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THEORETICAL MODELING FOR CURIOUS LEADERSHIP AND
INSTRUMENT DEVELOPMENT AND VALIDATION FOR MEASURING CURIOUS
LEADER CAPACITY

A Dissertation

Presented to the Faculty of
Graduate School of Leadership & Change
Antioch University

in partial fulfillment for the degree of

DOCTOR OF PHILOSOPHY

by

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February 2023

THEORETICAL MODELING FOR CURIOUS LEADERSHIP AND
INSTRUMENT DEVELOPMENT AND VALIDATION FOR MEASURING CURIOUS
LEADER CAPACITY

This dissertation, by Lisa Marie Gick, has
been approved by the committee members signed below
who recommend that it be accepted by the faculty of the
Graduate School of Leadership & Change
Antioch University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

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ABSTRACT

THEORETICAL MODELING FOR CURIOUS LEADERSHIP AND INSTRUMENT DEVELOPMENT AND VALIDATION FOR MEASURING CURIOUS LEADER CAPACITY

Lisa Marie Gick

Graduate School of Leadership & Change

Yellow Springs, OH

When curious, we admit we do not know. With the contemporary workplace emerging through increased complexity, leaders are compelled to shift mindsets and practices from more traditional methods to those more in service to the uncertainty of the day. The purpose of this mixed-methods study was to generate an integrated theoretical framework for curious leadership, a validated scale for its measurement, and practical methods for engaging differently in the context and practice of leading. Drawing from the literature review of relational leadership, adaptive leadership, complexity leadership, growth mindsets and curious behavior, and from my practice, 12 sub-constructs were identified as possible scale components of curious leader behavior. A mixed methods approach was taken with three differently composed focus groups who reviewed the 12 sub-constructs and honed them to four based on their intersections in Phase 1 of the study. In Phase 2, a survey was thereby developed identifying 66 items for further subsequent appraisal. A finalized survey was undertaken with 274 respondents. From principal and confirmatory factor analysis, four subscales were eventually identified: *Encourage Emergence*, *Enable Openness*, *Engage Experiments*, and *Honor Humanness* resulting in the development of the Gick Curious Leader Capacity Scale. The scale's application and future implications for research and practice are discussed.

This dissertation is available in open access at AURA (<https://aura.antioch.edu>) and OhioLINK ETD Center (<https://etd.ohiolink.edu>).

Keywords: adaptive leadership, complexity leadership, curious leadership, curiosity, emergence, focus groups, growth mindset, leader capacity, mixed methods, relational leadership

Dedication

For my parents, Kathy and Gordon Gick, whose curious and adventurous ways are present in this work, along with their heavenly oversight in bringing it to the world.

Acknowledgements

Hope locates itself in the premises that we don't know what will happen, and that in the spaciousness of uncertainty there is room to act.

—Rebecca Solnit (2016, p. xiv)

This thoughtful and wise offering by Solnit so nicely shares the uplifting theater in which a curious mind generates. In my research, a meta experience unfolds as my curiosity interrogates the space of curiosity to discover the meaning of “curious leader capacity” in the modern workplace. In doing so, a beautiful community engaged in service to this work without whom the work is not possible. I am humbled to honor them here.

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CHAPTER I: INTRODUCING CURIOUS LEADERSHIP

In the work environment, “being curious” is treated as a prized behavior, but often left without meaningful elaboration of its value or what it means. Things are said like, “When recruiting, we look for curious people,” “CEOs who are curious get better results,” “Curiosity is an important quality of a leader.” But what really does that mean? Laying groundwork, Silvia and Kashdan (2009) contended that curiosity and exploration are essential to learn how to adapt to changing situational demands and capitalize on growth opportunities.

In practice, I often see leaders working in complex systems follow scripts and formulas instead of developing confidence in their own judgment and embracing the generative opportunities of uncertainty and emergence.¹ The increasing complexity of contemporary work deepens the challenge for leaders to hold the space for emergence and unforeseen possibilities. There is a proportional challenge of identifying contexts in organizational systems that are ripe for re-contextualizing conditions in support of this growth space. Can the synergistic qualities of curious behavior and complexity (embracing uncertainty, open to possibilities, focus on emergence, etc.) overcome the need for rigid control.

Jeraj and Antoncic (2013) in research on entrepreneurial curiosity, remarked that to be successful, entrepreneurs must be curious about different, specific entrepreneurial-related topics, not just be curious in general. It is this specific entrepreneurial focus, in the context of leadership, which prompts my exploration in this dissertation. A critical question is, “Given the research and data, what is the opportunity

¹ “Emergence refers to the existence or formation of collective behaviors—what parts of a system do together that they would not do alone” (New England Complex Systems Institute, 2011, para. 1)

to apply a more intentional culture of curious practice as leaders to accelerate growth for themselves, those they lead and the organizations in which they work?”

In my literature review on curiosity (see Chapter II), I discovered the work of Russell (2013), whose multi-disciplinary concept analysis of curiosity was aimed at improving nursing education. She explained that the professional organization of nursing aligned with her practice, offers skills of inquiry critical to the profession. A strategy to meet this in their learning curriculum was to “encourage a student’s intellectual curiosity.” In reflecting back on evaluations of student’s performance, Russell documented references on intellectual curiosity as present and absent in student work. She questioned, however, “What is intellectual curiosity, how do you know it is present, and what does the student do or not do to demonstrate this ability?” (Russell, 2013, p. 94). Russell discussed these questions with her colleagues but there was no consistent answer or definition. Russell’s point was that if this is a valued and a necessary component to develop skills of inquiry in the profession, should not the concept of curiosity have more impact on curricula in nursing education and be modeled more substantially in pedagogical practices?

Russell (2013) offered a dynamic conceptual model of intellectual curiosity, delineating specific preconditions, attributes and consequences for nurse professionals engaging in this way. Most compelling, her work offered nurse educators a more substantial and coherent method for embedding instructional methods to support specific skill building for enriched curious behavior. In the end, Russell’s work went deeper into the substantial learning mechanisms that give purpose and richness to accelerate meaningful growth in the inquiry embedded in intellectual curiosity. For her,

“looking beneath the covers” of curious behavior revealed an underworld that delivers a model of engagement for activating deeper meaning when one is curious. By delineating specificity in preconditions, attributes, and consequences in the context of delivering nursing care, she offered her profession, nursing students, practitioners, and patients in their care, more substantial engagement in delivering care and potentially accelerating diagnosis and recovery. The discovery provided new ways of thinking and operating in a complex system, including shifts in pedagogical practices that present a compelling professor-student experience. The leadership implications of this work are meaningful, particularly in validating that this behavior can be examined more deeply in a leader-focused context.

There is no question that curious leader behavior can offer dividends to people and organizations in the contemporary work environment. In fact, it may never be more imperative as a practice. Weick (1993) contended that in a fluid world, wise people know that they do not fully understand what is happening right now. He suggested that curiosity is what is needed in changing times. With the fluid nature of change, prompted by the complexity of the organizational experience today, Weick’s words resonate.

The Study of Curiosity

While many definitions of curiosity exist, in this work I am drawn to the more contemporary research of Kashdan and Silvia (2009) who frame it as the recognition, pursuit, and intense desire to explore novel, challenging, and uncertain events. Even so, the state of contemporary research on curiosity is said to begin post 1950 and focuses on the concepts of exploratory behavior and manipulation drive evolved from classical stimulus response theories (Voss & Keller, 1983). Since that time, many constructs

have been explored and documented to offer distinctions in various facets of curiosity, leaving the field of study with inconsistent terminology, operational definitions, and measurement strategies (Kashdan et al., 2009). In my research to date, I have uncovered over 20 types of curiosity in the literature, to include epistemic curiosity (Berlyne, 1954), perceptual curiosity (Berlyne, 1954; Litman, Collins, et al., 2005), interpersonal curiosity (Litman & Pezzo, 2007), emotional curiosity (LaBar et al., 2000), empathic curiosity (McEvoy et al., 2013), social curiosity (Renner, 2006), sensory curiosity (Litman, Collins, et al., 2005), state and trait curiosity (Spielberger, 2006), and entrepreneurial curiosity (Jeraj & Antoncic, 2013).

Recently, scholars have attempted to organize the definitional landscape into what can be viewed as three studied domains of curious behavior, which include intellectual knowledge, sensory stimulation, and experiences of adventure and thrill (Litman & Pezzo, 2007). Litman and Pezzo (2007) offer a fourth consideration, that of people, for capturing more emerging study of curious behavior. In the people domain, we may choose to classify those studied curious behaviors that sit in a more humanistic realm, such as those with qualities of emotion, interrelatedness, morality, and socialness.

Despite the spectrum in the definitional landscape, a gap exists in the literature in exploring the existing constructs, naming, defining, and connecting curiosity to leader behavior. I will offer a more in-depth analysis of the definitional landscape of curiosity in Chapter II.

Purpose of this Study and Research Questions

The purpose of this research is to generate an integrated theoretical framework for curious leadership, an application for its measurement, and practical methods for engaging differently in the context and practice of leading. With the contemporary workplace emerging through increased complexity, leaders are compelled to shift mindsets and practices from more traditional methods. Conventional notions of management are based on the assumption of certainty; the world is knowable, systems are predictable, and effective leaders can rely on formulaic approaches to planning, control and organizational problems (Plowman & Duchon, 2008). These notions no longer define the present times. To rely on these conventional notions would be a complacent posture, ignoring the evolving context in which we live and work. Researching the specific opportunities within curious behavior for leaders brings new insights and methodologies for expanding leader and organizational capacity and outcomes.

For this research, I defined curious leader behavior as follows:

Situated in a generative mindset, gesturing through openness, invitation, and inquiry that what is not yet known will bring greater than what is known; the ability to quiet expertness to optimize the intensity of relational growth and impact, newness, and innovation in the complexity of human systems.

In applying this within this study, I will engage leaders in a reflective assessment using a newly developed survey designed to measure curious leader behavior. The purpose of the study is to validate the scale. When validated, leaders may use the assessment to understand their tendency toward curious behavior as a leader, use the data to build

personal strategies to situate with a more curious mindset, and experiment with and practice new ways of leading in the complexity of the contemporary workplace.

This study will explore the following research questions (RQs):

RQ1. What perceptions exist among leaders about the role of the potential curious capacity sub-constructs and their relationship to curious leader behavior?

RQ2. What factors are related to curious leader behavior?

RQ3. What correlations among the factors are present from the factor analysis?

RQ4. How do the respondent perceptions from the qualitative phase align with the results from the quantitative phase?

Theoretical Underpinning for this Work

I contend curious leadership is a behavior that serves as a connective enabler among four contemporary leadership theories and concepts: complexity leadership theory (Lichtenstein et al., 2006; Uhl-Bien et al., 2007) relational leadership theory (Cunliffe & Eriksen, 2011; Uhl-Bien, 2006), adaptive leadership theory (Heifetz et al., 2009), and the work of growth mindsets (Dweck, 2006).

Curiosity and Complexity Leadership

In highly distributed, complex systems, leaders tend to gravitate to what can be operationalized. Efficiently systematizing a perplexing problem that needs to be solved, calling forth best practices and managing to the discipline of rigid project plans is generally an intuitive path. It is compact, neat, clear, and directional.

But what is missing? What might we be leaving on the table by engaging this way? And, if there is richness in leaving the notion of certainty aside, how can we shift the momentum to find what has been left unexplored? When presented with the notion

to embrace complexity and work against the intuitive, gravitational pull of control, can leaning on a curious mindset provide a framework that offers the needed “stickiness” to engage differently, yet at the same time offer a viscous or fluid experience for honoring emergence, and possibilities? Can curious behavior be a meaningful and accessible channel through which uncertainty and ambiguity can be held? Examining the principles of complexity leadership theory and the potential congruence with the idea of curious leader behavior can help us understand answers to these questions.

It is helpful to break down the meaning of complexity science as it offers a contextual unfolding in organizational systems. Cilliers (1998) held this as the complex dynamics resulting from rich, evolving interaction of elements responding to the limited information being presented. He continues that these dynamics in complex adaptive systems are the self-organizing ways the system develops and changes, spontaneously and adaptively to cope with or influence their environment (Cilliers, 1998; Uhl-Bien & Marion, 2009). This is a meaningful distinction from how organizational practitioners may view complexity in its more traditional sense of complicated or burdened by multiple pieces and parts. In fact, the more complex and unpredictable patterning of change under complexity theory may be rejected based on emotional as well as intellectual reaction as practitioners search for an inherent sense of equilibrium, which cannot be achieved due to the inherent instability, or non-linear dynamics that lead organizations through multiple transitions (Schneider & Somers, 2006). Complexity science, therefore, gives us an opportunity to examine organizations as fluid and leadership as emergent, an outcome of relational interactions among agents (Lichtenstein et al., 2006).

Complex adaptive systems are non-linear, multilevel, and self-organizing (Boyatzis, 2006) neural-like networks of interacting, interdependent agents that are bonded in a cooperative dynamic by common goal, outlook, or need (Uhl-Bien et al., 2007). They hold self-organizing processes that govern the behavior of agents and offer enhanced capacity to a system, well beyond what the deliberate actions of individuals can provide (Uhl-Bien & Marion, 2009). Uhl-Bien and Marion (2009) elaborated on qualities of complex adaptive systems, to include holding the conditions that allow for dynamic interaction, fostering interdependence and heterogeneity and adaptive tension that pressures the organization to elaborate. Understanding the relationship between the adaptive experience and opportunities and the complexity dynamics (Uhl-Bien & Marion, 2009) is a sweet spot for leaders.

Complexity leadership theory is a framework for leadership that allows us to take advantage of the nature of complex systems in bureaucratic structures, by enabling the learning, creative and adaptive capacity of complex adaptive systems in knowledge producing organizations (Uhl-Bien et al., 2007). It has emerged in the contemporary work context in the shift from the more fixed, binary methodologies of the industrial era in recognition of the notion that a dependency on knowledge generation has emerged as an unrelenting focus in the contemporary world (Uhl-Bien et al., 2007). Complexity leadership theory is a contextual theory of leadership; it holds leadership as embedded in context with connectedness to the social dynamics in complex adaptive systems (Uhl-Bien & Marion, 2009). It also holds that leadership is dynamic and transcends the capabilities of individuals alone; it is the product of interaction, tension, and exchange rules governing changes in perceptions and understanding (Lichtenstein et al., 2006). In

this sense, it honors the idea that we are all leaders, and that as Lichtenstein et al. (2006) state, leadership can occur anywhere within a social system.

There are several features that leaders enjoy when considering the synergistic qualities of curious leader behavior and complexity leadership. First, a sense of comfort in holding uncertainty and open space to enable learning is apparent. Ambiguity is held as a focal point, in recognition of the fluidity of learning. In this way, there is recognition for productivity in disequilibrium, as opposed to searching for equilibrium. Both concepts repel the notion of control, opting for the intrigue of possibility and emergence. The idea of sitting in the “not knowing” state of curiosity also implies respect for what is offered outside of each person, key to what complexity leadership brings with its emphasis on the interdependencies or social integration in the environment.

Curiosity and Relational Leadership Theory

The essence of relational leadership perspective is that person and context are interrelated and that all knowledge of self and others are viewed as co-dependent and constructed as a process of the interrelatedness (Uhl-Bien, 2006). Uhl-Bien (2006) shares with us it is about the focus on the relational processes by which leadership is produced and enabled. I am drawn to consideration of relational leadership theory in this work as its centeredness on humanness supports the critical social construction that uplifts people and organizations. As offered by Ospina and Foldy (2010), the potential for connectedness is always present in human beings. Bringing relationality to the leadership field means viewing the invisible threads that connect actors engaged in leadership processes and relationships as part of the reality to be studied (Uhl-Bien & Ospina, 2012). In complex adaptive systems, relationships are not primarily defined

hierarchically, as they are in bureaucratic systems, but rather by interactions among heterogeneous agents and across agent networks (Lichtenstein et al., 2006). This idea parallels the conditions appreciated in complexity leadership when considering the agency developed within and across organizational networks. As Lichtenstein et al. (2006) offered, looking at organizations through the lens of complexity means a higher call to the prioritization of relationships.

For this work, the relational perspective also rings consistent with the conditions supporting growth as described in complexity leadership. The idea that social reality is constructed through the context of relationships holds together with the notion that growth comes from the product of relational exchanges through what Uhl-Bien et al. (2007) described as the “neural-like networks” that enable learning and adaptive capacity. Both leadership theories also suggest that leadership occurs in the relational dynamics, and that relationships are emergent or “made” in the process versus “brought.” Finally, interrelatedness is embraced in both complexity leadership theory and relational leadership theory, further emphasizing meaning in this work.

When I consider relational leadership theory with the notion of curious leader behavior, I find several parallels. First, if we consider curious leader behavior in either the entity or relational methodology described in relational leadership theory (Uhl-Bien, 2006), we find a means for gracious exploration enabling growth for the individual or social networks engaged. Curious behavior provides a vehicle for adaptive capacity growth, in both the leader and the subject (entity or collective). It may also be recognized that more contemporary studies of curious behavior focus on relational contexts. For example, interpersonal curiosity (Litman & Pezzo, 2007) and empathic

curiosity (McEvoy et al., 2013) are experiences that, when engaged, enrich the interconnectedness characteristic of relational engagement. For these reasons, curious behavior on behalf of leaders has an intuitive synergy with relational leadership theory and practice.

Curiosity and Adaptive Leadership Theory

The development of a robust adaptation to a new challenge is, in a sense, a learning process (Heifetz, 1994). As leaders, we are invited by Heifetz (1994) through this statement to think more deeply about the learning ritual. Too often, we consider the challenge brings the learning when in fact, it is the adaptation. I find this intriguing and a depth of consideration I have not noticed in the practitioner context. In fact, I can recall addressing challenges in multiple ways and always feeling fulfilled, and therefore assigned learning, in the conquering. A typical approach to overcoming challenges was to first consider what best practices might be available to quiet them. How illuminating it was for me to sit deeper in inquiry and recognize that, while an often-heralded leadership feat, applying best practices was one of the most stagnating experiences I could engage. After all, applying best practices rings not of possibilities or holding space for emergence; or an emphasis on deepened relationships.

In capturing the role of adaptive leaders, Heifetz et al. (2009) suggested three core responsibilities are to provide direction (clarify roles and offer a vision), protection (make sure the community is not vulnerable and can survive external threat), and order (maintain stability). Heifetz et al. (2009) created a clear opportunity to examine how this is enacted in their presentation of the distinction between technical and adaptive challenges. With technical challenges requiring only that we apply current “know how,”

those with authority and expertise can solve them. While technical challenges provide needed fixes, depending on a mindset that centers on technical expertise can stunt growth. This is akin to “fixed mindset” thinking, whereby one finds the need to be the “smartest person in the room” (Dweck, 2006). Relying on expertise beyond the threshold of its value in an organization suppresses an organization’s agility (Joiner & Josephs, 2007). Realizing and opening the space for adaptive learning and leading brings individual and organizational growth.

Adaptive challenges in the organizational context, in contrast to technical challenges as described above, are worked on among those who experience the problem, and the work is centered on learning newness instead of applying current know-how (Heifetz et al., 2009). As found in the other leadership theories presented in this work, this can decentralize the power often found in more hierarchical approaches allowing everyone involved in the challenge, not just the person of perceived authority, to explore the leader lens. The opportunity when engaging in this way is to diminish the tendency for destructive energy that comes from the aggregation of differences and, instead, harnesses it constructively (Heifetz et al., 2009).

The principles and techniques of adaptive leadership (Heifetz, 1994; Heifetz et al., 2009), such as getting on the balcony, orchestrating conflict, giving the work back, and protecting voices of leadership suggest methods that resonate in concert with complexity leadership and relational leadership. The idea that the work is done within and by the social network, relationships are formed because of the work, and the self-organizing and adaptive way the social network influences the environment are shared principles among these three theories. Embedded, too, is the idea of

emergence, which requires the holding of open space to effectively allow for learning and change to take place.

In bringing the idea of curious leader behavior to the realm of adaptive leadership, I again, find several linkages. The idea of risk-taking seems prominent in this relationship, given the vulnerability that exists when engaging in these behaviors. When leaders commit to curious behavior, particularly within their work relationships, they are cultivating idea generation and decision-making deeper in the organization, a shared outcome with adaptive leadership. Shared, too, is the idea of external awareness, or connecting with interests outside of your own. Both curious behavior and adaptive leadership require the ability to hold ambiguity and appreciate emergent thinking and reveal.

Adaptive leadership is intimately intertwined with complex adaptive systems dynamics and enabling conditions help create the contexts that are productive of adaptability, emergence and innovation (Uhl-Bien & Marion, 2009). With respect to complexity leadership theory and relational leadership, the idea of emergence is a shared principle with adaptive leadership. All three of these theories also depend on an embedded social system, recognizing that the work product will emerge because of the interconnectivity existing within the system. One feature I find as an interesting distinction is the orientation of their frameworks. Both complexity and relational leadership theories are framed with openness and an embracing of uncertainty and possibility. While in adaptive leadership we may find the same qualities emerge, the initial frame “reads” as one of control when you consider the leader role as described by Heifetz et al. (2009) of providing direction, protection, and order. For practitioners, being

mindful of holding the framework lightly while allowing the outcome of leadership to happen is ideal.

Curiosity and a Growth Mindset

Dweck (2006) defined mindset as the view you adopt for yourself. Of the two mindsets iconic in her work, she describes that in a fixed mindset, success is about proving you are smart and talented. In contrast, in a growth mindset where you view the world as having changing qualities, success is about stretching yourself to learn something new. It seems such a simple distinction. However, when focused on with intention, it presents deep clarity on how one must show up for leading to enrich individual and organizational growth.

The destined path prevalent when situated in a particular mindset should be no surprise. Dweck (2006) suggested that when focused on a fixed mind-set, people want to “look smart,” and therefore are prone to avoid challenges, give up easily, see effort as fruitless, ignore useful negative feedback and feel threatened by the success of others. As a result, these individuals may miss opportunities to understand, explore, and reach their full potential. On the other hand, when centered on a growth mind-set, we want to learn and therefore embrace challenges, persist through setbacks, view effort as vital to the path of mastery, learn from criticism and find inspiration in the success of others. As a result, we continue to higher levels of achievement. One of the most inviting findings in Dweck’s research is that mindsets can change. I find this feature of her work practically useful to leaders, particularly those who are quick to dismiss individuals with whom they work who present with fixed mindsets. It represents a marginalization that can be reversed with mindful focus on this generative work.

When considering the concept of curious leader behavior in relationship to mindsets, I would first suggest that curious behavior is integral to a growth mindset. Both concepts are focused on the desire to learn and embrace challenges. Particularly notable in shaping growth in an organizational context, they share the idea of interrelatedness, and importantly, seeing value in the gifts of others. I also recognize that a growth mindset and curious behavior both share an acceptance of the idea that the world is situated in change, fluidity, and emergence.

As previously mentioned, when considering Dweck's (2006) work on mindsets, the integration with complexity, relational and adaptive leadership theories is compelling and clear. Operating from a growth mindset is required to successfully participate in an organization that is situated in these theoretical constructs. Recognizing interrelatedness, welcoming emergent pathways, living in possibility and holding comfort in disrupted or disoriented times link these four concepts. Embracing the opportunity to lead mindset shifting must be undertaken to fully lead in service to the humanness of others. If we fail on this front, it might be suggested that we are not fully situated in a growth mindset ourselves, as we do not offer ourselves the opportunity to find inspiration in the success of others.

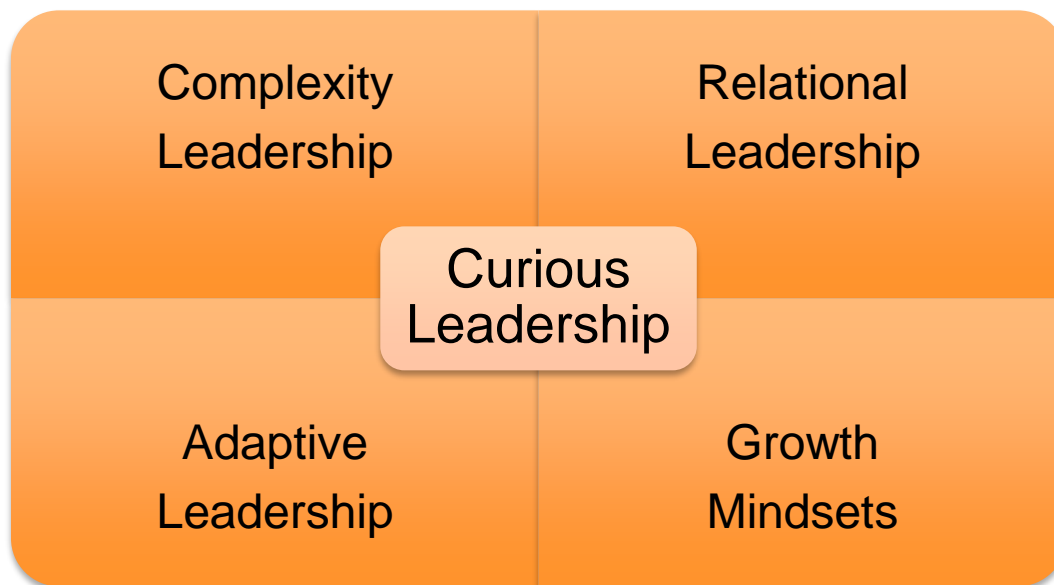
Synthesizing the Work

Building the connection between curiosity and leadership has the potential to recognize key behavioral attributes in driving successful organizational culture and employee growth in complex systems. What is intriguing is the simulcast features describing complex systems (Boyatzis, 2006; Uhl-Bien & Marion, 2009; Uhl-Bien et al., 2007), complexity leadership (Uhl-Bien et al., 2007), relational leadership (Cunliffe &

Eriksen, 2011; Uhl-Bien, 2006; Uhl-Bien & Ospina, 2012), adaptive leadership (Heifetz et al., 2009), growth mindsets (Dweck, 2006), and curious behavior (Kashdan, 2009).

Figure 1.1

Curious Leadership Theory and Concept Integration



For example, Boyatzis (2006) discussed that complex systems are non-linear, multilevel, and self-organizing with emergent events instigating new, dynamic processes. When leading in complexity, agents engage with external and internal pressures with interdependence and the resulting constraints and tensions and it is these tensions, when spread across the network of learning and interdependent agencies, which generate system wide emergent learnings, innovations, capabilities, and adaptability (Lichtenstein et al., 2006). This value of interdependence and growth from resulting restraints and tensions supports the notion that relationships are born and a product of relational leadership. The idea of growth through co-construction, leadership as a product of the work of the human system, and the mutuality inherent in this contextualization of interdependence also substantiate relationships as emergent

when considering relational leadership. In referencing curious behavior, Kashdan (2009) describes that it motivates us to be open to viewing the world, other people, and ourselves from multiple perspectives. It requires self-regulating attention and being open to exploration and discovery. I suggest the aggregation of these theories and concepts, with curious leader behavior as a catalyst, bring interesting opportunity to re-centering the work environment not only in celebration of one's humanity but also accessing the critical constructs for leader and organizational growth, as shown in Figure 1.1.

Curiosity as Generative in Intercultural Experience

The generative opportunities of curiosity are inherent in its unfolding. Curious behavior allows suspending judgment and being open to learning, catalyzing growth. This contributes to the notion of curious leader behavior having substantial meaning in the discussion of honoring dignity and the value of connectedness in multicultural experiences. Caligiuri and Tarique (2012) suggested that individuals with a greater openness are more likely to engage in multicultural opportunities because of their natural curiosity and interest in new experiences.

There is notable research associated with the Values in Action–Inventory of Strengths (VIA-IS; Park et al., 2006) that demonstrates over time a remarkable convergence cross-culturally in the evaluation of valued character strengths. At the conclusion of a second study during the longitudinal research, the top five character strengths ranked by over 1,000,000 participants from 74 nations and all 50 states changed only slightly from the original study early in its run. Curiosity, replacing Gratitude, was now in the top five, when formerly it was ranked sixth. The remaining

character strengths stayed the same through the research. Curiosity gaining advanced placement over time as a valued character strength consistently across the globe reinforces its prominence in the increasing complexity of this world. McGrath (2015) noted the most important finding of this collective work is the degree of cross-cultural consistency noted in both studies, and the potential it creates for dialog across nations on how to advance the development of character strengths. I find this work to have meaning in this discussion as it demonstrates the connective fiber that links a multicultural community. The identification of these shared character strengths, with curiosity prominently situated, sets the table for community meaning making when perceived boundaries are in play. I am intrigued by the identification of curiosity as one of the top five character strengths in the cross-cultural experience, as it provides acknowledgement to the possibilities that may be available in a deeper study of the meaning it may have in leading.

Why Curiosity is Compelling

As a practitioner, I believe centering on illuminating the humanness of organizations is an imperative as the footing in the emerging time is discovered. It is a focus that has gotten lost in the complexity of the contemporary workplace due to conditions like the economic challenges of the last decade, the continual elaboration of data, and the rapid pace of changing technology (Clarke, 2013; Dickens, 2013; Uhl-Bien et al., 2007), among several other shifting workplace conditions, like the dynamic of generational influencers. I believe the high-fidelity challenge of the difficulty many experience in adapting to the global experience is also contributing to a drive *away from* humanness. Even the more recent tenor of the global terror climate where fear drives us

to reductive behaviors to gain greater perceived control reinforces the behaviors that compress and deepen our commitment to a more compartmentalized and fixed way of thinking. How to operate differently in this more expansive world landscape must be learned (Dickens, 2013), as must how one shows up in organizational life. This not only presents an extraordinary opportunity to enrich this but becomes a compelling and vital reframing for people and organizations to thrive. As a practitioner, I see that a refocus on humanness can uplift people and the organizations in which they work, generating a sense of fullness and growth outcomes. My deep exploration of curious behavior presents a compelling and highly accessible way leaders may embrace these complex challenges we experience today.

Contribution of This Dissertation to Theory and Practice

Contextualizing curious behavior specific to the domain of leadership through this research offers new knowledge and theory building outcomes, as well as practical interventions for more deeply and effectively applying curious leader behavior. The current literature on curiosity as a leader behavior is scant and existing assessment instruments do not address curious behavior in the leadership context. The contribution of this work is in enabling the practice of critical existing theory through validated scale development and introducing new theory with respect to curiosity and leadership.

Study Design Overview

In this research, a mixed methods study was performed, using a sequential qualitative-quantitative design. The exploratory QUAL phase involved a series of focus groups to evaluate and co-create understanding and new knowledge using the lived experience and perspectives of leaders in practice. The QUAN phase involved

developing and validating a scale for the purpose of measuring curious leader capacity. A fuller description of the study design is made in Chapter III which explains this dissertation's methodology.

In Closing

Mindful, curious leader behavior can be a core and effective way to guide success in leading self, others, and organizations. The opportunity is to consider with greater intention how curious behavior can be contextualized in the leader domain, recognizing that there is a need go well beyond the request of leaders to simply be more curious. Exploring the notion of how to become better aware of the sense of curiosity and the generative impact of the behavior, building understanding of the potential relationship of mindsets, and developing a sphere of practice opportunities to experiment with curious leader behavior as a stronger part of our leadership are a compelling call.

The following chapters flow as follows. I will present the existing literature that frames this proposed research (Chapter II), the detail of the methodology I used in executing this study (Chapter III), the results and analysis of the research study (Chapter IV), and my assessment as a researcher of the value and relevancy of the work (Chapter V).

CHAPTER II: CRITICAL REVIEW OF THE LITERATURE ON THEORY, RESEARCH, AND SCALE DEVELOPMENT

To build understanding and context for my planned research, a review has been performed of the existing literature associated with key theories and concepts around curious leadership. Specifically, an understanding of the emergence of the exploration of theory and scale development on curiosity, focused on adulthood, and the literature on complexity leadership theory, relational leadership theory, adaptive leadership theory, and the work of mindsets, as it relates to leadership, are addressed.

Positioning this Research in the Leader Domain

In the quest to examine curious behavior of leaders, the intention of this research is to focus on the reflective leader. The opportunity is to more deeply understand how a sense of curiosity belongs in the framework of leading enriches one's leader impact. This impact may be on personal self-growth and on growing people and organizations. McDaniel and DiBella-McCarthy (2012) argued that leaders could refine their skills and performance by collecting data and analyzing information from many sources. Mussel et al. (2012) noted that, given the changes the world is experiencing because of globalization, economic shifts, and technology advancements, demands for curiosity as a relevant predictor will become increasingly important. This research links these imperatives to offer new knowledge and practice in advancing leader relevance and impact.

Research Landscape of Curiosity in Adult Behavior

Contemporary research on curiosity began after 1950 and initially focused on exploratory behavior and manipulation drive evolved from classical stimulus response theories (Berlyne, 1978; Voss & Keller, 1983). Lowenstein (1994) suggested that the prior two decades produced little research on individual differences in curiosity and a renaissance in the study of trait curiosity, defined as an enduring interest in acquiring new information (Camp et al., 1985; Lowenstein, 1994). Since that time, what is clear in the research is movement from a more general body of work on the exploration of curiosity to more distinct and finer contextual considerations for curious behavior. Even so, recent study of curiosity is burdened with inconsistent terminology, operational differences, and measurement strategies (Kashdan et al., 2009), resulting from the awareness that curiosity is not a unitary construct (Langevin, 1971). Its inherent sensibility of exploration has been ironically turned on itself, creating the contextual applications meaningful in the contemporary, complex world. These prominent distinctions in current research are highlighted in this literature review.

Early classifications of curious behavior began to emerge in the 1950s with the seminal work of Berlyne (1954) from which a constellation of scientific distinctions of curiosity emerged (see Figure 2.1). Early distinctions brought the naming of two types of curiosity, perceptual and epistemic (Berlyne, 1954). Berlyne (1954) defined *perceptual curiosity* as “the curiosity which leads to the increased perception of stimuli” (p. 180) and *epistemic curiosity* as “a drive to know” (p.187) brought on by gaps in knowledge or conceptual puzzles. More recent exploration presented a distinction of epistemic curiosity as related to cognition and perceptual curiosity as connected to emotional

needs (Reio & Callahan, 2004). Berlyne also offered two related concepts describing distinctions in exploratory behavior: *diversive*, which is motivated by boredom, and *specific*, which is motivated by curiosity. For this work, I find the concepts of specific, epistemic curiosity most aligned with the action of leadership, as it most closely resonates with the call for leaders today to hold the uncertainty needed to be effective in the modern world. Therefore, I emphasize the domain of specific, epistemic curiosity in unfolding the definitional segmentation that emerges in the relevant literature on curious behavior.

Figure 2.1

Types of Curiosity Presented in the Literature

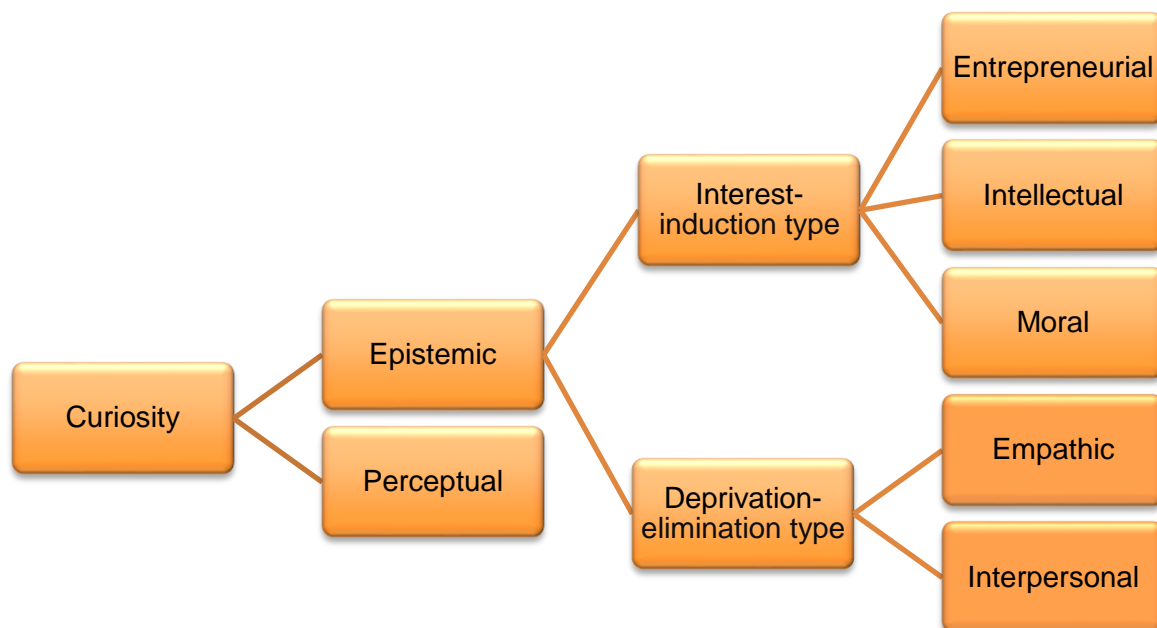


Figure 2.1 shows epistemic curiosity further deepens its roots by offering two additional features: interest induction and deprivation elimination curiosities that are driven by different motives for acquiring new information (Litman & Jimerson, 2004).

Interest induction curiosity involves the pleasure of new discoveries.

Deprivation-elimination curiosity is about reducing uncertainty and eliminating undesirable states of ignorance (Litman, 2008). Figure 2.1 also shows that deprivation-elimination represents two types of curiosity, empathic and interpersonal, as reflected in the literature.

In continuing the exploration of curiosity, I identified bodies of research that are framed in the generative space I see in interest-type curiosity. As illustrated in Figure 2.1, there are three sub-styles of interest-type curiosity: intellectual, moral, and entrepreneurial. Here I summarize of the various discoveries from the literature, pertaining to these types.

Using principle-based concept analysis, Russell (2013) examined the notion of *intellectual curiosity*. Driven from the request that intellectual curiosity be an evaluative factor in nursing student performance, Russell sought to understand how evaluators could be more discriminant in accurately assessing what appeared to be an ambiguous factor. In her qualitative study, she identified conceptual components or factors, categorized as preconditions (such as the degree of individual motivation related to the topic of inquiry), attributes (such as heightened or enhanced dimension of cognitive stimulation) and consequences (such as knowledge acquisition or clarity in understanding) linked to intellectual curiosity, and the existing relationships among them, to clarify how intellectual curiosity may be described and evaluated. Specifically, she offered the analysis provides initial considerations for nurse educators to better understand and use the concept of intellectual curiosity in curriculum redesign and

construction of learning environments that enhance the vibrancy of the conceptual components emerging from the work.

Sekerka et al. (2014) examined *moral curiosity* in an organizational context. Recognizing ethical behavior is challenging to sustain given the complexity, intensity, and pressure in organizational life, the researchers sought to explore the idea of how managers could be intrinsically motivated to be considerate of ethical decision-making in everyday routine. To do so, they used a combination of a learning exercise and a validated curiosity scale (Kashdan et al., 2004) administered before and after the exercise. The researchers discovered that when engaged in the exercise of experiential inquiry of a situational incident requiring application of an ethical mindset, moral curiosity was positively influenced for participants following the reflective exercise more so than that measured prior to the reflective exercise.

Finally, the contemporary world of work is starting to examine *entrepreneurial curiosity* as a finer distinction within specific, epistemic curiosity. Jeraj and Antoncic (2013), through their scale development research, offered a foray into this realm of curiosity by exploring its definition, conceptualization, and measurement, to determine if entrepreneurial curiosity is an independent construct dimension in relation to other types of curiosity. They defined curiosity as an aroused emotional state that entrepreneurs experience; after being confronted with a novel, complex, or ambiguous stimulus, curiosity leads entrepreneurs to find new opportunities to expand their business. This curiosity scale is useful for researching the correlation between entrepreneurial curiosity and entrepreneurial practice. Jeraj and Antoncic were successful in determining a distinction in entrepreneurial curiosity among other curiosity measures.

Litman and Pezzo (2007) stated research on curiosity has historically been focused on three types of information: intellectual knowledge (Berlyne, 1954; Litman & Spielberg, 2003), sensory stimulation (Berlyne, 1957; Collins et al., 2004) and experiences described as adventurous or thrilling (Litman, Hutchins, et al., 2005). Litman and Pezzo went on to suggest that information on curiosity related to the interconnectedness of *people* has received considerably less attention. Accordingly, they offered an examination of interpersonal curiosity, or the intrinsic motive to seek people-information. Litman and Pezzo identified three interpersonal curiosity factors: curiosity about emotions, spying and prying, and snooping.

Han et al. (2013) also researched interpersonal curiosity by examining neural mechanisms that distinguish curiosity with the prospect of being satisfied from curiosity that can never be satisfied. Using a multi-agent (self, other, computer) approach in manipulating curiosity about people-information with an interactive task, Han et al. compared electrophysiological activity to a cue informing participants they will or will not be provided information about each agent's decisions. These researchers posited that interpersonal curiosity might have value in observational learning; the brain activity observing someone else completing a task is consistent with the brain activity of completing the task oneself. This is social comparison (i.e., when people are uncertain about a situation, they turn to others who are in a similar situation for comparison purposes).

With the confirmation that individuals were more curious about the decisions of others versus those from a computer, Han et al. (2013) came up with electrophysiological evidence for the significance of interpersonal curiosity. Litman and

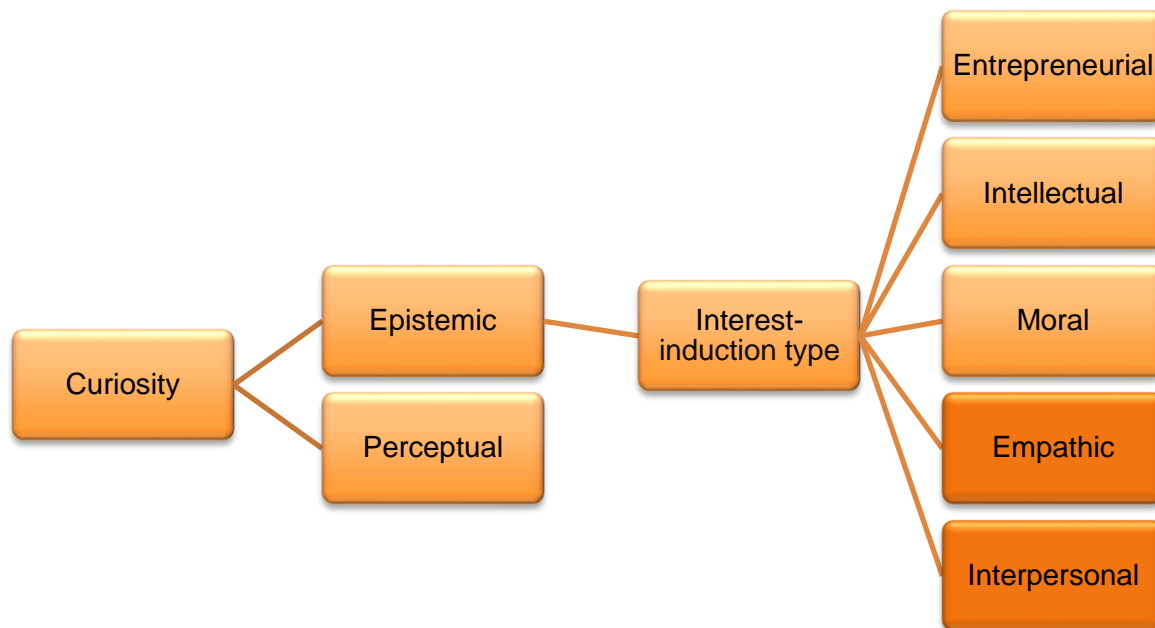
Pezzo (2007) classified interpersonal curiosity as deprivation-elimination. They concluded that people want to know about others as a way of reducing their own uncertainty.

For this literature review, I classify interpersonal curiosity as deprivation-type in Figure 2.1. However, I have interest in exploring the reframing of interpersonal curiosity as the interest type, because it is potentially generative for leaders. This reframed identification is discussed further in this chapter and presented in Figure 2.2.

McEvoy et al. (2013) discussed empathic curiosity and its role in driving conversational dialogue to support reflection and resolution of conflicting goals in situations of emotional distress. Placing it in the setting of mental health therapy, McEvoy et al. recommended empathic curiosity as a method for assisting those with mental health concerns to discover the control important to their well-being. The authors suggested that mental health professionals should link curious questions to conversational flow and non-verbal disruptions observed in body posture. While the idea of curious inquiry linked to the behavior of presence when engaged with others has a meaningful relationship to leadership in this research, McEvoy et al. linked inquiry to desire of control. While this makes sense in the context of service in mental health, it is a departure from my interest in inquiry a pathway for leaders to embrace uncertainty and emergence rather than as a place for what is certain. As with interpersonal curiosity, I offer a reframing of empathic curiosity as an interest-induction type in consideration of its role for generative leader behavior. This reframe is shown in Figure 2.2.

Figure 2.2

Types of Curiosity Presented in the Literature (Reframed)



Interest-type curiosity is most directly aligned with the framework of this study, given its value of being generative and reflective of a positive framework. A focus on deprivation-type curiosity is contrary to the interests of this research in that its goal appears to focus on reductive behaviors like finding certainty and cultivating expertness through ideas of correctness and answer discovery. The latter seeks the specific and certain while the former endeavors to reveal possibilities. As such, I document the path I choose to follow in Figure 2.2, the movement from epistemic to interest-induction type curiosity and include the reframing of empathic and interpersonal curiosity given their opportunity for supporting a generative mindset.

Relational Features of Curious Behavior

The literature on curiosity demonstrates features that are relational in focus or support relational behaviors and practice engagement. The concept of epistemic

curiosity (Berlyne, 1954; Litman, Hutchins, et al., 2005), reflecting the desire for new information and linkage with generative-based, interest-induction type curiosity, sets the stage for relational engagement. For example, discussing relational leadership, Cunliffe and Eriksen (2011) noted that relational leaders do not see communication as an expression of something pre-conceived, but as emerging, open, and as a way of working out what is meaningful. Consistent with the notion that leaders can use curious behavior to co-create new knowledge, experiences, and possibilities, Cunliffe and Eriksen suggested that dialogic discourse requires not just talking about something to others but working with them in negotiating and shaping a sense of what is needed. In the context of human engagement, curious behavior inherently creates an openness that can support deeper human exchange.

Relational behavior can be viewed as central to the experience of interest-type and deprivation-type curiosities. Of the genres of curiosity discussed here, interpersonal curiosity is most strongly congruent with cultivating relational engagement. Litman and Pezzo (2007) described interpersonal curiosity as the desire for information about other people. It is of high value in social interactions and human relationships. They stated that people information differs from other kinds of knowledge in being highly complex with features of personal experiences, public/private behaviors, and emotions and feelings. All of these are relational qualities.

Kashdan et al. (2013) further suggested that curious people engage in behaviors that increase the likelihood of positive social outcomes and healthy social relationships. Their study differs from prior relevant research in moving beyond self-reporting to actually engage members of the social circle of their respondents in gathering

multidimensional data about themselves. Their findings demonstrated a convergence from what was self-reported to other-reported: curious people, they suggested, possess a number of adaptive attributes, including an appreciation for beauty, enjoyment of complex/abstract thinking, strong intellectual capacity, initiation of humor and playfulness, comfort with uncertainty and anxiety, lack of timidity, and a tendency to avoid judging, criticizing or blaming others.

Kashdan and Roberts (2004) explored curious behavior and its relationship to intimacy. They contended that the experience of curiosity in a social engagement can broaden one's attention to information about others and conversation topics, thereby increasing the desire for more encounters. Further, they suggested, "An accumulation of interactions with the same person that continually induces flow-like absorption and a desire to learn more about their perspectives and experiences can be expected to lead to enduring intimate relationships" (Kashdan & Roberts, 2004, p. 703).

Empathic curiosity (McEvoy et al., 2013) is grounded in the idea of being "present" with another and engaging in meaningful inquiry designed to deepen knowledge and understanding about the human experience. It is underpinned by the core skill of listening which allows an individual to take in another's story and ask provocative questions to support another's self-learning. Relational exchange through empathic curiosity, therefore, becomes central and enduring in individual growth and development of each party in the exchange, not just for the individual engaged in receiving service.

In their examination of moral curiosity, Sekerka et al. (2014) contended that an intrinsic motivation to exercise ethical decision-making in every day routine may

cultivate other ethical actions such as compassion, empathy, and tolerance. This is consistent with what W. Kahn (2007) described as the key to creating meaningful relational connections at work: feeling supported, helped, understood, and worked with in non-superficial ways. These are culture-building behaviors emerging through curious inquiry, now defined as moral curiosity by Sekerka et al. (2014). Sekerka et al. also contended that collaborative, reflective, and experiential learning, by applying moral curiosity, expands leader capacity to proactively situate an organization more substantially in an ethical context compared to the alternative of reacting to poor ethical performance and decision-making.

Leonard and Harvey (2007) found an interesting distinction about the connection between curiosity and emotional intelligence. They cited the work of Mayer and Salovey (1993) who defined emotional intelligence as a type of social intelligence that involves the ability to monitor one's own and other's emotions. This allows for distinguishing among them and being guided by them. Leonard and Harvey recognized that interpersonal interactions provide people with skills for dealing with emotions. While their study did not examine the social nature of emotional intelligence, their recognition of the relational connection, as embedded in the link between curiosity and emotional intelligence, made Leonard and Harvey's study of interest and inspiring about research possibilities.

Exploring curiosity associated with entrepreneurship, Jeraj and Antoncic (2013) sought to determine if a scale focused on entrepreneurial curiosity could stand independently from other valid curiosity measures. They recognized that one of the value propositions for this assessment might be to identify effective collaborators for a

business. This is a critical point of focus for start-up initiatives. Using the assessment in this way suggests an optimization of the relational connection among colleagues that is meaningful in the context of the start-up experience.

Curiosity Linked to Leader Behavior is a Clear Gap

Most relevant to my interests in evaluating the depth and breadth of research on curious behavior is the opportunity to consider it related to the work of leaders. I aim to contribute new knowledge to support individuals and organizations in enriched learning and practice through curious behavior. In this, I recognize challenges in addressing nuances in this exploration. Accounting for the parallel concepts as described above is a significant opportunity.

I also note that there is a significant preponderance of quantitative work in research on curiosity. In this study, the value of qualitative methods on curious leader behavior was explored. The mixed methods research approach, as described in Chapter III, built upon the methodological approaches commonly engaged in research on curiosity.

Complexity Leadership as Context for this Research

Complexity science is not just presenting a powerful metaphor but offering “new rules” (Hazy, 2011) in many contexts as global world demands different and original thinking about how to engage. According to Uhl-Bien et al. (2007), complexity science suggests a paradigm for leadership that evolves to suit the knowledge era leading to a complex interactive dynamic from which adaptive outcomes emerge. This contrasts with the production-focused paradigms dominant in the 20th century.

In 1997, a notable time in transitioning to a post-industrial era, Hooijberg et al. (1997) observed that leader development models were not keeping pace with changes in the nature of work. In response, they introduced the “Leaderplex Model” (Hooijberg et al., 1997), which they defined as “a holistic perspective that integrates the myriad of leader role behaviors required to deal dynamically with the virtually endless number of contingencies occurring in the increasingly fast moving and complex contexts faced by most managerial leaders” (Hooijberg et al., 1997, p. 403). While the elegance of understanding and practice around leading in the context of complexity has clearly been refined over time, this work contributed pioneering ideas on reframing the leadership challenge.

Researchers Prominent in the Emergent Conversation on Complexity Leadership

The concept of complexity—although not by that name—and its specific relationship to the work experience, dates far back in leadership research. For example, in an interview in 1993, Peter Drucker suggested that managers have to learn to lead in situations where they are neither controlled or controlling (Harris, 1993). Drucker further recognized of the idea of emergence, by noting that leaders have moved from a posture of planning to one with more emphasis on learning. Bolman and Deal (1991) focused on the ability to view situations from multiple perspectives using concepts of framing and reframing, a practice that continues today to be highly resonant when exploring possibilities in emergent contexts. The emerging and increasing reference to complexity in work experience from the early postindustrial period was notable. Not until the last decade has a strong, named, and compelling presence of complexity in leadership

research and writing evolved. I offer here what I notice about those driving the conversation on complexity leadership theory, as well as some peripheral contributors.

The discussion of complexity as a leadership theory has been driven by the work of Uhl-Bien and several collaborating colleagues. She was an early contributor, and her work has evolved over time as primary and substantial developments in complexity leadership theory. Lichtenstein et al. (2006) made the connection between leadership and complexity science arguing that leadership is an emergent event, based in relationships, complex interactions, and influences that occur in the “space between” individuals. This work introduced and set the tone for richer consideration of complexity leadership theory. The authors noted that complexity offers new logic in leadership theory centered in the idea that it develops from an emergent event rather than from a person. Uhl-Bien et al. (2007) developed an overarching framework for studying complexity leadership theory, “a leadership paradigm that focuses on enabling the learning, creative and adaptive capacity of complex adaptive systems within the context of knowledge-producing organizations” (p. 298). This work deepened the conversation and explored the intersections of administrative, adaptive, and enabling leadership as critical to effectively operating within a complex adaptive system. With a focus on the interactive dynamics of complex adaptive systems (defined as a basic unit of analysis in complexity leadership theory), Uhl-Bien et al. discussed how individuals interact in the space to enable adaptive outcomes. The contribution of this work was in developing key elements of complexity leadership theory and offered a new way of perceiving leadership consistent with being called to consider how to engage as the Knowledge Era continues to unfold.

In 2008, Uhl-Bien and Marion edited *Complexity Leadership Part One: Conceptual Foundations*. This volume presented a collection of writings that dynamically reviewed conceptual features of complexity leadership. Advanced thinkers on this subject contributed chapters, including Uhl-Bien, Marion, McKelvey, Lichtenstein, and Hazy. In addition, there were other contributors who linked complexity leadership to relatable concepts. The work offers a forerunner academic perspective on building understanding of the relationship between complexity science and leadership.

Uhl-Bien and Marion (2009) explored more deeply the interactive process between adaptive leadership and complexity dynamics, particularly as applied to bureaucratic forms of organizing. In this work, even the definition of complexity leadership theory had evolved. The authors described it as, “The study of the interactive dynamics of complex systems embedded within the contexts of larger organizing systems” (Uhl-Bien & Marion, 2009, p. 632). Continuing to use the entwined administrative, adaptive, and enabling paradigms, they discussed more practically how the adaptive function within the complexity leadership theory framework can unfold within bureaucratic systems.

In notable recent work, Hazy and Uhl-Bien (2015) moved emphatically from the theoretical to operationalizing complexity leadership. In their 2015 work, the authors drew on over 20 contributors to the body of work in this category to offer five specific areas inspiring new insights to enable organizations with new outcomes: generative, administrative, community building, information gathering, and information using. The work associated each of these with a “complexity mechanism” that had been identified from work about complex adaptive systems, more generally. Also, the work is

synthesized to offer a holistic model of leadership in complex organizations. What is clear about the emergence of the work is movement from conceptual knowing to practical strategies and tactics that more effectively support leaders in actualizing within a complex system more fluidly.

Uhl-Bien and Arena (2017) have further refined complexity leadership theory. In their article, “Complexity Leadership: Enabling People and Organizations for Adaptability,” they synthesized a decade of research and practice into a more advanced complexity leadership model. They have honed the definition of complexity to “rich interconnectivity” (Uhl-Bien & Arena, 2017, p. 9) emphasizing that when things interact, they create irreversible change. For example, the ingredients of a cake are distinct and separate before the baking process, however, when you add them together with heat, they change irreversibly and can never be distilled to their original form. This is the transformative nature of complexity. In the next section, “Intersection of Adaptive and Relational Leadership Theory and the Work of Mindsets,” I will offer more detail about the contemporary model Uhl-Bien and Arena discussed and the implications it has for current practice.

As mentioned, the definitional landscape has evolved significantly over the last decade, offering a more refined perspective. Lichtenstein et al. (2006), in further connecting leadership with complexity, emphasized that what is known as leadership is not linear; rather, “It is an emergent event, an outcome of relational interactions among agents” (Lichtenstein et al., 2006, p. 2). They noted there is growing acknowledgement that what is known as effective leadership does not reside in a leader’s actions, but as an emergent event, an outcome of relational engagement. This is noticed as

contextually driven, an outcome of the dynamic nature of interaction among agents who make meaning from what is produced as interactions occur.

Lichtenstein et al.'s (2006) perspective was an outgrowth of earlier discussions that described leadership and its relationship to complexity with less maturity, focusing more on leader role elements, such as entrusting others with responsibility or getting comfortable with ambiguity (Harrison & Gray, 2003). In contrast, the emerging perspective recognizes the significance of integrated systems and the outcome of relational engagement (Lichtenstein et al., 2006). When leadership is grounded in this perspective, a whole new conversation opens.

Intersection of Adaptive and Relational Leadership Theory and the Work of Mindsets

Fully embracing complexity leadership theory means recognizing the confluence of intervening leadership theories. The notion of adaptation is a core theme among the emerging work in complexity leadership theory. Adaptive challenges in the organizational context are worked on among those who experience the problem, and the work is centered on learning newness instead of applying current know-how (Heifetz et al., 2009). This can decentralize the power often found in more hierarchical approaches allowing everyone involved in the challenge, not just the person of perceived authority, to explore the leader lens. Uhl-Bien and Marion (2008) noted it as they related it to collective intelligence, or the ability to organize and act on local conditions with the ability to adapt in a complex, emergent environment. We are called upon as leaders, regardless of our position on the spectrum from leading self to leading organizations, to hold adaptive capacity and recognize our organizations as complex

adaptive systems. Complex adaptive systems are dynamic systems able to adapt and evolve in a changing environment (Uhl-Bien & Arena, 2017). Leadership in this context can be a “catalyst for building networks, the structural elements of complex adaptive systems,” resulting in newness of behavior and knowledge (Clarke, 2013). Uhl-Bien et al. (2007) offered complex adaptive systems are “open, evolutionary systems whose agents are dynamically interrelated and who are cooperatively bound by common purpose” (p. 302). Adaptive leadership is grounded in agent interactions that can generate a tension from which new information can emerge for positive change (Lichtenstein et al., 2006).

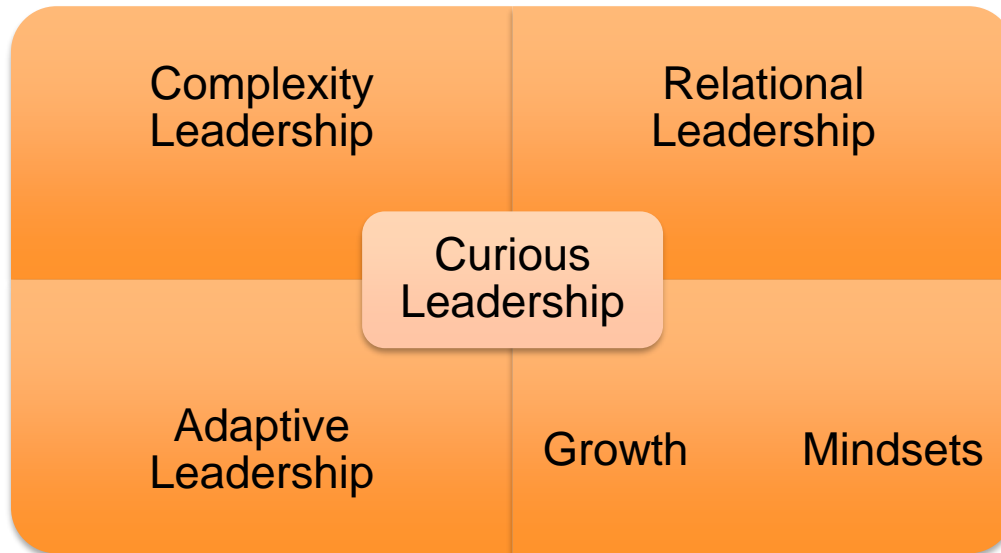
Bringing relational leadership theory into the experience of complexity leadership theory, Uhl-Bien (2006) placed leading in the context of relating, recognizing it as a process of social influence through which emergent coordination and change are constructed and produced. Cunliffe and Eriksen (2011) extended the learning on relational leadership theory through their research by honing what is involved and meaningful in our relational engagement. They suggested that the opportunity is not about how persuasion occurs, or how to instruct or manage impressions, but more about how creating openness, honoring differences, and becoming present in the moment in our relational exchanges. This reframing offered gave energy to what is needed to effectively lead in the experience of complexity. It also stages a context for applying curious leader behavior as a tool to potentially realizing optimal relational engagement.

This can be considered with concepts Uhl-Bien (2006) shared of relational leadership approaches offering more transactional experiences that are not as rich: the

collective approach, where an individual takes on the personality and attributes of the group, depersonalizing self-identity so that it may not be part of the contribution; and the entity approach, when individuals, rely on their own constituted realities, aligning with others to achieve shared goals, but not fully integrating.

In the literature on mindsets, Dweck (2006) compared fixed and growth mindsets as how people situate in the world. When holding a fixed mindset, intelligence is static. With a priority placed on the desire to look smart versus genuinely cultivate learning, challenges are avoided, obstacles are quickly succumbed to, effort is viewed as unimportant, criticism is repelled as not useful, and the success of others is threatening. This posture usually leads to achieving less than full potential. When centered on a growth mind-set, learning is what is wanted and therefore challenges are embraced, setbacks are tackled, effort is seen as vital to the path of mastery, criticism stimulates learning, and the success of others inspires. The result is achieving ever higher levels.

Dweck's (2006) work on mindsets is clear and compelling in its integration with complexity, relational, and adaptive leadership theories. Operating from a growth mindset is required to successfully participate in an organization that faces the challenges of complexity, relational and adaptive leadership. Recognizing interrelatedness, welcoming emergent pathways, living in possibility, and holding comfort in disrupted or disoriented times link relational, adaptive and complexity leadership, and the work of growth mindsets in this research as shown in Figure 2.3.

Figure 2.3*Curious Leadership Theory and Concept Integration***Scales Assessing Curious Behavior**

The review of literature on curiosity demonstrates frequent use of scale development. Table 2.1 summarizes key efforts to create curiosity-centered scales. In some cases, scale usage focused directly on validated instruments centered on curiosity while others used scales that contained measurement of curiosity as a component of a larger assessment addressing multiple behavioral domains.

Table 2.1*Comparison of Curiosity-Centered Scales*

Scale	Purpose	As cited in
<i>Entrepreneurial Curiosity</i> (Jeraj & Antoncic, 2013)	Measures individual alignment with entrepreneurship.	Jeraj & Antoncic, 2013
<i>Work-Related Curiosity Scale</i> (Mussel et al., 2012)	Developed specifically for use in organizations to measure relevance of construct of curiosity for work-related outcomes—also tested in German.	Mussel, 2010; Mussel et al., 2012
<i>Curiosity Exploration Inventory – II</i> (Kashdan et al., 2009)	Refines the measurement of trait curiosity from the CEI.	Kashdan et al., 2009
<i>Openness to Experience from the International Personality Item Pool</i> (Goldberg et al., 2006)	Measures curiosity as a central component.	Silvia, 2008
<i>Social Curiosity Scale</i> (Renner, 2006)	Measures how other people think, feel, and behave.	Jeraj & Antoncic, 2013
<i>Sensory Curiosity Scale</i> (Litman, Collins, et al., 2005)	Assesses individual differences in sensory curiosity.	Jeraj & Antoncic, 2013
<i>Perceptual Curiosity Scale (PCS)</i> (Collins et al., 2004)	Assesses interest in exploring new places and seeking broad range of sensory stimulation and inquiries about examining a particular stimulus.	Litman & Silvia, 2006; Litman & Spielberger, 2003; Silvia, 2008
<i>Curiosity Exploration Inventory</i> (Kashdan et al., 2004)	Measures two distinct but related components of curiosity, exploration, and absorption.	Cavojova & Sollar, 2007; Gallagher & Lopez, 2007; Kashdan et al., 2011; Kashdan & Steger, 2007; Litman & Silvia, 2006; Mussel, 2010; Mussel et al., 2012; Renner, 2006
<i>Curiosity and Feeling of Deprivation Scale Subscale of the Values in Action Inventory</i> (Litman & Jimerson, 2004)	Measures need to increase feelings of competence in acquiring new knowledge, intolerance for unsolvable problems, and persistence in trying to solve a problem or gather information.	Litman, Collins, et al., 2005; Litman & Silvia, 2006

Scale	Purpose	As cited in
<i>Curiosity/Interest in the World Scale of the Values in Action Inventory of Strengths</i> (Litman & Silvia, 2006; Peterson & Seligman, 2004)	Conceptualizes curiosity as global, positive trait that involves tendencies to find all manner of subjects interesting and to enjoy exploration and subsequent discovery.	Litman & Silvia, 2006; Silvia, 2008
<i>Epistemic Curiosity Scale</i> (Litman & Spielberger, 2003)	Assesses individual differences in epistemic curiosity.	Litman, 2008; Litman et al., 2005; Litman & Silvia, 2006; Litman & Spielberger, 2003; Mussel, 2010; Mussel et al., 2012; Renner, 2006
<i>Learning-Achievement Goal Scale</i> (Elliot & Church, 1997)	Measures different achievement goals in relation to learning academic course material.	Litman, 2008
<i>Anger Expression Inventory (AX)</i> (Collins et al., 2004; Spielberger, 1988)	Assesses suppressed anger, anger expressed towards others or objects in the environment, and how often a person tries to control angry feelings.	Collins et al., 2004
<i>NEO Personality Inventory</i> (Costa & McCrae, 1992; Kashdan et al., 2013)	Measures the Big Five personality traits (neuroticism, extraversion, openness, conscientiousness, and agreeableness).	Kashdan et al., 2013
<i>Melbourne Curiosity Inventory</i> (Naylor, 1981)	Measures state (how one feels at a particular moment) and trait (how one feels in general) curiosity.	Leonard & Harvey, 2007; Olson & Camp, 1984; Naylor, 1981; Reio & Wiswell, 2000; Reio et al., 2006; Renner, 2006
<i>State and Trait Inventory</i> (Spielberger, 1979, as cited in Collins et al., 2004)	Measures state and trait anxiety, anger, and curiosity.	Collins et al., 2004; Kashdan & Roberts, 2004; Litman & Spielberger, 2003; Olson & Camp, 1984; Reio & Callahan, 2004; Reio et al., 2006; Reio & Wiswell, 2000
<i>California Adult Q-Sort</i> (Block, 1978, as cited in Kashdan et al., 2013)	Measures wide-ranging personality constructs, to include curiosity and provides for self-reporting and informant data.	Kashdan et al., 2013
<i>Proverbs Test</i> (Maw & Maw, 1975)	Measures venturesomeness and the propensity to confront the unknown.	Olson & Camp, 1984

Scale	Purpose	As cited in
<i>Academic Curiosity Scale</i> (Vidler & Rawan, 1974)	Measures general curiosity in adults.	Olson & Camp, 1984; Reio et al., 2006
<i>Ontario Test of Intrinsic Motivation Specific Curiosity subscales</i> (Day, 1971, as cited in Olson & Camp, 1984)	Measures general curiosity in adults.	Olson & Camp, 1984
<i>Novelty Experience Scale</i> (Pearson, 1971)	Measures the tendency to approach or avoid novel stimuli, using a forced-choice reference format.	Collins et al., 2004; Litman & Spielberger, 2003; Reio & Wiswell, 2000; Reio et al., 2006
<i>Sensation Seeking Scale</i> (Zuckerman et al., 1964)	Assesses individual differences in the tendency to seek novel sensory stimulation by engaging in social exploratory behavior.	Collins et al., 2004; Litman & Spielberger, 2003; Olson & Camp, 1984; Reio et al., 2006; Reio & Wiswell, 2000
<i>Interpersonal Curiosity Scale</i> (Singer & Antrobus, 1963)	Measures intrinsic motivation to seek people-information.	Litman & Pezzo, 2007
<i>Experimental Perceptual Curiosity Questionnaire</i> Adapted from existing curiosity measures or constructed for specific study	Assess individual differences in reactions of interest to a variety of different types of novel sensory stimulation.	Collins et al., 2004

Several important observations about the scales should be made. First, as noted by Voss and Keller (1983), there has been consistent representation in the scales of curious behavior beginning in 1950 and continuing to the contemporary period of research on the concept. Over time, there has been a clear trend in measuring curiosity from a general concept to a variety of specific contextual distinctions. The work of Vidler and Rawan (1974) and Day (1971; as cited in Olson & Camp, 1984), illustrates the early work on scale development that was focused in more general terms on the concept of curiosity. In recent years, scale developers have explored finer distinctions, as evidenced in Kashdan et al. (2004), Litman and Spielberger (2003), Mussel et al.

(2012), and Jeraj and Antoncic (2013). These finer distinctions offer the opportunity to focus research more deeply in specific areas such as interpersonal curiosity and entrepreneurial curiosity, thereby expanding the potential for new knowledge development and its practical application. Yet currently, a scale for measurement of curious leader behavior is not available, reinforcing the need to develop a point of view and the potential instruments to support leader and organizational learning and development.

Of particular interest to this dissertation is the evolution of scales on curious behavior that have a focus in the work environment. Noteworthy on this are the Work-Related Curiosity Scale by Mussel et al. (2012) and Jeraj and Antoncic's (2013) focus on entrepreneurial curiosity. These provide a contextual examination meaningful in exploring this concept apropos leaders in complex organizational systems. Mussel et al.'s is a work-place scale originated in German. Jeraj and Antoncic (2013) included a cross-cultural element in their scale, offering recognition of the contemporary global nature of work. Exploratory and confirmatory factor analysis were used in both cases to validate these scales.

Overall, it appears that parallel concepts share meaning with the terms curious and curiosity. Embedded terms such as "interest," "openness," "exploration," and "discovery" are noted in the research in a variety of scales and may have meaning, and prompt expanded consideration in evaluating the idea and behavior of being curious.

Proposing a Multi-Dimensional Construct for Measuring Curious Leader Behavior

When considering the literature review combined with my years of professional practice, multiple dimensions emerge as intersections among relational leadership,

adaptive leadership, complexity leadership, growth mindsets and curious leader behavior. Table 2.2 documents the multiple dimensions identified for this research and their assigned definitions. In addition, the references from this review demonstrate how these behaviors have appeared in my professional practice.

Table 2.2

Outcomes of Curious Leader Behavior Noticed in Literature and Practice

Emerging Constructs	Literature Reflections	Practice Opportunities
<p><i>Honor Emergence</i></p> <p>Lead with confidence in knowing what may be of greatest value is yet to be revealed.</p>	<p>Bolman & Deal, 1991; Cunliffe & Eriksen, 2011; Dweck, 2006; Hazy & Uhl-Bien, 2015; Lichtenstein et al., 2006; Uhl-Bien & Arena, 2017; Uhl-Bien et al., 2007</p>	<p>Lead with “yes” instead of finding ways a suggestion or idea won’t work.</p>
<p><i>Hold Ambiguity</i></p> <p>Able to operate in uncertainty.</p>	<p>Dweck, 2006; Kashdan, 2009</p>	<p>Quiet your leader expertness for solutions to develop through others.</p>
<p><i>Embrace Interrelatedness</i></p> <p>Affirm and engage the value of our human connectedness over individualism.</p>	<p>Hazy & Uhl-Bien, 2015; Kashdan et al., 2011; Kashdan & Roberts, 2004; Lichtenstein et al., 2006; Uhl-Bien & Arena, 2017; Uhl-Bien et al., 2007</p>	<p>Tap into colleagues outside of your immediate sphere to get their insight on a plan you are developing.</p>
<p><i>Engage Experiments</i></p> <p>Open to act knowing there is value regardless of the outcome.</p>	<p>Heifetz et al., 2009</p>	<p>Forgo the notion of applying Best Practices. After all, applying another’s best practice may not be in service to your unique experience. Take a chance on experimenting in an inventive way to see what develops.</p>
<p><i>Situate in Continuous Learning</i></p>	<p>Heifetz et al., 2009; Uhl-Bien et al., 2007</p>	<p>Invite a staff member to participate in a meeting you cannot attend.</p>

Emerging Constructs	Literature Reflections	Practice Opportunities
Recognize learning comes from what we encounter and engage with—every day.		
<p><i>Assume Fluidity</i></p> <p>Recognize our experience as continuous and dynamic, rather than discrete and a sum of parts.</p>	Dweck, 2006; Hazy & Uhl-Bien, 2015; Uhl-Bien & Arena, 2017	Reframe traditional organizational structures to open more informal, real time communication flow.
<p><i>Spark Newness and Innovation</i></p> <p>Create opportunity for new ideas, ways or products; driven to discover something new.</p>	Hazy & Uhl-Bien, 2015	Reframe idea generation as an embedded social process that all can enjoy.
<p><i>Compel Power Evenness</i></p> <p>Eliminate power dominance in a relationship; enable a state of co-creating.</p>	Heifetz et al., 2009	Quiet your expertness in order to give voice to the ideas of a staff member.
<p><i>Inspire Provocative Collaboration</i></p> <p>Overlook real or perceived organizational boundaries while engaged with others to achieve inspired results.</p>	Hazy & Uhl-Bien, 2015; Heifetz et al., 2009; Jeraj & Antoncic, 2013; Uhl-Bien & Arena, 2017	Assemble a project team with boundary spanning features.
<p><i>Propel an Intercultural (Intersectional) Experience</i></p> <p>Advocate for an experience honoring the complexity of our interculturalism.</p>	Uhl-Bien & Arena, 2017	Ensure every decision-making structure has the benefit of an engaged intercultural experience.
<p><i>Enable Person Centered Growth</i></p> <p>Development focused on a person's uniqueness.</p>	Cunliffe & Eriksen, 2011; W. Kahn, 2007; Litman & Pezzo, 2007; McEvoy et al., 2013	Assertively invite individual team members to create and activate development interests meaningful to their experience.
<p><i>Center Humanness</i></p> <p>Honor and care for people in their whole person; see and know them for who they are and all they offer.</p>	Cunliffe & Eriksen, 2011; W. Kahn, 2007; Litman &	Invite others to express who they are in their “whole

Emerging Constructs	Literature Reflections	Practice Opportunities
	Pezzo, 2007; McEvoy et al., 2013	person;" beyond their work identity.

The dimensions depicted in Table 2.2 were tested to determine which supported a multi-dimensional construct for curious leader behavior.

In Closing

As leaders and organizations experience, we are predisposed to want to try to control the behaviors of the collective (Uhl-Bien & Marion, 2008). The literature on the theories underpinning my research provides an integrated context within which curious leader behavior may be a catalyst for accelerating. Using this theoretical framework and emerging constructs of curious leader behaviors, in Chapter III I will propose a scale constructed from the intersecting theories and concepts and the methodology I will use to validate it, and further explore curious leader behavior within the leader experience.

CHAPTER III: THE STUDY

With leaders facing increased complexity as they grow the business of their organizations, curious behavior will provide an advantage for their positioning, accelerating growth of people and place. Having a measure to assess a leader's propensity to engage curious behavior will be helpful on several levels, such as the following:

1. Creating more reflective leaders.
2. Cultivating growth mindsets.
3. Embedding within leaders a deeper practice of adapting.
4. Enhancing individual reflective development, or sense-making around how one might strengthen their position of *leading self*.
5. Inviting leaders to think about how they engage with other's differently, either direct team members or boundary spanning relationships.
6. Unjamming complacency and curating possibilities for newness and innovation.
7. Assessing the sense of curiosity within a team, recognizing talent and/or development needs.

In this chapter, I review the research questions addressed in this dissertation, articulate the worldview in which this research is situated, and substantiate the design of the research and the methods and techniques the research engaged.

Research Questions

This research to develop and validate a scale measuring engagement in curious leader behavior was shaped by these four questions:

RQ1. What perceptions exist among leaders about the role of potential curious capacity sub-constructs and their relationship to curious leader behavior?

RQ2. What factors emerge from the factor analysis related to the sub-constructs identified through the literature and professional practice related to curious leader behavior?

RQ3. What correlations among the factors are present from the factor analysis?

RQ4. How do the results from the quantitative phase align with respondent perceptions?

RQ1 was addressed through the qualitative (QUAL) phase of this research, and RQs 2, 3, and 4 were informed through the quantitative (QUAN) phase of this research.

Research Philosophy, Design, and Method

This research was framed as the intersection of three successive decisions I applied to the work: my philosophical worldview, selecting the study design, and choosing the research methods (Creswell, 2014; Edmondson & McManus, 2007).

Approaching the study with this formula offered integrity in study execution.

The philosophical perspective provides a framework to guide the research. Although survey design and scale development are anchored in a positivist paradigm, a more emergent view offers recognition of the creative and subjective elements of design and knowledge construction, in addition to the mathematical approach (Baron, 2018).

The philosophical perspective or worldview I applied to this research is interpretive constructivism (Creswell, 2014). I believe new knowledge is generated, or constructed, through interacting agents questioning and offering, subjective meanings, with multiple realities possible (Creswell, 2014; Rubin & Rubin, 2012; Tashakkori & Teddlie, 1998). Meaning resides in the complexity, not the narrow lanes (Creswell, 2014), representing a view that is generative versus reductive. Cunliffe (2011), in her work on revising contemporary qualitative research and theorizing, held this to be intersubjectivism, that knowing is created intuitively and deliberately through interrelationships in living one's life. In fact, this is what compelled me to the topic of curious leader behavior. When curious, people are open to possibilities, have a sense of co-creation, and situate themselves in a mindset open to multiple perspectives and data in order to form meaning. I consider intersubjectivism as inherent in curious engagement.

Study Design Overview

My study design and methods arise from my interpretive constructivist perspective. The study involved mixed methods, using a two phase, sequential, exploratory design (Creswell & Plano Clark, 2011; Johnson & Onwuegbuzie, 2004; Tashakkori & Teddlie, 1998). The purpose of the design is centered on *development*, where the results from the qualitative phase, or first part of the research, inform the results of the quantitative phase, or second part of the research (Greene et al., 1989). In the language of mixed methods, the study method is QUAL→QUAN. Phase 1, the QUAL phase, relied upon focus groups, using semi-structured questions to engage leader perspective on the meaning of curious leader capacity in practice. Phase 2, the

QUAN segment of the research, comprises the development of a validated scale measuring the propensity for a leader to engage in curious behavior.

Phase 1 Overview: Exploratory Qualitative Study

The qualitative study involved exploring leader perceptions about the curious leader behavior and how it relates to the practice of modern leadership. This was undertaken by convening business leaders in focus groups. Focus groups made it possible to convene a group of individuals representative of the target population (Rubin & Rubin, 2012) whose ideas contributed to understanding the curious leader behavior concept. This exploratory procedure was designed to learn and translate experiential perspective about curious leader capacity from professionals in the field, leading to refinement of the Phase 2 study. Twelve sub-constructs related to the curious capacity of leaders were developed from the extensive literature review and my professional practice experience. This phase of the research was designed to test the resonance of the 12 sub-constructs for leaders, ultimately determining if all or a subset of the sub-constructs would situate effectively in the Phase 2 quantitative study.

Three focus groups were convened to explore and discover perceptions of curious behavior of leaders in the work environment. Direct email was used to contact business leader participants, along with networking with my colleagues. Each focus group was 90 minutes. A total of 20 leaders participated in the focus groups. A copy of the invitation to prospective focus group participants is included as Appendix C. The consent form for participation is included as Appendix D.

The focus groups were convened both in person and using Zoom. For each focus group, the same outline was used, with a semi-structured interview approach. The focus

group discussions were recorded, and narrative transcriptions completed using a professional, third-party transcription service. Narrative analysis was used in the evaluation of the focus group feedback. The demographic composition of the exploratory focus groups is shown in Table 3.1.

Table 3.1

Demographic Information of Focus Group Participants (N = 20)

Focus Group	Participant #	Industry	Gender	Generational Band
1	1	Healthcare	Female	Baby Boomer
	2	Financial Services	Female	Gen X
	3	Higher Education	Female	Baby Boomer
	4	Non-Profit Healthcare	Female	Gen X
	5	Technology	Female	Gen Y
	6	Non-Profit Human Services	Female	Gen X
	7	Management Consulting	Female	Gen Y
	8	Financial Services	Male	Gen Y
	9	Management Consulting	Male	Gen X
	10	Financial Services	Male	Baby Boomer
2	1	Consumer Goods	Female	Gen Y
	2	Military - Civilian	Female	Baby Boomer
	3	Higher Education	Female	Baby Boomer
	4	Public Safety	Female	Gen X
	5	Consumer Goods	Female	Gen X
	6	Healthcare Technology	Female	Gen Y
	7	Consumer Goods	Female	Gen X
3	1	Financial Services	Female	Gen Y
	2	Marketing Technology	Female	Gen Y
	3	Marketing	Female	Gen Y

The following criteria were used to identify participants for the sessions:

- Focus Group #1: Self-identified leaders with no other demographic parameters ($n = 10$)
- Focus Group #2: Women leaders ($n = 7$)
- Focus Group #3: Gen Y leaders ($n = 3$)

Participants were coded using their focus group number, an assigned participant number, the industry in which they were employed at the time of the focus group, their declared gender identification, and the generational band to which they belonged at the time of their focus group.

As part of my brief introduction, participants were informed that the research was being conducted to examine the relationship between the curious capacity of leaders and the implications of engaging curious ways of leading in the modern workplace. Participants were told at the outset that, for the purpose of this research, I defined curious leadership as follows:

- Situated in a generative mindset, gesturing through openness, invitation, and inquiry that what is not yet known will bring something greater than what is known.
- The ability of leaders to quiet expertness to optimize relational growth and impact, newness, and innovation in the complexity of human systems.

In the focus groups, participants reflected on a set of behaviors I had identified and responded with their thoughts regarding the relationship of such leader behaviors to curious leader capacity. The purpose was to gather data through the lived experience of leaders that refined the item development and survey construction of the Phase 2

research. High-level insights compiled from research and practice aggregate data were introduced to the participants to get their perspective about emerging themes. The focus groups were 90 minutes each.

Phase 2 Overview: Quantitative Study

As a measurement tool, scales enable capturing the essence of a concept with greater precision than any one item (DeVellis, 2017). Research interest generally moves beyond individual questions to constructs (DeVellis, 2017), examining the impressions or knowledge available by aggregation of reliable scale items.

The quantitative component of scale construction and validation was undertaken as the second phase of this research. In Phase 2, a conversational survey design (Baron, 2018) was used to develop and validate a scale addressing the construct of curious leader capacity. One hundred items (Appendix A) were tested. All were my original constructions generally reflecting work-related behaviors and circumstances associated with curious behavior.

Drawing from the literature review and my practice, 12 sub-constructs related to curious capacity, were identified as possible dimensions for items to potentially aggregate as scale components (DeVellis, 2017). Each of the 100 items were mapped to one of the 12 sub-constructs based on knowledge I developed through the literature review and professional practice. Each sub-construct comprised seven to 11 items. The 12 sub-constructs and examples of associated items are shown in Table 3.2. Prior to data collection and factor analysis, the 12 sub-constructs were considered possible separate structures within the overarching curious leader behavior construct.

Table 3.2*Proposed Multidimensional Construct and Selected Items for Curious Leader Behavior*

Emerging Constructs	Examples of Items
<i>Honor Emergence</i>	<p>The best path forward is clearly defined. (Reverse coded)</p> <p>As a leader, I find it important to ensure a controlled outcome on project work. (Reverse coded)</p> <p>I like to execute with detailed project plans. (Reverse coded)</p>
<i>Hold Ambiguity</i>	<p>I am comfortable not having all the answers.</p> <p>Organizational boundaries are more confining than helpful.</p> <p>Rules are helpful to have in a work environment. (Reverse coded)</p>
<i>Embrace Interrelatedness</i>	<p>I believe there is a lot I can learn from others.</p> <p>If I had it my way, I would make decisions without the input of others. (Reverse coded)</p> <p>I regularly seek out the thoughts and opinions of others about my work.</p>
<i>Engage Experiments</i>	<p>Taking a risk is something I am inclined to avoid. (Reverse coded)</p> <p>I experiment with new things at work all the time.</p> <p>I like to know how something will end before I begin. (Reverse coded)</p>
<i>Situate in Continuous Learning</i>	<p>I am often intrigued.</p> <p>I find people who ask a lot of questions annoying. (Reverse coded)</p> <p>I am driven to read the latest articles on business research in my field.</p>

Emerging Constructs	Examples of Items
<i>Assume Fluidity</i>	<p>I get excited about change.</p> <p>My work involves many moving parts that I need to reduce or control. (Reverse coded)</p> <p>I get frustrated when I think I have the answer and then something new pops up to consider. (Reverse coded)</p>
<i>Spark Newness and Innovation</i>	<p>I view rules as confining.</p> <p>I prefer to follow best practices than be inventive. (Reverse coded)</p> <p>When filling an open job, I am intentional about hiring people who think differently than me.</p>
<i>Inspire Provocative Collaboration</i>	<p>I prefer to work with people who think differently than me.</p> <p>I often co-create solutions with others.</p> <p>Being the expert in my work is important to me. (Reverse coded)</p>
<i>Compel Power Evenness</i>	<p>I am comfortable putting my ideas aside to give voice to another's ideas.</p> <p>I like being right. (Reverse coded)</p> <p>The ideas of others are as good, if not better, than my own.</p>
<i>Inspire Provocative Collaboration</i>	<p>I prefer to work with people who think differently than me.</p> <p>I often co-create solutions with others.</p> <p>Being the expert in my work is important to me. (Reverse coded)</p>
<i>Propel an Intercultural (Intersectional) Experience</i>	<p>I would rather spend time with people like me than people different than me. (Reverse coded)</p> <p>I enjoy spending time with people I have yet to get to know.</p> <p>I think of my work as a leader as being connected to the global scene.</p>
<i>Enable Person Centered Growth</i>	<p>I am open to ask less experienced employees to stand in for me at important meetings.</p> <p>I regularly reflect on my experience to see what I might change going forward.</p> <p>I would rather make decisions as the team leader than involve everyone. (Reverse coded)</p>

Emerging Constructs	Examples of Items
<i>Center Humanness</i>	<p>It is important to express care for the personal lives of others at work.</p> <p>Policies are really helpful to ensure all employees are treated the same. (Reverse coded)</p> <p>For the people I work most directly with, I can tell you what brings them joy in life.</p>

There are differing views about the stages of scale construction, yet all pathways are similar in overall approach (de Vaus, 2014; DeVellis, 2017). Following the DeVellis (2017) model, the following stages were engaged in constructing the survey used in the research detailed in this chapter:

1. *Determine clearly what it is you want to measure.* In this work, I endeavored to validate a scale to measure a leader's propensity to engage curious behavior. Based on this, curious leader behavior is defined here as follows: Situated in a generative mindset, gesturing through openness, invitation, and inquiry that what is not yet known will bring greater than what is known; the ability to quiet expertness to optimize the intensity of relational growth and impact, newness, and innovation in the complexity of human systems.
2. *Generate an item pool.* A 100-item pool for this research was developed and further honed through the research, with factor analysis narrowing the item pool in Phase 2. Items were generated solely by the researcher, with the intent of focusing them on potential leader behavior in the work environment. Each item was considered as to its meaning and relatability to curious leadership as derived from the theories and concepts framing this research (adaptive leadership theory, complexity leadership theory, relational

- leadership theory and growth mindsets). A copy of the survey item pool is attached as Appendix A.
3. *Determine the response format for measurement.* A six-point Likert scale was used to measure the degree to which participants agree with each proposed survey item. The survey, from left to right on the instrument, read as: 1 (*strongly disagree*), 2 (*disagree*), 3 (*somewhat disagree*), 4 (*somewhat agree*), 5 (*agree*), and 6 (*strongly agree*). The six-point Likert scale was selected over a five- or seven-point scale, to exclude a neutral position. This meant that respondents had to either disagree or agree with the proposed item.
 4. *Have initial item pool reviewed by experts.* With the proposed scale items constructed, content validation (Salkind, 2011) was performed on the items by asking a small group of experts in the field of leadership to assess how closely items related to each sub-construct and the definition of curious leader behavior.
 5. *Consider inclusion of validated items.* In the survey item list, intention was given to develop sub-constructs, with each item evaluated and assigned to a primary construct. Twelve sub-constructs emerged from the theoretical analysis in the literature review, with related key behaviors for each, designed to ensure the items fully support the overarching construct of curious leader behavior. Validated items from existing scales related to curiosity were not selected for two reasons: there is not a current scale that exists that measures curious leader behavior and, most existing scales on curiosity do

not have a work environment orientation. It was the intention of this research to focus the items within the context of a work community, more specifically a modern, complex system, to ensure they are relatable in a compelling way for the participants. The 100 items originated for this research are drawn from the researcher's practice knowledge and in-depth literature review, which places the framework holding the item pool uniquely linked to the theories associated with adaptive leadership, relational leadership, complexity leadership and the work of mindsets.

6. *Administer items to a pre-test sample.* Using Survey Monkey as the tool to distribute the survey, a convenience sample of 12 leader practitioners was solicited, resulting in seven respondents taking the pilot survey before launching to the larger sample. Emerging suggestions for modifications to the survey were minor and addressed. The pre-test results were included in the study data file.
7. *Evaluate the items.* Items were evaluated during the factor validation and reliability-testing phase and reduced according to the results of the analysis.
8. *Optimize the scale length.* Following the application of factor analysis, scale items were optimized and finalized.

Target Population and Sample

A target convenience sample of up to 500 respondents was planned and 315 respondents eventually participated. For this research, the respondent community consisted of anyone who identified as a leader within the scope of these criteria:

- Responsible for delivering results in the work environment through how one lead's self or lead's others
- Job role may or may not include supervision of a direct team
- Any tenure as a leader
- Currently working as a professional within an organizational system, whether a for-profit, not-for-profit, or government organization

The primary means of communication was an invitation to participate through email (Appendix B). The email communication included an overview of the research. When fully launched, the communication was adapted, released, and networked in multiple ways to get maximum participation. These included the following "pools":

- My personal LinkedIn and Facebook accounts.
- Proprietary lists of leaders held by my company who could be reached through email.
- The Cincinnati USA Regional Chamber of Commerce Leadership Alumni Group.
- The Antioch Leadership and Change PhD Alumni and Student Group.

The initial communication network was invited to participate in the research and invite their networks to participate in the research, with the intent of expanding the respondent community using a snowball technique.

Survey Instrument

According to Baron (2018), the format of the survey, when well planned, guides participants through a conversation. She proposed the following format to stage the best survey outcome:

1. *Survey introduction*—An effective opening that repeats or extends the initial information conveyed in the communication to invite participants to the survey. In this space, the opportunity to reflect on the potential benefit of participating, as well as consider any potential bias and the credibility of the researcher is available to the participants. Human subject ethics information, the assurance of confidentiality and anonymity, the voluntary nature of submission and contact information are also included in the introductory information.
2. *Qualifying filter questions*—Questions that determine whether the recipient of the survey meets the target population.

For this research, the respondent community consisted of anyone who identified as a leader within this scope:

- Responsible for delivering results in the work environment through how one lead's self or lead's others
- Job role may or may not include supervision of a direct team
- Any tenure as a leader
- Currently working as a professional within an organizational system, whether a for-profit, not-for-profit or governmental organization

Diversity in the subject pool, including age, ethnicity, gender identity, organizational seniority, organizational size, industry, and role/position title, were desired.

3. *Opening questions.* Ease the respondents into the survey by drawing them into a reflective posture, such as using an overall rating question related to the respondent's perception of their level of curiosity.
4. *Topic sections.* Offer a way to group items creating a manageable pathway through the items. Identifying the items into relatable topics allows the respondent to apply consideration and experience a natural break, thereby creating a more efficient experience for the respondent. While sections were created to organize ease for the respondent, each section shared one topic question: "Thinking about your experience leading or being led, how strongly do you agree or disagree with the following statements?"
5. *Demographics.* Allow the respondent to offer helpful data to the research. Demographic questions generally center on environmental questions pertaining to the experience of the respondent or on the individual respondent directly. In this study, the demographic questions included:
 - Gender identity
 - Age or generational band
 - Highest educational level completed
 - Years working
 - Years as a leader of others
 - Current industry of employment
 - Approximate number of employees in company
 - Years with this company

- Currently leading a team (If yes, size of team as indicated through thresholds presented).
6. Final overall rating – provides respondent a final opportunity to share their impressions about the concept, having a more informed view after working through the survey items. For this research, the respondent had an opportunity to rate their perceptions of the construct-related items at the conclusion of the item rating section. The following prompt was administered:

To what degree do you perceive these statements as true about leader behavior?

A slider-scale, from 1 to 100, was offered to register a response. The statements included were the following:

- When I am curious at work, I learn more.
- When I am curious at work, I am more likely to innovate or develop something new.
- When I am curious at work, I am more able to work through things that are unclear.
- When I am curious at work, I can adapt more easily to change.
- When I am curious at work, deeper collaboration is possible.
- When I am curious at work, I am more likely to develop relationships with people of different cultures and experiences other than my own.
- When I am curious with others at work, power differences that may exist are reduced.

- When I am curious with others at work, I more deeply engage with them in a person-centered way.
7. Final open-ended question – provides respondent an opportunity to leave any final comments as conclusionary remarks, given their experience with the survey. To provide the respondent with a final opportunity to leave any remarks in this survey, the following open-ended question was included: If you have any thoughts or inspirations about leadership from taking the survey, please share those here.
 8. Thank you. Offering gratitude for the time and reflection offered by respondents through completing the survey.

With the scale items constructed, content validation (Salkind, 2011) was performed on the items by asking a small group of experts in the field of leadership to assess how closely the items relate to each sub-construct and the definition of curious leader behavior. The item pool was reviewed by this expert group, which included my dissertation committee.

Following this review, I extended the expert review by engaging a scholar-practitioner in the Think Aloud Protocol (Efklides, 2006). Using this tool, a researcher, partnered with a person selected to provide content validity, uses an active oral conversation process to extract first impression thoughts about what they hear. The researcher reads an item aloud, and the listener “thinks out loud” about what first comes to mind and any other question or comment that arises when they hear the item. The researcher then captures this data and considers it when determining content validity and the appropriateness of the item for the scale development process. This procedure

to strengthen content validity was performed following the expert group's approval of the items to further refine the item pool.

In the survey item list, attention was given to develop sub-constructs, with each item evaluated and assigned to a primary construct. Twelve sub-constructs emerged from the theoretical analysis in the literature review and were designed to ensure the items fully support the overarching construct of curious leader behavior.

Data Analysis

Regarding descriptive statistics, Tashakkori and Teddlie (1998) suggested that regardless of the nature, type, and scale of measurement, there are two basic research principles that must be explored about collected data: validity and reliability.

Construct validity is the product of adequate definitions and measures (Creswell, 2014; Nardi, 2015; Tashakkori & Teddlie, 1998). Factor analysis, a statistical technique for evaluating a set of interval-level, non-dichotomous variables (de Vaus, 2014), is a primary method to evaluate construct validity in scale development. Its purpose is to reduce a set of variables to a smaller set of underlying variables known as factors. De Vaus (2014) explained that factor analysis determines which variables belong together and is a method for combining these variables into scales. Specifically, exploratory factor analysis is used to determine the underlying structure of a set of items, and confirmatory factory analysis is used to confirm a pattern of relationships grounded in theory or prior analytic results (DeVellis, 2017).

The two main factor models associated with exploratory factor analysis are the component model and common model, with the component model assuming no measurement error and the common model attempting to account for measurement

error (Schmitt, 2011). In this research, principal component analysis (PCA), a method of exploratory factor analysis that assumes no measurement error (Schmitt, 2011), drove item reduction by assessing if items and components should be retained (Baron, 2018). Varimax rotation—the loading of an item on its primary factor (DeVellis, 2017)—was applied. This method was selected as a frequently preferred approach to facilitate interpretation of the findings.

Using the findings of principle component analysis, confirmatory factor analysis was performed, using SPSS AMOS, to show the goodness of fit of the data (Baron, 2018). Confirmatory factor analysis (CFA) helps answer whether the factors emerging are affirmed constructs by their associated items. Execution of the factor analysis informed which items are situated within identifiable subscales and whether or not the subscales share a relationship within the larger construct.

Reliability is the determination of whether a test measures something consistently (de Vaus, 2014; DeVellis, 2017; Nardi, 2015; Salkind, 2011; Tashakkori & Teddlie, 1998). The Cronbach alpha statistic is used to determine internal reliability; the higher the result within the range of .0 to 1, the more reliable the scale (de Vaus, 2014). For a scale to be determined reliable, the alpha should be at least .7 (de Vaus, 2014). For this research, the alpha statistic was applied to determine reliability within the scale.

Ethical Considerations

Before a study begins, it is incumbent upon the researcher to address the ethical considerations of doing research by creating descriptions for participants of the selected topic, the measures used, the people or organizations intended to engage in the

research, the analysis of data, and storage of data (Creswell, 2014; Fowler, 2014; Nardi, 2015; Rubin & Rubin, 2012). While I did not foresee any ethical concerns with my topic of research, following the proper processes and requirements to ensure no harm to participants and their privacy and confidentiality was vital. Several necessary considerations here were critical consideration in sampling, measuring, and analyzing and storage of data, disseminating and using findings, and so forth. (Nardi, 2015). To ensure ethical considerations for this research, an application with the Antioch University Institutional Review Board (IRB) was filed, reviewed, and approved prior to proceeding with the research. Data was retained and stored electronically, maintained by the researcher in password protected files.

CHAPTER IV: RESULTS

The purpose of this research study was to explore the underpinnings of curious capacity and to uncover behaviors in service to meeting the modern leadership challenge. More specifically, I asked, what does it mean to be a curious leader and what behaviors may directly drive curiosity in the modern organizational experience? Knowing the answer to this allows leaders to more practically engage self and the development of others in leading meaningfully with curious capacity.

The research questions (RQs) pursued in this study and responded to in this chapter were as follows:

RQ1. What perceptions exist among leaders about the role of potential curious capacity sub-constructs and their relationship to curious leader behavior?

RQ2. What factors emerge from the factor analysis related to these sub-constructs identified through the literature and professional practice related to curious leader behavior?

RQ3. What correlations among the factors are present from the factor analysis?

RQ4. How do the results from the quantitative phase align with respondent perceptions?

Phase 1—Qualitative Study

This phase of the study focused on RQ1: What perceptions exist among leaders about the role of potential curious capacity sub-constructs and their relationship to curious leader behavior? Using the focus group method, each of three focus groups that were convened included three parts:

1. Introduction and opening question

2. Content questionnaire and further focus group questions
3. Closing

Part 1 of Focus Group: Introduction and Opening Question

To engage the group from the outset, and begin framing the idea of linking curious behavior to the work environment, participants were invited to first consider this question: When you consider the behavior of curiosity in the workplace, what comes to mind? Participants discussed their perceptions to this prompt and their statements are presented in Appendix E. Themes resulting from this discussion were used to inform Phase 2 of the research; they included:

- Curiosity is perceived as a driver of newness and innovation, a disruptor of the status quo.
- Curiosity as a feature of organizational culture demonstrates a value for openness and transparency.
- Curiosity is a connector, supporting relationship development affecting positively the quality and completion of work.
- Curiosity assumes you don't have to have an answer; it offers permission to consider and explore.

Following the opening discussion, the focus groups offered meaningful insights and perspectives resulting from reflection on the pre-designed content questionnaire. These results are discussed in Part 2.

Part 2 of Focus Group: Content Questionnaire and Further Questions

Participants were then invited to consider and complete a reflective exercise that I prepared to learn participant leader perspectives on the 12 sub-constructs identified with expected linkages to curious leader capacity. In reflecting upon and considering the exercise, participants evaluated each construct, including its definition and an illustrative example, for meaningfulness to curious leader behavior and then rated their impressions on the meaningfulness scale from *not meaningful* to *highly meaningful*. The reflective exercise is shown in Appendix F. Once complete, participants shared and discussed their perspectives, using these questions as prompts:

1. Share the concepts that received your highest meaningfulness rating related to the behavior of curiosity at work.
 - a. What meaning does the concept have for you in the workplace?
 - b. What relationship do you notice it has to being curious in the workplace?
2. What concepts received your lowest rating? What makes it so?
3. What gets in your way of being more curious in the workplace?

Additional questions for the focus groups included these:

- In what ways do you notice your own sense of curiosity showing up in the workplace?
- Think about how you exercise or experience curiosity in the workplace. When curious, what do you notice about the outcome/impact?
- What might we have not yet talked about today about the curious capacity of leaders that you would like to share?

Emerging from discussion of these questions, participants offered 52 statements clarifying what they identified from their experience as most and least relatable regarding the 12 sub-constructs designed for relatability to curious leader capacity. As a result, the 12 sub-constructs were compressed to four, which were foundational to building the framework for Phase 2 of the research.

The following discussion highlights how these sub-constructs were determined and impacted by the focus group data and deeper reflection by the researcher:

1. *Honor Emergence and Hold Ambiguity*: It was clear in the feedback that these two sub-constructs share an intersection; there is inherent ambiguity in honoring what emerges in our experience. Given the alignment within these two constructs, I combined them to one sub-construct: *Encourage emergence*.
2. *Assume Fluidity*: While acknowledging that the modern world means leaders experience more fluid change, it was determined this concept is inherent in others that remained more resonant. As a result, this concept was removed from Phase 2 of the research.
3. *Spark Innovation and Newness*: Innovation and newness were noted as important concepts in the modern world. However, the focus group feedback identified them as results of other behaviors, such as encouraging emergence and engaging experiments. As a result, this sub-construct was removed from the Phase 2 research.
4. *Propel an Intercultural Experience*: Consistent with the above, this sub-construct was seen as an outcome of others in the study that have been

- retained, such as embracing interrelatedness and honoring humanness. As a result, it was removed from the Phase 2 research.
5. *Situate in Continuous Learning* and *Engage Experiments*: It was noted that these two constructs are both grounded in learning. *Engage Experiments* is perceived to reflect a more active experience in learning, and therefore was retained from the two while *Situate in Continuous Learning* was dropped.
 6. *Enable Person-Centered Growth* and *Center Humanness*: With these two sub-constructs, the idea of *Enable Person-Centered Growth* is contained within focusing on the humanness of others. For this reason, *Enable Person-Centered Growth* was eliminated in favor of retaining a focus on humanness. The final sub-construct was re-crafted as *Honoring Humanness*.
 7. *Enable Interrelatedness*: This sub-construct robustly stood on its own within the focus group feedback. Leaders commented that expressing curiosity about others is a relationship-building tool. This was also discussed as an impactful way to move beyond otherwise confining boundaries.

Part 3 of Focus Group: Closing

Participants were thanked for their openness and insights in support of the research. I explained that the second phase of the research was informed by their feedback and invited them to participate. Participants were asked to complete a brief, anonymous demographic questionnaire before concluding the session.

Overall Focus Group Learnings

The focus group feedback was highly instructive in verifying the intentions of this research. During narrative analysis of the transcribed discussions, themes were noticed that aligned with the established sub-constructs to justify continuing to use them in the research, with some modifications. The validation process for identifying sub-constructs to continue into Phase 2 of the research included an assessment to determine if the total number of sub-constructs should continue to be used or be reframed in some way, and what additional considerations should guide honing the sub-constructs for use in Phase 2.

Table 4.1 shows the paring of the sub-constructs from the Phase 1 research, along with substantive comments from the focus groups that support the retained sub-constructs.

Table 4.1

Compression of Sub-constructs from 12 to Four and Related Evidence from Focus Group Data

Pre-Focus Group Sub-Constructs (12)	Post-Focus Groups Sub-Constructs (4) with Illustrative Statements
<i>Honor Emergence</i>	<i>ENCOURAGE EMERGENCE</i>
<i>Hold Ambiguity</i>	<ul style="list-style-type: none"> • “There is a lot of uncertainty. Being OK with the truth that we don’t know for sure what the outcome is because we haven’t tried this before is important.” • “You don’t always have the answers. You need to be OK with pausing and asking a question.” • “Everything is dynamic and changing.” • “Curious behavior is an integration of things and constant listening. And an openness to, “I don’t know what I don’t know yet, but let me go and listen and see what I can do to serve.” • “We’re reminded that we didn’t have expertise in the things we now have expertise in...that we started somewhere.”

Pre-Focus Group Sub-Constructs (12)	Post-Focus Groups Sub-Constructs (4) with Illustrative Statements
<i>Embrace Interrelatedness</i>	<p data-bbox="578 268 971 300"><i>EMBRACE INTERRELATEDNESS</i></p> <ul data-bbox="578 310 1414 821" style="list-style-type: none"> <li data-bbox="578 310 1414 378">• “To be curious is a condition by which you are able to build relationships, which is how work gets done.” <li data-bbox="578 394 1414 562">• “I am an immigrant, and sometimes I get asked, “Where are you from?” When people approach me with a smile and ask the question, it makes me happy because they are interested to know my story. So we should, as leaders, encourage people to open this conversation.” <li data-bbox="578 579 1414 611">• “It’s truly about NOT seeing organizational boundaries.” <li data-bbox="578 632 1414 730">• “I’ve learned how hard it is for people to ask questions depending on where they are or how they feel they are “leveled” within the organization.” <li data-bbox="578 751 1414 821">• “I feel like we learn something from everyone we meet and every experience we have.”
<i>Engage Experiments</i>	<p data-bbox="578 856 878 888"><i>ENGAGE EXPERIMENTS</i></p> <ul data-bbox="578 930 1414 1318" style="list-style-type: none"> <li data-bbox="578 930 1414 997">• “This helps people recognize they are operating in a safe space.” <li data-bbox="578 1014 1414 1150">• “It’s silly to think the same thing that worked yesterday will work tomorrow. You remain relevant by realizing today’s going to be different than tomorrow and tomorrow’s going to be different than today.” <li data-bbox="578 1167 1414 1234">• “This allows people to be creative without the constraint of best practices.” <li data-bbox="578 1251 1414 1318">• “So, if it fails, we’ll figure out it didn’t work, and we’ll try something different.”
<i>Assume Fluidity</i>	Did not emerge as a stand-alone sub-construct.
<i>Spark Newness and Innovation</i>	Did not emerge as a stand-alone sub-construct.
<i>Compel Power Evenness</i>	Did not emerge as a stand-alone sub-construct.
<i>Inspire Provocative Collaboration</i>	Did not emerge as a stand-alone subconstruct.
<i>Propel Intercultural Experience</i>	Did not emerge as a stand-alone subconstruct.

Pre-Focus Group Sub-Constructs (12)	Post-Focus Groups Sub-Constructs (4) with Illustrative Statements
<i>Enable Person-Centered Growth Center Humanness</i>	<i>HONOR HUMANNES</i> <ul style="list-style-type: none"> • “If you’re curious and open, the whole person comes to work...that just amplifies the condition.” • “Caring for the whole person helps me see with greater clarity what will benefit them.” • “We want to actually improve our employees’ lives, so we have to understand them.”

Contributions from Qualitative Study to Quantitative Study

The exploratory phase of this research addressed RQ1, “What perceptions exist among leaders about the role of the sub-constructs and their relationship to curious leader behavior?” Leaders as focus group participants were clear in linking curious behavior as a modern organizational imperative, most specifically through the evaluation and prioritization of the sub-construct analysis described above. As such, the focus of this study was reinforced. Specifically, in consideration of adding value to Phase 2, the following contributions are noted:

1. The 12 sub-constructs explored were honed to four primary sub-constructs linked to curious leader capacity, and the four sub-constructs were defined.
2. The four primary sub-constructs were used to frame the quantitative research, under which the 100 individual survey items were reduced to 66 and then organized within each sub-construct.

Further, to assess if the survey was covering the breadth of the sub-construct, three to five leader key behaviors were identified as corresponding to each curious leader capacity sub-construct. Each potential scale item was mapped to a behavior within a sub-construct. Tables 4.2, 4.3, 4.4, and 4.5 show Key Behaviors and

Survey Items based on Phase 1 findings thereby establishing a framework for the quantitative phase of this research. A full version of the final survey sent to participants is included as Appendix H.

Table 4.2

Items That Shaped the Hold Emergence Sub-Construct

	Hold Emergence Survey Items	Key Behavior
1	When something is unclear, I would rather spend time exploring it than acting on it.	Open
2	I regularly stay open to new ideas even if it affects my efficiency on a project.	Open
3	I find it easier to work when reporting lines are more flexible than structured.	Flexible
4	When I encounter something unexpected on a project, I am likely to call it an opportunity instead of a roadblock.	Adventurous
5	I am open to new information that may change my course, even after I start implementing a plan.	Open
6	I prefer to begin a project with a “blank slate” rather than detailed project plans.	Open
7	I am more likely to invent something new rather than use what may be considered a best practice.	Adventurous
8	I think the workplace is better with fewer rather than more rules.	Flexible
9	At work, I adapt to change with little to no lead time to prepare for it.	Flexible
10	Even when I learn something is a best practice, I find it important to explore options before deciding on a course of action.	Adventurous
<i>[reversed questions]</i>		
11	I find it important to control the outcome on project work.	Open Reversed
12	I feel anxious when things are uncertain.	Flexible Reversed

In consideration of the items, a definition for the *Hold Emergence* sub-construct was developed as follows:

Lead with confidence knowing that what may be of greatest value is yet to be revealed. Be open to newness, flexible in thought and action, and adventurous in exploring.

To further assess connection to the construct of curious leader capacity and the sub-construct of *Hold Emergence*, key behaviors were associated with the sub-construct with which to affirm each item. For this sub-construct, the key behaviors include *open*, *flexible*, and *adventurous*.

Table 4.3

Items That Shaped the Design Interrelatedness Sub-Construct

	Design Interrelatedness Items	Key Behavior
1	I believe there is a lot I can learn from others at work.	Collective value
2	I regularly seek out the thoughts and opinions of others about my work.	Connect with others
3	I often initiate working with others to find collaborative solutions.	Connect with others
4	I often reach across formal and informal organizational boundaries to get feedback on my plans and ideas.	Spanning boundaries
5	I believe letting others' thoughts and opinions help shape solutions is how the best work gets done.	Collective value
6	I look forward to working with people who think differently than me.	Collective value
7	I often reach out to people who know little about my project to get their insights on my work.	Connect with others

	Design Interrelatedness Items	Key Behavior
8	I often put my expertise aside to let another's ideas take the lead.	Collective value
9	I am open to learning from others, regardless of their work role.	Spanning boundaries
10	The ideas of others are as good, if not better, than my own.	Collective value
11	I think strictly following supervisory reporting lines inside an organization is more confining than helpful.	Spanning boundaries
12	I regularly invite people from other departments to help me brainstorm ideas.	Spanning boundaries
13	On a project, I prefer to work with others rather than on my own.	Connect with others
	<i>[reversed items]</i>	
14	I am usually right.	Collective (Reversed)
15	I like brainstorming with coworkers who think like I do.	Collective (Reversed)

In consideration of the items shown in Table 4.3, a definition for the *Design Interrelatedness* sub-construct was developed as follows:

Affirm and engage the value of our human connectedness, overlooking real or perceived boundaries, for the value of co-creating inspired results.

To further assess connection to the construct of curious leader capacity and the sub-construct of Design Interrelatedness, key behaviors were associated with the sub-construct with which to affirm each item. For this sub-construct, the key behaviors include connecting with others, spanning boundaries, and harvesting collective value.

Table 4.4*Items That Shaped the Engage Experiments Sub-Construct*

	Engage Experiments Items	Key Behavior
1	I experiment with new ideas at work almost all of the time.	Improvise
2	I often take risks by offering new ideas.	Risk take
3	When I encounter something new, I take steps to understand it better.	Mine
4	I make it a practice to ask questions to find out what other people think.	Question
5	I regularly read the latest articles about what is happening in my field.	Mine
6	At work, I regularly create something with little to no preparation.	Improvise
7	As a leader, I find people who ask questions refreshing.	Question
8	Even when I have an answer, I still stay open to new options that may change my course.	Question
9	I think rules get in the way.	Improvise
10	I enthusiastically take risks at work.	Risk take
11	I am comfortable not knowing how a project may end when I begin it.	Improvise
12	In my mind, failing is acceptable.	Risk take
13	I get excited about change.	Risk take
14	When people ask questions, I find it more intriguing than annoying.	Question
15	I often take time to reflect on my experience.	Reflect
16	I regularly maintain a journal or record of my thoughts about my day.	Reflect
17	When my work gets intense, I have an established practice of inserting a “pause” to rejuvenate myself.	Reflect
18	I am a persistent explorer.	Mine

	Engage Experiments Items	Key Behavior
	<i>[reversed items]</i>	
19	I usually hesitate to take risks at work.	Risk take (Reversed)
20	I lead with more answers than questions at work.	Question (Reversed)

In consideration of the items shown in Table 4.4, a definition for the *Engage Experiments* sub-construct was developed as follows:

Be open to act knowing there is value in the learning regardless of the risk, outcome, or potential change. Lead with questions, mine for discoveries, and improvise to notice potential and possibility.

To further assess connection to the construct of curious leader capacity and the sub-construct of *Engage Experiments*, key behaviors were associated with the sub-construct with which to affirm each item. For this sub-construct, the key behaviors include risk take, mine, improvise, question, and reflect.

Table 4.5

Items That Shaped the Honor Humanness Sub-Construct

	Honor Humanness Items	Key Behavior
1	I invest time with co-workers to get to know who they are beyond their professional roles.	Care
2	I let others take action with their own ideas, even when I believe I have a better course of action.	Defer
3	I am comfortable with others getting credit for some of the work I do.	Defer
4	The best work gets done when work colleagues take the time to care about each other's daily lives.	Care
5	It is important to me to express interest in the personal lives of co-workers.	Care

	Honor Humanness Items	Key Behavior
6	I intentionally seek to work with people whose experience, such as age, ethnicity, gender identity, or education, is different than mine.	Inclusive
7	I am intentional about making time to know about the lives of people at work.	Care
8	When I actively listen to someone, I am giving them recognition.	Dev/Cel
9	I celebrate the special events of coworkers, even when they are not work-related accomplishments.	Dev/Cel
10	For the people I work with most directly, I can tell you what makes them happy in life.	Care
11	I believe that what people bring to a team extends far beyond their business expertise.	Inclusive
12	I see it my responsibility to care for others at work.	Care
13	I always take action to get to know people for who they are, even if we have different beliefs, values, and/or life experiences.	Inclusive
14	I hold colleagues at work responsible for respecting people of all backgrounds and experiences.	Inclusive
15	I intentionally take time to think about how I can develop the experience and capacity of individuals at work.	Dev/Cel
16	I care for the emotional safety of those I work with.	Care
17	During a brainstorming session, I am usually a strong listener.	Defer
	<i>[reversed items]</i>	
18	I avoid getting to know about the personal lives of my coworkers.	Care— <i>Reversed</i>
19	I believe having strict boundaries between work and life outside of work is most effective.	Care— <i>Reversed</i>

Note. Dev/Cel means “develop and celebrate others.”

In consideration of the items shown in Table 4.5, a definition for the *Honor Humanness* sub-construct was developed as follows:

Honor and care for people in their whole person; see, know, engage, and celebrate them for who they are and all they offer.

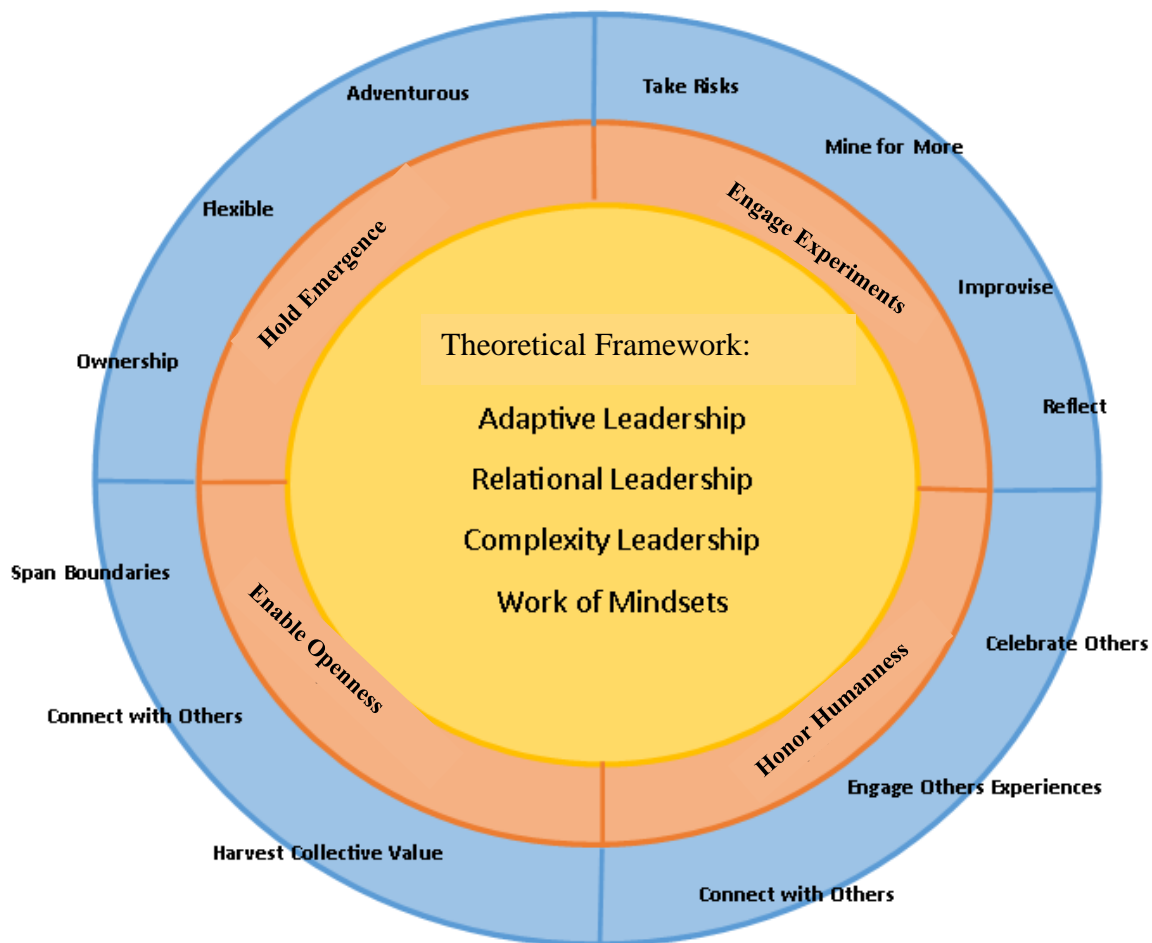
To further assess connection to the construct of curious leader capacity and the sub-construct of *Honor Humanness*, key behaviors were associated with the sub-construct with which to affirm each item. For this sub-construct, the key behaviors include care for the whole person, defer to the experience of others, embed inclusive actions, and develop and celebrate others.

Graphic Representation of Emerging Model

In Figure 4.1, a visual representation is presented of the theoretical framework, sub-constructs, and associated key behaviors shaped through the literature review, my practice, and the Phase 1 study. In this model, the intersecting theories underlying this work are at the core of the model. The four resulting sub-constructs frame the core theories, and each sub-construct is associated with its related key behaviors on the outside edge of the model. This model is designed to organize the relationships of the various components that are inherent in the Phase 1 process and design, from the theoretically grounded core, and outward to the behaviors that are recognized in practice.

Figure 4.1

Framework of Theory and Practice Based on Results of Phase 1



Phase 2 – Quantitative Study: Scale Development

The Curious Capacity Scale for Leaders was designed to enrich leaders' perspective about behaviors that underpin the idea of being curious and ways of practice to accelerate development in the fluidity of modern organizations. The scale is designed as an organizational tool to support the development of curious capacity in people and to be used to characterize the curious capacity of organizations.

In this phase of the study, the following research questions are addressed:

RQ2. What factors emerge from the factor analysis related to the sub-constructs identified through the literature and professional practice related to curious leader behavior?

RQ3. What correlations among the factors are present from the factor analysis?

RQ4. How do the results from the quantitative phase align with respondent perceptions?

In preparation for conducting the main survey, the form was administered to a test group to ensure respondents could move effectively through the survey and respond as requested. Seven participants were in the test group and completed the survey with no difficulty. Since there were no changes to the survey, test group responses were included with those of the remaining survey respondents, for a total of 315. The initial survey launched in January of 2020, with responses collected through to May 2020. A copy of the survey request for participants is included as Appendix G. As a result of the coronavirus pandemic at the time, I reopened the survey in July 2020 with a revised strategy to increase respondent participation. Once respondent participation exceeded 300, the survey closed. The final survey is included as Appendix H.

Data Cleaning

Before beginning the data analysis, survey responses were downloaded from Survey Monkey to SPSS to identify if any missing values existed that would affect the analyses (George & Mallory, 2014). Surveys that were incomplete were eliminated. An incomplete response was defined as partial completion of the 66 scale items affiliated with the four sub-constructs defined within the research. Of the 315 respondents to the

survey, 272 (86%) were retained for the data analysis. Table 4.6 shows how many respondents were eliminated through the survey at certain thresholds.

Table 4.6

Participant Elimination Due to Incomplete Responses (N = 315)

Following Survey Item	Cases Skipped	Participants Remaining
3.1	17	298
4.1	4	294
5.1	5	289
6.1	3	286
7.1	2	284
8.1	2	282
9.1	4	278
10.1	6	272
Final Case Number		272

It is expected in survey research that not all respondents will complete all items in the survey, creating gaps or missing values in the data (George & Mallory, 2014). In this research, 14% of the respondents ended their participation leaving their survey incomplete. Seventeen, or 40% of those who ended their participation before completing the survey did so following the second qualifying question which requested their current work status. If the respondent was not currently working, they were eliminated from progressing further with the survey. Aside from this, while I was pleased with the completion rate, the reason why some respondents did not complete was unknown. One consideration may have been the generalized definition of leadership framed in this research, inviting anyone who identifies as a leader, whether leading a team or leading self, as an eligible participant. It is possible that some may have found

some items not answerable given the more subjective notion of leading self. Also, while the average time to complete the survey was relatively brief at approximately 15 minutes, it is also possible that some respondents may have withdrawn because of being interrupted while the survey was in process.

Once this data cleaning process was complete, I recoded eight inverse items so they may be seamlessly included in the statistical analysis along with the other items.

Participant Demographics

Of the surveys completed, 259 respondents completed most demographic questions positioned at the end of the survey. Under gender identify, 81.5% of respondents were female, 17.7% male, and 0.8% responded as other. With respect to racial identity, 87.1% respondents identified as White/Caucasian, 8.1% Black/African American, 1.6% Hispanic, 1.6% Asian/Pacific Islander, and 1.6% as Multiple Ethnicity/Other (Afghan, Turkish, German, and Black/White). The age of the respondent population was distributed as follows: 1.2% 75 or over (the Silent Generation), 35.1% age 56 to 74 (Boomers), 34% age 44 to 55 (Gen X), 27% age 25 to 43 (Millennial), and 2.7% age 18 to 24 (Gen Z).

For leadership tenure, 175 (68.1%) respondents identified as leading teams for 11 or more years. Participants identified as leaders in a broad scope of industries, including advertising/marketing, healthcare, retail, financial services, education, logistics, real estate, public safety, manufacturing, entertainment, construction, consulting, government, and non-profit. Demographics are summarized in Table 4.7.

Table 4.7

Demographics of Survey Respondents

Demographic	Demographic Descriptor	<i>n</i>	%
Gender	Female	211	81.5
	Male	46	17.7
	Other	2	.8
Age	75 and over	3	1.2
	56–74	91	35.1
	44–55	88	34.0
	25–43	70	27.0
	18–24	7	2.7
Race	White/Caucasian	224	87.1
	Black/African	21	8.1
	American	4	1.6
	Hispanic	4	1.6
	Asian/Pacific Islander	4	1.6
	Multiple		
	Ethnicity/Other		

Research Question #2: What Factors Are Related to Curious Leader Behavior?

In this part of the research, the factors emerging from exploratory and confirmatory factor analysis related to curious leader behavior are explored. The following section documents the process used in this statistical evaluation.

Descriptive Statistics and Bivariate Correlations

Within the survey, each potential scale item required the respondent to select a response option: 1 (*strongly disagree*), 2 (*disagree*), 3 (*somewhat disagree*), 4 (*somewhat agree*), 5 (*agree*), 6 (*strongly disagree*). Each potential scale item was run for descriptive statistics, to include mean, standard deviation, and measures of skewness and kurtosis. In the review of this data, skewness and kurtosis were helpful to

identify items that were not normally distributed. If skewness for any item presents at greater than 2.0, and/or kurtosis for any item is > 3.0 , that item may be eliminated at the outset. Measures of skewness and kurtosis for Item 5.1—*I believe what people bring to a team extends far beyond their business expertise*—exceeded these thresholds. As a result, this item was removed from further analysis, bringing the item count to 65. The results of the descriptive statistics evaluation are in Appendix I.

Further preparation of bivariate correlations for factor analyses were run to evaluate a potential scale item's relationship with each of the other potential scale items. If items do not correlate with at least one other item in the data set, they are not in the larger construct domain. To remain in the data set, each potential scale item had to correlate with at least one other potential scale item $\geq .300$. If it could not meet this threshold, the potential scale item was discarded. From the remaining 65 items in this research, 11 were discarded in the bivariate correlation analysis, bringing the dataset to 54 items. Items eliminated in this analysis are shown in Table 4.8.

Table 4.8*Items Deleted Based on the Bivariate Correlation Analysis*

Item Number	Item
3.6	I get anxious when things are uncertain.
4.1	When something is unclear, I would rather spend time exploring it than acting on it.
6.2	I regularly read the latest articles about what is happening in my field.
6.3	I find it important to control the outcome on project work.
7.2	I am usually right.
7.4	I avoid getting to know about the personal lives of my coworkers.
7.5	When my work gets intense, I have an established practice to insert a “pause” to rejuvenate myself.
8.2	I like brainstorming with coworkers who think like I do.
10.6	I believe in having strict boundaries between working, and life outside of work, is most effective.
11.5	I lead with more answers than questions at work.
11.6	I usually hesitate to take risks at work.

Exploratory Factor Analysis

After the descriptive statistics and bivariate correlation analysis were completed exploratory factor analysis was run. This study used exploratory factor analysis, or more specifically, principal component analysis (PCA), to validate the number of factors associated with the scale. Before applying PCA, the KMO Measure of Sampling Adequacy and the Bartlett’s Test of Sphericity were run to confirm whether the sample size was adequate to effectively perform factor analysis. The KMO Measure of Sampling Adequacy of .855 for this study scored very high, or “meritorious,” in the KMO measure interpretation (George & Mallory, 2014).

Bartlett's Test of Sphericity determines whether the correlation matrix is an identity matrix (George & Mallory, 2014). With an identity matrix, the research variables are unrelated and not ideal for factor analysis (George & Mallory, 2014). A significant statistical test in this case (usually less than .05) shows that the correlation matrix is not an identity matrix and therefore is suitable for factor analysis. The significance factor found in this study was .000, validating sufficiency for factor analysis.

Once the KMO and Bartlett's Test demonstrated viability for factor analysis, PCA was applied as the methodology for extracting the components, or factors, from the survey items (Osborne et al., 2008). Varimax (orthogonal) rotation was applied within PCA to ascertain a more complete interpretation of the data. "Rotation is needed because the original factor structure is mathematically correct but is difficult to interpret." (George & Mallory, 2014, p. 268). In the PCA, variables loading on more than one factor, or cross loading, or not loading at all were deleted following each run. In conducting this analysis, I experimented with several loading cutoffs, specifically .30, .40, .45 and .50 to determine which had the most interpretable unique factors. A rotation of .45 proved optimal in producing strong item groupings and loadings for a successful factor structure.

Using a .45 rotation, 11 rounds of extraction produced four components with an eigenvalue > 1.0, the threshold considered for scale inclusion (See Table 4.9). In Round 1, 15 components were produced with 15 items either not loading or loading on multiple components removed. In Round 2, 12 components were produced with 5 items either not loading or loading on multiple components removed. Eleven components were produced in Round 3, with 4 items loading on multiple components removed. Round 4

produced 11 components, with three items loading on multiple components removed. In Round 5, 10 components produced with two items loading on more than one component. These items were also removed. In Round 6, 10 components were produced, with two components only loading one item; these components were removed. For Round 7, eight components produced, however one component only produced with one item, so that item was eliminated to see what impact it would have on Round 8. For Round 8, seven components were produced, with one component loading only two items; these were extracted. For Round 9, six components were produced, with two only two items loading on one component; these items were extracted. In Round 10, only two items loaded on one component and those items were also extracted. In Round 11, four components produced with each component loading at least four items. In other words, no items loaded simultaneously on more than 1 component, and every component loaded multiple items. Table 4.9 shows the item count removal.

Table 4.9*Extraction Rounds of PCA with Numbers of Items Produced and Removed*

Round	Items Produced	Items Removed
1	15	15
2	12	5
3	11	4
4	11	3
5	10	2
6	10	2
7	8	1
8	7	2
9	6	2
10	6	2
11	4	0

In factor analysis, eigenvalue is a measure representing the amount of variance captured by a factor (DeVellis & Thorpe, 2022). The goal of PCA is data reduction or retaining the components that explain more variance than a single item and deleting those that do not. Table 4.10 shows that four (4) components had eigenvalues that exceeded 1.0 and clearly meet the test for retention. Each component is also assigned a percent of variance, with the cumulative percent of variance totaling 100% once the final factor is calculated (George & Mallory, 2014). A reasonable measure for cumulative percent of variance explained when considering the retained components is 60% or greater. In this study, the cumulative percent of variance explained for the retained components is 54.8%, sufficient to continue the study.

Table 4.10*Total Variance Explained*

Component	INITIAL EIGENVALUES			ROTATION SUMS OF SQUARED LOADINGS		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.379	25.616	25.616	4.055	19.311	19.311
2	2.936	13.979	39.595	2.612	12.437	31.748
3	1.683	8.016	47.612	2.504	11.922	43.670
4	1.518	7.228	54.840	2.346	11.170	54.840
5	.961	4.576	59.416			
6	.887	4.225	63.641			
7	.838	3.990	67.630			
8	.747	3.559	71.189			
9	.704	3.351	74.540			
10	.609	2.900	77.440			
11	.581	2.769	80.209			
12	.573	2.728	82.937			
13	.556	2.646	85.583			
14	.482	2.295	87.879			
15	.456	2.171	90.049			
16	.440	2.097	92.146			
17	.403	1.917	94.063			
18	.378	1.802	95.865			
19	.372	1.770	97.635			
20	.306	1.455	99.090			
21	.191	.910	100.000			

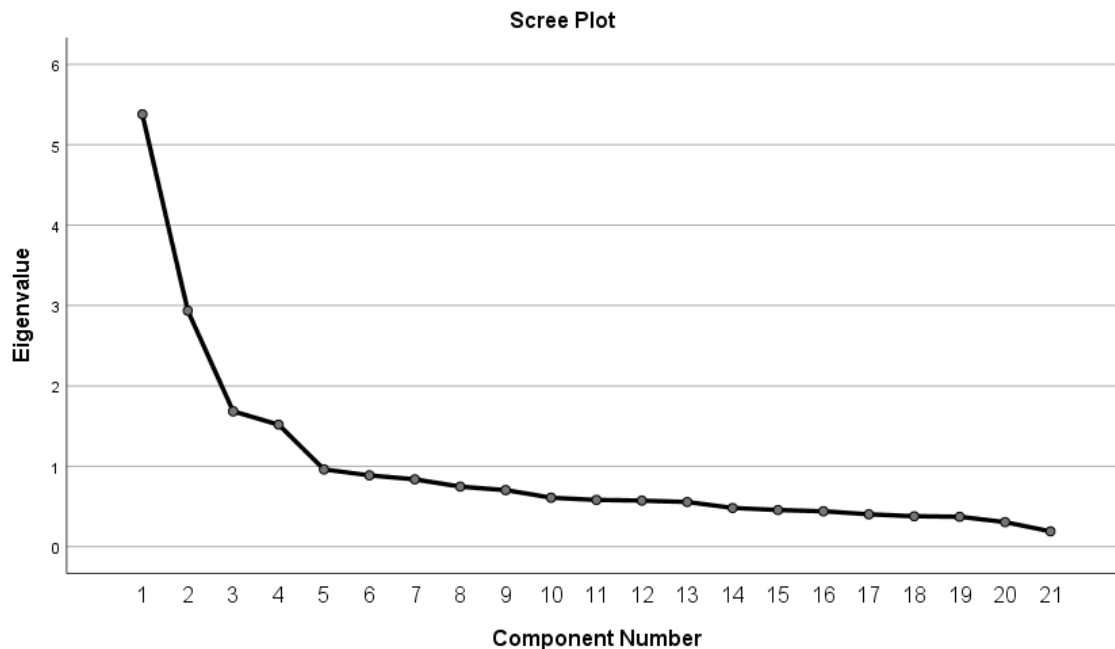
Note. Extraction method was principal component analysis.

A scree plot graphically presents the eigenvalues produced from a factor analysis in a bicoordinate plane (George & Mallory, 2014). Figure 4.2 is the scree plot for this study. The scree, or base of the slope, represented the transition from the expected number of retained factors to those unretained. The scree plot offered another view to hone the selection of retained factors, or components, by examining the scree for visual aberrations that might exist to question. In this study, the elbow of the scree plot

showed that four components were expected. The scree plot aligned with the cumulative variance explained through the eigenvalues, and therefore, presents no reason to retain more or less components.

Figure 4.2

Scree Plot



In Table 4.8, the results of the PCA are documented, showing four components, or factors, and the variables that loaded on each. For the extracted components sustained through PCA, each component holds between four and seven variables, all with strong loadings. This represents a strong position from which to conduct confirmatory factor analysis. It is also noted that the factor loadings correspond with the constructs honed during Phase 1 of this research: hold emergence, engage experiments, design for interrelatedness, and honor humanness. Names that demonstrate the relatability to the factors to the sub-constructs emerging from the study

were assigned as shown in Table 4.11. The names, item count of the factor, and their primary theoretical sub-construct from which they originate, were as follows:

- *Humanness*—seven total items (*Honor Humanness*)
- *Experiment*—four total items (*Engage Experiments*)
- *Openness*—six total items (*Engage Experiments/Hold Emergence*)
- *Emergence*—four total items (*Hold Emergence*)

One finding was that the Phase 1 construct identification showed an intertwined pattern within some of the components. This emerged as a favorable result bringing further clarity to the relationship of the items to components, as later in the description of work on confirmatory factor analysis.

Table 4.11*Component Matrix With .45 Varimax Rotation and Kaiser Normalization*

Component	Factor			
	1 Humanness	2 Experiment	3 Openness	4 Emergence
Q08_1.HH_C.a_know beyond professional_1	.781			
Q08_3.HH_DC.i_celebrate non work_1	.741			
Q09_6.HH_C.i_care about others lives_1	.731			
Q11_2.HH_C.j_whatmakesthemhappy_1	.610			
Q11_4.HH_C.e_interest in personal lives_1	.797			
Q13_3.HH_C.g_know lives of people_1	.876			
Q07_4.HH_C.r_avoid personal lives REV_1	.635			
Q09_4.HE_A.g_inventsomethingnew_1		.627		
Q12_4.EE_RT.b_ofentakrisksideas_1		.682		
Q13_4.EE_RT.j_enthusiasticallytakerisks_1		.802		
Q11_6.EE_RT.s_hesitaterisksRCED_1		.760		
Q03_5.EE_Q.n_questionsintrigue_1			.609	
Q04_2.DI_H.e_othersthoughtsopinions_1			.513	
Q04_4.DI_S.I_reginviteothersbrainstorm_1			.677	
Q04_5.EE_M.r_persistentexplorer_1			.603	
Q05_2.HE_O.b_regopennewideas_1			.630	
Q12_5.HE_O.e_open to change course_1			.541	
Q06_1.HE_F.c_reportinglinesflex_1				.581
Q07_1.HE_F.h_fewer rules_1				.768
Q07_3.DI_S.k_reporting lines confining_1				.768
Q10_3.EE_I.i_rules get in the way_1				.753

Once PCA was complete, a reliability analysis of the sub-constructs was run. Reliability statistics inform about the likelihood that an instrument will produce the same results each time it is administered (George & Mallory, 2014). A key measure and

important indicator of a scale's quality is the reliability coefficient alpha (DeVellis & Thorpe, 2022). Also referred to as Cronbach or coefficient alpha, the closer alpha is to 1.0, the greater the internal consistency of the items within the scale (Arbuckle, 2014). DeVellis and Thorpe (2022) indicate an alpha of .65 to .70 is minimally acceptable, between .70 and .80 is respectable, between .80 and .90 is very good, and above .90 is an indicator that a scale may need to be shortened in consideration with its inter-item correlations. In this research, the alpha measures for the sub-constructs indicate respectable to strong internal consistency for Factor 1 named Humanness ($\alpha = .87$) with 7 items, Factor 2 named Experiments ($\alpha = .78$) with 4 items, Factor 3 named Openness ($\alpha = .70$) with 6 items, Factor 4 named Emergence ($\alpha = .73$) with 4 items. Alpha measures for all 4 Factors were strong. Given the effective reliability measures, the study moved forward with confirmatory factor analysis.

Confirmatory Factor Analysis

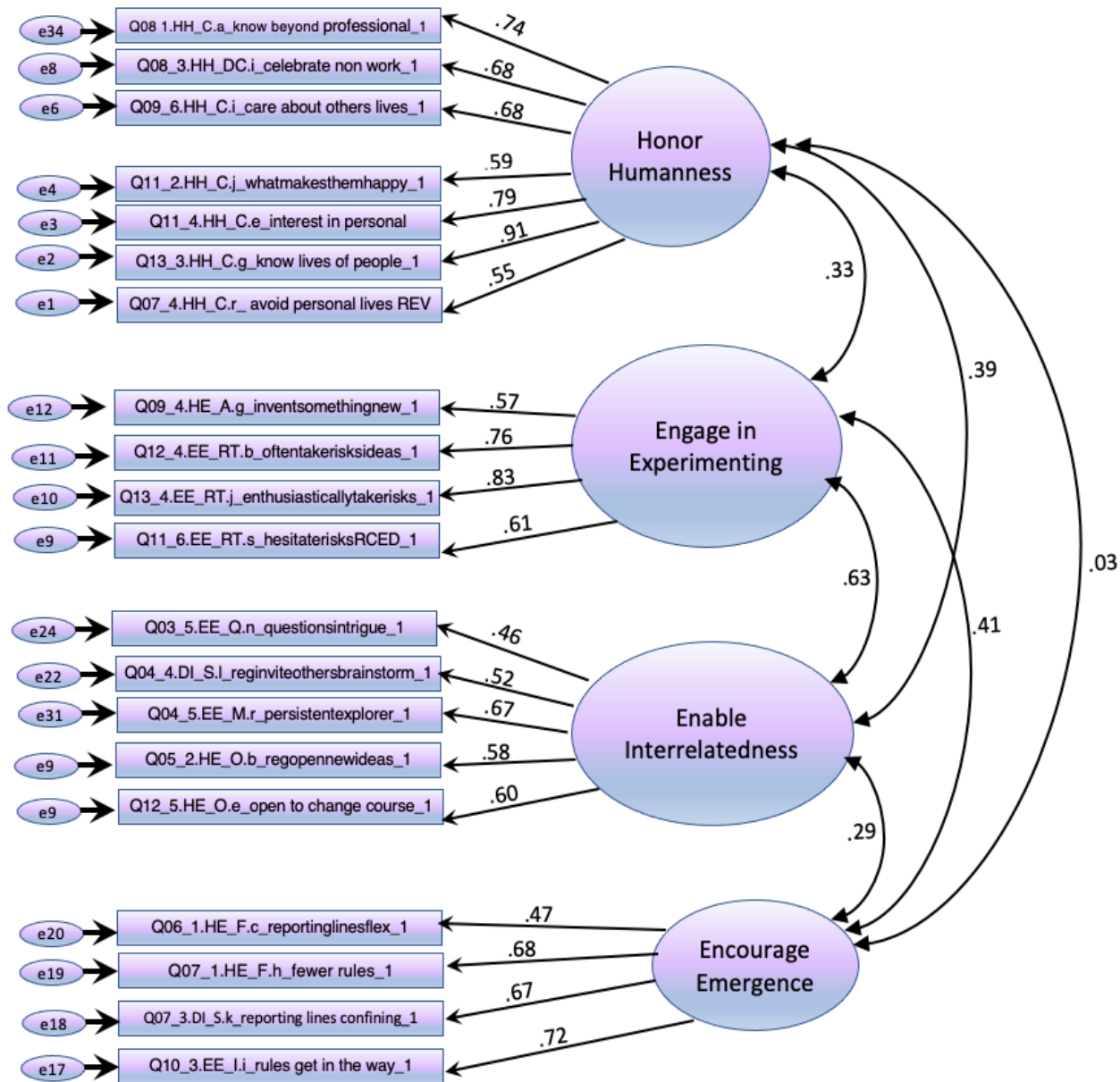
For construct validation related to questionnaires, researchers use CFA (Prudon, 2015). Having reduced the item list from 66 to 21 through PCA, CFA was performed as an application to further examine the results of PCA, specifically the emergent subscales, and the data fit with the model. "CFA represents a valuable method to test theory-driven hypotheses" (Kahn, 2006, p. 711). All 21 items in the four components resulting from PCA were included in the CFA analysis using IBM SPSS Amos 26 (Arbuckle, 2019). A structural equation modeling program was used to test the empirical validity of the hypothesized theoretical model "with maximum likelihood estimation of the covariances of the items" (Creswell & Plano Clark, 2011, p. 343). Using the dataset from the results of principal component analysis, CFA was run and modification indices,

standardized residuals, goodness of fit measures, and loadings were reviewed. Modification indices (MI) are measures that provide suggestions for model modifications that result in stronger chi square values (Arbuckle, 2014). Instead of a specific standardized threshold, evaluating the MIs for the distance between two items can be helpful in determining if items may need to be excluded or covaried. In this case, looking for outliers, or those indices with a substantial MI, presented an opportunity for exclusion. The resulting indices for all items were no greater than 11, demonstrating sufficiency with this assessment. The standardized residuals were also evaluated for outliers, with all falling below 2.5 except for one at 3.16. Upon review, this was determined not to be high enough to consider removing one of the variables.

Following the first run, one item was eliminated due to a low loading (.36); the model improved in the second run. Following this run 20 items were uniquely assigned within the sub-constructs with moderate to strong loadings and the model was accepted. Figure 4.3 is a graphic representation of the model demonstrating a valid scale resulting from CFA.

Figure 4.3

Curious Capacity Scale for Leaders Model Resulting from Confirmatory Factor Analysis



Goodness-of-fit statistics are measures of how well the study data fit the proposed CFA model. According to Kahn (2006), “A good CFA model simplifies the complex relationships among variables without losing too much information about those relationships” (p. 706). There are three standard concepts involved in evaluating goodness of fit used for this study:

1. Root mean square error of approximation (RMSEA) measures fit by compensating for the effect of model complexity. An RMSEA value of approximately .05 or less would indicate close model fit (Arbuckle, 2014).
2. Chi-square divided by degrees of freedom (CMIN/DF) identifies the minimum discrepancy, divided by its degrees of freedom (Arbuckle, 2014). In this measure, the resulting ratio should be close to 1 for good fit measure (Arbuckle, 2014), with a ratio > 2 representing inadequate fit (Byrne, 1989).
3. Comparative fit index (CFI) measures the fit of the model being evaluated with the baseline model. A strong standard of fit in this case is a measure close to 1.0 (Arbuckle, 2014).

Model fit. The final CFA run resulted in an overall measure with 20 items representing four subscales. Acceptable model fit levels for the goodness-of-fit measures RMSEA, CMIN/DF, and CFI were achieved. The RMSEA result of .04 was within the standard of $<.05$. The CMIN/DF measure of 1.6 met the acceptable range of 1.0 to 2.0. The CFI measure of .95 is found within the acceptable range of .95 to 1.0.

In considering the theoretical and empirical model clustering, Prudon (2015) indicated that “if the predicted clustering differs vastly from the empirically found clustering, the theory behind it could be considered faulty”; however, “if the difference is

moderate the discrepancies could be used to refine the theory and/or for further improvement of the instrument” (p. 2). Noted in the final model, seven items on three sub-scales aligned empirically with a different sub-construct than theoretically placed. In evaluating these items, the researcher can see a logical connection in the realignment of the items, with the emergence of a stronger study as a result. These shifts served to refine the theory and improve the overall scale.

Given the model fit assessment, which included the minor subscale refinement that resulted in the elimination of 1 item identified as impacting the strength of model fit, the researcher concludes the empirical model fits with the theoretical model. In further clarifying the naming of the subscales, slight editing is recommended for clarity refinement. The final subscales are *Encourage Emergence* (versus hold), *Engage Experiments*, *Enable Openness* (versus interrelatedness), and *Honor Humanness*. This scale demonstrates integrity in with model fit measuring curious capacity in leaders.

Validity and Reliability. After addressing model fit, I evaluated the model for validity and reliability by looking at the composite reliability (CR), average variance extracted (AVE), and the maximum shared variance (MSV). Composite reliability should be $> .700$ for each factor (Kahn, 2006). With convergent validity, the AVE should be $> .5$ and for discriminant validity, the MSV should be less than the AVE for each factor (Gaskin, 2016).

In Table 4.12, strong results are present for composite reliability with all sub-constructs measuring $> .70$. With convergent validity, all four components are below the $>.5$ threshold for average variance extracted, although *Humanness*, *Experiment* and *Emergence* are close to the recommended standard. In continuing the study after this

initial research, it would be helpful to experiment with eliminating some of the lower loading variables to determine if this fit measure may be improved.

Table 4.12

Validity and Reliability Measures from Confirmatory Factor Analysis

Subconstruct	CR	AVE	MSV
Humanness	.827	.490	.001
Experiment	.788	.488	.398
Openness	.702	.323	.398
Emergence	.733	.412	.170

Related to discriminant validity, the MSV is successful when measured against the recommended standard except for the component of Openness at .398. While the MSV is slightly higher than the AVE for the component, it does not present a significant concern for the component of *Openness*. With the component of *Openness* performing slightly under the AVE and MSV recommended standards, it reinforces the earlier note of the opportunity to further experiment to determine if stronger results may be obtained by experimenting with eliminating lower loading variables and rerunning the model.

Overall, within the Curious Capacity Scale for Leaders, all correlations indicate that the subscales effectively measure unique constructs and therefore demonstrate discriminant validity among them. Rönkkö and Cho (2022) reviewed various definitions and techniques of discriminant validity and provided a generalized definition: “Two measures intended to measure distinct constructs have discriminant validity if the absolute value of the correlation between the measures after correcting for measurement error is low enough for the measures to be regarded as measuring distinct constructs” (p. 11). There is varied practice within empirical studies about what

constitutes an appropriate cut-off to indicate problematic discriminant validity. Rönkkö and Cho suggested that a practice for the sub-construct correlations threshold is likely to fall no greater than between .8 and .9. In this study, all correlations between measures meet this threshold.

Research Question 3: What Correlations Among the Factors are Present From the Factor Analysis?

Based on the literature review, I proposed 12 sub-constructs that were meaningful in identifying the curious capacity of leaders in the modern workplace. As a result of the Phase 1 study, I narrowed the focus, hypothesizing four sub-constructs would have meaning in composing a scale to measure curious leader capacity. After applying PCA to the theoretical sub-constructs developed, four factors were produced. When CFA was applied, the four factors were further refined to four that mirrored in theme to the original sub-constructs hypothesized, with the renaming of one sub-construct that became clearer in its refinement. Within the four factors resulting from CFA, practical significance with low to strong moderate correlations is present among components, except for the correlation between *Honoring Humanness* and *Encouraging Emergence*. This correlation presents as an outlier with further opportunity for study. Figure 4.4 presents the model for the Curious Capacity Scale for Leaders as produced through CFA, featuring the correlations across factors. Table 4.13 displays the cross-factor correlations among constructs and the reliability related to the loadings.

Table 4.13*Cross Factor Correlations*

Variable	Variable			
	1. Engage Experiments	2. Encourage Emergence	3. Honor Humanness	4. Enable Openness
1. Engage Experiments	1.00			
2. Encourage Emergence	.41	1.00		
3. Honor Humanness	.33	.03	1.00	
4. Enable Openness	.63	.29	.39	1.00

Research Question 4: How Do the Respondent Perceptions from the Qualitative Phase Align with the Results From the Quantitative Phase?

As demonstrated through the discussion regarding Phase 1, it is clear the respondent perceptions from the focus groups align well with the quantitative results in Phase 2. The insights of the leaders participating in Phase 1 focus groups not only reinforced the sub-construct pathways that emerged from the literature review, but they also served as a credible connector to the Phase 2 study which continued to endorse the themes present in the wholeness of the study. For example, in the focus group, one respondent said, “In my experience, what stands out to me is that to be curious is a condition by which you are able to build relationships, which is how work gets done.” Study findings reinforced that the sub-constructs of *Honoring Humanness* and the named sub-construct of *Enabling Openness*, along with their associated behaviors, are meaningful. One respondent offered that, “You don’t always have to have the answer.

Take a pause, ask questions and the path will become clearer,” which shows the linkage to the sub-construct of *Encourage Emergence*. Another respondent insight demonstrated the value of the sub-construct *Engage Experiments*: “Organizations, teams, and even leaders who are operating according to the status quo, operating towards ‘we have always done it this way,’—curiosity disrupts that.” It is clear that the sub-constructs maintained integrity throughout Phase 1 development and Phase 2 validation.

In Closing

In this study, the mixed methods approach enabled a systemic process leading to validation of four sub-scales indicating a leader’s curious capacity in the modern world. By evaluating intersecting theoretical perspectives that frame the leadership landscape, conducting a qualitative study focused on the experience and practice of leaders related to curious behavior, and applying data from the qualitative study to a quantitative study to determine a valid assessment experience for building curious leader capacity, a meaningful story for leader development, and a practical tool in its service, are now available in the leadership domain.

CHAPTER V: DISCUSSION AND RECOMMENDATIONS

This research was born of curiosity to explore years of my practitioner experience within which coaching and mentoring were rich with the suggestion to “just be curious” in the context of leader and organizational development.

Leadership is a capacity that integrates context with action. In the modern world, the dynamics of organizational life have increasingly called leaders to notice and be open to new ways of leading. The complexity of today’s world, which delivers the experience of perpetual change through which one must learn and grow as people and organizations, calls us to hold our leader selves meaningfully. This brings with it the need to expand capacity in ways that meet the dynamic theater in which leadership happens.

Summary of Key Findings and Meaning-Making

A review of the extant literature on curiosity as a leader capacity demonstrated a range of linkages to potential relatable behaviors of being curious, but nothing specifically related to curious leader capacity. Similarly, there were certain scales produced over time that focused on being curious, but not in the context of leadership. A review of the literature in concert with the evidence of my professional practice, led to the emergence of 12 sub-constructs as underlying behaviors and ways of being related to curious leader capacity. These 12 sub-constructs have theoretical underpinnings to adaptive leadership theory, complexity leadership theory, relational leadership theory, and the study of mindsets. Aligned with those constructs, I developed 100 potential survey items to establish a preliminary body of work to carry through the research.

In Phase 1 of the study, the 12 sub-constructs were presented to three differently composed focus groups for participants to reflect upon and share from experience their perceptions of relationships that exist between the 12 sub-constructs and the capacity of curiosity in leaders. As a result of this Phase 1 study and the participant feedback, the 12 sub-constructs were honed to four by collapsing those that had perceived intersections. In addition, the 100-item survey was reconsidered and edited based on the findings of Phase 1, and then honed further using validation techniques resulting in 66 items for the finalized survey.

In Phase 2 of the study, the survey was distributed to over 300 respondents located using a snowball approach. Through the data cleaning process, the respondent count carried into the statistical data analysis was 272. In the data analysis, both PCA and CFA were used, as well as reliability testing, to determine if a valid scale emerged. In PCA using a .45 varimax rotation, four factors, or components, emerged with 21 items successfully loading. Reliability testing produced respectable to very good outcomes across the components. Carried into CFA, four components, or subscales, produced with meaningful correlations among 20 items loading within the subscales. Acceptable model fit as measured through RMSEA (.045), CMIN/DF (1.6), and CFI (.95), and sufficiency of all model indices was determined.

The four subscales carried from Phase 1 of the research into Phase 2 were maintained once the statistical analysis was applied, with modifications made to one sub-construct with *Enable Interrelatedness* renamed as *Enable Openness*. In addition to editing the name of the sub-construct, the definition was also edited slightly to hold the expanded meaning from what was established in Phase 1. The renaming was

meaningful following review of the item loading in CFA, where it was clear that the sub-construct offered a more expansive opportunity. The shift from *Interrelated* to *Openness* has meaning that includes the value of persistence with openness to inviting others into one's experience and personal capacity of openness to what is possible. The four sub-constructs and their definitions are restated in Table 5.1.

Table 5.1

Four Sub-Constructs and Their Definitions

Sub-Constructs	Definitions
<i>Encourage Emergence</i>	Lead with confidence knowing that what may be of greatest value is yet to be revealed
<i>Enable Openness</i>	Affirm and engage the value of our human connectedness for the advantage of co-creating inspired results; be rigorous in seeking possibilities with each other and opportunities
<i>Engage Experiments</i>	Be open to act knowing there is value in the learning regardless of the risk, outcome, or potential change
<i>Honor Humanness</i>	Honor and care for people in their whole person; see, know, engage, and celebrate them for who they are and all they offer

While all four sub-constructs were effectively carried through the research, within the sub-constructs, certain items were rerouted to different constructs. Table 5.2 clarifies the new positioning of four items within the sub-constructs.

Table 5.2*Recalibration of Item Placement within Sub-Constructs*

Item	Sub-Construct Before Analysis	Sub-Construct After Analysis
I am more likely to invent something new rather than use what may be considered a best practice.	<i>Hold Emergence</i>	<i>Engage Experiments</i>
I am a persistent explorer.	<i>Engage Experiments</i>	<i>Enable Openness</i>
When people ask questions, I find it more intriguing than annoying.	<i>Engage Experiments</i>	<i>Enable Openness</i>
I regularly stay open to new ideas even if it affects my efficiency on a project.	<i>Honor Emergence</i>	<i>Enable Openness</i>
I am open to new information that may change my course, even after I start implementing a plan.	<i>Honor Emergence</i>	<i>Enable Openness</i>
I think strictly following supervisory reporting lines inside an organization is more confining than helpful.	<i>Enable Interrelatedness</i>	<i>Encourage Emergence</i>
I think rules get in the way.	<i>Engage Experiments</i>	<i>Encourage Emergence</i>

In evaluating these shifts, I make meaning of the new positioning for these four items below in the discussion of each sub-construct.

Integration of Mindsets

In this research on leader capacity there is inherent recognition that leadership is about generation or honoring the space of growth versus reduction. Dweck's (2016) work about growth mindsets and the vital canvas it provides to the successful leader

experience has a meaningful intersection with this research. Dweck argued that a growth mindset is based on the belief that one's qualities can be cultivated through personal strategies, effort and help from others. She suggested that when leaders situate in a growth mindset, an organizational growth mindset is discernable, producing a stronger experience of trust, empowerment, ownership, and commitment within the employee community, as well as resonance of risk-taking, innovation and creativity.

Mindset is defined as a mental attitude or an inclination (Merriam-Webster, n.d.). Accepting the sub-constructs of my research, situated in a growth mindset as defined by Dweck (2016), I have extended the consideration of growth mindset by aligning leader inclinations that promote curious leader capacity. This elaboration of curious leader mindset comes from the clarity of sub-construct formation in Chapter IV resulting from the Phase 1 research, slightly refined from Phase 2 of the research, and is aligned with Dweck's findings. Identification of the promoters of curious leader mindsets is in Table 5.3.

Table 5.3*Curious Leader Mindset Promoters*

Sub-construct	Mindset Promoters
<i>Encourage Emergence</i>	<p><i>Ambiguity</i>: the complexity of our experience will situate us in continuous uncertainty.</p> <p><i>Fluidity of change</i>: change is ever-present, altering the landscape and our opportunity within it.</p>
<i>Engage Experiments</i>	<p><i>Continuous Learning</i>: we perpetually learn as we go, no matter our experience or expertise.</p> <p><i>Newness and Innovation</i>: the modern environment of change is opportunistic.</p>
<i>Enable Openness</i>	<p><i>Provocative Collaboration</i>: Engage and position relationships intentionally both inside and outside of logical leader comfort and wingspan.</p> <p><i>Press the Edges</i>: Engage and influence connections across differences, including race, ethnicity, nation, age, education, gender identity, work roles, and more.</p>
<i>Honor Humanness</i>	<p><i>Person-centeredness</i>: Know individuals for who they are and honor and develop them accordingly. Share in the same way about you to others.</p> <p><i>Power evenness</i>: Diminish structural boundaries to establish authentic and open connections.</p>

In acknowledging these leader inclinations—what I have termed here as *mindset promoters*—the growth potential that exists within the complex, modern landscape in which leaders operate is honored. In adopting these mindset promoters into the leader point of view, leaders will advantage their development and practice of curious capacity as validated through the sub-constructs.

Reconciling Sub-Constructs and Related Behaviors Post-CFA

In evaluating the results of CFA, I considered the items that successfully produced within the scale to ensure that each of the key behaviors aligned with the

sub-constructs at the end of the Phase 1 research continued to align. I noticed the need to recalibrate two key behaviors to ensure that meaning was optimally aligned. Table 5.4 shows the sub-constructs impacted in the recalibration, the key behavior in the original mapping, and the new behavior that has been remapped.

Table 5.4

Sub-Constructs and Key Behavior Alignment

Sub-Construct	Key Behavior Was	Key Behavior Is
<i>Honor Humanness</i>	Embed inclusive actions	Connect with others.
<i>Enable Openness</i>	Connect with others	Embed inclusive actions.
<i>Encourage Emergence</i>	Open	Ownership

The Gick Curious Capacity Scale for Leaders™

The final scale, named the Gick Curious Capacity Scale for Leaders™, is comprised of 20 items distributed into four sub-constructs, as depicted in Table 5.5. With empirical validation of the sub-constructs related to curious leader capacity, the elaboration of mindset promoters and the recalibration of key behaviors, a story is composed in service to supporting leader and organizational development in the modern world.

Table 5.5*Gick Curious Capacity Scale for Leaders™*

-
1. I invest time with co-workers to get to know who they are beyond their professional roles.
 2. The best work gets done when work colleagues take the time to care about each other's daily lives.
 3. It is important to me to express interest in the personal lives of co-workers.
 4. I am intentional about making time to know about the lives of people at work.
 5. I celebrate the special events of coworkers, even when they are not work-related accomplishments.
 6. For the people I work with most directly, I can tell you what makes them happy in life.
 7. I avoid getting to know about the personal lives of my co-workers.
 8. I regularly stay open to new ideas even if it affects my efficiency on a project.
 9. I am open to new information that may change my course, even after I start implementing a plan.
 10. I regularly invite people from other departments to help me brainstorm ideas.
 11. When people ask questions, I find it more intriguing than annoying.
 12. I am a persistent explorer.
 13. I am more likely to invent something new rather than use what may be considered a best practice.
 14. I often take risks by offering new ideas.
 15. I enthusiastically take risks at work.
 16. I usually hesitate to take risks at work.
 17. I find it easier to work when reporting lines are more flexible than structured.
 18. I think the workplace is better with fewer than more rules.
 19. I think strictly following supervisory reporting lines inside an organization is more confining than helpful.
 20. I think rules get in the way.
-

In the next section, each sub-construct is positioned with its influencing items, key behaviors, mindset promoters and validated scale items.

Sub-Constructs: Hold Leader Opportunities

Based on my research, each sub-construct composing the larger scale brings unique areas of focus opportunity for leaders. Examining each shows directly what the impact is on practical action and outcomes in leading in organizations.

Being Curious in Encouraging Emergence Strengthens Leader Capacity

The modern workplace holds an experience distinct from ones that most tenured leaders first entered. Given the pace of change that organizations must deal with and the continual obligation to not only adapt but also invent newness in an emergent landscape, a curious mind enables leaders to face uncertainty more effectively. Curious capacity is a strong antidote to not knowing. Having a curious nature, means admitting one does not know. This stance creates opportunity for openness to the uncertainty and allows a more “craft-as-you-go” posture (Charney & Gick, 2021). Table 5.6 shows the key behaviors, the mindset promoters, and the sub-scale item list for the sub-construct *Encourage Emergence*.

Table 5.6*Encourage Emergence Sub-construct and Related Capacity Builders*

Sub-Construct Leader Capacity	Influencing Leader Behaviors	Mindset Promoter
Encourage Emergence	Ownership Adventurous Flexible	Fluidity of change Ambiguity
Sub-Scale Items		
<ol style="list-style-type: none"> 1. I find it easier to work when reporting lines are more flexible than structured. 2. I think the workplace is better with fewer rather than more rules. 3. I think strictly following supervisory reporting lines inside an organization is more confining than helpful. 4. I think rules get in the way. 		

With this leader capacity, two items joined the sub-scale following CFA. Subscale items number three and four moved from their positioning of *Enable Openness* and *Encourage Emergence*, respectively. I am very comfortable with this item placement, finding it makes meaning in the totality of the construct outcome.

Considerations for leaders in building capacity for holding emergence may include:

- Practice building the capacity of reflection in action (Schön, 1983). The act of being curious is about reflection; it is our opportunity, for example, to wonder what may be happening in a given situation, or what may be possible. Reflecting in action leads to noticing what is unfolding, with the opportunity to make choices or select interventions meaningful to the moment from which to build, embracing the dynamics of unfolding change. Reflective periods create open space for present and enriched noticing and consideration.
- When working in a space of fluid change and ambiguity, moving forward requires leaders to choose the course of action in the moment. Leaders must

- get comfortable creating and constructing without the confines of a plan and recognize the emergent work is meaningful. I noticed this in the emergence of the COVID-19 pandemic. Faced with newness for which we had no answers, physicians, business leaders and parents, among others, found themselves leading by reading the landscape and making critical decisions in the moment to move forward. This “craft-as-you-go” agility (Charney & Gick, 2021) was dependable, as expertise learned over time could not suffice. In retrospect, it can see that being present and curious in the moment and making the best move possible in the day, reflecting, and noticing what that move produced, helped us make our next move. Linear planning and execution were not in our service. Being willing to quiet our expertise and set aside anchors to which we may hold bias, will open us to flexibility we will need to lead in the moment.
- When engaging strategic frameworks for business and organizational development, embed more emergent-style frameworks that draw on creativity, openness and accentuate thinking on possibilities. Examples to consider at this time may be Design Thinking (Brown, 2019) or Seeing Around Corners (McGrath, 2021). These frameworks depend on the exercise of curious capacity and appreciate that we moved beyond linear planning as effective in complex organizational systems.

Being Curious in Engaging Experimentation Strengthens Leader Capacity

In this sub-construct, three scale items loading originated from the item distribution to the sub-construct development in Phase 1, with item number one adding through CFA from the *Holding Emergence* sub-construct. In evaluating the addition, I

am comfortable with its fit in this sub-scale given invention has a direct relationship to experimentation. In Table 5.7, key leader behaviors, mindset promoters and scale items are contained for the *Engage Experiments*.

Table 5.7

Engage Experiments *Sub-Construct and Curious Capacity Builders*

Sub-Construct Leader Capacity	Influencing Leader Behaviors	Mindset Promoter
Engage Experiments	Improvise Mine for more Take risks Reflect	Continuous learning Newness and innovation

Scale Items

1. I am more likely to invent something new rather than use what may be considered a best practice.
2. I often take risks by offering new ideas.
3. I enthusiastically take risks at work.
4. I usually hesitate to take risks at work. (R)

Note. R denotes a reverse coded item

This leader sub-construct experienced no change from PCA through CFA.

Exercising action out of curiosity, notably in the complexity of organizational systems, involves risk. However, the traditional notion of risk is usually burdened by the anxiousness of consequences to failure. Reframing risk to experimentation positions the leader mindset in a positive framework, acknowledging that no matter the result, new knowledge will be learned. This learning is generative, and as with the concept of emergence, moves us further in what is possible. Certainly, choices need to be made when experimenting, such as resource investment. The opportunity here is to consider the resources differently and know that what we learn from the experiment may reveal a possibility that might have never been available to us if we were working in a more reductive mindset than a generative one.

Considerations for leaders in exercising curiosity in experimentation may include:

- Even when you think you may have the answer, mine for more. In doing so, reflect on what brought you here and think beyond where the organization may be situated today. Involve others in your experience of openness and discovery, modeling strong ways of situating in continuous learning and innovation. This will help fortify the organization's experience in a mindset of learning and growth.
- Be open to improvising to see what may be noticed in experimenting in this way. Introducing something new through improvisation will bring you data from which to determine what to carry forward and what not. Again, it is important to be present for what is emerging to take fullest advantage of newness that amplifies position and reenter the iterative process of designing in the experience of change.
- Experimentation in complex organizational systems emphasizes the value of recursiveness and iteration in changing environments. A recursive posture of noticing, reflection, and iterating, or making a move, draws on our curious capacity and enables the "craft-as-you-go" agility that engages the system in continuous learning and innovation. In pairing this recursive and iterative posture, improvisation and experimentation are likely to uplift the organization in this environment of change.

Being Curious in Honoring Humanness of Others Strengthens Leader Capacity

With the sub-construct of *Honoring Humanness*, all scale items produced originated in the same construct from the theoretical item placement following Phase 1

research. Table 5.8 coalesces key behaviors, mindset promoters and the item list for the sub-construct *Honor Humanness*.

Table 5.8

Honor Humanness Sub-Construct and Related Capacity Builders

Sub-Construct Leader Capacity	Influencing Leader Behaviors	Mindset Promoter
Honor Humanness	Connect with others Engage others' experiences Celebrate the lives of others	Person-Centered Power Evenness

Scale Items

1. I invest time with co-workers to get to know who they are beyond their professional roles.
2. I celebrate the special events of coworkers, even when they are not work-related accomplishments.
3. The best work gets done when work colleagues take the time to care about each other's daily lives.
4. I am intentional about making time to know about the lives of people at work.
5. For the people I work with most directly, I can tell you what makes them happy in life.
6. It is important to me to express interest in the personal lives of co-workers.
7. I avoid getting to know about the personal lives of my co-workers. (R)

Note. R denotes a reverse coded item

With this leader capacity, there is intentionality around knowing professional colleagues beyond their work identity. Exercising curiosity in prioritizing this accelerates relationship building, as in knowing the wholeness of another illuminates shared interests, trusted engagement, and more purposeful, person-centered development. Leaders who offer this are also more adept in creating an environment that cultivates it within the work community, thereby amplifying the impact and value of an organizational community focused in this way.

Guidance for leaders in developing this capacity includes:

- Resist classifying team members into bands of performance (i.e., A players, B players, C players, etc.) which encourages a determined focus as a result of the classification. Instead, know and develop everyone in a person-centered way to discover what may not yet be known in their ability to contribute and open meaningful development potential.
- When introducing yourself to an individual or group for the first time, share not only elements of your business biography, also share elements of who you are outside of your professional identity. Invite others to do the same when they introduce themselves. Setting a tone for the value of knowing the whole person is an appreciative community standard, and invites an acceleration of individual growth, deeper partnering, and a trusted community.
- Create experiences that soften boundaries that communicate hierarchy and closed organizational systems. For example, consider having a new hire make an appointment to introduce themselves to a leader they may not otherwise engage with regularly, like a function leader or CEO. This helps humanize the relationship and convey the relational tone of the work community at the start.

Being Curious in Enabling Openness Among People and Possibilities

Strengthens Leader Capacity

Within this sub-construct, items from three sub-constructs coalesced to shape a more expansive, and desirable, construct following the CFA. In renaming the construct from Enable Interrelatedness to Enable Openness following CFA, we now recognize the

greater meaning it its value for holding connections among people and possibilities. “I am a persistent explorer,” formerly placed in Engage Experiments, does have a relationship with this sub-construct in its context of reaching further to ensure cultivation of diverse and inclusive perspectives. Table 5.9 brings together the key leader behaviors, mindset promoters and item list for the sub-construct Enable Interrelatedness.

Table 5.9

Enable Interrelatedness Sub-Construct and Related Capacity Builders

Sub-Construct Leader Capacity	Influencing Leader Behaviors	Mindset Promoter
Enable Openness	Span boundaries Embed inclusive actions Harvest collective value	Press Edges Provocative Collaboration

Scale Items

1. I regularly invite people from other departments to help me brainstorm ideas.
2. I regularly stay open to new ideas even if it affects my efficiency on a project.
3. I am open to new information that may change my course, even after I start implementing a plan.
4. When people ask questions, I find it more intriguing than annoying.
5. I am a persistent explorer.

This sub-construct invites leaders to consider specific strategy that extends their experience in partnering with colleagues within their own work, and the same in engaging teams. As with other sub-constructs within this research, this is a contextual strategy. It is critical to reflect on current habits and patterns of assembling to solve business issues and/or create business opportunity and intentionally discern how you may best deepen the experience of convening and collaborating within the organization.

Considerations for leaders to take full advantage of more robust and generative relationships that add dimension to our own offer may include:

- When collaborating in your leader role, invite others to the experience that bring what you may not. For example, include a peer from another part of the organization you may not yet know or regularly work with. Identify a collaborator whose life experience is different than yours, perhaps in gender identity, national origin, race, education, age, etc. Pay attention in these engagements to notice what occurs in conversation or results that offers a more robust experience and/or outcome. What do you also notice about the engagement of team members?
- Some leaders tend to depend on a certain slate of partners. This may be because comfort has grown, or perhaps you know you'll always get to a result. Be curious; consider shifting this practice and committing to engaging new partners for each successive project for a period. Cut across traditional boundaries. Notice what changes occur when you practice in this way. What happens when someone role-models this practice within the organization?
- As a leader in your organization, notice opportunities that exist to enrich your work community with diverse experiences and perspectives. For example, are there touchpoints throughout the organization which may benefit from a more intentional strategy to gather and tap a more inclusive experience? How might you advocate or sponsor strategy building among these touchpoints to bring a more vibrant experience for the employee community and the organization at large?

With the detailed structure of each sub-scale presented here, I will now share with you the Curious Leader Capacity Model offering a visual framework that integrates

the sub-scale content within the continually iterating contextual experience in which leaders operate.

Framework for Learning: Curious Leader Capacity Model

In this research, the literature examination, along with the comprehensive research in Phase 1 and Phase 2, developed a story in service to leaders in the modern work environment: cultivating and applying curious capacity in a generative framework, optimally uplifts people and organizations. To elucidate the story for practitioners for application, Figure 5.1 holds an original visual framework identified as the Curious Leader Capacity Model. This model offers a synergistic portrayal of the high-level considerations and connections that prompt integration and adoption within leader identity.

Components of the model include:

At the core: Modern leadership theories established in Chapter I as foundational to the case-building for this research.

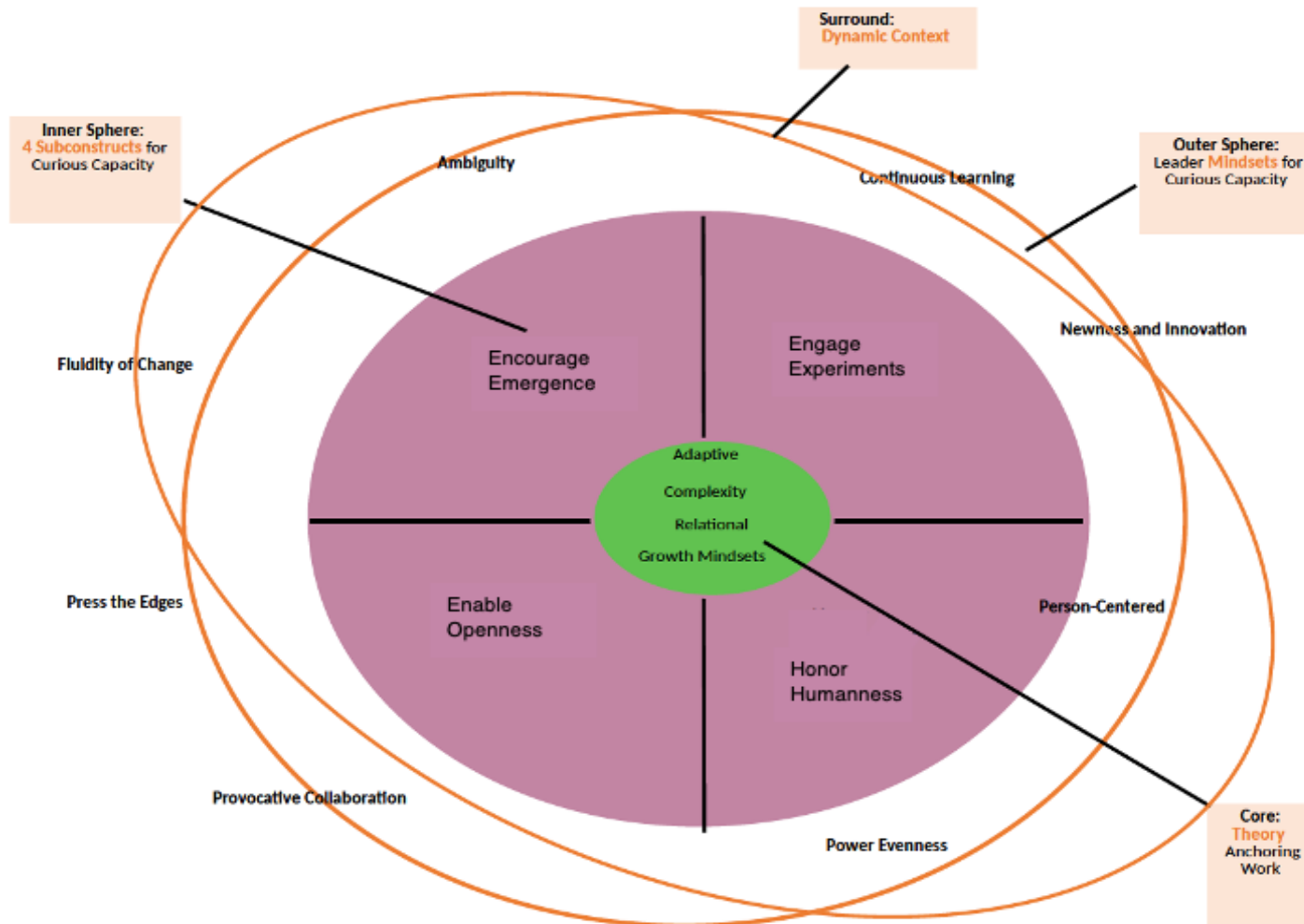
Circling the core: The four sub-constructs demonstrated throughout the research as a framework for curious leader capacity.

Beyond the sub-constructs: The key behaviors reinforcing the capacities of the sub-constructs.

Framing the sub-constructs: The leader mindsets that promote or accelerate the building of curious leader capacity.

Dynamic bands encasing the image: The movement of context or the landscape in which we operate that is ever-changing, energetic, and rich with data from which the curious capacity of leaders' flourishes.

Figure 5.1

Curious Leader Capacity Model

Note. Figure by author. Copyright 2022 by Lisa Gick.

Using the Scale

As a product of this research, new knowledge confirming behavioral linkages to capacity-building of modern leaders is vitally meaningful. In demonstrating validated scale items, I am curious about framing the scale, named the Gick Curious Leader Capacity Scale, in a meaningful assessment tool that may inform and prompt individual leaders to reflect on and prioritize development of curious capacity. There is also merit for organizations to consider this assessment to understand cultural inclinations within the organization, which may have the potential to prompt more macro-style, generative interventions in refocusing organizational posture to entwining curious leader capacity with the accountability of holding perpetual change.

I look forward to discovering additional meaningful interests for this work.

Limitations of this Research

With this work concluded, I recognize a few opportunities to address some limitations of the work. Three of those include repeating the study, enriching the diversity of the respondent community, and recognition that the shadow side of curiosity is not a part of this research design.

In order to strengthen the scale's outcomes, I also recognize that repeating the study on one or more samples will be meaningful. In doing so, the study's validity and reliability have the opportunity to be further emphasized, making the work more stable in its contribution to the academy. I plan to continue the work by repeating the study with more samples, to further substantiate the outcomes.

A limitation I am mindful of continuing to consider in this research is the small respondent participation with respect to racial and ethnic diversity. Intention was given in the survey completion process to access affinity populations to ensure access to the survey, however, it did not produce the respondent participation of interest in the research. Other considerations were made, such as the use of external services like Mechanical Turk, however, the feedback in this consideration did not indicate it may be a successful tool. As I collect more samples to further the research, I will be mindful of strategies that will support diversifying the respondent community.

Finally, the design of this research was intentional in exploring the generative components of curiosity as a leader behavior. It is possible that curious behavior can also be explored for its non-generative qualities. While this was not part of this research, it may be a meaningful pathway to explore related to the leader experience.

My interest following this dissertation research is to continue to collect samples to strengthen the study and diversify the respondent pool in the process. I look forward to what emerges in the continued study.

Contributions to the Fields of Leadership and Strategy

As threaded through this entire work, a case is effectively available to us that the modern workplace is calling us to reconsider how we lead. Researchers including Uhl-Bien and Marion (2009) and Heifetz et al. (2009), have presented bodies of work that frame the operational context to which organizations must adapt, one deep with complexity, fully requiring immediate shifts from more traditional leadership approaches for leaders and organizations to thrive. And there is no end in sight to what has become this space, where organizations are not just called to be “better” to be competitive, they

are called to be differentiators, stretching new and different muscles as described in this research.

Applying curious leader capacity is a generative posture when embedded in this environment. In this research, the curtain of curiosity is parted so we can see what is behind it when considering leader and organizational development. The guidance to “just be more curious” now has deeper meaning; meaning which applies more developmental and actionable pathways for learning, growth, outcomes, and impact.

Specific consideration for opportunities to give the development of curious leader capacity place include:

- Leaders of all levels discovering the impact of prioritizing curious leader capacity in their work of developing self and engaging in self-development through processes such as reflection and coaching to cultivate the posture.
- Leaders focusing the coaching of people and teams in the development of curious leader capacity to accelerate growth and engagement.
- Leaders focusing on evaluation of the work community, or organizational culture, to determine its sensibility and alignment around curious leader capacity.
- With talent development experiences within organizations, consider how to prioritize focus on building curious leader capacity. This may be in coaching, simulations, the embedding of regular practices (such as reflection) prior to certain experiences like key meetings, project generation, etc.
- In the transitory time of a student’s engagement in higher education, colleges and universities may evaluate how to embed the development of curious

leader capacity in the student experience. This may include in curriculum building, experiences of caring for the whole person, student leadership opportunities, and assignment work. This will help prepare students in understanding the organizational experience and accelerating impact when engaged in co-curricular work assignments and professional engagement when they fully enter the professional work environment.

Recommendations for Future Research

With a validated set of sub-scales in practice, there now exists a substantial opportunity to socialize this assessment work and further learn from continuing to grow the respondent pool. As a leadership coach and professor of leadership studies, I will have ample opportunity to engage respondents and further analyze the resulting data. This will support continuing to hone the assessment as a development tool and provide for continuing to modernize it with the shifting experience of leaders.

There also exists a continued opportunity to diversify the respondent pool over what exists in the current study. While a very defined strategy was applied to support a diverse respondent pool, the result did not meet expectations. By further exploring intentional strategies to ensure representation and access, a stronger story will be told from the work of the sub-scales as considered within the spirit of diversity, inclusion, equity and belonging

Emanating specifically from the data of this research, I would like to continue to focus on the connection between the sub-constructs Honor Humanness and Encourage Emergence. In factor correlation, this relationship was the weakest among the sub-constructs in the study. In reviewing the original item list of the sub-construct and what

produced through factor analysis, I see an opportunity to clarify approach and further experiment with the sub-construct. For example, the items of the subconstruct are primarily of the tone of structure, with a few focused on personal emergence. The structural items held together, and therefore I expect create an unlikeliness of strong correlation with a more humanistic sub-construct. Exploring this more in my professional practice and noticing what may emerge for further study is of great interest.

While this work was originally proposed in the context of leadership, an emergent theme through the research that appeared is the relationship to strategy. In strategy research, with modern models such as Design Thinking (Liedtka & Kaplan, 2019) and the work of Rita McGrath (2021) as presented in her book, *Seeing Around Corners*, the idea of curious capacity has a very meaningful intersection. These strategic frameworks share ideas with curious leader capacity, such as the notion of emergence, experimentation, and connecting to the human experience. This is an encouraging and compelling connection, which not only suggests a helpful linkage, but also gives extension to continued research from which modern organizations may benefit.

Finally, related to future research opportunities, while this research was focused on leader capacity within the organizational experience, there are innumerable ways elements of this research can also uplift people in other contexts. For example, there are practices here of developing and applying curious capacity that may empower family engagement. While not a focus of this research, I offer that the underpinning of this research be considered from the experience of place, allowing any meaning to be considered, and perhaps centered in an experiment of one's interest.

Final Thoughts

It is celebratory and at the same time quite difficult, to be in this final dissertation paragraph. I am honored to have the opportunity to engage in what has so piqued my curiosity over time and realize the pathway produced meaning for leaders. I also have difficulty finding the end point to what I know is work that has perpetual opportunity. For now, I consider this only a place on the emergent path that will offer the chance to enter the recursive loop and iterate newness through the continual engagement of leaders and their landscapes. And so, I press on.

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Appendix A: Item List for Content Validity Expert Review

Leader Survey - Original Item List

The best path forward is usually clearly defined.

As a leader, I find it important to ensure a controlled outcome is achieved on project work.

When responsible for a team, I watch how their work unfolds, stepping in only if I notice they are stuck.

I like to execute with detailed project plans.

When something is done well, it should be repeated.

I like it when people tell me what to expect.

The more details, the better.

When there is a conflict at work, it usually has a negative impact.

When working a plan, it is frustrating when new information becomes available requiring a change in course.

When something is unclear, I would rather explore it than set it aside.

Uncertainty helps leaders grow.

It is better to work within a hierarchical organizational structure than one where reporting lines are less clear.

Organizational boundaries are more confining than helpful.

I am comfortable without having all the answers.

Uncertainty is a positive state.

When I notice a gap, I prioritize filling it.

Rules are helpful to have in a work environment.

I believe there is a lot I can learn from others.

I can learn just as much from a colleague (peer) as they can learn from me.

If I had it my way, I would make decisions without input from others.

It is important to convey you care about the professional experience of others at work.

I prefer to share my work with others along the way to get their input rather than wait until I have a nearly finished product.

I prefer to work alone.

I regularly seek out the thoughts and opinions of others about my work.

I am uncomfortable when peers question my work.

I like to work independently.

When working on a project, there is value in deviating from the project plan when something new comes up.

I view rules as important.

I experiment with new things at work all the time.

Taking a risk is something I am inclined to avoid.

It is difficult for me to act in uncertainty.

I have a practice of taking risks with new ideas, in spite of uncertainty about the outcome.

I like to know how something will end before I begin.

I am often intrigued.

When I encounter something new, I take action to understand it better.

When I am intrigued, I explore.

I ask open-ended questions daily to gather others' thoughts.

I find people who ask a lot of questions annoying.

I am driven to read the latest articles on business research in my field.

I like to experiment with new ideas in real work situations.

I believe leading with questions is a strength for a leader.

I find people who ask a lot of questions refreshing.

I get excited about change.

I like to be able to have some lead time to plan for anticipated change.

I believe what I experience each day will inform what happens next.

I have a plan for where I will be in my career in 5 years.

At work, change is something I can usually plan for.

I get frustrated when I think I have the answer and then something new pops up to consider.

I do not get excited about change.

My work involves many moving parts that I need to reduce or control.

It's important to me to clear my task list daily.

I view rules as confining.

If my business were underperforming to competitors, I would want to learn what competitors were doing so I can replicate it.

I prefer to follow best practices than be inventive.

If my schedule gets packed, I actually block in calendar time just to think about new possibilities I should be considering.

When filling an open job, I am intentional about hiring people who think differently than me.

I see myself as creative in my work.

At work, I lead with how I can say "yes" to ideas of others instead of saying "no."

I am a thought leader.

I am an "out of the box" thinker.

I am comfortable putting my ideas aside to give voice to another's ideas.

I have a difficult time following courses of action suggested by others.

I can learn just as much from a newer employee as they can learn from me.

I enjoy having positional power over others at work.

I am open to learning from others, no matter their role.

Having positional power at work is important as a leader.

The ideas of others are as good, if not better, than my own.

When responsible for teams, I let them organize around their work independently from me and update me along the way.

I prefer to participate regularly in the work of teams I may be responsible for.

I like being right.

I am usually always right.

I often engage in co-creating solutions with others.

I regularly reach across organizational boundaries to vet my ideas.

Letting others thoughts and opinions shape solutions is how the best work gets done.

I prefer to work with people who think differently than me.

I only want to work with people who think like me.

Being the expert in my work is important to me.

I often reach out to people who know little about my project to get their insight on my work.

I would rather spend time with people like me than people different than me.

I enjoy spending time with people I have yet to get to know.

I think of my work as a leader as being connected to the global scene.

When putting together a project team, I am intentional about seeking out members who culturally have a different lived experience than I do.

My style is generally to make room for more, rather than contain and reduce.

What people bring to a team extends far beyond their business acumen.

Efficiency in thinking and acting is of high value to me.

I regularly reflect on my experience to see what I might change going forward.

I am willing to let someone grapple with uncertainty to discover their own solution - even when I prefer a different solution.

I am open to offering freely to the learning of others.

I prefer a colleague come with more questions than answers when we are working on a project together.

I am open to ask less experienced employees to stand in for me at important meetings.

It is more efficient to make the decisions as the team or project leader.

I would rather make decisions as the team leader than involve everyone.

I have a practice of sitting in quiet, regularly.

I make time to have regular conversations with coworkers without having a specific agenda.

It is important to express interest in the personal lives of others at work.

It is important to express care for the personal lives of others at work.

There is a difference between dignity and respect.

Listening to a colleague's idea is giving recognition.

I believe in celebrating the special events of individual team members that have nothing to do with work accomplishments.

Policies are really helpful to ensure all employees are treated the same.

For the people I work most directly with, I can tell you what brings them joy in life.

Appendix B: Email Invitation for Survey

(To Be Adapted for Pilot Survey and Social Media Postings)

Friends, colleagues and curious leaders,

As you may know, I am in the home stretch in finishing my doctoral work with Antioch University in Leadership and Change. At this time, I'm conducting research designed to create new knowledge and practice opportunities in the area of leading in the workplace of now and next. I would like to invite you to join me in this contribution by participating in the research.

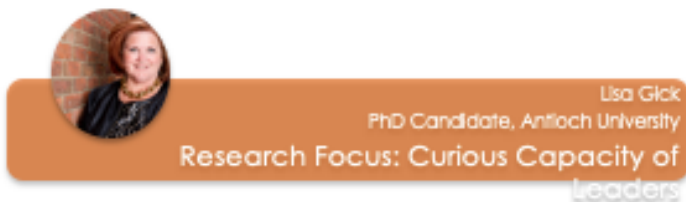
I've identified 12 concepts from existing research that suggest curiosity is a key behavior to leader impact in the modern workplace. This research is designed to understand the behavior of curiosity and its meaning to leader impact through the development and application of an assessment tool measuring a leader's tendency to curious behavior. This part of my research is to validate the assessment tool I've created so that it may be used to support the development of leaders.

Whether you lead a team or not, I'm interested in your voluntary participation. The main criterion to participate is that you are responsible for delivering results in the work environment through how you lead self and/or others. Please click on the link below to get started.

I would appreciate your sharing the link with as many people as possible and inviting them to take the survey. The more responses received, the stronger the research conclusions!

Thank you, in advance, for supporting this work and contributing to the future of leader development!

Appendix C: Focus Group Recruitment Script



Focus Group - Recruitment Script

Friends and colleagues,

As you may know, I am in the home stretch in finishing my doctoral work with Antioch University in Leadership and Change. At this time, I'm conducting research designed to create new knowledge and practice opportunities in the area of leading in the workplace of now and next. I would like to invite you to join me in this contribution by sharing this opportunity to participate in the research with your business network and colleagues.

In the first phase of my research, I will be conducting 3 focus groups. Each focus group is scheduled for 90 minutes. The focus groups will be discussing curiosity as a leader behavior, and its relationship to a number of concepts experienced in the work environment.

I am looking for volunteer participants who meet the criteria associated with each session:

- Session 1: Leaders with 15 or less years of professional work experience
- Session 2: Leaders with more than 15 years of professional work experience
- Session 3: Women leaders of diverse tenure, industry, roles, etc.

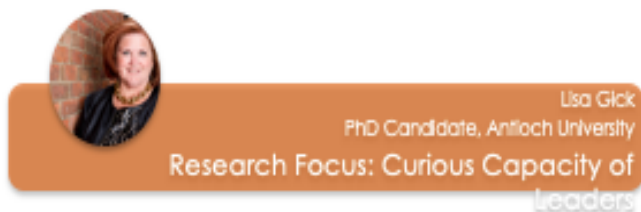
For the purpose of this research, **participants only need to self-identify as leaders**, regardless of whether or not they supervise an individual, team or have no direct supervisory responsibility.

I have attached a note similar to this, but directed to participation, that you can share with professionals in your network. I will communicate directly with all volunteers, describing the research, focus group opportunity, dates of sessions and other details important for participation. If you have any questions about this opportunity or the work ahead, let's connect. You can reach me at [redacted]

Thank you, in advance, for supporting this work and contributing to the future of leader development!

Lisa Gick
 PhD Candidate, Antioch University
 CEO + Founder, [curious] leadership + change agency

Appendix D: Consent for Focus Group Participation



Consent to Participant in Research Focus Group

Theoretical Modeling for Curious Leadership and
Instrument Development and Validation for Measuring Curious Leader Behavior

Principal Investigator: Lisa Gick, PhD Candidate
Antioch University, PhD in Leadership and Change Program

Thank you for your consideration to participate in this research study. As a leader in the workplace, you are invited to join a Focus Group to develop ideas and thinking about the curious capacity of leaders.

Your participation is completely voluntary, so you can decide whether or not to take part in this study. This document will inform you about the study, why the research is performed, what will occur during the study and any benefits and risks of your participation.

If you choose to participate, you are asked to sign this form. You will still be able to freely withdrawal at any time without needing to provide reason for doing so, if you choose. Your decision to participate or not participate will have no bearing on your role within the organization for which you work and will be held in confidence by the Principal Investigator.

Please read the following information carefully:

WHO IS CONDUCTING THE STUDY?

I, Lisa Gick, am the Principal Investigator of this study. The research is part of my doctoral dissertation for the PhD program in Leadership and Change at Antioch University.

BACKGROUND AND PURPOSE OF THE STUDY

Leaders are called to operate in contexts of increasing complexity. This environment is characterized by ongoing experiences of ambiguity and fluid change, requiring continuous learning and adaptation in driving employee and organizational growth. Curious leader behavior is an effective tool in accelerating growth in these conditions. This research involves developing and validating an assessment instrument for leader development in the contemporary workplace. The intention is to offer all leaders across the leadership spectrum, from leading self to leading organizations, a clear

measurement of Curious Leader Behavior and recommendations for how to engage more affirmatively with curiosity in leading self and others. With successful growth in curious capacity, leaders will advantage self, others and organizations in moving through critical periods of inflection with greater speed, agility and growth.

WHAT DOES THE RESEARCH ENTAIL?

This study involves 2 phases of research: A qualitative phase in which 3 focus groups will be conducted; and a quantitative phase in which a survey instrument will be developed and validated.

You are invited to participate in a focus group comprised on 5–8 leaders. This focus group is conducted to examine the relationship between the curious capacity of leaders and the implications of engaging curious capacity in the contemporary workplace. The proceedings of the focus group will be recorded, solely for research purposes, but all the participants' contributions will be de-identified prior to publication or sharing of the research results. Results will only be used in an aggregated format. These recordings and any other information that may connect you to the study will be kept in a locked, secured location.

Each focus group is scheduled for 90 minutes.

You may also choose to participate in the second phase of the study by agreeing to take the survey developed as part of this research. To volunteer for this phase of the research, you may share your interest with the Principal Investigator who will then contact you when that phase of the research is undertaken.

PARTICIPANT SELECTION

Volunteers are invited to participate who are currently employed and self-identify as a leader, regardless of whether or not they have the responsibility of directly supervising an individual or team. Three volunteer focus groups will be conducted, with the following group criteria:

Focus Group One: Leaders with 15 or less years of professional experience.

Focus Group Two: Leaders with more than 15 years of professional experience.

Focus Group Three: Women leaders from diverse industries, with diverse tenure.

RISKS OF PARTICIPATION

While no study is risk free, I do not anticipate that you will experience any harm or stress during this study. Your participation is voluntary, and you may discontinue your participation at any time if you become uncomfortable.

Measures have been taken to protect the confidentiality of participants. While the Principal Investigator cannot guarantee confidentiality of participation in the focus group, she will request all focus group participants to maintain confidentiality in service to each other. There will be no names associated with the direct data obtained in the focus

group. The audio recordings of the focus group will be transcribed verbatim. No names will be used during the recorded session and, therefore, also not in the transcription process. If any personal identifiers are recorded by mention in the focus group, the Principal Investigator will remove them from the recording transcript. A transcriptionist will be used to reduce the records to transcripts. The transcriptionist will also be advised of the confidentiality expectation.

No personal information or identifiers of participants will be included in the reports or publications that result from this research.

Ethical research standards will guide the storage, retention and destruction of focus group recordings and transcripts.

BENEFITS OF PARTICIPATION

Participation in the focus group will give you an opportunity to reflect on how curious behavior fits with your approach to leadership. There may or may not be other direct benefits to you in participating in this study. You will be able to share your insights and experiences and hear the same of others related to the research focus. My hope and intention is that, by including your perspective, the resulting work from this research will offer an advancement in both scholarship and practice related to leader development, from which leaders, at large, including yourself, may benefit.

MAY I BE ASKED TO LEAVE THE STUDY?

In cases where a participant does not comply with the requirements of the study, or for any other reason that impedes the progress of the study, the Principal Investigator may withdraw you from the study. You are also free to leave this study at any time you wish.

WHEN THE STUDY CONCLUDES

Once the study is finished, there will be no need to remain in contact. The Principal Investigator, Lisa Gick, reserves the right to include any results of this study in future scholarly or practice publications and/or presentations. All personal information will be de-identified before publication.

CONTACT INFORMATION FOR QUESTIONS

If you have any questions, you can contact Lisa Gick at [redacted] or by emailing [redacted]

If you have any questions about your rights as a research participant, you may contact Dr. Lisa Kreeger, Chair of the Antioch University PhD in Leadership and Change IRB, via email at [redacted]

DO YOU WISH TO BE IN THIS STUDY?

I have read the foregoing information and consent to voluntarily participating in this study. I understand the researcher will by audio recording the focus group proceedings and I agree with how that will be addressed as included above. I understand that I may choose to withdraw my participation at any time without harm to myself.

Printed Name of Participant

Signature of Participant

Date

Printed Name of Principal Investigator

Signature of Principal Investigator

Date

Appendix E: Statements of Focus Group Participants about their Perceptions of Curious Behavior at Work

Question: When you consider the behavior of curiosity in the workplace, what comes to mind?

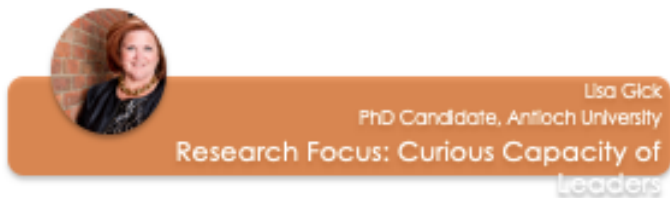
Responses:

1. I'd always define curious as another new opportunity, to want to know more and always saying what else is possible, what else is next.
 2. Without curiosity, there is no innovation, so that's the first thing that came to mind.
 3. ...reading the pulse of what is happening...taking in feedback, which gets your team more on board...
 4. When curiosity is practiced and becomes a habit in an organization, it opens up trust across the organization.
 5. When we have a task to do and people are asking all of these questions to understand the context of the engagement, this is something a leader can appreciate.
 6. Curiosity is the arch-nemesis of status quo. Organizations, teams and even leaders who are operating according to the status quo, operating towards we have always done it this way, then curiosity disrupts that.
 7. Curiosity is the willingness to ask, "what if?"
 8. Curiosity shows you have transparency in your organization.
 9. Too often we encourage people to learn from each other and have fun while doing it. But a lot of those learnings get pressed down because
-

people are not allowed to express different points of view or they get suppressed because “we don’t have time for that.” This gets in the way.

10. When we’re in a time of crisis, we need more diverse thinking.
 11. If we don’t have curiosity, we’re really not open to new directions or things that need to be done to sustain organizations.
 12. I think about where I am now, how to or what may be needed to keep curiosity going when things are moving at the speed of light.
 13. Sometimes, people get stuck and are in their own way and that may stop curiosity because they think – what has ever worked is always going to continue to work – when it doesn’t.
 14. “If we had curious leaders in the organization there would be a lot more listening, willingness to learn and adapt to new directions.”
 15. “Curiosity is necessary for any type of growth.”
 16. “You don’t always have to have the answer. Take a pause, ask questions and the path will become clearer.”
 17. “Showing I am curious as a leader and I’m willing to learn opens the door for the rest of the team to also do the same thing, to the rest of the organization....to put themselves forward and not be ashamed of (not knowing) and asking questions, to learn more.
 18. In my experience, what stands out to me is that to be curious is a condition by which you are able to build relationships, which is how work gets done.
-

Appendix F: Focus Group Reflective Activity



Place an “X” on the scale to rate your perception of how meaningful the relationship is between the concept and the curious behavior of leaders:

Honor Emergence
Lead with confidence in knowing that what may be of greatest value is yet to be revealed.
For example: Lead with “yes” instead of finding ways a suggestion or idea won’t work.

Not Meaningful _____ Highly
Meaningful

Hold Ambiguity
Able to operate comfortably and successfully in uncertainty.
For example: Quiet your leader expertness for solutions to develop through others.

Not Meaningful _____ Highly
Meaningful

Embrace Interrelatedness
Affirm and engage the value of our human connectedness over individualism.
For example: Tap into colleagues outside of your immediate work group to get their insight on a project you’re developing.

Not Meaningful _____ Highly
Meaningful

Engage Experiments
Open to act knowing there is value regardless of the outcome.
For example: Forgo “best practices” in favor of being inventive, given your unique context.

Not Meaningful _____ Highly
Meaningful

Situate in Continuous Learning

Recognize learning comes from what we encounter and engage with – every day.

For example: Invite a staff member to participate in a meeting you cannot attend.

Not Meaningful _____ **Highly Meaningful**

Assume Fluidity

Recognize our experience as continuous and dynamic, rather than discrete and linear.

For example: Reframe traditional organizational structures to open cross-functional, real time communication flow.

Not Meaningful _____ **Highly Meaningful**

Spark Newness and Innovation

Create opportunity for new ideas, ways or products; driven to discover something new.

For example: Reframe idea generation as an embedded opportunity within the organizational system for all to enjoy.

Not Meaningful _____ **Highly Meaningful**

Compel Power Evenness

Eliminate power dominance in a relationship; enable a state of co-creating.

For example: Lead with questions instead of answers, intending to be open to the learning.

Not Meaningful _____ **Highly Meaningful**

Inspire Provocative Collaboration

Overlook real or perceived organizational boundaries while engaged with others to achieve inspired results.

For example: Assemble a project team with “boundary spanning” relationships.

Not Meaningful _____ **Highly Meaningful**

Propel an Intercultural Experience

Advocate for an experience honoring the complexity of our interculturalism.

For example: Ensure every decision-making structure has the benefit of an engaged intercultural experience.

Not Meaningful _____ **Highly Meaningful**

Enable Person-Centered Growth

Development focused on a person's uniqueness.

For example: Assertively invite individual team members to create and activate development interests meaningful to their experience.

Not Meaningful _____ **Highly Meaningful**

Center Humanness

Honor and care for people in their whole person; see and know them for who they are and all they offer.

For example: Invite others to express who they are in their "whole person," beyond their work identity.

Not Meaningful _____ **Highly Meaningful**

Appendix G: Communications for Survey Respondents

Social Media Invitations

Facebook, LinkedIn, Instagram, Twitter

Colleagues and Friends...I have a special request!

As you may know, I am in the home stretch of concluding my research for my PhD. In my study of the capacity of leaders in the modern workplace, I have a survey that I would like as many leaders as possible complete. You qualify to participate if you are at least 18 years of age, currently working full or part time, and have perceptions about leading or being led. Leading a team directly is not required, since individuals may identify as leaders when leading self, collaborating on projects with peers, or leading teams directly. The survey will take approximately 20–30 minutes to complete.

Please access the survey in the link below. If you have any trouble, please do not reply to this post, but email me directly at [redacted]

I would also appreciate it if you could share this survey link with your friends and colleagues, with a brief invitation from you to complete it. The more leaders who complete the survey, the stronger the results will be in generating new knowledge for us to learn from about the experience of leading in the modern workplace.

Thank you very much for your participation and support! I look very forward to sharing the study results with you.

6.5

E-Newsletter of [curious] leadership + change agency

Colleagues...I have a special request!

As you may know, I am in the home stretch of concluding my research for my PhD. In my study of the capacity of leaders in the modern workplace, I have a survey that I would like as many leaders as possible complete. You qualify to participate if you are at least 18 years of age, currently working full or part time, and have perceptions about leading or being led. Leading a team directly is not required, since individuals may identify as leaders when leading self, collaborating on projects with peers, or leading teams directly. The survey will take approximately 20–30 minutes to complete.

Please access the survey in the link below. If you have any trouble, please email me directly at [redacted]

I would also appreciate it if you could share this survey link with your friends and colleagues, with a brief invitation from you to complete it. The more leaders who complete the survey, the stronger the results will be in generating new knowledge for us to learn from about the experience of leading in the modern workplace.

Thank you very much for your participation and support! I look forward to sharing the results of my study with you.

Appendix H: Final Survey

This page intentionally left blank due to eliminating personally identifying information.

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* 1. Are you at least 18 years of age?

- Yes
 No

* 2. Are you currently employed? (includes self-employed)

- Yes, Full-time
 Yes, Part-time
 No

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Please mark the response that is most true for you today.

* 3. Thinking about your experience of leading or being led, how strongly do you disagree or agree with each of the following statements:

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I prefer to begin a project with a "blank slate" rather than detailed project plans.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On a project, I prefer to work with others rather than on my own.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Even when I have an answer, I still stay open to new options that may change my course.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At work, I regularly produce or create something with little to no preparation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When people ask questions, I find it more intriguing than annoying.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel anxious when things are uncertain.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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* 4. Thinking about your experience of leading or being led, how strongly do you disagree or agree with the following statements:

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
When something is unclear, I would rather spend time exploring it than acting on it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe letting others' thoughts and opinions help shape solutions is how the best work gets done.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At work, I adapt to change with little to no lead time to prepare for it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I regularly invite people from other departments to help me brainstorm ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am a persistent explorer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I intentionally seek to work with people whose experience, such as age, ethnicity, gender identity or education, is different than mine.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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* 5. Thinking about your experience of leading or being led, how strongly do you disagree or agree with the following statements:

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I believe that what people bring to a team extends far beyond their business expertise.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I regularly stay open to new ideas, even if it affects my efficiency on a project.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The ideas of others are as good, if not better, than my own.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I make it a practice to ask questions to find out what other people think.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I encounter something unexpected on a project, I am likely to call it an opportunity instead of a roadblock.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I see it as my responsibility to care for others at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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* 6. Thinking about your experience of leading or being led, how strongly do you disagree or agree with the following statements:

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I find it easier to work when reporting relationships are more flexible than structured.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I regularly read the latest articles about what is happening in my field.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find it important to control the outcome on project work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often take time to reflect on my experience.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During a group brainstorming session, I lead by being a good listener.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I regularly maintain a record or journal of my thoughts about my day.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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* 7. Thinking about your experience of leading or being led, how strongly do you disagree or agree with the following statements:

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I think the workplace is better with fewer rather than more rules.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am usually right.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think strictly following supervisory reporting lines inside an organization is more confining than helpful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I avoid getting to know about the personal lives of my coworkers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When my work gets intense, I have an established practice of inserting a "pause" to rejuvenate myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I hold colleagues at work accountable for respecting people of all backgrounds and experiences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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* 8. Thinking about your experience of leading or being led, how strongly do you disagree or agree with the following statements:

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I invest time with co-workers to get to know who they are beyond their professional roles.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like brainstorming with coworkers who think like I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I celebrate the special events of co-workers, even when they are not work-related accomplishments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I look forward to working with people who think differently than me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am open to learning from others regardless of their roles.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In my mind, failing is acceptable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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* 9. Thinking about your experience of leading or being led, how strongly do you disagree or agree with the following statements:

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I often reach across formal and informal organizational boundaries to get feedback on my plans and ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I experiment with new ideas at work almost all of the time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I care for the emotional safety of those I work with.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am more likely to invent something new rather than use what may be considered a best practice.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I regularly seek out the thoughts and opinions of others about my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The best work gets done when colleagues take time to care about each others' daily lives.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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* 10. Thinking about your experience of leading or being led, how strongly do you disagree or agree with the following statements:

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
When I actively listen to someone, I am giving them recognition.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As a leader, I find people who ask questions refreshing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think rules get in the way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I intentionally take time to think about how I can develop the experience and capacity of others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I encounter something new, I take steps to understand it better.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe having strict boundaries between work, and life outside of work, is most effective.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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* 11. Thinking about the experience of leading or being led, how strongly do you disagree or agree with the following statements:

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I always take action to get to know people for who they are, even if we have different beliefs, values and/or life experiences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For the people I work with most directly, I can tell you what makes them happy in life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I let others take action with their own ideas, even when I believe I have a better course of action.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important to me to make sure I express interest in the personal lives of co-workers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I lead with more answers than questions at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I usually hesitate to take risks at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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* 12. Thinking about your experience of leading or being led, how strongly do you disagree or agree to the following statements:

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
Even when I learn something is a best practice, I find it important to explore options before deciding on a course of action.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe there is a lot I can learn from others at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often initiate working with others to find collaborative solutions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often take risks by offering new ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am open to new information that may change my course, even after I start implementing a plan.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often reach out to people who know little about my project to get their insights on my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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* 13. Thinking about your experience of leading or being led, how strongly do you disagree or agree with the following statements:

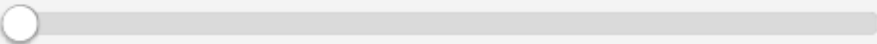
	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I often put my expertise aside to let another's ideas take the lead.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I get excited about change.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am intentional about making time to get to know about the lives of people at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enthusiastically take risks at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am comfortable with others getting credit for some of the work I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am comfortable not knowing how a project may end when I begin it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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To what degree do you perceive these statements as true about **leader behavior**?

* 14. When I am curious at work, I learn more.

1 100

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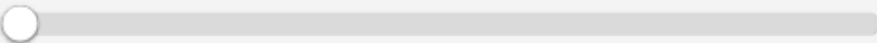
* 15. When I am curious at work, I am more likely to innovate or develop something new.

1 100

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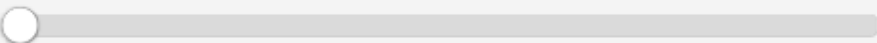
* 16. When I am curious at work, I am more able to work through things that are unclear.

1 100

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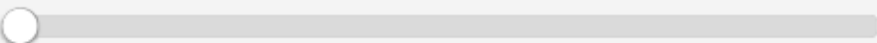
* 17. When I am curious at work, I can adapt more easily to change.

1 100

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* 18. When I am curious at work, deeper collaboration is possible.

1 100

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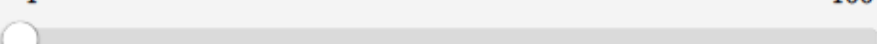
* 19. When I am curious at work, I am more likely to develop relationships with people of different cultures and experiences other than my own.

1 100

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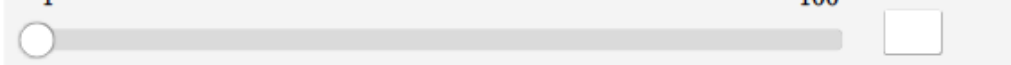
* 20. When I am curious with others at work, power differences that may exist are reduced.

1 100

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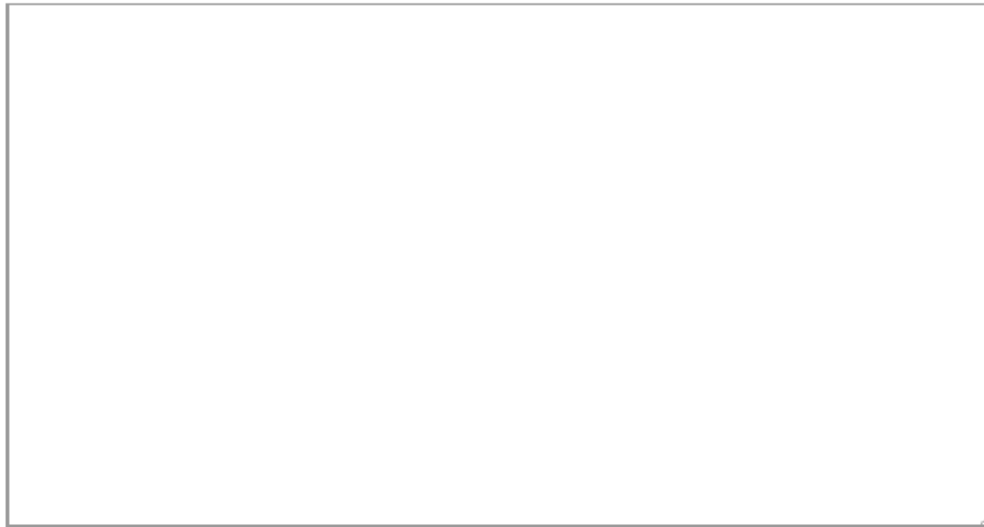
* 21. When I am curious with others at work, I more deeply engage with them in a person-centered way.

1 100



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22. During this time that our world is experiencing the pandemic, what new thoughts do you have about the behaviors of leading or being led?



23. If you have any thoughts or inspirations about leadership from taking the survey, please share those here.

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Please share a little more about yourself.

* 24. What is your gender identity:

- Female
- Male
- Other (please specify)

25. Which race/ethnicity best describes you? (Please choose only one.)

- American Indian or Alaskan Native
- Asian / Pacific Islander
- Black or African American
- Hispanic
- White / Caucasian
- Multiple ethnicity / Other (please specify)

* 26. Please select your age group:

- 18 to 24 56 to 74
 25 to 43 75 or over
 44 to 55

27. What is your highest level of education completed?

- High School Diploma or Equivalent Master's Degree
 Associate's Degree Doctoral Degree
 Bachelor's Degree
 Other (please specify)

28. Are you currently a student?

- Yes
 No

29. How many years have you led teams?

- I do not have experience leading a team. 11 - 20 years
 Less than 5 years 21 - 30 years
 5 - 10 years 31 or more years

30. About how many employees are in your CURRENT company?

- Less than 100 5,001 - 10,000
 100 - 500 10,001 - 50,000
 501 - 5,000 Over 50,000

31. Which of the following best describes the principal industry of your organization?

Other (please specify)

32. How satisfied are you in your current job?

Very Dissatisfied Very Satisfied

33. Are you currently leading a team?

Yes

No

If yes, about how many people are on your team?

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Thank you for spending time with my survey!

I appreciate the thoughts and insights you shared as I consider refining leader impact for the modern workplace. An abstract of the research study will be posted on the Instagram account [REDACTED] when the study is complete. Please click "Done" to submit your responses.