross-Cultural Leadership Perceptions

Acknowledgements

Earlier versions of the paper were presented at the European Group of Organisation Studies (EGOS) conference in Tallinn in 2018, and at the European Academy of Management (EURAM) conference in Lisbon, in 2019. I would like to thank Zdeňka Konečná, Gyula Bakacsi and Rainhart Lang for their contributions

Introduction

Implicit Leadership Theories (ILT) propose that individuals form cognitive leadership schemas based on cultural and societal influences (Eden & Leviatan, 1975). These implicit schemas interact with the perceptions, expectations, and decision-making processes in leadership contexts (Ruben & Gigliotti, 2016). Media narratives play a crucial role in constructing and reinforcing these schemas by framing specific leadership attributes as effective or desirable (Ruben & Gigliotti, 2016). Given the agenda-setting function of media, analysing its influence on leadership prototypes is important in order to understanding how societal

leadership expectations are shaped. Therefore, the study of leadership should consider how leadership attributes are represented in mass media and how these representations influence leadership perceptions at an individual and collective level. Culturally Endorsed Implicit Leadership Theories (CLT), as introduced by the Global Leadership and Organizational Behaviour Effectiveness (GLOBE) Program (House et al., 2004), provides a structured framework for assessing leadership perceptions across different cultural contexts (Tung & Verbeke, 2010). However, leadership perceptions are also shaped by gender expectations (Role Congruity Theory, Eagly & Karau, 2002), ethical authenticity (Authentic Leadership, Avolio & Gardner, 2005), and transformational attributes (Burns, 2004; Northouse, 2021). Integrating these theories allows for a more comprehensive understanding of leadership in the media. The GLOBE Program has made a substantial contribution to leadership research by systematically analysing leadership prototypes across diverse national cultures. While there has been extensive research on leadership prototypes in organisational and cross-cultural settings (Den Hartog et al., 1999; Dorfman et al., 2012), relatively few studies have examined the role of mass media in constructing and reinforcing leadership narratives in a global context, particularly in a European context. The present study addresses this research gap by systematically analysing leadership illustrations in German newspapers over a ten-year period. To provide a broader cross-cultural perspective, it integrates comparative insights from British and American media representations. This enables a more nuanced interpretation and understanding of leadership prototypes that dominate in Germany, how they align with German national cultural expectations, and identify universal or culture-specific patterns.

Newspapers are influential institutions that play an important role in reflecting the public discourse and constructing leadership perceptions. They engage in the selection and framing of narratives that reinforce societal values (Fairhurst & Grant, 2010). Through the selection of stories, the framing of narratives, and the language they use, newspapers help to construct an idealised or problematic image of leadership. These media-driven perceptions have real-world implications, influencing public trust in leaders, shaping organisational leadership expectations, and reinforcing cultural assumptions about what constitutes effective leadership (Holmberg & Åkerblom, 2001). The German media landscape offers a unique case study for leadership discourse analysis due to its well-established and archived print media tradition each with its own editorial angle and ideological bias. Business-oriented newspapers, for instance, may emphasise Autonomous and Charismatic leadership traits, aligning with market-driven notions of leadership effectiveness, whereas generalist and more sensationalist publications may offer less nuanced illustrations, focusing instead on individual personalities and controversies. Despite extensive research on leadership theories and their applications, there is a gap in understanding how mass media constructs and reinforces leadership narratives. Existing research on leadership effectiveness (Avolio et al., 2009; Oc, 2018) has largely focused on organisational contexts, without adequately addressing how leadership perceptions are shaped by media discourses. Furthermore, studies examining cross-cultural leadership differences (Den Hartog et al., 1999; Chhokar et al., 2007) have explored leadership prototypes in workplace settings, yet these have not systematically been applied to media representations. The present study addresses this gap and offers important insights by systematically examining how leadership is portrayed in German newspapers, the frequency with which different leadership prototypes appear, and the cultural implications of these expressions. It contributes to the field by analysing which leadership attributes appear most frequently in German newspapers. In order to achieve the defined research goals, the following research objectives have been specified:

- Extending leadership research by applying it to mass media narratives.
- Assessing editorial preferences in leadership illustrations across different newspaper types.
- Identifying dominant leadership prototypes in German newspaper media and examining their alignment with cultural leadership expectations over a ten-year period in Germany.
- Exploring the cultural and societal implications of media-driven leadership representations reflecting and shaping implicit leadership theory and practice.

The study empirically investigates how German media representations of leadership reflect and shape cultural norms, reinforcing dominant leadership models while marginalising others. It is essential for scholars and policymakers in the fields of leadership and media studies to recognise and analyse these media-driven

leadership patterns, so as to assess their impact on public trust, leadership legitimacy, and cultural leadership norms. Building on the theoretical foundation in the next chapter, the study explores:

- Which CLT dimensions are present in German daily newspaper articles?
- Which leadership prototypes are predominantly illustrated in the German media?
- What are the frequencies of these dimensions, and which newspapers prioritise them?
- How do media illustrations reflect, shape and reinforce cultural leadership expectations?
- What are the broader implications of these descriptions for leadership theory and practice?

Newspapers remain an important source of information, reaching millions of readers and reflecting, shaping and influencing a country's public discourse. In Germany, national daily newspapers have a combined circulation of over 13.5 million copies per day, with 50% of the population regularly consuming print or online newspaper content (BDZV, 2024). Thus, media narratives play a significant role in shaping public perceptions. The extent to which leadership dimensions are represented in the German media provides considerable insights into which leadership attributes are socially reinforced and which are downplayed or contested. By analysing these representations, the study contributes to a more nuanced understanding of leadership prototypes in the media and their influence on cultural leadership expectations. The findings provide empirical evidence on how leadership is illustrated in German newspapers but also contributes to the ongoing discussions on the role of the media in the construction of leadership legitimacy, credibility and authority. Through a systematic analysis of leadership narratives in German newspapers, the study provides expressive empirical insights into how the media construct, reinforce and challenge perceptions of leadership in the public discourse.

Theoretical Foundation

Implicit Leadership Theories (ILT) describe how individuals develop cognitive schemas that shape their expectations of leadership based on cultural exposure, social influences, and past experiences (Lord & Maher, 2002). These schemas interact dynamically with societal values, media narratives, and organisational norms, shaping leadership evaluations across different contexts (Eden & Leviatan, 1975). Cross-cultural research has demonstrated that leadership expectations are not universal but are shaped by societal norms, values, and institutional structures (Dorfman et al., 2012). The GLOBE Program, one of the most extensive cross-cultural leadership studies, identified six global leadership dimensions: Charismatic/Value-Based, Team-Oriented, Participative, Humane-Oriented, Autonomous, and Self-Protective Leadership (House et al., 2004). These leadership prototypes vary across cultural clusters, reinforcing the argument that leadership is inherently contextual (Javidan et al., 2006). Western leadership paradigms often prioritise Charismatic and Participative Leadership (Chhokar et al., 2007). Conversely, Asian cultures may favour Self-Protective and Team-Oriented Leadership, reflecting high-context communication styles and hierarchical societal structures (Javidan et al., 2006). Cross-cultural media studies revealed that British and American media platforms tend to illustrate leadership in individualistic and transformational terms, reinforcing narratives of charismatic, visionary figures (Javidan et al., 2006). However, the German media predominantly emphasises institutional stability, pragmatic governance, and consensus-driven leadership, reflecting broader cultural preferences for structured decision-making and collective responsibility (Reinemann et al., 2019). Charismatic leadership, as outlined by Northouse (2021), can be further divided into Transformational and Transactional Leadership. Transformational leaders inspire through vision and ethical values, whereas transactional leaders focus on structured rewards and performance expectations (Burns, 2004; Scandura & Dorfman, 2004). Media representations generally tend to favour transformational leadership, reinforcing narratives of visionary and ethically inspired leadership (Burns, 2004; Scandura & Dorfman, 2004). Transactional leadership, in contrast, is often characterised as bureaucratic and static, despite its role in effective organisational management (Northouse, 2021). This framing of leadership expectations in the media contributes to shifting perceptions in times of crisis (Junker et al., 2011). Additionally, Eagly and Karau's (2002) research on gender differences in ILT emphasises how stereotypes shape the perception of male and female leaders differently across cultures. Eagly & Karau's (2002) Role Congruity Theory posits that female leaders mostly encounter a double standard in leadership evaluations due to conflicting societal expectations regarding communal and agentic traits. This phenomenon is particularly evident in media illustrations, where female leaders are subject to heightened scrutiny (Koenig et al., 2011). These gendered leadership expectations serve to reinforce traditional norms,

which often restrict the visibility and credibility of female leaders in specific cultural contexts. Furthermore, ILT interact with media narratives in shaping leadership perceptions, as media discourse serves as a reinforcing agent of existing leadership prototypes (Koenig et al., 2011). Recent scholars have emphasised the dynamic nature of ILT in response to social and technological shifts. For instance, the implicit leadership expectations of different generations have been shown to vary in their preferences for different forms of leadership (Kwiecińska et al., 2023). This evolving nature of ILT indicates that leadership perceptions adapt to changing social, technological, and economic conditions. Empirical research has examined the relationship between media exposure and leadership perception formation. Avolio and Gardner (2005) argue that digitalisation has contributed to the democratisation of leadership expectations, enabling a more participative model in contrast to traditionally hierarchical structures (Wang et al., 2022). Moreover, studies by Shondrick et al. (2010) indicate that ILT evolve in response to cultural shifts and crisis events. These shifts emphasise the need to integrate media theories into ILT frameworks, as societal and digital leadership narratives increasingly influence public and organisational leadership expectations. Leaders who embody transformational attributes during uncertain times may experience enhanced public approval, whereas those who fail to align with implicit leadership expectations may struggle with legitimacy. This is particularly evident in global leadership situations, where cultural and contextual differences impact how leaders are perceived (Osland, 2017).

Cultural Values and Leadership Prototypes Across Contexts

Cultural values have been demonstrated to exert a significant influence on the shaping of leadership expectations and the acceptance of different leadership styles. Hofstede's dimensions of national culture, including power distance, individualism vs. collectivism, uncertainty avoidance, masculinity vs. femininity, and long-term orientation, have been shown to influence how leadership is perceived. His research revealed that societies with high power distance may favour leadership styles that are autonomous and self-protective, while those with lower power distance may prefer leadership styles that are participative and team oriented. Cultural values influence not only the behaviour of leaders but also the manner in which they are evaluated. In high-context cultures, such as those found in East Asia, leadership is characterised by indirect communication, group harmony, and situational adaptability (Kim et al., 1998; Würtz, 2005). In contrast, low-context cultures, such as those found in the United States and Germany, value direct communication, individual initiative, and decisiveness (Kim et al., 1998; Würtz, 2005). The evolution of cultural leadership values has led to an increased emphasis on inclusive and ethical leadership models (Würtz, 2005). Research by Maier and Ravazzani (2019) underlines the growing importance of ethical decision-making and corporate social responsibility (CSR) in leadership evaluations across different cultural contexts, a shift that is particularly prominent in Western societies, where ethical leadership is becoming a key determinant of leader legitimacy and organisational success. As globalisation reshapes leadership expectations, hybrid leadership models that integrate multiple cultural influences have emerged. Stahl et al. (2017) theorised that leaders who combine elements of charismatic, participative, and humane-oriented leadership styles are more effective in multicultural settings. Moreover, technological advancements, including artificial intelligence (AI) and digital transformation, are reshaping leadership perceptions by shifting expectations from human-driven expertise. The GLOBE Program developed a framework for understanding how leadership is perceived across cultures, providing a systematic approach to identifying global leadership attributes across different cultural contexts (Table 2.1).

Table 2.1: GLOBE Cultural Competencies

1.	**Performance Orientation**	Degree to which a collective encourages and rewards (should encourage/reward) group members for performance improvement and excellence.
2.	**Assertiveness**	Degree to which individuals are (should be) assertive, confrontational, and aggressive in their relationship with others.
3.	**Future Orientation**	Extent to which individuals engage (should engage) in future-oriented behaviours like planning, investing in the future, delaying gratification.
4.	**Humane Orientation**	Degree to which a collective encourages and rewards (should encourage/reward) individuals for being fair, altruistic, generous, caring, kind to others.

5.	**Institutional Collectivism**	Degree to which organizational and societal institutional practices, encourage and reward (should encourage/reward) collective distribution of resources and collective action.
6.	**In-Group Collectivism**	Degree to which individuals express (should express) pride, loyalty, cohesiveness in their organizations or families.
7.	**Gender Egalitarianism**	Degree to which a collective minimises (should minimise) gender inequality.
8.	**Power Distance**	Extent to which the community accepts and endorses authority, power differences, and status privileges.
9.	**Uncertainty Avoidance**	Extent to which a society, organisation, or group relies (and should rely) on social norms, rules, and procedures to alleviate the unpredictability of future events. The greater the desire to avoid uncertainty, the more people seek orderliness, consistency, structure, formal procedures, and laws.

Source: Adapted from GLOBE, 2004.

The understanding of cultural attributes can enhance the precision of cross-cultural leadership comparisons (Stahl et al., 2017), thereby reinforcing the importance of contextual adaptation in leadership assessments. These insights can inform leadership development programs, global talent management, and international communication strategies, assuring culturally adaptive leadership models. The effectiveness of leadership depends on contextual factors. Fiedler's (1972) Contingency Model proposes that leadership outcomes are shaped by task structure, leader-member relations, and situational control. This theoretical framework is highly relevant for media portrayals, as certain leadership styles are favoured in different situational contexts (e.g. crisis vs. stability). Goleman (1998) introduced the concept of Emotional Intelligence as a key predictor of leadership effectiveness. Leadership images in the media frequently accentuate attributes such as empathy, adaptability, and self-regulation, reinforcing the notion that effective leaders must possess emotional competence (Treem et al., 2021). The framework further reinforces the argument that leadership expectations are dynamic and evolving, requiring constant adaptation by global leaders to align with cultural and organisational norms. Recent studies have accentuated how gender egalitarianism is increasingly influencing leadership prototypes, particularly in Western societies where female leadership representation is growing. Furthermore, uncertainty avoidance has been demonstrated to influence leadership during crises, with high-uncertainty-avoidance cultures tending to favour structured decision-making and risk mitigation strategies (House et al., 2013). This underlines the importance of cultural adaptability in leadership research and practice, suggesting that future research should examine how these leadership dimensions evolve in response to global trends such as digitalisation and international mobility. Further studies are required in order to assess how AI-driven leadership models interact with culturally established leadership expectations. As organisations become increasingly global, understanding cultural adaptability and flexibility will remain critical.

The Role of Media in Shaping Leadership Perceptions

Media platforms play an important role in shaping leadership perceptions by influencing the public opinion, reinforcing societal expectations, and framing leadership narratives (Auvinen et al., 2019). The agenda-setting theory (McCombs & Shaw, 1993) explains that media channels do not merely report events but actively shape the importance of issues, including the illustrations of leadership. In the context of Germany, media narratives reflect both cultural leadership norms and broader societal debates about power, governance, and leadership effectiveness (Müller, 2018). The diversity of Germany's media landscape, encompassing both business-focused newspapers and general-interest publications, including tabloids, offers a multifaceted perspective on leadership. Business-oriented newspapers, such as *Handelsblatt* and *Frankfurter Allgemeine Zeitung (F.A.Z.)*, are known to emphasise Autonomous and Charismatic leadership styles, mostly portraying corporate executives and political figures as strategic, visionary, and decisive (Reinemann et al., 2019). However, general-interest newspapers, such as *Süddeutsche Zeitung* and *Die Welt*, offer a contrasting perspective. These publications often frame leadership through the framework of ethical responsibility, inclusivity, and transparency, placing greater emphasis on Participative and Humane-Oriented leadership models (Hunt, 2017). Sensationalist tabloids, such as *Bild*, mostly construct leadership narratives based on directive and self-protective leadership traits, portraying political and business leaders in polarised or scandal-driven contexts

(Dziuda & Howell, 2021). Burns (2004) differentiated between Transformational and Transactional Leadership, arguing that transformational leaders focus on vision and ethical inspiration, while transactional leaders rely on structured exchanges. Media representations tend to favour transformational leadership, reinforcing narratives of visionary, ethically driven, and charismatic leadership (Burns, 2004; Scandura & Dorfman, 2004). In contrast, transactional leadership is often illustrated as bureaucratic and rigid, despite its essential role in structured decision-making and crisis management (Northouse, 2021). This particular framing does not only influence the public expectations of leadership, but it also evolves in response to societal crises, where the demand for decisive, authoritative figures often intensifies (Junker et al., 2011). The tendency is consistent with ILT, as the public often seeks stability in leadership figures during periods of uncertainty (Koenig et al., 2011). An illustration of this phenomenon is the way in which the German media portrayed Chancellor Angela Merkel during the COVD-19 crisis, with her scientific and data-driven crisis management approach being seen as an ideal leadership response (Kneuer & Wallaschek, 2023). However, Maier and Ravazzani (2019) emphasise that ethical leadership and corporate social responsibility have become fundamental in contemporary models of leadership. Media narratives scrutinise ethical failures to a greater extend, thereby reinforcing public expectations for transparency and integrity (Northouse, 2021). According to Tewksbury and Scheufele's (2019) news framing theory, media channels may highlight or neglect certain leadership traits, thereby reinforcing bias and shaping public perceptions. Comparative studies have indicated that charismatic and visionary leaders receive greater prominence in Anglo-American media outlets, whereas the German media places a much stronger emphasis on pragmatic, institutional, and consensus-driven approaches (Bakir & McStay, 2018).

The increasing dominance of social media and digital journalism has transformed leadership communication, making it more direct, interactive, and, at times, populist (Treem et al., 2021). Unlike traditional news media, social media platforms enable leaders to control their own narratives, bypassing journalistic framing (Moffitt & Tormey, 2014). Research on mediatised leadership (Fakhreddin, 2025) argues that contemporary leaders, particularly in politics, utilise Twitter, YouTube, and other social platforms to craft personalised and populist leadership personas. In Germany, political and corporate leaders are increasingly leveraging digital platforms to engage with audiences. However, this trend raises concerns about polarisation and credibility, as leaders who successfully utilise direct communication strategies may gain influence regardless of their actual competencies (Treem et al., 2021). This phenomenon reflects a broader shift in leadership perception formation, where authenticity, relatability, and responsiveness often outweigh traditional leadership qualifications in digital discourse. The globalisation of leadership narratives through digital media provides a unique opportunity to make cross-cultural comparisons. While German leadership prototypes are historically rooted in rationality, pragmatism and institutional stability, increased exposure to leadership styles from Anglo-American and Asian countries in digital media is influencing domestic leadership expectations (Scandura & Dorfman, 2004). Cross-cultural research shows that leadership representations differ significantly depending on national media norms and cultural expectations. Hofstede's (2011) cultural dimensions, particularly Power Distance and Uncertainty Avoidance, exert a significant influence on the portrayal of leadership in the media. In cultures characterised by high power distance (e.g., France), authoritative leaders are more positively described, whereas participative leadership is emphasised in cultures exhibiting lower power distance, such as Germany. In the United States, leadership narratives are frequently characterised by an emphasis on individualism and transformation, with a focus on charismatic and inspirational figures (Northouse, 2021). In contrast, Asian media platforms commonly propagate collectivist and hierarchical leadership models, emphasising team-oriented and strategic leadership approaches with a focus on the long term (Keuscher & Vergossen, 2024). However, German media representations tend to balance charisma with institutional responsibility, reflecting a preference for structured, methodical, and ethically sound leadership models (Reinemann et al., 2019). This underscores the importance of cultural contexts in leadership media expressions and highlights how national values shape leadership expectations. Further research should explore how the media continues to influence leadership models.

The theoretical foundation outlined in this chapter establishes a comprehensive framework for integrating ILT, leadership prototypes, cultural value dimensions, and media representations. Each of these components contributes to a holistic model of leadership perception, reinforcing the argument that leadership is a socially constructed and contextually shaped phenomenon. ILT highlight how individuals develop cognitive leadership prototypes based on societal norms and personal experiences. These preconceived expectations

influence leadership evaluations across different cultural and medial contexts (Lord & Maher, 2002). However, ILT alone do not fully explain variations in leadership perception, demanding the integration of cultural dimensions and media framing theories to provide a more nuanced understanding (Tung & Verbeke, 2010). Cultural values, further refine leadership prototypes by demonstrating how leadership expectations vary across societies. CLT serves as a methodological foundation for understanding how societal preferences shape the acceptance of specific leadership attributes. For instance, societies with high power distance tend to endorse directive leadership styles, while those with egalitarian cultures favour participative leadership models (House et al., 2004). These dimensions provide a systematic approach for categorising leadership expectations in cross-cultural settings and form the foundation for the methodology of this study. The role of media representation in constructing leadership narratives further demonstrates how leadership perceptions are reinforced or challenged. Media framing and agenda-setting (McCombs & Shaw, 1993) shape public understanding of leadership, emphasising specific traits and leadership prototypes depending on political, economic, or cultural contexts. The increasing digitalisation of leadership communication further complicates leadership evaluation, as leaders actively participate in shaping their own narratives through social media and direct digital engagement. CLT categorises leadership attributes based on how societies endorse or reject specific leadership traits. This approach enhances the cross-cultural validity of leadership prototype analysis by systematically identifying variations in leadership perception across media representations. The following chapter is going to operationalise these insights through the integration of CLT as a methodological and structured framework.

Methodology

The methodological approach was based on a systematic and quantitative content analysis, characterised by a structured and objective nature, grounded in theoretical frameworks and assuring comparability, replicability and structural clarity (Saunders, 2009). The study followed a positivist-functionalist paradigm, assuming that media portrayals of leadership were external and measurable realities which can be analysed using quantitative methods. It applied deductive reasoning and examined long-term trends in media leadership representations over a ten-year period (2009–2019). The timeframe allowed for the identification of stability, or development, about how leadership was constructed and perceived in the public discourse. To reach a representative coverage, the study examined six national daily newspapers, selected based on their readership, editorial diversity, and data availability in German newspaper archives. The exclusion of weekly newspapers ensured a consistent media coverage over the ten-year period, while the selection of newspapers with a large readership made sure that the findings reflected the leadership descriptions of the population. The sample included business-focused, general-interest, and sensationalist newspapers, allowing for a contrasting expression of leadership prototypes. To maintain data consistency, only newspapers with full-text archives available were included, enabling the measurement of leadership discourses without direct interaction with the media (Pedersen et al., 2025).

Table 3.1: Overview of the German Daily Newspaper Sample

No.	Daily Newspaper	Database	Timeframe	Newspaper Type
1.	Bild	Wiso[1]	1.1.2009-31.12.2019	Sensationalist
2.	Süddeutsche Zeitung	FI LibraryNet[2]	1.1.2009-31.12.2019	General Interest (Left-Centre)
3.	Frankfurter Allgemeine Zeitung	F.A.Z. Archive[3]	1.1.2009-31.12.2019	General Interest (Right-Centre)

[1] WISO: Online database for science. Over 21 million references, 17 million full texts from over 770 specialist journals, more than 230 million articles from the daily and weekly press, 88 million company information, 15 million personal information, 1 million market data, approx. 12,000 electronic books.
[2] FI LibraryNet: Exclusively all articles in the Süddeutsche Zeitung since 1992.
[3] F.A.Z. Archive: Exclusively all articles in the Frankfurter Allgemeine Zeitung since 1949.

No.	Daily Newspaper	Database	Timeframe	Newspaper Type
4.	Die Welt	Genios[4]	1.1.2009-31.12.2019	Conservative
5.	Das Handelsblatt	Genios[5]	1.1.2009-31.12.2019	Business-Focused
6.	**Total**	**–**	**10 Years**	**Balanced Selection**

Source: Author

The prototype dimensions were classified to ensure cross-cultural validation in the methodology. Each newspaper article was systematically coded for explicit leadership references corresponding to implicit leadership dimensions that were endorsed by the respective culture. The study applied Boolean search operators, allowing for a precise and consistent classification. This approach assured consistency during the identification of relevant leadership illustrations across all newspapers. **Table 3.2** outlines the CLT dimensions, and their corresponding keywords used in the analysis. Computer-assisted keyword searches efficiently identified the media descriptions while maintaining a systematic classification consistency.

Table 3.2: GLOBE CLT Dimensions and German Search Keywords

No.	CLT Dimension	Definition	German Keywords
1.	Charismatic/Value-Based Leadership	Inspires, motivates, and promotes high performance through core values.	(Führungskraft ODER Manager) UND (visionär ODER inspirierend ODER integer ODER leistungsorientiert)
2.	Team-Oriented Leadership	Focuses on collaboration, diplomacy, and administrative competence.	(Führungskraft ODER Manager) UND (kollaborativ ODER Teamspieler ODER diplomatisch ODER administrativ ODER kompetent)
3.	Participative Leadership	Encourages shared decision-making and inclusivity.	(Führungskraft ODER Manager) UND (partizipativ ODER demokratisch)
4.	Autonomous Leadership	Emphasizes independence and self-reliance.	(Führungskraft ODER Manager) UND (autonom ODER eigenständig ODER unabhängig ODER einzigartig)
5.	Self-Protective Leadership	Ensures status, security, and group safety.	(Führungskraft ODER Manager) UND (egozentrisch ODER statusbewusst ODER konfliktverursachend ODER gesichtswahrend ODER prozedural)
6.	Self-Protective Leadership	Ensures status, security, and group safety.	(Führungskraft ODER Manager) UND (egozentrisch ODER statusbewusst ODER konfliktverursachend ODER gesichtswahrend ODER prozedural)

Source: Adapted from GLOBE, 2006.

To achieve methodological rigour during the data processing and coding procedure, the study adhered to an established coding protocol adapted from Bartlett & Vavrus (2016) (Table 3.3), which guaranteed consistency and reliability in the categorisation of leadership prototypes across various media sources. To strengthen the methodological robustness, the following multiple validity and reliability measures were implemented.

Table 3.3: Quantitative Content Analysis Process Model

No.	Process Phase	Key Question
1.	Conceptualisation	What phenomenon is being studied?

[4, 5] GENIOS: GBI-Genios Deutsche Wirtschaftsdatenbank GmbH is a commercial provider (host) of electronic press, company and business information in full text.

No.	Process Phase	Key Question
2.	Theory Review	What does previous research suggest?
3.	Research Questions	How will the study address gaps?
4.	Content Definition	What media content is relevant?
5.	Sampling Strategy	How is the data selected?
6.	Coding & Categorisation	How are leadership prototypes classified?

Source: Adapted from Bartlett & Vavrus, 2016.

With the aim of establishing external validity, the study evaluated whether media representations of leadership correlated with societal leadership expectations. The semantic reliability test, based on Krippendorff's (2011) guidelines, was sensitive to symbolic meanings. To enhance the methodological accuracy, the coding protocol was pilot tested, followed by an independent re-testing. A random sample of 50 articles was analysed to verify the inter-coder reliability, achieving an accuracy rate of 96%, which confirmed the consistency and reproducibility of the classification process. The pilot study helped to refine the coding framework and to make sure that the subjectivity in the categorisation was minimised, and consistent coding criteria were applied across the entire dataset. The study analysed the contemporary newspaper reach and audience quotas to estimate how leadership narratives might have influenced the public opinion, which was crucial for understanding the impact of media on the public opinion of leadership , and to minimise sampling bias . By analysing widely circulated national German newspapers, the leadership representations reflected the public discourse (Table 3.4).

Table 3.4: Newspaper Reach and Quotas

No.	Newspaper	Reach (million) 2024 → (2023)	Quota 2024 → (2023)
1.	Bild	23.21 → (25.79)	0,49 → (0,49)
2.	Süddeutsche Zeitung	8.03 → (8.33)	0,16→ (0,17)
3.	Frankfurter Allgemeine Zeitung	6.94 → (7.24)	0,13 → (0,14)
4.	Die Welt	5.85 → (5.92)	0,12 → (0,12)
5.	Handelsblatt	3.67 → (3.51)	0,10 → (0,08)
6.	**Total**	**47.70 → (50.79)**	**1,0 (1,0)**

Source: Institut für Demoskopie Allensbach, 2024.

1. External Validity

- By selecting major national newspapers, the analysis increased the generalisability of the findings and confirmed that the results were reflective, broader, national leadership representations rather than medial niche illustrations.
- The application of the GLOBE CLT framework made sure that the comparability of the study's findings with those of established cross-cultural leadership research was possible, thereby enhancing the study's relevance across diverse cultural contexts and media landscapes.

2. Reliability Measures

- The inter-coder reliability was measured using Krippendorff's (2011) Alpha ($\alpha = 0.96$), which is widely regarded as a reliable measure of consistency between coders. This approach was adopted to enhance the credibility of the data categorisation process.
- In order to establish face validity and take care of the categories used, it was necessary to confirm that they were appropriate and aligned with the study's objectives. In order to achieve this, expert reviews were conducted (Kemper, 2020).

- The study incorporated triangulation with previous leadership content analyses (Wimmer & Dominik, 2011), which enabled more comprehensive validation of the coding system and established consistency in the interpretations.

3. Predictive and Construct Validity

- The study then compared its findings with those of existing leadership perception studies to test for consistency, confirming that the media descriptions were aligned with existing research.
- Finally, the study tested whether the leadership descriptions in the German media were aligned with the expected leadership attributes defined within the CLT framework for Germany, thereby providing an additional layer of validity to the results.

Results

With 13.52 million, daily newspapers remain one of the most influential sources of information and discourse in Germany. A total of 327 newspapers with 1,452 local editions are published every day, alongside 17 weekly newspapers (1.61 million copies) and six Sunday newspapers (1.74 million copies) (BDZV e.V., 2024). In 2024, daily newspapers reached more than 50% of the German population, meaning that more than 40 million people read at least one newspaper per day (AWA, 2024). The analysis revealed that Bild had the highest readership with 23.21 million, followed by Süddeutsche Zeitung (8.03), Frankfurter Allgemeine Zeitung (6.94), Die Welt (5.85), and Handelsblatt (3.67). The quotas below represent each newspaper's proportion of the total readership, reflecting their relative influence. Bild accounts for almost half of the readership (49%), while Handelsblatt, as a specialised business newspaper, has a smaller but influential readership. A total of 281,598 newspaper articles was examined, of which 2,846 articles (10%) explicitly referenced CLT dimensions (Table 4.1)**.**

Autonomous Leadership (46%) and Humane-Oriented Leadership (21%) dominated the media coverage, collectively accounting for 67% of all leadership descriptions in Germany.

- Autonomous Leadership is characterised by independent, self-reliant and individualistic leadership, which is in line with Germany's cultural preference for self-directed decision-makers. The frequency (46%) indicated that German media plays a central role in shaping and reflecting leadership legitimacy by consistently amplifying narratives that prioritise individual authority over collective decision-making. This framing was consistent with Germany's broader leadership culture, valuing self-reliance, strategic autonomy, and task-oriented leadership.
- Humane-Oriented Leadership is defined by its supportive, considerate and ethical nature, reflecting an increasing emphasis on empathy and social responsibility. The study demonstrated that the German media favours leadership styles that balance authority and ethical responsibility.
- The findings indicate that German media narratives predominantly favoured leaders who demonstrate both independence and compassion, aligning with broader societal expectations.

Table 4.1: CLT Distribution Across German Newspapers 2009-2019

Newspaper	**F.A.Z.** 118,147		**Handelsblatt** 15,188		**Die Welt** 17,377		**Süddeutsche** 24,425		**BILD** 106,452		**Total** 281,598
CLT	**No.**	**Rank**	**No.**	**Rank**	**No.**	**Rank**	**No.**	**Rank**	**No.**	**Rank**	**SUM**
Autonomous Leadership	634	1.	397	2.	132	3.	105	4.	38	5.	**1,306** 45.9%
Humane-oriented Leadership	323	1.	135	2.	57	3.	48	4.	35	5.	**598** 21.0%
Charismatic value-based Leadership	172	1.	105	2.	37	4.	87	3.	20	5.	**421** 14.8%
Participative Leadership	244	1.	78	2.	56	3.	20	4.	1	5.	**399** 14.0%
Team-oriented Leadership	59	1.	25	2.	16	3.	6	4.	4	5.	**110** 3.9%
Self-protected Leadership	5	1.	1	2.	1	2.	5	1.	0	3.	**12** 0.4%
Total %	**1,437** 50%		**741** 26%		**299** 11%		**271** 10%		**98** 3%		**2,846** 100%
Quota	0.14		0.08		0.12		0.17		0.49		1.0
Weight	201.88		59.28		35.88		46.07		48.02		/
Rank	**1.**		**2.**		**5.**		**4.**		**3.**		/

Source: Author.

Charismatic/Value-Based Leadership (15%) and Participative Leadership (14%) were the next most frequently mentioned leadership dimensions in Germany.

- Charismatic/Value-Based Leadership emphasises leaders who inspire, motivate, and value high performance, and maintain strong ethical core values.
- Participative Leadership focuses on collaborative decision-making, reinforcing the importance of inclusivity and shared governance in leadership discussions.
- These dimensions expressed that media narratives acknowledged the role of visionary leadership and democratic engagement, though to a lesser extent than individualistic and humane attributes.

Team-Oriented Leadership (4%) and Self-Protective Leadership (0.4%) least represented.

- Team-Oriented Leadership, emphasising collaboration and group cohesion, appeared in 110 articles, indicating a low emphasis on collective leadership in German media discourses.
- Self-Protective Leadership, which focuses on face-saving, conflict avoidance, and status preservation, was almost entirely absent (12 articles, 0.4%), indicating that German leadership narratives did not prioritise hierarchical or defensive leadership styles.
- The results suggest that the German media favoured leadership styles that balance individual autonomy with ethical responsibility, while hierarchical and team-based leadership models received significantly less attention.

Frankfurter Allgemeine Zeitung (FAZ) and Handelsblatt

- Together, business-oriented newspapers accounted for 76% of all leadership-related coverage.
- They predominantly highlighted Autonomous Leadership (634 and 397 articles, respectively), aligning with their readerships' focus on economic and political independence.

- They also placed strong emphasis on Charismatic and Humane-Oriented Leadership, reflecting their interest in ethical corporate leadership and visionary economic figures.

Süddeutsche Zeitung and Die Welt

- General-interest newspapers provided a more balanced representation of leadership prototypes.
- They featured a relatively higher proportion of Participative Leadership references (14%), expressing an editorial preference for democratic decision-making.
- Their moderate emphasis on charismatic leadership was consistent with centralist political interests that value visionary leadership while maintaining institutional stability.

Bild Zeitung

- The sensationalist tabloid contained the fewest leadership-related articles (98 out of 2,846, 3%).
- Bild primarily focused on Autonomous Leadership (38 articles) and Humane-Oriented Leadership (35 articles), reflecting its preference for individualistic leaders who exhibit strong personalities and emotional appeal.
- The absence of other leadership traits showed that Bild prioritised strong, independent figures over collaborative decision-makers. This editorial framing aligns with populist media strategies, which favour personality-driven leadership models that emphasise direct action, strong rhetoric, and decisive authority. This illustration reinforces leadership as an individualistic rather than collective process, resonating with a tabloid's readership demographics. The distribution of Autonomous and Humane-Oriented Leadership in Bild further indicated that its readership was more receptive to leaders who exhibit strong decision-making combined with emotional appeal.

Discussion

The study analysed how leadership prototypes were represented in the German media and assessed their impact on reflecting and shaping the public expectations of leadership. The results revealed a strong preference for leadership styles that balance decisiveness with ethical responsibility, as evidenced by Autonomous (46%) and Humane-Oriented (21%) Leadership representing 67% of all descriptions. The results provide insights for CLT, emphasising the role of media as a key influencer in leadership perception. The analysis also indicates that the German media reflects and constructs public leadership expectations by reinforcing a dual leadership ideal – one that integrates autonomous decision-making with ethical responsibility. The emphasis on Autonomous Leadership (46%) aligns with Germany's high individualism and low power distance, as previously identified in Hofstede's cultural dimensions (Hofstede, 2011). The German media frequently portrays leaders as self-reliant, decisive, and goal-oriented, reflecting societal expectations of leadership effectiveness. However, the strong representation of Humane-Oriented Leadership (21%) demonstrated that leadership is not solely viewed through the lens of individualism and independence, but also incorporates a growing emphasis on empathy, social responsibility, and ethical behaviour. This dual expectation demonstrates that German leadership values both, assertiveness and compassion, reflecting shifts towards human-centred leadership paradigms (Meyer et al., 2019). Charismatic/Value-Based Leadership (15%) and Participative Leadership (14%) further support an evolving leadership paradigm in Germany, emphasising visionary and inspiring leadership qualities, often associated with transformational leadership models (Bass, 1990). Participative leadership, which encourages collaborative decision-making, is in line with the growing focus in contemporary leadership research on inclusive leadership approaches (Bolden et al., 2023). The moderate representation of team-oriented leadership (4%) and self-protective leadership (0.4%) indicates that German media narratives place less emphasis on collective and status-preserving leadership styles. This media framing has the potential to reinforce public expectations that leadership effectiveness is prioritised by individual agency rather than by collaborative decision-making or hierarchical authority (Rice, 2018). This is in line with Germany's broader leadership culture, which favours self-reliant yet ethical leadership models (House et al., 2013). The emphasis on autonomous leadership corresponds with Germany's low power distance and high individualism, as already identified in Hofstede's cultural dimensions. At the same time, humane-oriented leadership reflects an increasing societal expectation for ethical leadership,

corporate social responsibility, and workplace inclusivity (Maier & Ravazzani, 2019). The present study confirms that German newspapers frame leadership through the lens of autonomy, ethical responsibility, and charisma, while collaborative and hierarchical leadership styles receive less coverage and reveals that business-oriented newspapers favour independent and charismatic leaders, while general-interest newspapers emphasise participative and humane leadership.

While this study focused on German newspaper coverage, its findings are also relevant to understanding how the media shapes leadership norms across different cultural contexts. The strong representation of Autonomous and Humane-Oriented Leadership in Germany expresses a unique combination of individualistic and ethical leadership expectations. However, leadership prototypes vary significantly across different cultural contexts. In high power distance cultures such as China and Russia, leadership descriptions tend to emphasise hierarchical, directive and status-conscious leadership styles, reinforcing the expectation that authority is derived from positional power rather than individual performance (Brodbeck et al., 2002). In contrast, leadership discourses in low power distance countries such as the Nordic states prioritise consensus-building and participative leadership models. Germany's media narratives combine elements of both autonomy and ethical responsibility, indicating a hybrid approach – rooted in individual performance yet increasingly valuing social responsibility as a leadership trait. In contrast, Nordic countries, which also have low power distance and high individualism, tend to favour participative leadership models, highlighting collaborative decision-making and consensus-building as key leadership attributes (Dinçer, 2021). These differences underline the importance of contextualising leadership theories within specific cultural frameworks. The predominance of Autonomous Leadership in German media is influenced by historical and economic factors, including Germany's emphasis on technical expertise, efficiency, and structured decision-making (Berger, 2019). The increasing prominence of Humane-Oriented Leadership reveals a shift towards more inclusive and socially responsible leadership narratives, reflecting global trends towards ethical leadership and sustainability (Keuscher & Vergossen, 2024). The increasing use of AI-driven and digital leadership models, and hybrid work environments may further reshape leadership expectations and representations (Ly, 2020).

Conclusion

The study's focus on German newspapers limits the generalisability of its findings to other cultural contexts (Barmeyer et al., 2019) and further research should be conducted to examine how the interaction between leadership and the media varies globally. The study analyses six major national newspapers, but does not include regional media, platforms, social media or television narratives. Further research is therefore encouraged to expand the study to include digital platforms, television and social media to capture a more holistic picture of leadership expressions and their public impact (Iacus et al., 2020). Given the specific context of crisis leadership, which is characterised by specific leadership conditions (Wu et al., 2021; Forster et al., 2020), this study examined a fixed 10-year dataset from 2009-2019. Hence, further research should examine how leadership prototypes shift during crises in response to industry-specific transformations or broader socio-political disruptions (Fischer & Sitkin, 2023). The present study investigates leadership illustrations in the media; however, it does not assess the extent to which these leadership portrayals translate into leadership effectiveness. Further studies could examine the impact of media endorsed leadership traits on actual leadership effectiveness and organisational success (Sertel et al., 2022).

However, newspapers are an important medium for interacting with public perceptions. However, the extent to which they support certain leadership prototypes, challenge traditional leadership expectations, or introduce alternative narratives, remains underexplored. This study systematically examines how different newspaper genres influence the leadership discourse in Germany, and whether these media expressions align with or deviate from established societal leadership norms. The distribution of leadership prototypes across newspapers reflected editorial priorities and audience preferences, shaping how leadership was framed and emphasised in each publication. The findings strengthen the idea that leadership expectations are culturally specific and reinforced by media portrayals, which has been previously explored in cross-cultural leadership studies (Brodbeck et al., 2002). The emphasis on Autonomous and Charismatic Leadership over participative or hierarchical frameworks was consistent with Germany's high individualism and low power distance and suggested that media narratives support a leadership ideal that conforms to cultural expectations while

marginalising alternative models. The increasing representation of Humane-oriented Leadership signals a shift towards ethical and socially responsible leadership paradigms. A considerable key finding of the study is that leadership legitimacy is shaped not only by individual characteristics but also by media influence. The role of the media in supporting or challenging societal norms of leadership in the public is demonstrated, as the media reflect and shape public perceptions, thereby influencing which leadership traits are considered legitimate. Furthermore, the study shows how leadership is socially constructed, thereby justifying its hegemonic and conceptual structure. A practical recommendation is that German leadership development programmes should focus on cultivating a balance between independent decision-making and ethical responsibility. The findings suggest that German leaders who can demonstrate both strategic autonomy and social empathy may gain more public trust and legitimacy. The dominance of Autonomous and Human-oriented Leadership in the German media reflects a dual expectation of leaders to be both independent and ethically responsible. The presence of Charismatic/Value-Based and Participative Leadership in German media narratives emphasises that leadership training should include inspirational communication, ethical decision-making and inclusive leadership practices, in line with contemporary ethical and inclusive leadership expectations. The study contributes to the advancement of ILT and CLT by demonstrating that leadership prototypes are dynamic constructs that are reinforced by media discourses rather than being culturally predetermined. It emphasises the crucial role of the media in reflecting, shaping, reinforcing or challenging culturally endorsed implicit leadership attributes while reproducing or constructing leadership paradigms over time (Table 6.1).

Table 6.1: Leadership Prototypes in German Newspapers 2009–2019

No.	Prototype	Definition	Percentage	Key Newspapers
1.	Autonomous Leadership	Independent, goal-oriented, self-reliant decision-making	46%	F.A.Z, Handelsblatt
2.	Humane-Oriented Leadership	Ethical, compassionate, socially responsible leadership	21%	F.A.Z, Süddeutsche Zeitung
3.	Charismatic/Value-Based Leadership	Visionary, inspiring, strong ethical values	15%	F.A.Z, Handelsblatt, Die Welt
4.	Participative Leadership	Inclusive, collaborative decision-making	14%	Süddeutsche Zeitung, Die Welt
5.	Team-Oriented Leadership	Emphasis on teamwork, cohesion, collective goals	4%	FAZ, Handelsblatt
6.	Self-Protective Leadership	Status-conscious, hierarchical, defensive leadership	0.4%	No significant representation

Source: Author.

The findings of this study underline that leadership theories should integrate media influence and regional variations as key variables in leadership frameworks. The understanding of media narratives can help leadership scholars, educators and practitioners to navigate public expectations and perceptions more effectively. It is crucial for leadership communication strategies to consider how different media platforms frame leadership attributes, allowing leaders to adapt their messaging, public image, and leadership styles in order to resonate with societal expectations. Further research should explore the impact of digital media, social media, reginal leadership narratives and globalisation on leadership perceptions. A deeper understanding of these dynamics would be essential for developing innovative leadership frameworks. The study also provides evidence of editorial preferences in how the different newspapers frame leadership. The analysis showed that business-oriented newspapers tended to favour Autonomous and Charismatic

Leadership, aligning with their readership's preference for strategic, visionary, and performance-driven leadership models (Ernst et al., 2022). In contrast, general-interest newspapers provided a more balanced image of leadership prototypes. This implies an editorial preference for democratic and collaborative leadership approaches, aligning with their broader audience's expectations of governance and leadership effectiveness. Tabloid newspapers tended to mirror sensationalist reporting rather than in-depth leadership analysis. The absence Self-protective Leadership across all newspapers indicates that hierarchical, status-driven leadership styles are not prominently featured in German media narratives, reinforcing the country's preference for egalitarian leadership models (Lang & Keuscher, 2020). The media's tendency to emphasise certain leadership styles over others underlines the importance of critical media awareness. The findings of the study support that traditional frameworks should integrate media influence as an important factor in shaping leadership perceptions. A proposed model for further research should consider the interaction between cultural values, media narratives and leadership prototypes. Such a model should consider that leadership prototypes are not only culturally determined but also influenced by media discourse and organisational contexts. Further research could empirically test such a model across other countries and industries to refine an integrative cross-cultural leadership framework. This study contributes to theoretical and practical discussions on implicit leadership prototypes, cultural influence and media discourse. The results indicate that autonomous and people-oriented leadership traits are the most dominant leadership prototypes in German print media, reinforcing public expectations of self-reliant yet ethically responsible leadership. Further research should focus on cross-cultural leadership comparisons between different countries, the influence of print media on leadership legitimacy, and the evolution of leadership perceptions over time. Incorporating digital and social media into leadership research would provide a more comprehensive understanding of contemporary leadership frameworks. By extending leadership theories to account for media influence, the research paves the way for a more integrated understanding of how leadership prototypes are constructed, reinforced and adapted in global, cultural and organisational settings. For Germany, the findings recommend that leadership development programs should focus on a balance between independence and ethical responsibility, reproducing societal expectations. Given the media’s emphasis on leadership, leadership development programs should prioritise training in inspirational communication, strategic vision, and inclusive decision-making. However, understanding how media narratives interact with leadership perceptions can help leaders to manage public expectations (Jian, 2022). However, leaders should be aware of the dominant leadership discourses and how they influence public image, especially as digital and social media play an increasing role in leadership legitimacy (Makridakis, 2017).

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